

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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META PLATFORMS, INC.; INSTAGRAM, INC.; WHATSAPP LLC; META  
PLATFORMS TECHNOLOGIES, LLC; AND GIPHY, INC.

Petitioners

v.

VL COLLECTIVE IP LLC

Patent Owner

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Case IPR2023-00923  
U.S. Patent 7,266,682

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**PATENT OWNER'S PRELIMINARY RESPONSE**

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**PATENT OWNER'S EXHIBIT LIST**

| <b>Exhibit</b> | <b>Description</b>                                                                     |
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| 2001           | Declaration of Jaime F. Cardenas-Navia in Support of Motion for Admission Pro Hac Vice |
| 2002           | The Secure Real-time Transport Protocol (SRTP)                                         |

VL Collective IP LLC (“Patent Owner”) submits this Preliminary Response to the Petition of Meta Platforms, Inc.; Instagram, Inc.; WhatsApp LLC; Meta Platforms Technologies, LLC; and Giphy, Inc. (“Petitioners”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 7,266,682 (“the ’682 patent”).

## **I. INTRODUCTION**

Institution should be denied for several reasons. First, the Board should exercise its discretion under 35 U.S.C. § 314(a) to deny the Petition in view of Petitioners’ incorporations by reference and abusive citation practices for circumventing the wordcount limitations on petitions. Between Petitioners’ explicit incorporations by reference and repeated practice of supporting conclusory assertions with little more than bare citations to supporting declarations, the Petition incorporates by reference thousands of additional words and the entirety of Petitioners’ substantive positions (less the conclusory assertions in the Petition itself) regarding the prior art status of all three asserted references relied on in all four asserted Grounds. The Petition’s convoluted internal cross references also obscure the actual basis for three of Petitioners’ four asserted Grounds of alleged unpatentability. Whether the Board deems Petitioners’ abusive citation practice a violation of the rules worth denying the Petition, or instead a substantive defect that results in Petitioners’ failure to satisfy its burden of proof for institution, the Board should deny the Petition.

Second, the Petition fails to demonstrate a reasonable likelihood that *any* of the asserted references constitutes a prior art printed publication under the law. For one of the three references (Handley), Petitioners cite no evidentiary support whatsoever that it was publicly accessible. For another (PacketCable), Petitioners cite no evidence that demonstrates the reference's purported publication date is in fact a publication date or that the reference was publicly disseminated or otherwise accessible. For the third (Basturk), the Petition fails to identify, with particularity, Petitioners' arguments and supporting evidence of public accessibility—it merely incorporates by reference the entirety of an expert declaration without any explanation or discussion, which is impermissible and insufficient.

Third, the Petition fails to demonstrate a reasonable likelihood of success on the merits. Petitioners' arguments that the asserted references disclose or render obvious the asserted independent claims are contrary to the references' own teachings, fail to account for the '682 patent's lexicography, and for several claim elements, consist of conclusory assertions citing only to Petitioners' expert's declaration, which, in turn, does little more than parrot back the same conclusory assertions without factual support.

For the reasons explained in this Preliminary Response, the Petition should be denied.

## II. BACKGROUND

### A. Overview of the '682 Patent

The '682 patent addresses a longstanding problem in the transmission of real-time audio and visual data over the internet. In the mid-1990s, the Real Time Transport Protocol, or RTP, was developed by the Internet Engineering Task Force (IETF), designed for end-to-end real-time transfer of streaming media. *See* EX1005 1, 73.

But RTP was not very secure. Transmission networks carrying RTP payload packets were susceptible to security flaws at the transmitter, during transmission, and at the receiver. *See* EX1001 2:44–3:10. Attackers could overload the network—sending mass data to receivers, encumbering availability and performance. *Id.* 2:47–64. Firewalls were of limited use because it was a “simple matter for an attacker to send [its] meaningless (mass) data to addresses within the private network as well, that is to say, behind the firewall.” *Id.* 2:65–3:10.

In one approach, the IPSEC protocol, “data packets of the Internet protocol (IP data packets) [could] be encapsulated and [could] be protected in terms of confidentiality and/or integrity.” *Id.* 3:16–41. It included a cookie-based mechanism, linking fast one-way hash functions, random numbers, and IP addresses to one another. *Id.* But that solution had a security gap: the “first ‘cookie’ transmitted from the transmitter to the receiver” was unprotected. *Id.* 3:30–34. And

