

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,

Petitioner,

v.

UMBRA TECHNOLOGIES LTD.

Patent Owner.

Case No. IPR2024-00270

U.S. Patent No. 11,108,595

PATENT OWNER'S PRELIMINARY RESPONSE

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Patent Owner UMBRA Technologies Ltd. (“Patent Owner” or “UMBRA”) respectfully submits this preliminary response to Cisco System, Inc.’s petition (“Petition”) seeking *inter partes* review of U.S. Patent No. 11,108,595 (“the ’595 patent”). For the following reasons, the Board should decline to institute *inter partes* review.

I. INTRODUCTION

For element 15.3, nothing in Hankins discloses or suggests requesting a list of available servers from the controller as argued in the Petition. The Petition argues that what Hankins discloses (*i.e.*, a request from one gateway to another gateway for services) is “really” a request for a list of available servers, but that assertion finds no support in the record. The Petition points to a passage in the ’595 patent specification and argues that Hankins’ system is equivalent, but that is flatly incorrect. What is described in the ’595 patent specification bears no resemblance to Hankins’ system. Hankins wholly fails to disclose or suggest requesting a list of available servers from the controller as required in element 15.3.

For element 15.2, the Petition and Reddy declaration (which are in relevant respect word-for-word identical) argue merely that use of tunnels to communicate with controllers is “well known” and thus the relevant controller connection in Hankins “could be” a tunnel as recited in the claim. This is the same type of flawed obviousness argument that the Federal Circuit recently rejected in *Virtek Vision Int’l*

ULC v. Assembly Guidance Sys., Inc., 97 F.4th 882, 888 (Fed. Cir. 2024) (In reversing the Board’s obviousness finding, noting that the Petitioner’s argument boiled down to “an assertion that because two coordinate systems were disclosed in a prior art reference and were therefore ‘known,’ that satisfies the motivation to combine analysis.”)

Since claims 1-14 are concurrently herewith statutorily disclaimed and the remaining claims depend from claim 15, for which the Petition fails to make a *prima facie* case of obviousness, the Petition should be denied.

II. ARGUMENT

A. Hankins Does Not Disclose that a Control Server Receives a Request for Lists of Available Servers from the Controller (Claim Element 15.3)

Claim element 15.3 recites that 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 end-point devices, the list of available servers including the access point server.” Ex. 1001, 34:14-17.

Petitioner’s argument concerning element 15.3 is premised on the following assertions concerning Hankins:

For example, Hankins discloses that gateway 311 in one logical broadcast domain, may request services available from gateway 321 in another logical broadcast domain. *EX-1005* 12:9-16. *The controller identifies potential tunnel servers that are available to provide a tunnel*

between gateway 311 to [sic] gateway 321. For example, as shown in Annotated FIG. 2, tunnel servers 360 and 370 can be used to establish communications between gateway 311 and 321 [sic].

Petition at 46 (emphasis added).

The italicized sentence implies (incorrectly) that the controller identifies tunnel servers in response to one gateway's request for services from another gateway. There is no such disclosure in Hankins, which is why the Petition provides no citation for that sentence. Dr. Reddy's declaration adds nothing on this issue, as it is word-for-word identical to the Petition. *See* Ex. 1003 ¶¶ 139, 140.

From the foregoing, the Petition jumps to the conclusion that any request for services from a remote gateway device is, in actuality, a request for a list of available servers.

Thus, a POSITA understood that a request from gateway 311 for services available from gateway 321 is a request for available tunnel servers that can provide a tunnel between gateway 311 and 321 [sic]. This is consistent with the disclosure of the '595 Patent 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 in the [sic] build a tunnel. *EX-1001* 23:11-24; *EX-1003* ¶¶ 139, 140.

Petition at 46.

Patent Owner will first address the actual disclosure of Hankins and then will turn to Petitioner's characterization of the '595 patent specification.

Hankins does not teach **any** gateway making **any** request to a controller for a list of available servers including **any** tunnel server. Each time Hankins provisions a tunnel server, it simply informs each gateway in the private network *at that time* how to reach that tunnel server, with no requests, lists, or dynamic reordering at all. Ex. 1005, 19:32-35; 25:22-26. Fig. 4 of Hankins illustrates that the controller initiates transmission of the server address to all gateway devices (block 422) with no preceding or intervening list request from any gateway. ***Hankins wholly fails to envision a controller waiting for end points to ask for lists of access points***, much less customized lists as claimed.

