UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DELL TECHNOLOGIES INC. AND DELL INC.,
Petitioners,

v.

CLOUD BYTE LLC
Patent Owner.

Case No. IPR2025-01285
U.S. Patent No. 9,560,177

PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBITS

EX2001	U.S. Pat. No. 8,705,527
EX2002	U.S. Pat. Appl. No. 2005/0208947
EX2003	U.S. Pat. No. 6,907,036
EX2004	Dkt. 94 (Second Amended Scheduling Order)
EX2005	Docket Navigator Statistics from 1/1/20-9/18/25
EX2006	U.S. Court's median time-to-trial statistics for the Eastern District of Texas
EX2007	Dkt. 119 (Order Setting Markman Hearing)
EX2008	Rijhsinghani Invalidity Claim Chart for the '177 Patent (C6)
EX2009	Declaration of Dr. Paul Min in support of Patent Owner's Preliminary Response

I. INTRODUCTION

For the reasons explained in Patent Owner's Request for Discretionary Denial, the Board should exercise its discretion to deny these petitions given the significant settled expectations and the impending trial in the parallel litigation.

However, there are also significant flaws with the merits of the Petition. The Petition fails to establish that any of the challenged claims are unpatentable because: (1) Rijhsinghani, alone or in combination with Computer Networking, does not render obvious a table that stores rules, because Rijhsinghani discloses that its rules are programming instructions that are not suitable for storage in a table, and (2) Rijhsinghani does not disclose that the duplicated information is a header that encapsulates the received packet.

II. PROSECUTION HISTORY

Patent Owner inadvertently filed an incorrect version of its Request for Discretionary Denial which had an incorrect description of the '177 patent's prosecution history and explanation for why the examiner did not commit any error in granting the patent—specifically, the Request inadvertently used the prosecution history description for the '249 patent, an unrelated patent being challenged in IPR2025-01284. Paper 8 at 6. Below is a corrected description.

During prosecution, the examiner did not issue any rejections based on Sections 102 or 103. In the only rejection, the examiner rejected the claims under Section 101. EX1002, 89-90. The applicant did not amend the claims, but argued that the claimed steps of receiving rules and encapsulating a targeted packet with an additional, duplicated header based on the rules is non-conventional and discrete. EX1002, 156-162.

In its notice of allowance, the examiner stated that the closest prior art, Gobara, does not disclose the step of duplicating a part of a header of a targeted packet and encapsulating the packet with that duplicated header. EX1002, 179. As explained below, Petitioner's art does not meet this limitation.

III. GROUND 1: RIJHSINGHANI DOES NOT RENDER OBVIOUS ANY CHALLENGED CLAIM

A. The Petition Fails to Establish that Rijhsinghani Discloses a "Table Including Rules and Actions" (Claims 1, 7)[1]

Claims 1 and 7 require that a switch includes "storage storing a table, the table including rules and actions corresponding to the rules." The Petition

[1] Although this argument only applies to 12 of the 20 challenged claims, if the Board agrees with this argument, then the Petition should be denied as it would be an inefficient use of Board resources to institute a proceeding where most of the claims are unlikely to succeed at trial. *Zhuhai CosMX Battery Co., Ltd. v. Ningde Amperex Tech. ltd.*, IPR2025-00405, Paper 24 at 3 (Oct. 15, 2025) (Director Review).

has failed to establish that Rijhsinghani alone discloses or renders obvious such a table. EX2009, ¶36.

For the claimed "rules and actions," the Petition relies on Rijhsinghani's disclosure of "instructions" that are sent from an NMS to a switch. Pet. 23-24, 31-34. However, Rijhsinghani makes clear that such "instructions" are ***programming*** instructions which are not suitable for storage in a table. EX1005, 2:14-19 ("[T]he NMS 290 has configured two VLANs by instructing, ***e.g. programming***, and thereby configuring the switches 5'-55' …."), 2:53-56 ("[T]he NMS 290 generates and transmits signals to ***instruct*** the switches 5'-55' to form the desired VLAN configurations."), 3:39-45 ("The switch determines, based upon ***instructions*** previously received from the NMS 290, that the LAN 205 falls within the applicable VLAN"), 10:55-59 ("[T]he control module 288, in accordance with the ***programmed instructions*** … determines one or more VLAN matches"); EX2009, ¶37.

Petitioner does not contend that Rijhsinghani expressly discloses any table that stores such instructions. Pet. 23-24. Instead, Petitioner argues that "a POSITA would have known that the instructions issued to switches … would be stored in *a table*, as claimed, because a table data structure was the most common technique for switches to make packet routing decisions." Pet.

