

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

UMBRA TECHNOLOGIES LTD.,
Patent Owner.

IPR2024-00270
Patent 11,108,595 B2

Before ST. JOHN COURTENAY, III, MICHAEL R. ZECHER, and
GREGG I. ANDERSON, *Administrative Patent Judges*.

ANDERSON, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. Background

Cisco Systems, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–20 (“the challenged claims”) of U.S. Patent No. 11,108,595 B2 (Ex. 1001, “the ’595 patent”). Petitioner also filed a Declaration of Dr. A.L. Narasimha Reddy with the Petition. *See* Ex. 1003. UMBRA Technologies Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). Claims 1–14 were disclaimed by Patent Owner on June 17, 2024. Ex. 3001 (“Disclaimer”). Consequently, only claims 15–20 remain pending for our consideration. *See* Prelim. Resp. 15; *see also* 37 C.F.R. § 42.107(e) (“No *inter partes* review will be instituted on disclaimed claims”).

We instituted *inter partes* review only as to claims 15–20 on September 5, 2024. Paper 9 (“Inst. Dec.”). Patent Owner filed a Patent Owner’s Response. Paper 21 (“PO Resp.”). Patent Owner also filed a Declaration of Dr. Micah Beck with the Patent Owner’s Response. *See* Ex. 2002. Petitioner filed a Petitioner’s Reply to Patent Owner’s Response. Paper 22 (“Pet. Reply”). Patent Owner filed a Patent Owner’s Sur-Reply. Paper 23 (“Sur-reply”). In addition, an oral argument was held on June 4, 2025, and a transcript of the hearing is included in the record. Paper 30 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. Upon considering the record, for the reasons discussed below, we find Petitioner has not shown by a preponderance of the evidence that claims 15–20 are unpatentable.

B. Related Proceedings

The parties identify the following related district court cases involving the '595 patent: *Umbra Technologies Ltd. (UK) v. Cisco Systems, Inc.*, No. 1:23-cv-00903-DII (W.D. Tex.); *Umbra Technologies Ltd. (UK) v. VMware, Inc.*, No. 1:23-cv-00904-DII (W.D. Tex.). Pet. 57; Paper 18, 2 (Patent Owner's Updated Mandatory Notices).

C. Real Parties-in-Interest

Petitioner identifies itself, Cisco Systems, Inc., as the real party-in-interest. Pet. 57. Patent Owner identifies itself, UMBRA Technologies Ltd., as the real party-in-interest. Paper 18, 2.

D. The '595 Patent

The '595 patent is entitled "Systems and Methods for Providing a Global Virtual Network (GVN)." Ex. 1001 at code [54]. The application for the '595 patent was filed August 24, 2020, as U.S. Patent Application No. 17/000,997 ("'997 application"). *Id.* at codes [21], [22]. The '997 application is a continuation of U.S. Patent Application No. 15/563,253, filed April 7, 2016, now U.S. Patent No 10,756,929. *Id.* at code [63], 1:9–14. The '997 application claims the benefit of and priority to U.S. Provisional Patent Application No. 62/144,293, filed on Apr. 7, 2015, and U.S. Provisional Patent Application No. 62/151,174, filed on Apr. 22, 2015. *Id.* at code [60], 1:9–14.

1. Technical Background

High latency results in delays that cause online systems to perform poorly and possibly cease functioning. Ex. 1001, 1:27–32. Prior art solutions include wide area network (WAN) optimization, which requires

“a hardware (HW) device at the edge of a local area network (LAN) which builds a tunnel to another WAN optimization HW device at the edge of another LAN, forming a wide area network (WAN) between them.” *Id.* at 1:38–45. Other approaches include direct point to point connections between LANs, which are expensive and require time to install. *Id.* at 1:59–64. When connections require a gateway (GW) to the general Internet, latency increases. *Id.* at 1:67–2:18.

Another option for creating WAN links from one LAN to another LAN involve[s] the building of tunnels such as IPSec or other protocol tunnels between two routers, firewalls, or equivalent edge devices. These are usually encrypted and can offer compression and other logic to try to improve connectivity. There is little to no control over the routes between the two points as they rely on the policy of various middle players on the internet who carry their traffic over their network(s) and peer to other carriers and or network operators.

Ex. 1001, 2:18–27.

2. The Global Virtual Network of the '595 Patent

“A global virtual network (GVN) is a type of network which offers network optimization over the top (OTT) of the internet.” Ex. 1001, 2:40–43. “Having a secure tunnel between an end point device (EPD) and an access point server (SRV_AP) linked to the broader GVN global network offers many advantages.” *Id.* at 2:43–46. The network system may include a first tunnel connecting an endpoint device and an access point server. *Id.* at 3:8–9. A second tunnel connects the access server and a control server. *Id.* at 3:9–10.