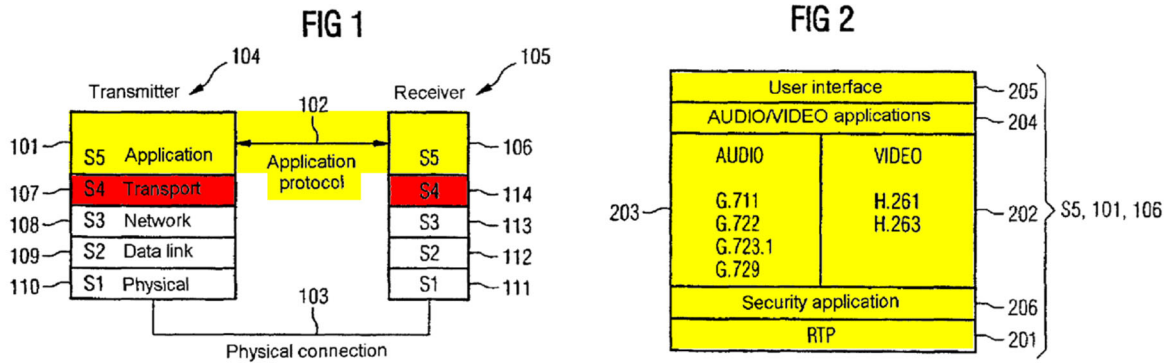
the cookie method could not ensure protection against unwanted mass data on the application layer (for the application protocol) under real-time conditions. *Id.* 3:34–38. Structurally, it was not possible to link IPSEC to the security functions of an application layer. *Id.* 3:38–41.

Ultimately, IETF introduced a security and authentication layer into RTP in 2004 called SRTP. *See* EX2002.

But years before the formalization and publication of SRTP, the '682 patent's inventors had already recognized and solved RTP's security problems. The '682 patent prevents the security flaws by ensuring, at the receiver, that data being transmitted is not insecure or unwanted. *See* EX1001 3:45-48. Specifically, the transmitter is used to insert authentication data into the data packets before the data is transmitted. *See id.* 3:49-55, 7:6-23. The authentication data is then transmitted together with the data packet and analyzed by the receiver to ensure that the transmitter and the receiver know each other. *See id.* Fig. 3, 3:49-55, 5:30-38. 7:6-23. If the receiver knows the transmitter, the data is processed; if not, the data is rejected. *See id.* 7:14-21.

The '682 patent teaches that authenticating RTP packets in the application layer (as part of an application layer protocol), as claimed in the '682 patent, is extremely advantageous from both a user and network perspective. *See id.* 3:49-4:30, 7:24-48. The “application layer” for purposes of the '682 patent refers to “the

layers above the transport layer (layers above 4),” and the “application protocol” refers to “the protocol for communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer.” *Id.* 2:6–11. Thus, with reference to Figures 1 and 2 (annotated below), the patent teaches that “directly above the layer 4” (highlighted red) “is the real time transport protocol (RTP)” in “the application layer (layer 5)” (highlighted yellow). *Id.* 6:33–51, Figs. 1 and 2.



EX1001, Figs. 1 and 2 (annotated)

For one, authenticating RTP packets in the application layer permits reduced size of authentication data, including because it allows the transmitter and receiver to share secret information, such as a key, which can be economically used to generate message authentications. *See id.* 3:60-4:10, 7:24-36. Another benefit is that it increases the transmission system’s performance and reduces the implementation complexity of the system. *See id.* 4:11-22. Authenticating RTP packets in the application layer also provides real time availability of the data. *See*

*id.* 3:60-4:10. Once the receiver determines that the transmitter is known, the message is immediately accepted. *See id.* 4:3-7. If the receiver determines that the transmitter is not known, the message is immediately rejected; no buffering or loading are performed, and no further action is needed. *See id.* 4:7-9.

## **B. The Claims of the '682 Patent**

Representative claim 1 of the '682 patent (reproduced below). Key concepts discussed above and relevant to this Preliminary Response are italicized.

1. A method for transmitting data from a transmitter to a receiver, comprising:  
*providing transmitter-to-receiver authentication at a Real Time Transport Protocol (RTP) packet level as an application protocol on an application layer by inserting, at the transmitter, authentication data at end of a whole RTP packet payload;*  
*ascertaining, by the receiver, whether the receiver knows the transmitter based on the RTP packet level authentication data; and*  
accepting, by the receiver, the whole RTP packet payload, if the receiver knows the transmitter, and otherwise rejecting the whole RTP packet payload.

The '682 patent claims novel methods and systems that capture improvements to the transmission of real-time data described in the '682 patent, as described above.

The Petition incorporates by reference its arguments for claim 1 to address independent claims 25-28. Pet. 36-41 (Ground I), 59-64 (Ground II), 66-72 (Ground III).<sup>1</sup> Accordingly, Patent Owner treats claim 1 as representative of claims 25-28 for purposes of this Preliminary Response.