23 (citing EX1003, ¶142). Petitioner then cites to a number of references for the proposition that "[s]witches commonly used information about a received packet to look up routing information in *a table* stored on the switch." Pet. 23-24. However, none of these references describe storing in a table ***programming instructions*** related to routing. EX2009, ¶38. For example, Exhibit 1008 displays a "switch table" that does not contain programming instructions. EX1008, 263-264.

Address	Interface	Time
62-FE-F7-11-89-A3	1	9:32
7C-BA-B2-B4-91-10	3	9:36
....	....	....

Figure 5.27 ♦ Portion of a switch table for the uppermost switch in Figure 5.26

Similarly, Exhibit 1009 describes a table storing various fields, none of which constitute programming instructions. EX1009, 5-6; EX2009, ¶39.

Petitioner also argues that it would have been "obvious … to try implementing Rijhsinghani's *rules* and *actions* on each switch in *a table* because it was one of a finite number of identified, predictable data structures for this purpose and could have been implemented by a POSITA with more than a reasonable expectation of success." Pet. 24. However, Petitioner provides no evidence beyond its expert testimony (which parrots the Petition) that a table was a suitable data structure for storing programming instructions.

Indeed, a table was ***not*** a "data structure[] for this purpose," as tables were known and expected to store ***data***, not programming instructions. EX2009, ¶¶40-41.

B. The Petition Fails to Establish that Rijhsinghani Discloses "Encapsulat[ing] the Identified Packet by the Additional Header" (All Claims)

Each of the challenged claims require that the system "duplicate a part of a header of the identified packet as ***an additional header***" and then "encapsulate the identified packet by ***the additional header***." Petitioner has proposed that the term "encapsulate" be construed as "appending an additional header to a data packet." Pet. 7. Patent Owner does not necessarily disagree with that construction, but additional context with respect to what a "header" constitutes is necessary. EX2009, ¶¶42-43.

Network communications involve what is known as a network stack, such as the OSI model. EX2009, ¶44. For example, the OSI model constitutes various layers such as the physical layer, the data link layer, the network layer, the transport layer, and the application layer. *Id.* In accordance with the OSI model, and in particular network communications using TCP/IP, a packet may contain multiple layers of headers associated with each of the layers. *Id.* Thus, a TCP/IP packet will have an ***IP header*** (associated with the network layer) which includes information the source and destination IP addresses. *Id.*

The TCP/IP packet will also have a ***TCP header*** (associated with the transport layer) which includes the port number. *Id.* And the packet may also have, for example, an ***application header*** such as an HTTP header for communicating with web servers using information pursuant to the HTTP protocol. *Id.*

Each of these headers encapsulate the previous header and the rest of the data as a payload to that header. EX2009, ¶45. Thus, a packet containing a payload may be encapsulated by a data link header. Then, the data link header and payload may be encapsulated by the network layer. And so on. Consistent with this understanding, the '177 patent explains that, for example, the "IP header of the packet" can be duplicated by "encapsulating a packet with the ***same header as the IP header***." EX1001, 6:18-24. This is done by appending the same IP header to the packet. EX1001, 6:51-54 ("[T]he packet … has the structure of 'the IP header 1-the IP header 1-the payload'.").

Patent Owner does not disagree that the encapsulation simply involves appending the header to the packet. EX2009, ¶46. However, Patent Owner disagrees with a further characterization proposed by Petitioner for this limitation: that it includes "duplicat[ing] part of the existing header to use as ***a portion*** of the added encapsulation header." Pet. 44. In other words, Petitioner proposes that the encapsulation header need only partially comprise the duplicated portion. Pet. 44-45 ("Rijhsinghani discloses … duplicating part

of the header information in the received packet so that it can be used as ***part of the VLAN header*** added to the packet.").

But the claim language does not support such a construction. EX2009, ¶46. The claim language requires "duplicat[ing] a part of a header of the identified packet ***as an additional header***." It is this "additional header" which encapsulated the packet. While the duplicated portion can come from a part of the preexisting header, the duplicated portion must constitute ***the encapsulating additional header***. In other words, the duplicated portion cannot simply be a ***part*** of the encapsulating header. *Id.* This is consistent with the specification, where the IP header is duplicated and appended to the packet. EX1001, 6:18-54.