Figure 32 of the '595 patent is reproduced below.

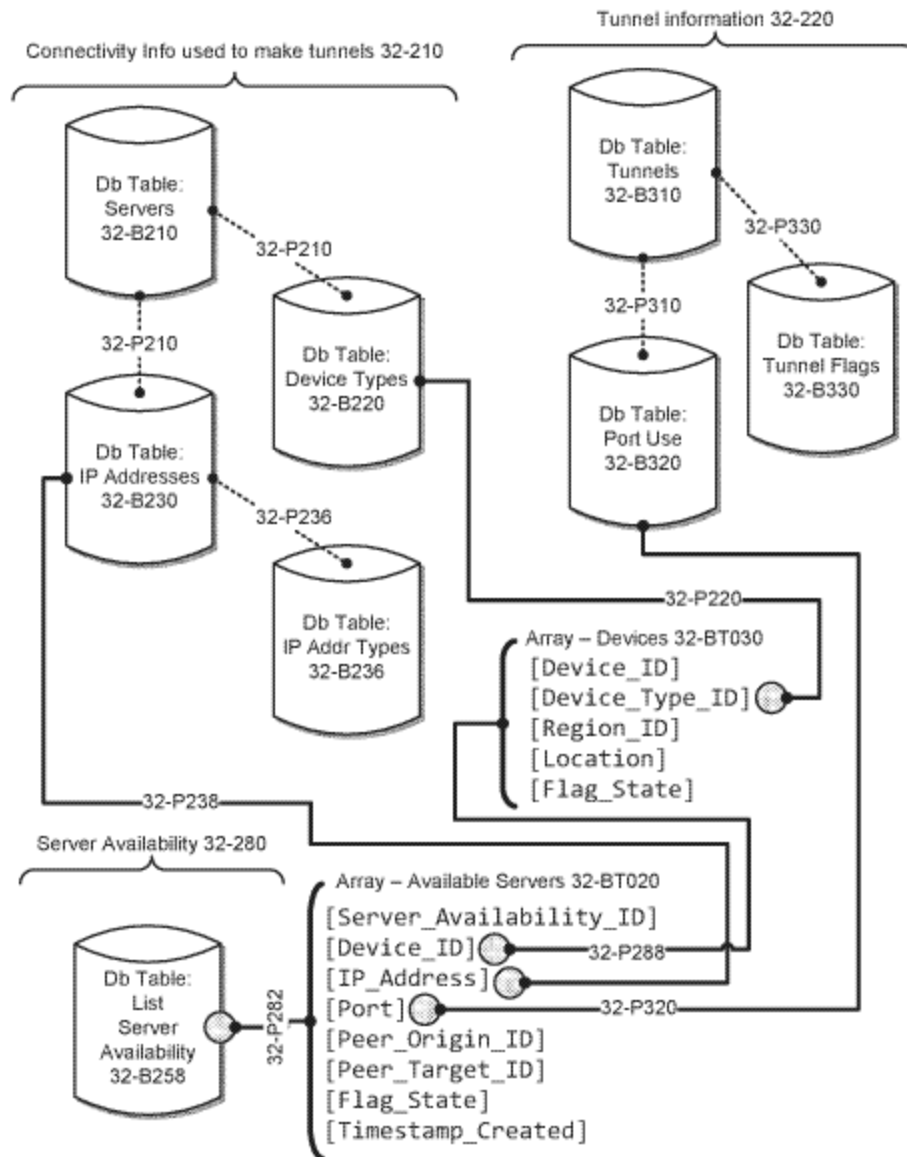


FIG. 32

Figure 32 is a simple example databases schema for relating and storing connectivity information from both tests and production environment usage.

Ex. 1001, 5:7–9, 23:4–6. As shown in Figure 32, “[t]he Server Availability 32-280 module examines current allocation of [Internet Protocol (IP)]

address and port combinations while taking account actual use, Load, and other factors of the live production environment.” *Id.* at 23:11–14.

When a device makes a request to the server availability module, what it is really asking for is a list of available servers, and specifically an IP and port which it could utilize to in the present or in the future to build a tunnel to. Each tunnel has specific information which needs to be known to each pair in the tunnel building process as defined by tables under Tunnel information 32-220.

Id. at 23:17–23.

