

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. IPR2024-00498

U.S. Patent No. 10,574,482

PATENT OWNER'S SUR-REPLY

Petitioner raises two arguments in its June 17, 2024 reply (“Reply”) to Patent Owner’s Preliminary Response (“POPR”), which are addressed in turn below.

I. Shieh’s Security/Service Processing Modules Do Not Meet the Ordinary Meaning of *Access Point Servers*

Petitioner argues (at 1) that Patent Owner’s showing as to the ordinary meaning of the term *access point server* (hereinafter “APS”) is unduly restrictive. However, despite being one of the two purposes this briefing was granted, Petitioner never identifies (at 1-3) any actual error in Patent Owner’s proposed construction. Rather, Petitioner just suggests (at 1-3) that there *might* be embodiments or examples that are excluded by Patent Owner’s proposed construction.

The parties appear to agree that Patent Owner’s proposed construction is consistent with the intrinsic evidence, at least inasmuch as Petitioner does not argue otherwise in its Reply. Indeed, the specification teaches that the APSs (a.k.a. SRV_APs) are “*devices that respond to other devices and provide services, including an entry point to a network, to other devices*”:

FIG. 10 is a flow chart of the various routes available through a GVN from an origin C 10-002 to destination S 10-502. . . . ***GVN [Global Virtual Network] ingress is from EPD 10-108 via first hop 10-CP00 to an access point server (SRV_AP) 10-102, 10-104, 10-106, 10-202, 10-204. Paths from EPD 10-108 to a first SRV_AP can be defined as the ingress point from the EPD 10-108 into the GVN*** Ex. 1001 at 11:58-12:3 (emphasis added).

FIG. 11 . . . shows the path from an end point device (EPD) 11-100 to the Internet 11-002 via the path TUN 11-0 to a first access point server (SRV_AP) 11-302 then to a cloud firewall load balancer (CFW_LB) device 11-144LB via TUN 11-4, and then to SRV_AP 11-304 via TUN 11-6. From SRV_AP 11-304 traffic egresses the GVN via egress ingress point (EIP) 11-E2 to the internet 11-002. *Id.* at 13:7-15.

The specification thus teaches that an APS (SRV_AP) provides ingress to the GVN (the ingress to the global virtual network being a service) to other devices (end point devices). The end point devices communicate with the GVN through the APS. *Id.*

Petitioner proceeds to argue (at 2-3) how the security processing modules of Shieh meet Patent Owner’s proposed construction, although the Board’s order only permitted briefing on “the proper scope and meaning of the claim term ‘access point server.’” Board Order of June 11, 2024 (Paper 9) at 3. Because this argument violates the express terms of the Board’s order concerning the scope of the reply, the Board should decline to consider it.

In the event the Board chooses to consider it, Petitioner’s argument is (at 2-3) essentially that Shieh’s security processing modules meet Patent Owner’s proposed construction because the security processing modules are i) deployed on *servers* in the cloud, ii) provide virtual private network (“VPN”) *services*, and iii) may communicate with another network.

Being deployed on a server does not make a module a server any more than being deployed on a central processing unit (“CPU”) makes a cache memory unit a

CPU. Shieh's security processing modules merely perform security functions assigned by another component that *is* an access point server, namely, one of the virtual I/O modules 301-304. Ex. 1004 at 7:32-35 ("Each of virtual I/O modules 301-304 receives packets from any of servers 321-324 of LAN 320 and sends packets to external network 315 outside of the firewall."); *id.* at 7:42-45.

As to the VPN services argument, Shieh is clear that any security processing is done as an offload activity forwarded from the virtual I/O module (the actual APS) and not *as* an APS. *Id.* at 7:32-55.

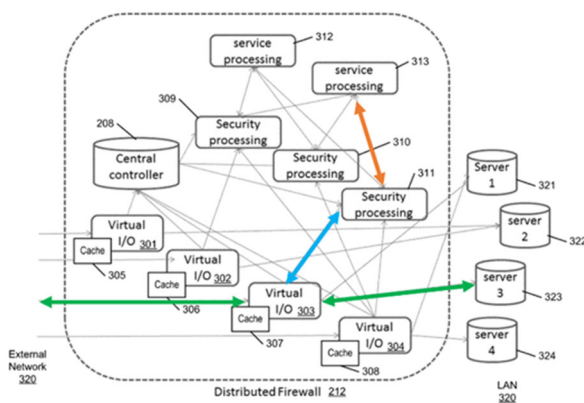
Finally, as to the "may communicate directly with a destination device" argument, Shieh never describes an outside server 321-324 being allowed to access a network through a security processing module. The sole capability described and pointed to is that a security processing module can forward an outgoing packet on behalf of a virtual I/O module if the security processing module is so configured. *Id.* at 7:64-67.

The virtual I/O modules in Shieh are the APSs. The other modules that perform various functions to assist the virtual I/O modules (i.e., the security and service processing modules) are not APSs because, among other things, they do not provide other devices access to a network.

II. Petitioner Still Fails to Identify in Shieh Two Firewalls that Each Block At Least Some of the Network Traffic at Two APSs

Petitioner next argues (at 3-5) that Shieh meets the multi-perimeter firewall recitations because Shieh teaches that separate “modules” can perform firewall functions and this would create multiple logical boundaries.

Notably, Petitioner does not dispute that the annotated illustration below accurately depicts how Shieh actually operates. Rather, Petitioner’s only rebuttal in this regard is (at 5) that “the ‘example’ relied upon by PO [referring to the illustration] is a strawman scenario that has no basis in the Petition.” While the illustration may have no basis *in the Petition*, Petitioner appears to concede that it accurately summarizes the operation of the network system *taught in Shieh*.



Representative claim 1 requires “***a first perimeter firewall in communication with [a] first access point server [APS] ... to prevent at least some traffic from passing from the first [APS] to [a] second [APS]***” and “***a second perimeter firewall in communication with the second [APS] . . . to prevent at least some traffic from passing from the second [APS] to the end point device.***” Ex. 1001, claim elements 1.5-1.6 (emphasis added); *see also* claim elements 13.5-13.6. The ’482 patent claims thus require that firewalls be enforced at two nodes – one that blocks traffic from

flowing from a first APS to a second APS and another that blocks flow from the second APS to the end point device.

In Shieh, however, there is only *one access node* (virtual or physical) at which a firewall is enforced for a given connection – at the assigned virtual I/O module. *See supra* and POPR at 6-9. Regardless of whether the virtual I/O module is assisted by 2, 8, 17, or 1,000 other processing modules (again, whether virtual or physical), in Shieh the firewall is still enforced at a *single access node* (i.e., the virtual I/O module, which is an access point server). Regardless of how many modules might be working in the background to support a virtual I/O module 303, in Shieh, traffic is blocked only at that single virtual I/O module for a given connection.

Petitioner has not, and cannot, identify a second node in Shieh at which traffic is blocked for a given connection. Shieh simply does not operate that way, and for that reason cannot meet the claim recitation that one firewall is enforced to prevent at least some of the traffic from passing from a first APS to a second APS, and a second firewall is enforced to prevent at least some traffic from flowing from the second APS to the end point device. Claim elements 1.5-1.6, 13.5-13.6.

For the foregoing reasons, Patent Owner respectfully submits that the Board should reject the arguments presented in Petitioner's Reply and decline to institute *inter partes* review in this proceeding.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing PATENT OWNER'S SUR-
REPLY 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
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