Turning to Petitioner's argument that a request by gateway 311 for services from gateway 321 is "really" a request for a list of available servers, as evidenced by the cited teachings in the '595 patent specification. That is simply not correct.

The passage of the '595 patent specification relied upon in the Petition (reproduced below) describes something fundamentally different than what is described in Hankins – a request to a *server availability module*. These portions of the '595 patent specification can be fairly read to convey the unremarkable principle that requests to a *server availability module* are "really" requests for a list of available servers.

The Server Availability 32-280 module examines current allocation of IP address and port combinations while taking account actual use, load, and other factors of the live production environment. It further analyzes

the potential impact of assigned but standby allocations to predict the impact of those resource demands going live.

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.

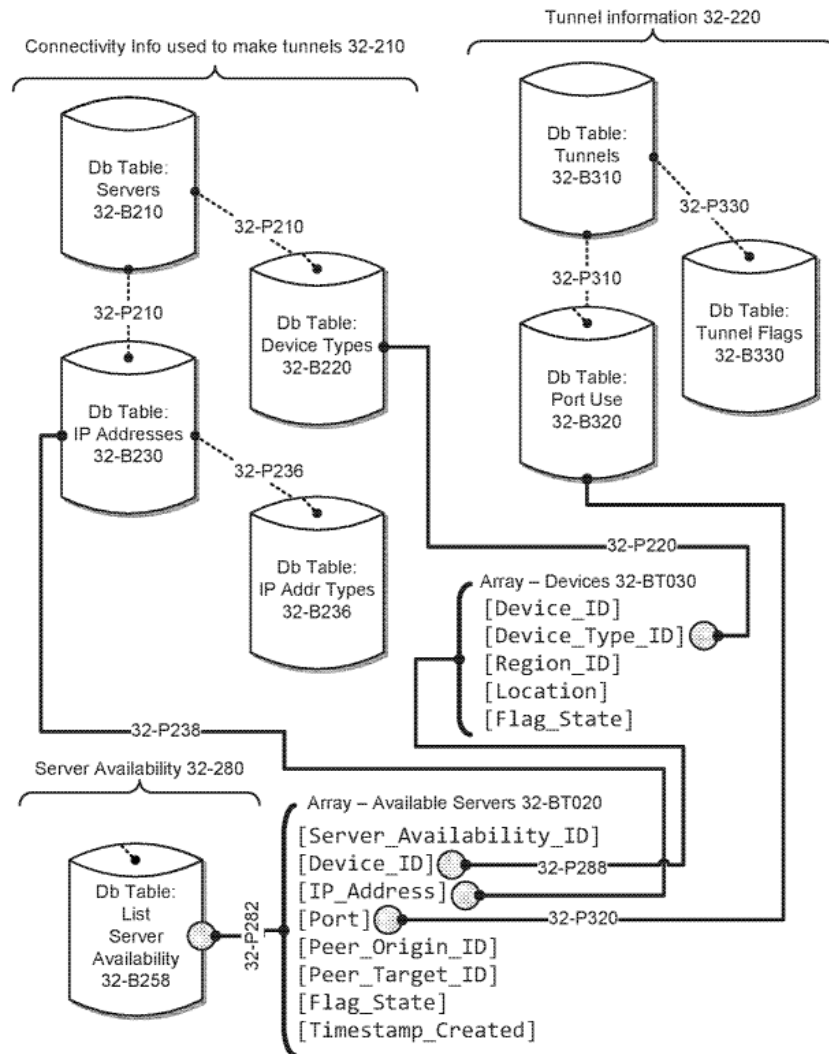


FIG. 32

Ex. 1001, 23:11-23, FIG. 32.