E. Illustrative Claim

The Petition challenges non-disclaimed claims 15–20, of which claim 15 is an independent claim directed to “[a] network system for managing a global virtual network.” Ex. 1001, 34:4–5. Claims 16–20 all depend from claim 15. *Id.* at 34:25–46. Claim 15 is illustrative of the claimed subject matter and reproduced below:

[15.0]¹ A network system for managing a global virtual network, comprising:

[15.1] an access point server configured to connect to one or more endpoint devices via one or more first tunnels; and;

[15.2] a control server connected to the access point server via a second tunnel, the control server storing one or more records associated with each of the one or more endpoint devices;

[15.3] wherein the control server is configured to receive a request for a list of available servers from a first endpoint

¹ Paragraph labeling in brackets is based on those provided by Petitioner. Pet. 40–52. Patent Owner also adopts this format. *See, e.g.*, PO Resp. 6 n.3 (claim element [15.3]). We adopt the same format for purposes of this Decision.

device among the one or more endpoint devices, the list of available servers including the access point server;

[15.4] retrieve the list of available servers; retrieve the one or more records associated with the first endpoint device, and

[15.5] dynamically order the list of available servers for the first endpoint device based on the one or more records associated with the network device; and

[15.7]² transmit the ordered list of available servers to the first endpoint device.

Ex. 1001, 34:4–24.

F. References

The Petition relies on the following references:

Kommula, US 2010/0153558 A1, published June 17, 2010 (Ex. 1004, “Kommula”); and

Hankins et al., US 10,177,957 B1, issued January 8, 2019 (Ex. 1005, “Hankins”).

G. Asserted Grounds of Unpatentability

Petitioner asserts the challenged claims are unpatentable on the following grounds:

² Petitioner omits limitation identifier [15.6], skipping to limitation identifier 15.7. *See* Pet. 48–52. It appears that limitation [15.4] may be two limitations consolidated into one. Regardless, we proceed with the Petition as it appears of record, without a limitation identifier [15.6].

Grounds ³	Claims Challenged	35 U.S.C. § ⁴	References
1 ⁵	1–14	103	Kommula
2	15–20	103	Hankins
3	15–20	103	Hankins, Kommula

See Pet. 18.

H. Overview of the Prior Art

Hankins is the only prior art needed to decide this case. *See* Section II.E below. Kommula is included for completeness of the record.

1. Hankins (Ex. 1005)

Hankins describes managing networks, including connecting a private network to the Internet and communicating signal packets from a first device in a first logical broadcast domain to another network device in another logical broadcast domain using a tunnel server. Ex. 1005, code [57]. Hankins describes that broadcast domain refers to a set of devices occupying a network address space, in which any device is able to communicate with any other device in the broadcast domain without rerouting transmission. *Id.*

³ Grounds as listed at page 18 of the Petition.

⁴ Because the earliest application from which the '595 patent claims priority was filed after March 16, 2013, the AIA (“America Invents Act”) version of § 103 applies. Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011).

⁵ As a result of the filing of the Statutory Disclaimer, claims 1–14 are no longer at issue. Ex. 3001.

at 6:33–40. A logical broadcast domain means that portions of the broadcast domain may not be entirely related to a particular set of physical devices and instead can be associated with a cloud implemented functionality. *Id.* at 4:12–16, 7:45–50.

Figure 2 of Hankins is reproduced below.