### **C. Overview of Handley (EX1005)**

Handley's stated purpose is to "provide an overview of multimedia conferencing on the Internet" with respect to "synchronous or so-called 'real-time' conferencing, including audio, video, shared whiteboards and other applications." EX1005 1. Handley states that "[i]n a datagram network, multimedia information must be transmitted in packets, some of which may be delayed more than others," and that a "transport protocol" has been defined "that allows the recipient to reconstitute the timing" so that "audio and video streams [can] be played out at the recipient in the correct timing." *Id.* 2. Handley further states that "security measures may be required," and that "cryptographic methods are used for encryption and authentication." *Id.*

Handley states that "[t]he transport protocol for real-time flows is RTP," which it says "is normally carried using UDP," but does not "provide any enhanced reliability over UDP." *Id.* 8. According to Handley, "[e]ach RTP flow is

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<sup>1</sup> Ground IV addresses two claims that are dependent from claim 1.

supplemented by Real-Time Control Protocol (RTCP) packets,” which “provide the relationship between the realtime clock at a sender and the RTP media timestamps so that inter-flow synchronisation can be performed.” *Id.* 9.

According to Handley, “[i]f the application requirement (conference policy) is to communicate between some defined set of users, then strict privacy can only be enforced in any case through adequate end-to-end encryption.” *Id.* 12. “RTP specifies,” says Handley, “a standard way to encrypt RTP and RTCP packets using private key encryption schemes such as DES,” and “a standard mechanism to manipulate plain text keys using MD5 so that the resulting bit string can be used as a DES key.” *Id.*

#### **D. Overview of Basturk (EX1006)**

Basturk asserts “that the increasingly widespread use of networks is leading to new security concerns such as *secure delivery* which are most naturally *associated with the transport level* and best addressed by the design of secure transport protocols.” EX1006 Abstract (emphasis added), *see also id.* 3. “In contrast to traditional security features which tend to be purely application level,” says Basturk, “the new ones are most naturally identified with *the transport level.*” *Id.* (emphasis added). Citing “the need to add security functionality in a way which is consistent with, and best matches, the existing communication structure,” Basturk expressly “distinguish[es] security features according to the layer of the communication

structure to which they are most naturally associated,” stating that “the traditional features are mostly application level, while *the new ones we deem necessary are transport level.*” *Id.* 3 (emphasis added). Basturk proposes a “secure transport protocol” to address this “transport level” security issue. *Id.* Abstract, 3.

Basturk identifies “integrity” and “confidentiality” as the two “traditional” “application level security features.” *Id.* Basturk says that “[i]ntegrity” means “it isn’t possible for [an adversary] to modify the contents of transmitted data,” while “confidentiality” means “[the adversary] cannot figure out the content of the transmission but the receiver can recover it.” *Id.* Both “are requirements of the data transmitted by the application,” which “is the reason,” says Basturk, that “we view them as application level security features.” *Id.* According to Basturk, “[a]pplication level security features are easily (and usually) provided by application level security,” whereby “the sender applies appropriate cryptographic functions to his data before passing it to the transport for conveyance.” *Id.* Basturk states that “integrity” and “confidentiality” are “guaranteed” by both “signing” and “encrypt[ing]” the data “before passing it to the transport level. *Id.* 4.

“*Secure delivery*,” on the other hand, “is a guarantee to the sender A that his message was received by B and not intercepted and destroyed by the adversary,” which Basturk describes as “an extension of the standard *transport level reliability* feature . . . which is why it seems most natural to view it as a *transport level* feature.”

*Id.* (emphasis added). Basturk notes that “the presence of the application level security features does not necessarily imply the security of delivery,” because “[t]he adversary can easily make a sending application believe that whatever it transmitted has been received by the receiving application, even if the data are signed or encrypted by the upper layer.” *Id.* Basturk says that “the lack of secure delivery is a serious security problem” and is an “example of a **transport level** security feature that is desirable.” *Id.* (emphasis added). According to Basturk, these points “motivate[] the need for security **at the transport layer.**” *Id.* 6 (emphasis added).