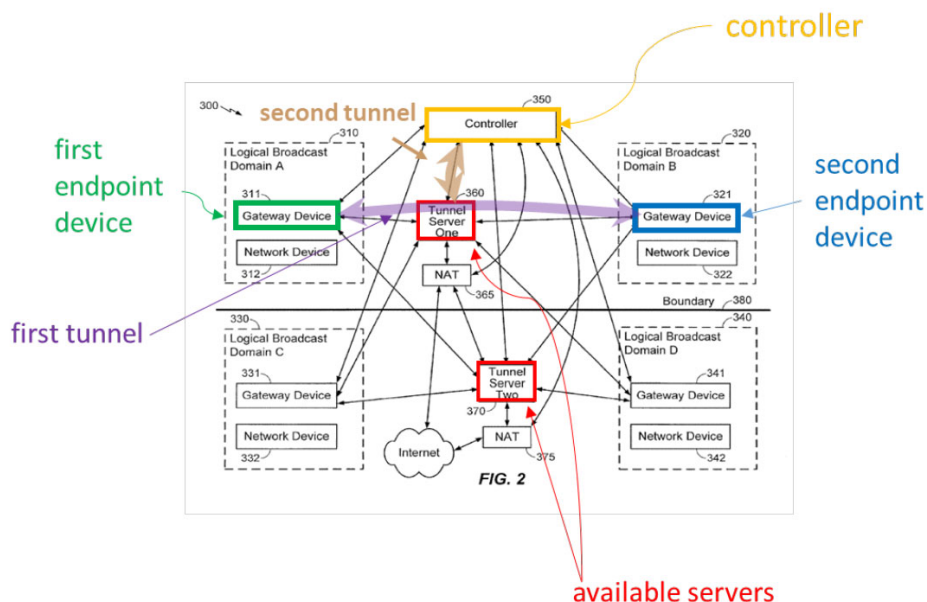
Accordingly, the Petition's assertion that a Hankins' gateway-to-gateway request for services is "really" a request for a list of available tunnel servers is wholly unsupported. Hankins discloses nothing like a server availability module, and there is nothing in the cited passages of the '595 patent specification that provides a bridge from Hankins' disclosure to claim element 15.3.

B. The Petition Completely Fails to Identify Any Motivation or Rationale to Implement a Tunnel for the Controller-to-Access-Point-Server Connection in Hankins (Claim Element 15.2)

The Petition's "Detailed Application of Hankins" to claim element 15.2 is reproduced below in relevant respect. The entirety of Petitioner's argument concerning the first clause of claim element 15.2 (the "*controller-to-access-point-server tunnel*" limitation) is as follows:

Hankins discloses that a controller (yellow) (*a control server*) is connected to a tunnel server (red) (*access point server*) via a *second tunnel* (yellow). Although Hankins does not expressly state that the communication path shown in FIG. 2 between controller 350 and tunnel sever 360 or tunnel server 370 is a tunnel, a POSITA understood this path could be a tunnel. For example, Hankins discloses that a gateway can operate as a controller, and further discloses that the communication path between a gateway and a tunnel server is via a tunnel. *EX-1005* 14:41-49; 12:1-25. Further, as discussed in the State of the Art, it was known to use a tunnel between an access point and the controller. *EX-1006* [0013]. Thus, a POSITA understood that controller could be implemented in a gateway which is connected to a tunnel server via a second tunnel. *EX-1003* ¶¶ 131,132.

...

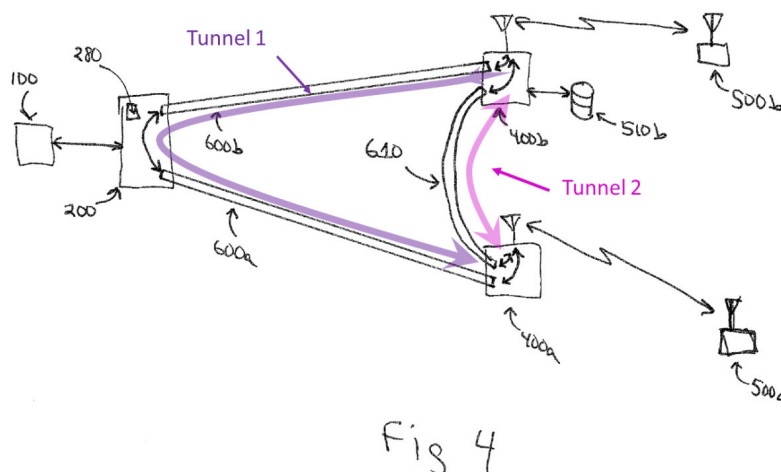


Petition at 43-44 (emphasis and color annotations in original).

The State of the Art section referenced by Petitioner (which, again, is word-for-word identical to the supporting Reddy declaration) states only that use of tunnels to communicate with controllers was “known.” The relevant portion of the State of the Art section is reproduced below:

1. Communication Tunnels

The use of “tunnels” was well known in the art. For example, Iyer (2010) disclosed a plurality of communication paths (tunnels 1 and 2) between wireless clients, which were identified as “peer-to-peer tunnels” established between “any two clients in the mobility domain” to route traffic between the clients. Traffic between the clients pass through the tunnels and intermediate access point servers. EX-1006 [0015], [0030]; *EX-1003* ¶ 60.