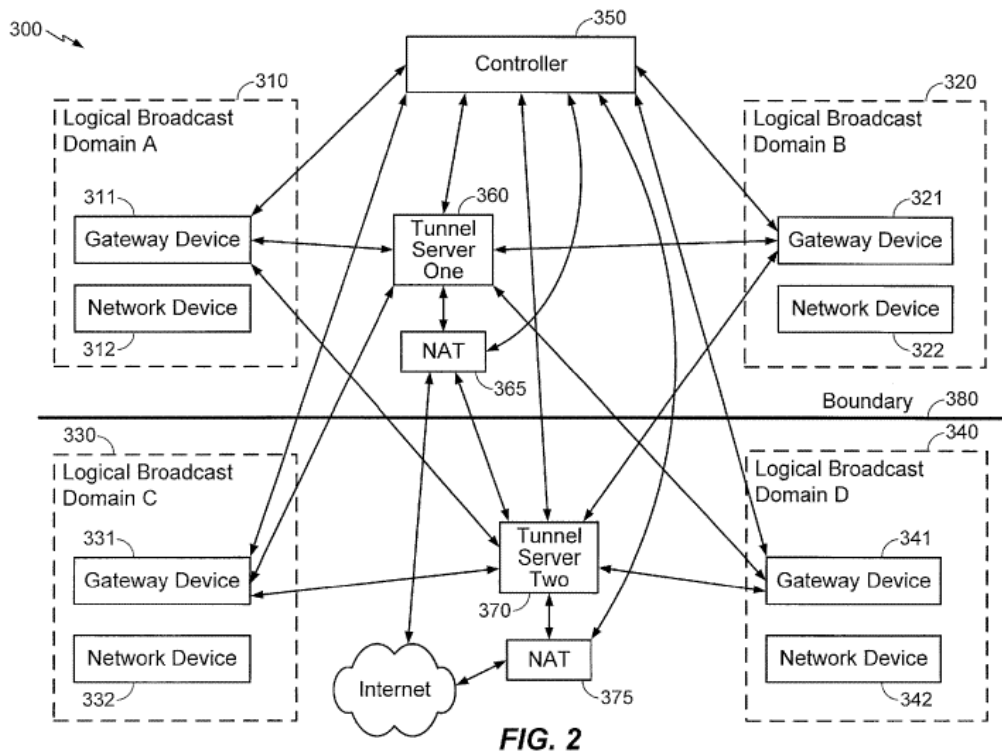


Figure 2 is a schematic diagram illustrating an embodiment to connect a private network to the Internet.

Ex. 1005, 1:45–46. As depicted in Figure 2, four logical broadcast domains A310, B320, C330, and D340 are in communication via one or more tunnel servers 360, 370. *Id.* at 24:45–47, 24:58–67. For example, “[g]ateway devices 311, 321, 331, and 341 may generate a broadcast domain configuration for their respective logical broadcast domains.” *Id.* at 24:47–49. “Gateway devices 311, 321, 331, and 341 may forward

respective broadcast domain configurations to controller 350,” which provisions tunnel server one 360. *Id.* at 24:49–52.

The communication channel between remote physical locations, e.g., Los Angeles and New York, may be enhanced by provisioning a tunnel server located more physically proximate to endpoints. Ex. 1005, 25:7–18. “A path or channel . . . may potentially be enhanced by controller 350 provisioning an additional tunnel server located more physically proximate to logical broadcast domain C 330 and logical broadcast domain D 340” *Id.* at 25:15–19.

Hankins’s servers, “which may comprise a computing device, may also operate as network device[] by serving content over a network.” Ex. 1005, 8:19–22. “Examples of content may include text, images, audio, video, the like, or any combinations thereof.” *Id.* at 8:33–34. As to the requested services, Hankins discloses that a network device may simplify conventional routing by discovering and/or requesting “services available [from] network devices of another logical broadcast domain while still communicating via their respective logical broadcast domains.” *Id.* at 12:9–16.

2. *Kommula* (Ex. 1004)

Kommula discloses a global server load-balancing (GSLB) switch, which “serves as a proxy to an authoritative DNS^[6] and communicates with numerous site switches that are coupled to host servers serving specific applications.” Ex. 1004, code [57]. Kommula describes existing methods

⁶ “Domain name server.” Ex. 1003 ¶ 69.

for communicating between applications over a network, like the Internet, using transmission control protocol/Internet protocol. *Id.* ¶ 5. According to existing methods, when a client provides a URL⁷ “to request access to an application program or another type of resource, the host name portion of the URL needs to be resolved into an IP address of a server for that application program or resource.” *Id.* If a corresponding IP address is not locally cached in a DNS server, the DNS server dispatches a recursive query to another DNS server. *Id.* “This process is repeated until an authoritative DNS server for the . . . [URL] is reached.” *Id.*

Kommula identifies shortcomings of existing methods including distance, which can be international, resulting from differences in location between the host server location and a client. Ex. 1004 ¶ 7. Further, invalid IP addresses resulting from a downed server persist until the invalid IP address expires. *Id.*

⁷ “Universal Resource Locator.” Ex. 1003 ¶ 75.

Figure 1 of Kommula is reproduced below.

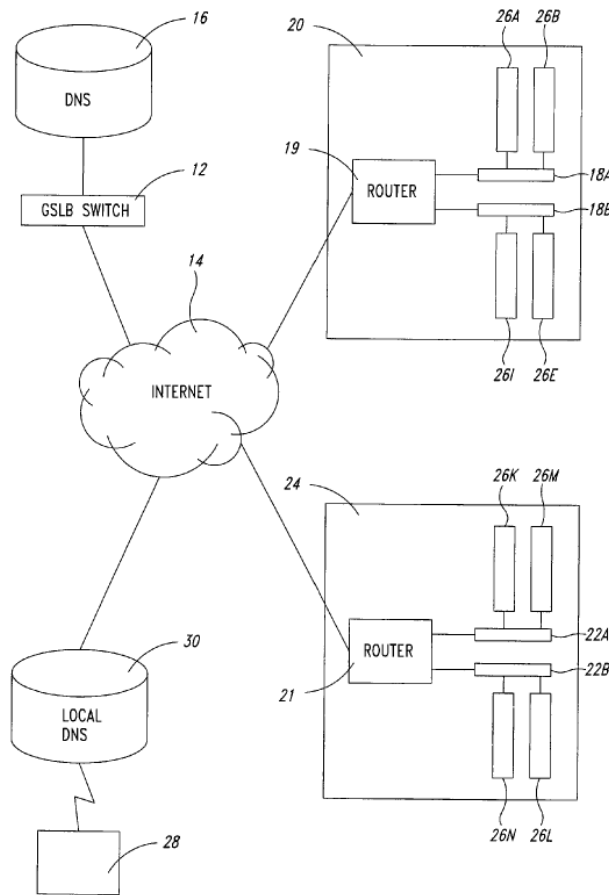


Fig. 1

Figure 1 illustrates a global server load-balancing configuration.