Petitioner argues that Rijhsinghani duplicates a header by creating a "VLAN header" which includes the same destination address and source address found in the header of the received packet. Pet. 43-44. However, Rijhsinghani's "VLAN header" also includes non-duplicated information, such as the "VLAN Protocol" and "VLAN Tag." Pet. 45; EX1005, Fig. 4 (annotated by Petitioner). Thus, the Petition fails to explain how Rijhsinghani teaches how the duplicated portions constitute a header. EX2009, ¶47.

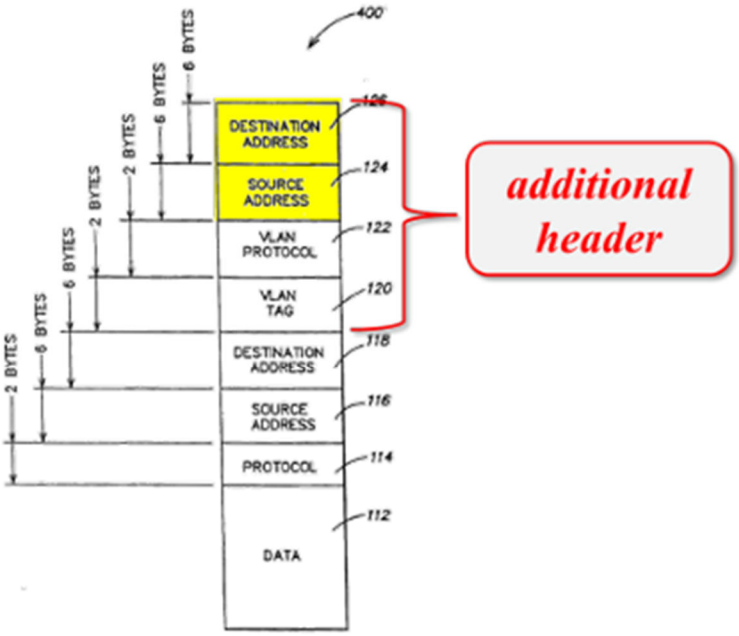


FIG. 4

Contemplating this deficiency in its argument, Petitioner alternatively argues that "the source and destination addresses within the VLAN header would constitute such an *additional header*." Pet. 46 (providing an alternative annotation to Figure 4, reproduced below).

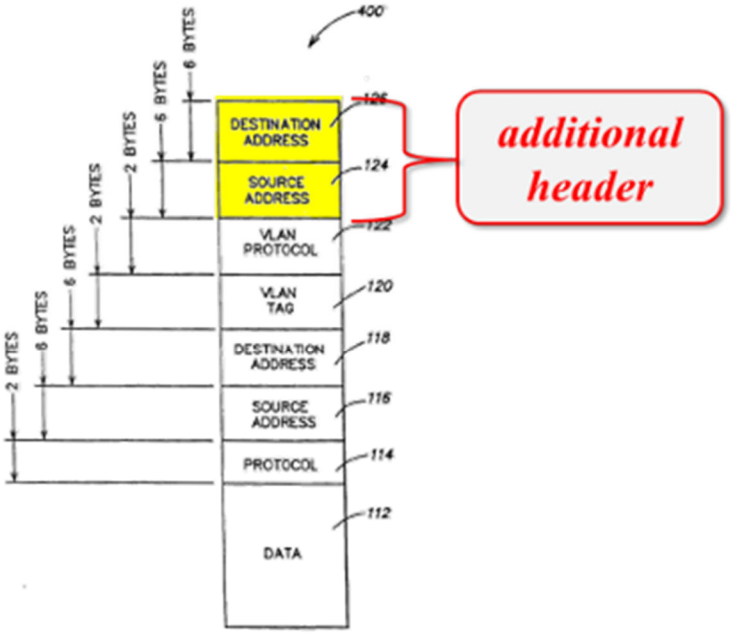


FIG. 4

But Petitioner fails to explain how the duplicated destination and source addresses constitute an additional header. EX2009, ¶¶48-49. Rijhsinghani does not say they alone constitute a header—it is clear that the VLAN header includes additional information. And Petitioner's expert provides no explanation, simply parroting the Petition's conclusory statement. EX1003, ¶184. Not only are conclusory statements insufficient to establish that the limitation is met, the Board cannot rely on expert testimony alone to supply a missing limitation. 37 C.F.R. § 42.104(b)(4); July 31, 2025 Director Memo ("[E]nforcement of Rule 104(b)(4) means that … expert testimony … may not be used to supply a missing claim limitation.").