EX-1006 Fig. 4; *EX-1003* ¶ 60.

The two communication paths connecting wireless clients 500a and 500b are “form[ed]” by access nodes 400a and 400b, because access nodes 400a and 400b “establish” the tunnel 610, or tunnels 600a and 600b.

[M]obility manager 280 instructs access node 400a to establish peer-to-peer tunnel 610 between access node 400a and access 400b.

EX-1006 [0030]; *EX-1003* ¶ 61.

In addition, the access nodes 400a,b can also be connected to controller 200 via tunnels:

[T]he access nodes establish communications with the controller using tunnels.

EX-1006 [0013]; *EX-1003* ¶ 62.

Id. at 15-17.

To summarize the foregoing, the Petition appears to make two arguments concerning how Hankins might meet claim element 15.2: 1) that a skilled artisan understood that the communication path between Hankins' controller 350 and tunnel server 360 "*could be a tunnel*" as claimed (Petition at 43) because such connections were "known" (*Id.* at 15-17), and 2) "Hankins discloses that a gateway can operate as a controller, and further discloses that the communication path between a gateway and a tunnel server is via a tunnel." (*Id.* at 43).

These arguments will be addressed in turn.

1. Merely Asserting that the Controller-Tunnel-Server Connection *Could Be* a Tunnel is Insufficient as a Matter of Law

The Petition, which is word-for-word identical to the supporting declaration of Dr. Reddy, argues principally that use of tunnels to communicate with controllers is "well known" and thus the relevant controller connection in Hankins "could be" a tunnel as recited in the claim. (Petition at 15-16 and 46). This argument fails as a matter of law under the Federal Circuit's precedential *Virtek Vision* decision.

In *Virtek Vision*, the Federal Circuit observed that Virtek's petition was based on the erroneous premise that the mere fact that a feature is well known could be sufficient to support a finding of obviousness:

There was no argument in the petition regarding why a skilled artisan would make this substitution—other than that the two different coordinate systems were "known to be used." The petition does not argue Briggs articulates any reason to substitute one for another or any

advantages that would flow from doing so. Nor does Dr. Mohazzab, Aligned Vision's expert, articulate any reason why a skilled artisan would combine these references. In his declaration, he testified "it would have been obvious" to use the 3D coordinates instead of angular measurements because "both such measurement systems were known."

97 F.4th at 887 (internal citations omitted).

Chief Judge Moore explained that this argument misapprehended the law of obviousness. "*KSR* did not do away with the requirement that there must exist a motivation to combine various prior art references in order for a skilled artisan to make the claimed invention." *Id.* In reversing the Board's determination of obviousness, the Court noted a complete lack of substantial evidence supporting a motivation to combine a reference with "known" art:

[T]here was no argument about common sense in the petition or in Dr. Mohazzab's declaration. There was no evidence that there are a finite number of identified, predictable solutions. There is no evidence of a design need or market pressure. In short, this case involves nothing other than an assertion that because two coordinate systems were disclosed in a prior art reference and were therefore "known," that satisfies the motivation to combine analysis. That is an error as a matter of law. It does not suffice to simply be known. A reason for combining must exist.

Id. at 887-88 (internal citations omitted).

Cisco's Petition suffers from precisely the same defect. As discussed above, the Petition and the verbatim expert declaration merely state that use of tunnels to

communicate with controllers “was known.” That, however, is insufficient to support an obviousness finding as a matter of law.

2. Petitioner’s Second Argument is Unduly Vague and, to the Extent it is Considered by the Board and Understood by the Patent Owner, Fails for Multiple Reasons

The Petition also contains an isolated sentence that vaguely presents what could be intended to be a discrete argument: “Hankins discloses that a gateway can operate as a controller, and further discloses that the communication path between a gateway and a tunnel server is via a tunnel.” Petition at 43. *See* Ex. 1003 ¶131. Dr. Reddy’s declaration provides no additional context or explanation – here again it is a verbatim copy of the Petition (or vice versa).

As best this statement can be understood, the Petition is implying that because Hankins passes domain-to-domain traffic through gateway-to-tunnel-server tunnels, and separately states (in a catch-all paragraph) that controller functionality may be built into one of the gateway devices, it necessarily follows that any controller functionality built into a Hankins’ gateway would communicate non-domain-to-domain traffic to the tunnel server via a tunnel. Stated another way, the *Petition may be suggesting an alternative application of Hankins to the claims*, wherein the controller functionality is built into a gateway and uses a tunnel to send control information to the tunnel server.