Ex. 1004 ¶ 12. Figure 1 shows “client program 28 connected to Internet 14, and communicates with local DNS server 30.” *Id.* ¶ 19. When a browser on client program 28 requests a web page with a URL, a query is sent to local DNS server 30 to resolve the URL to an IP address of a host server. *Id.* Client program 28 receives from DNS server 30 a list of IP addresses corresponding to the resolved host name, which are either retrieved from local DNS server 30’s cache, if not expired, or “from GSLB switch 12, as a result of a recursive query.” *Id.*

Differing from existing methods described above, the “list of IP addresses is ordered by GSLB switch 12 based on [performance] metrics.” Ex. 1004 ¶ 19. “In one embodiment, GSLB switch 12 determines which site switch would provide the best expected performance (e.g., response time) for client program 28 and returns the IP address list with a virtual IP address configured at that site switch placed at the top” as either a ranking or by weighting the IP addresses. *Id.* ¶ 20. “Client program 28 can receive the ordered list of IP addresses, and typically selects the first IP address on the list to access the corresponding host server.” *Id.* Other performance metrics include availability metrics, load metrics, proximity metrics, and the topological distance between the host server and the client program measured in the number of hops between the server and the client. *Id.* ¶ 9.

II. ANALYSIS OF THE CHALLENGED CLAIMS

A. Level of Ordinary Skill in the Art

Petitioner alleges a person of ordinary skill in the art “would have been familiar with using cloud based resources offered on top of regular Internet connections to provide virtual networks and the formation of tunnels and the associated protocols as demonstrated by the prior art references and description in the [Petition].” Pet. 14 (citing Ex. 1003 ¶ 55; Pet. 15–18).

Petitioner further alleges a person of ordinary skill in the art

would have gained knowledge of these concepts through a mixture of training and work experience, such as by having a Bachelor’s degree in computer science and two years of experience; or by obtaining a Master’s degree in computer science, but having only one year of experience; or by having no formal education but experience in storage systems of at least four years.

Id. at 14–15 (citing Ex. 1003 ¶ 56).

Patent Owner does not dispute Petitioner’s proposal of the level of ordinary skill in the art. PO Resp. 6. Petitioner’s proposal is supported by the Reddy Declaration and is consistent with the ’595 patent and the asserted prior art. Accordingly, we apply Petitioner’s articulation in our obviousness evaluation below.

B. Claim Construction

Beyond plain and ordinary meaning, Petitioner does not propose any term for claim construction. Pet. 13. Patent Owner does not argue any claim construction issue. *See generally* PO Resp.

The argument and evidence provided by the parties regarding limitation 15.3 is dispositive. *See* Section II.E. below. Our analysis of limitation 15.3 does not turn on any claim construction question. *Id.* Accordingly, we do not need to construe any claim term. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). We apply the plain and ordinary meaning of all claim terms, as would have been understood by a person of ordinary skill in the art, in the context of the ’595 patent.

C. Obviousness

A claim is unpatentable as obvious under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious before the effective

filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called “secondary considerations,” including commercial success, long-felt but unsolved needs, failure of others, and unexpected results. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Neither party has presented any evidence on the fourth *Graham* factor.

D. Claims 1–14 as Obvious Over Kommula

As already noted, Patent Owner has disclaimed claims 1–14. Ex. 3001. We do not analyze claims 1–14 as the challenge is mooted by the filing of the Statutory Disclaimer.

E. Claims 15–20 as Obvious Over Hankins Alone or Hankins and Kommula

Petitioner argues claims 15–20 are unpatentable because they would have been obvious over Hankins alone. Pet. 37–54. Alternatively, Petitioner argues claims 15–20 would have been obvious over Hankins and Kommula. *Id.* at 50–51. Petitioner cites to the Reddy Declaration for evidentiary support. Ex. 1003 ¶¶ 127–152 (Hankins alone), 153–166 (Hankins and Kommula).

Petitioner relies on Hankins alone to show limitation 15.3. Pet. 45–47. Kommula is not cited as support. Patent Owner argues that Hankins does not teach limitation 15.3. PO Resp. 7–12. For the reasons discussed

below, Petitioner has not shown by a preponderance of the evidence that limitation 15.3 is taught by Hankins.