Thus, the Petition fails to establish that Rijhsinghani discloses this limitation.

IV. GROUNDS 2 AND 3

Grounds 2 and 3 of the Petition combine Rijhsinghani with other references to challenge dependent claims, and therefore fail for the same reasons as Ground 1. EX2009, ¶50.

V. GROUNDS 4-6

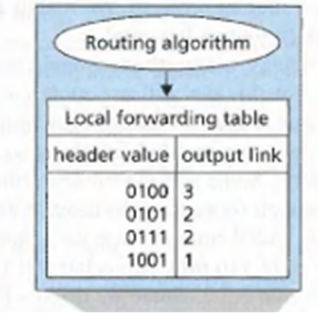
Grounds 4-6 of the Petition add the Computer Networking prior art as disclosing a "forwarding table," which Petitioner argues meets the recited "table including rules and actions." Pet. 82-84. Grounds 4-6 do not address the deficiencies with the other limitations discussed above.

Moreover, Grounds 4-6 are themselves deficient for at least two additional reasons: (1) Petitioner has failed to establish that Computer Networking is prior art, and (2) Petitioner does not explain how Computer Networking's forwarding table is suitable for storing Rijhsinghani's programming instructions.

Computer Networking is a book which purports to be published in 2008. However, beyond conclusory statements from its expert, Petitioner does not provide any explanation or evidence for how this book was available to a POSITA exercising reasonable diligence. Pet. 16-17; EX1002, ¶122.

Petitioner does not provide any evidence that the book was, for example, available in public libraries. Petitioner does not provide any evidence that the book could be found online. Petitioner does not provide any evidence about the publisher or its process for publishing books. Nor does Petitioner provide any evidence that Exhibit 1008 is an authentic copy as it purportedly available in 2008. The only evidence Petitioner provides is its expert's uncorroborated statement that he used a copy of the book "shortly after it was published in 2008." EX1002, ¶122. Such uncorroborated testimony about events that purportedly occurred nearly two decades ago are not sufficient to support the availability of the publication.

Regardless, Grounds 4-6 also fail because Petitioner has not explained how the forwarding tables found in Computer Networking would be suitable for storing the programming instructions disclosed in Rijhsinghani. EX2009, ¶¶51-52. The Petition relies on the following "exemplary forwarding table" (Pet. 82-83 (citing EX1008, 96)):



The Petition argues that "it would have been obvious to implement Rijhsinghani's switches with table structures including rules and corresponding actions for processing packets as taught by any number of prior art references including Computer Networking (EX1008)." Pet. 82. However, as discussed above for Ground 1, Rijhsinghani teaches that its alleged rules come in form of ***programming instructions*** delivered from the NMS for determining which VLAN a packet should be associated with. *See, e.g.*, EX1005, 2:14-19, 10:55-59. Petitioner does not explain how such programming instructions could be stored in the forwarding table disclosed by Computer Networking, which merely includes "a column with header values (*rules*) used to lookup values in a column identifying the output link for forwarding the particular packet." Pet. 83. Such a table is not suitable for storing programming instructions. EX2009, ¶53.

To the extent Petitioner is arguing that Rijhsinghani's programming instructions should be completely replaced with Computer Networking's forwarding table, Petitioner does not provide sufficient motivation or argument for such a wholesale departure from Rijgsinghani. For example, such a combination would require heavy modifications to the NMS with respect to how the forwarding table is stored in the NMS and delivered to the

switches. EX2009, ¶54. Petitioner provides no reason or reasonable expectation of success to modify the NMS in such a fashion.

For these reasons, Grounds 4-6 also fail.

VI. CONCLUSION

For the foregoing reasons, *inter partes* review should not be instituted.

Date: October 20, 2025

/s/ James M. Glass

James M. Glass
Registration No. 46,729
Quinn Emanuel Urquhart & Sullivan LLP
295 5th Avenue, 9th Floor
New York, New York 10016
Tel: (212) 849-7000
Fax (212) 849-7100
jimglass@quinnemanuel.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(E), 42.105(A))

The undersigned hereby certifies that the foregoing document was served in its entirety on October 20, 2025 upon the following parties via Electronic Mail:

jday@fbm.com

dcallaway@fbm.com

wliaw@fbm.com

calendar@fbm.com

Date: October 20, 2025

/s/ James M. Glass
James M. Glass
Registration No. 46,729
Quinn Emanuel Urquhart & Sullivan LLP

Counsel for Patent Owner