At the outset, presenting an argument by implication is not sufficient under the rules. The Petition must set forth its explanation as to each element expressly and in detail. 37 C.F.R. § 42.22(a)(2) (the petition must include “a detailed explanation of the significance of the evidence”); *Id.* § 42.104(b)(5) (the Board may “give no weight to the evidence where a party has failed to state its relevance”). Failing to do so is severely prejudicial to the Patent Owner for the reason manifested in this section, namely, the Patent Owner is put in position of needing to guess at what argument Petitioner actually intends to make in the proceeding. This second argument – which is not clearly understood and to which the Petition only alludes – should therefore not be considered.¹

If the Board is inclined to consider this veiled argument, it still fails for multiple reasons (again, to the extent the argument is understood by Patent Owner). Firstly, if the controller functionality were built into a Hankins’ gateway, the control data for a tunnel server would of course *not* be sent on the same communication stream or channel as the domain-to-domain network data (because the control information would be exposed to the network user/endpoint). A separate communication pathway would be used, and Hankins nowhere discloses or remotely

¹ Petitioner should not be afforded an opportunity to expand on this argument in a reply to the Patent Owner’s preliminary response. A reply brief is not a mechanism to modify the manner in which an argument was presented in the Petition.

suggests that control commands and information would be communicated via a tunnel. Hankins' controller and tunnel servers exist in a private network and are trusted with all connection information for the entire network. *See, e.g.*, Ex. 1005 at 13:47-14:18. There is no reason to create a tunnel (e.g., a VPN tunnel) to carry the communications between the control module (wherever it is physically located) and the tunnel servers because both are trusted and already have access to all sensitive data or information (for all network connections) which might be exchanged between the controller and the tunnel server. Using a controller-to-tunnel-server tunnel in this architecture would impose all the latency, overhead, cost and complexity associated with tunnels without providing any benefit whatsoever.

Second, the Petition provides no explanation how the remaining claim elements (15.3 to 15.7) would be met if certain of Hankins' controller functionality was built into one of the gateway devices 311, 321. The Petition's arguments for elements 15.3 to 15.7 are limited to explaining how Hankins' controller 350 has functionality that meets those elements. The Petition provides no alternative rationale as to how Hankins would meet those claim elements if one of the gateway devices 311, 321 served as both the endpoint and controller. Such an explanation was required if the Petitioner sought to rely on such an alternative "mapping" of Hankins to the claim elements. 37 C.F.R. § 42.104(b)(4) ("The petition must specify

where *each element* of the claim is found in the prior art patents or printed publications relied upon.”) (emphasis added).

To summarize with respect to element 15.2, Petitioner’s primary argument is that Hankins “could be” equipped with the recited tunnel connection between the controller and the tunnel server because tunnel connections were “well known.” That argument fails as a matter of law and the Petition must be denied for that reason. The second, veiled argument also fails (to the extent it is understood) for the reasons provided immediately above.

C. The Remaining Claims (1-14) Have Been Statutorily Disclaimed

Concurrently herewith, Patent Owner has filed a statutory disclaimer of claims 1-14 under 37 C.F.R. § 1.321(a). Under 37 C.F.R. § 42.107(e), no *inter partes* review may be instituted based on disclaimed claims.

Patent Owner does not by way of the disclaimer admit the allegations made regarding claims 1-14; indeed, many of the allegations are deeply flawed. With the disclaimer of claims 1-14, however, all remaining claims depend from claim 15, for which the Petition fails to make a *prima facie* case of obviousness.

III. CONCLUSION

For the foregoing reasons, UMBRA respectfully submits that the Board should decline to institute *inter partes* review in this proceeding.

Dated: June 17, 2024

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WORD COUNT CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24 (d), I hereby certify that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE contains 2934 words as measured by the word processing software used to prepare the document. This total does not include the table of contents, the caption page, any signature blocks, the certificate of service, or this certificate of word count.

Respectfully submitted,

Dated: June 17, 2024

By: /James E. Harris/

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE was served in its entirety by filing this document through the Patent Trial and Appeal Case Tracking System (P-TACTS) as well as providing a courtesy copy via e-mail to the following attorneys of record for the Petitioner listed below:

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