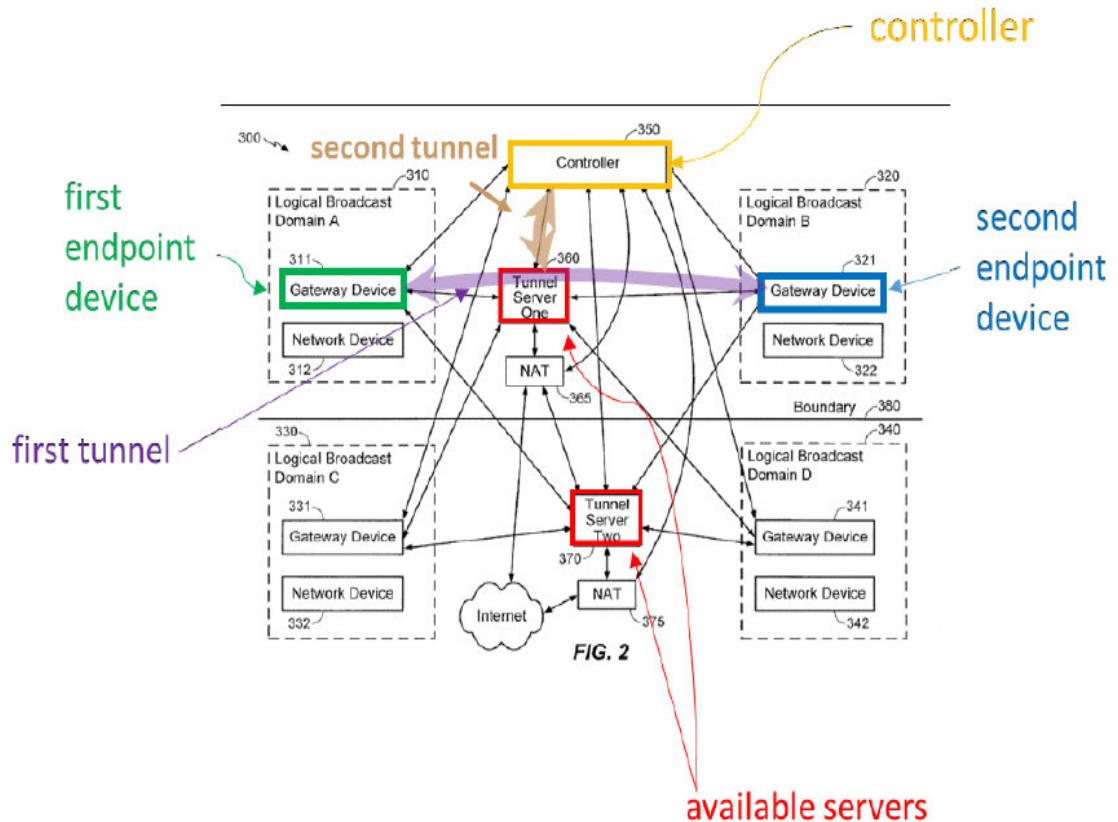
1. Limitation 15.3

Limitation 15.3 recites “wherein the control server is configured to receive a request for a list of available servers from a first endpoint device among the one or more endpoint devices, the list of available servers including the access point server.” Ex. 1001, 34:12–16. Petitioner alleges Hankins alone teaches limitation 15.3. Pet. 45–47 (citing Ex. 1005, 12:9–16, 25:45–55; Ex. 1003 ¶¶ 139–142; Ex. 1001, 23:11–24).

Petitioner alleges limitation 15.3 is shown because Hankins discloses that controller 350 (Hankins, Fig. 2 reproduced in Section I.H.1 above) receives a request from gateway device 311 for a list of available servers, which include tunnel servers 360, 370. Pet. 45–46. For example, Petitioner argues that Hankins discloses “that gateway 311 in one logical broadcast domain, may request services available from gateway 321 in another logical broadcast domain.” *Id.* at 46 (citing Ex. 1005, 12:9–16).

Petitioner’s position is shown in the Second⁸ Annotated Figure 2 of Hankins, reproduced below.

⁸ Hankins’s Figure 2 is first annotated by Petitioner in support of its showing for limitation 15.1. Pet. 42.



Second Annotated Figure 2 of Hankins.

Pet. 44 (citing Ex. 1005, Fig. 2 annotated at Pet. 44; Ex. 1003 ¶ 135).

Petitioner argues the Second Annotated Figure 2 of Hankins shows “tunnel servers 360 and 370 can be used to establish communications between gateway 311 and 321.” *Id.* at 46 (citing Second Annotated Figure 2 at Pet. 44; Ex. 1003 ¶ 135). Petitioner argues “[t]his is consistent with the disclosure of the ’595 Patent that explains that when a device makes a request to a server, what it is really asking for is a list of available servers, and specifically an IP and port which it could utilize to . . . build a tunnel.” *Id.* (citing Ex. 1001, 23:11–24; Ex. 1003 ¶¶ 139, 140).

In addition, Petitioner argues that Hankins, via controller 350, teaches “a private network may be reconfigured without human intervention, for example, to improve performance and/or reduce cost.” Pet. 46. Petitioner further argues, “if latency increases, and/or if network utilization increases, controller 350 may provision additional tunnel servers or may provision tunnel servers in a manner to improve performance and/or reduce cost without human intervention.” *Id.* (citing Ex. 1005, 25:45–55; Ex. 1003 ¶ 141).

Patent Owner first argues “[t]here is no factual or technical basis in the record to conclude that the claimed ‘request for a list of available servers . . . including the access point server’ is the same as the Hankins disclosure of a ‘request [for] services available via network devices’ from one logical broadcast domain to another.” PO Resp. 7 (alterations in original). Patent Owner also notes Petitioner’s argument paraphrasing Hankins’s column 12 that a request from gateway device 311 for a list of available servers, which include tunnel servers one and two 360, 370, does not support the assertion that Hankins teaches limitation 15.3. *Id.* n.4. According to Patent Owner, Hankins actually teaches “use of a network device . . . to discover and/or request services available via network devices of another logical broadcast domain while still communicating via their respective logical broadcast domains.” *Id.* (quoting Ex. 1005, 12:9–16).

Patent Owner cites the same column 12 teaching in Hankins relied on by Petitioner as failing to point to any disclosure in Hankins to suggest “receiv[ing] a request for a list of available servers.” PO Resp. 8 (citing Pet. 46 (citing Ex. 1005 at 12:9–16)). Patent Owner alleges “Hankins never

discloses a controller-provided option to select from *either* ‘tunnel server one 360’ *or* ‘tunnel server two 370.’” *Id.* at 9.

Patent Owner argues that Petitioner cannot rely on the knowledge of a person of ordinary skill in the art to “equate a request for ‘*services*’ with a request for ‘*a list of available servers*.’” PO Resp. 10 (citing Pet. 46).

Along the same vein, Patent Owner also argues Petitioner improperly uses the ’595 patent as a “roadmap” to make its showing that Hankins teaches limitation 15.3. PO Resp. 12–14; *see* Pet. 46 (citing Ex. 1001, 23:11–24).

Patent Owner alleges Petitioner mischaracterizes the ’595 patent by asserting that when “a device makes a request to a server, what it is really asking for is a list of available servers.” PO Resp. 12 (citing Pet. 46 (citing Ex. 1001, 23:11–24)). Patent Owner states that there is no such statement in the ’595 patent. *Id.* at 13. As Patent Owner points out, the actual quote from the ’595 patent is “[w]hen a device makes **a request to the server availability module**, what it is really asking for is a list of available servers” *Id.* (quoting Ex. 1001, 23:17–19) (emphasis in original). Patent Owner emphasizes that the functionality is associated with the “server availability module,” and not a general request for a “list of available servers.” *Id.* at 13–14. Patent Owner quotes from the Reddy Declaration to explain how the “server availability module” functions, including “compil[ing] a custom-made list” of options for “endpoint devices to utilize.” *Id.* (citing Ex. 1003 ¶ 48 (citing Ex. 1001, 27:20–31)).

Petitioner responds to the argument by again arguing Hankins’s controller 350 that generates a listing of “services” meets limitation [15.3]. Pet. Reply 4. Petitioner asserts Hankins’s “request to access content from a

remote server is sent to the availability module and treated as a request for available servers.” *Id.* at 4–5.⁹

Based on the complete record, we determine that Hankins’s controller 350 receiving a request for a listing of “services” from a gateway device and provisioning one or more tunnel servers has not been shown to teach generating “a list of available servers.” There is no persuasive evidence to support Petitioner’s assertion. Petitioner relies on unsupported argument because, at best, Hankins discloses gateway devices 311 and 321, each of which is located in different logical broadcast domains, requesting services from one another. Ex. 1005, 12:9–16. This particular disclosure, however, does not appear to implicate the functionality of Hankins’s controller 350, much less result in controller 350 generating a list of available tunnel servers that would allow gateway devices 311 and 312 to exchange a listing of “services” therebetween. Petitioner’s reliance on Hankins’s controller 350 provisioning additional tunnel servers both to improve performance and without human intervention fares no better. Ex. 1005, 25:45–55. There is no indication in Hankins that this provisioning performed by controller 350 is done in response to receiving a request for a list of available tunnel servers from either gateway device 311 or 312.

⁹ Petitioner provides no support for this statement. At the hearing on this case the same assertion was repeated. Tr. 11:11–13:2. At the hearing, Petitioner acknowledged “Hankins in itself doesn’t explicitly disclose that controller 350 receives a request for a list of available servers.” *Id.* at 11:18–21.

To the extent that Petitioner impermissibly relies upon the '595 patent and uses it as a guide¹⁰ in support of its argument that Hankins teaches limitation 15.3, which would be improper in an obviousness evaluation, we agree with Patent Owner that Petitioner's argument is flawed. There is no description in the '595 patent that a request to a server is "really asking for is a list of available servers." As Patent Owner alleges and as discussed below, Petitioner's reliance on the functionality of the '595 patent "server availability module," which Petitioner does not appear to equate with any component illustrated in Hankins's Figure 2 embodiment, is not a request for a list of available servers.

As previously noted, the Reddy Declaration asserts that Hankins teaches requesting a list of available servers by opining that a person of ordinary skill in the art would have understood that "a request from gateway [device] 311 for services available from gateway [device] 321 is a request

¹⁰ "The pertinence of the reference as a source of solution to the inventor's problem must be recognizable with the foresight of a person of ordinary skill, not with the hindsight of the inventor's successful achievement." *Sci. Plastic Prods., Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014). Merely indicating that a skilled artisan *could have* made such modifications to arrive at the claimed invention does not establish that a person of ordinary skill *would have* made such modifications. See *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). "Although the *KSR* test is flexible, the Board 'must still be careful not to allow hindsight reconstruction of references . . . without any explanation as to *how* or *why* the references would be combined to produce the claimed invention.'" *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016).

for available tunnel servers that can provide a tunnel between gateway [devices] 311 and 321.” Ex. 1003 ¶ 140. This testimony does not alter our determination because, apart from citing to the ’595 patent, Dr. Reddy does not cite to any other underlying facts or data for support. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”). Petitioner does not assert anything to the contrary in its Petitioner Reply. *See* Pet. Reply.

Petitioner alleges that, the Hankins’s control server (i.e., controller 350) is like the ’595 patent’s “server availability module.” Pet. Reply 6 (*compare* Ex. 1001, 23:11–24 *with* Ex. 1005, 25:7–25, 26:55–65). According to Petitioner, both provide “a list of available servers to a gateway.” *Id.*

We disagree with Petitioner’s assertion of equivalency in this regard for two reasons. First, there is no dispute that Petitioner argues that Hankins’s controller 350 teaches the “control server” required by limitation 15.2. *See* Pet. 43. Petitioner, however, fails to explain adequately how Hankins’s controller 350 amounts to the claimed “control server,” yet at the same time, includes a software module that possesses the same functionality as the ’595 patent’s “server availability module.”

Second, as Patent Owner argues, Petitioner does not direct us to, nor can we find, where Hankins’s controller 350 is identified as having a software module that “has any such listing capability.” PO Sur-reply 7. We also agree with Patent Owner that, if Hankins explicitly taught controller 350 (or a software module included therein) providing a list of available servers, it should have been cited in the Petition itself. *Id.* Fundamentally,

as already discussed, Hankins’s controller 350 does not “receive a request for a list of available servers from a first endpoint device,” as recited in limitation 15.3.

On the complete record, and for reasons stated above, Petitioner has not sufficiently shown Hankins teaches limitation [15.3].

2. Limitation 15.5

Patent Owner also disputes Petitioner’s showing regarding limitation 15.5, which recites “dynamically order the list of available servers for the first endpoint device based on the one or more records associated with the network device.” PO Resp. 14–17. Having determined Petitioner has not shown Hankins teaches limitation 15.3, we need not determine if Petitioner has shown that Hankins teaches limitation 15.5.

3. Dependent Claims 16–20

By virtue of dependency, claims 16–20 include the same limitations as independent claim 15. Because Petitioner has not shown independent claim 15 is unpatentable, Petitioner also has not shown the unpatentability of claims 16–20.

4. Summary

Petitioner has not shown by a preponderance of the evidence that claims 15–20 would have been obvious over Hankins alone or Hankins and Kommula.

III.CONCLUSION¹¹

For the foregoing reasons, Petitioner has not shown by a preponderance of the evidence that claims 15–20 are unpatentable.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–14 ¹²	103	Kommula		
15–20	103	Hankins		15–20
15–20	103	Hankins and Kommula		15–20
Overall Outcome				15–20

IV. ORDER

In consideration of the foregoing, it is

ORDERED that Petitioner has not shown that challenged claims 15–20 are unpatentable; and

¹¹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹² As a result of the filing of the Statutory Disclaimer, we need not reach claims 1–14 because they are no longer at issue. Ex. 3001.

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FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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