Basturk’s solution addresses “transport level security” with “the provision of secure delivery,” where a “transport module,” rather than “the application,” is tasked with “applying any cryptographic functions or taking other security steps.” *Id.* 4-5. According to Basturk, “the transport module can compute a signature which covers not only the data but also (relevant parts of) the **transport** header which it creates,” and can “sign the acknowledgments messages which exist only at the **transport level.**” *Id.* (emphasis added). Basturk’s solution adds transport level security to transport level protocols while providing the option to also use the standard application level security features. *See id.* 5. That is, Basturk’s method “transform[s] any transport protocol into a ‘secure’ version, equipped not only with **the new security features discussed above**, but providing, at least as options, the standard application level security features.” *Id.*

**E. Overview of PacketCable (EX1007)**

According to PacketCable, “[t]he PacketCable architecture” is an “end-to-end broadband architecture that supports voice, video, and other multimedia services.” EX1007 10. PacketCable says that the PacketCable architecture “contains three networks: the ‘DOCSIS HFC Access Network,’ the ‘Managed IP Network’ and the PSTN.” *Id.* 12. As stated in PacketCable, “[t]he Cable Modem Termination System (CMTS) provides connectivity between the ‘DOCSIS HFC Access Network’ and the ‘Managed IP Network’. Both the Signaling Gateway (SG) and the Media Gateway (MG) provide connectivity between the ‘Managed IP Network’ and the PSTN.” *Id.*; *see also* Figure 1 (reproduced below).

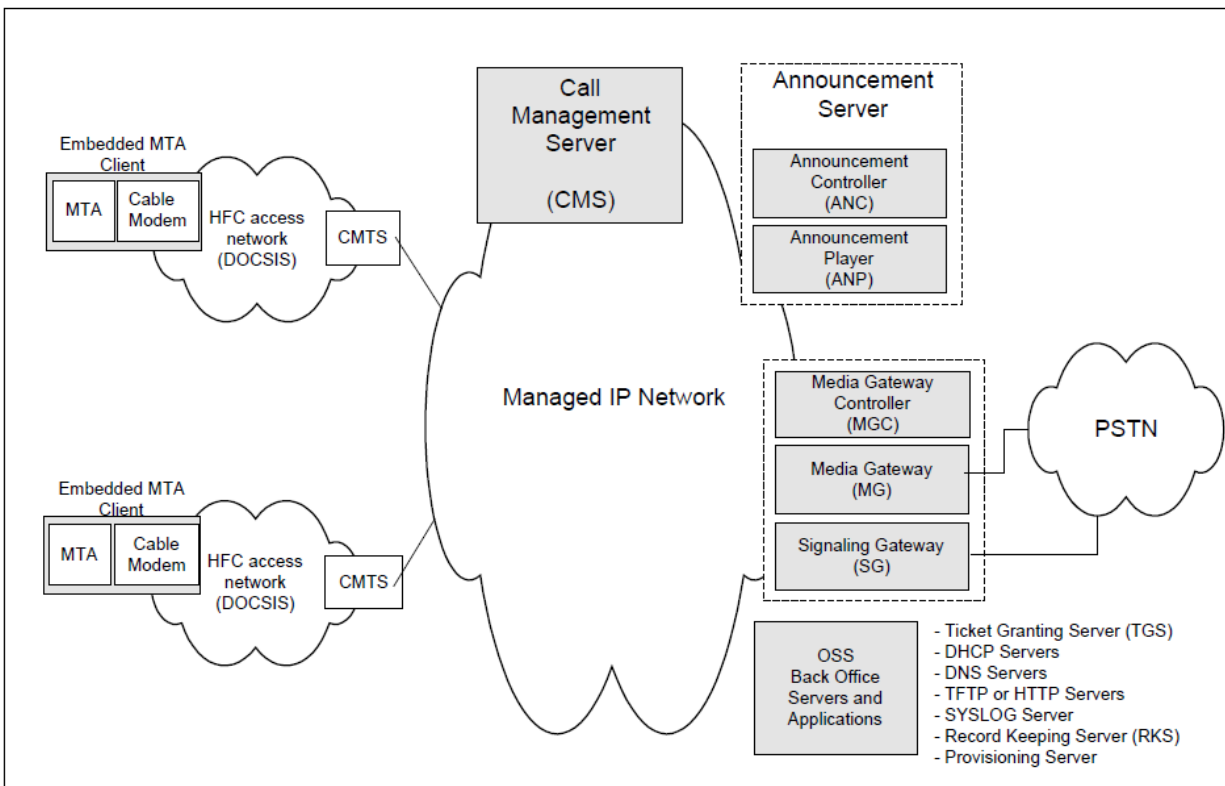


**Figure 1. PacketCable Reference Architecture**

PacketCable states that “PacketCable endpoint devices” are called “MTAs.”

*Id.* 17. According to PacketCable, “[a]n MTA is a PacketCable client device that contains a subscriber-side interface to the subscriber’s CPE (e.g., telephone) and a network-side signaling interface to call control elements in the network. An MTA provides codecs and all signaling and encapsulation functions required for media transport and call signaling.” *Id.* 18.

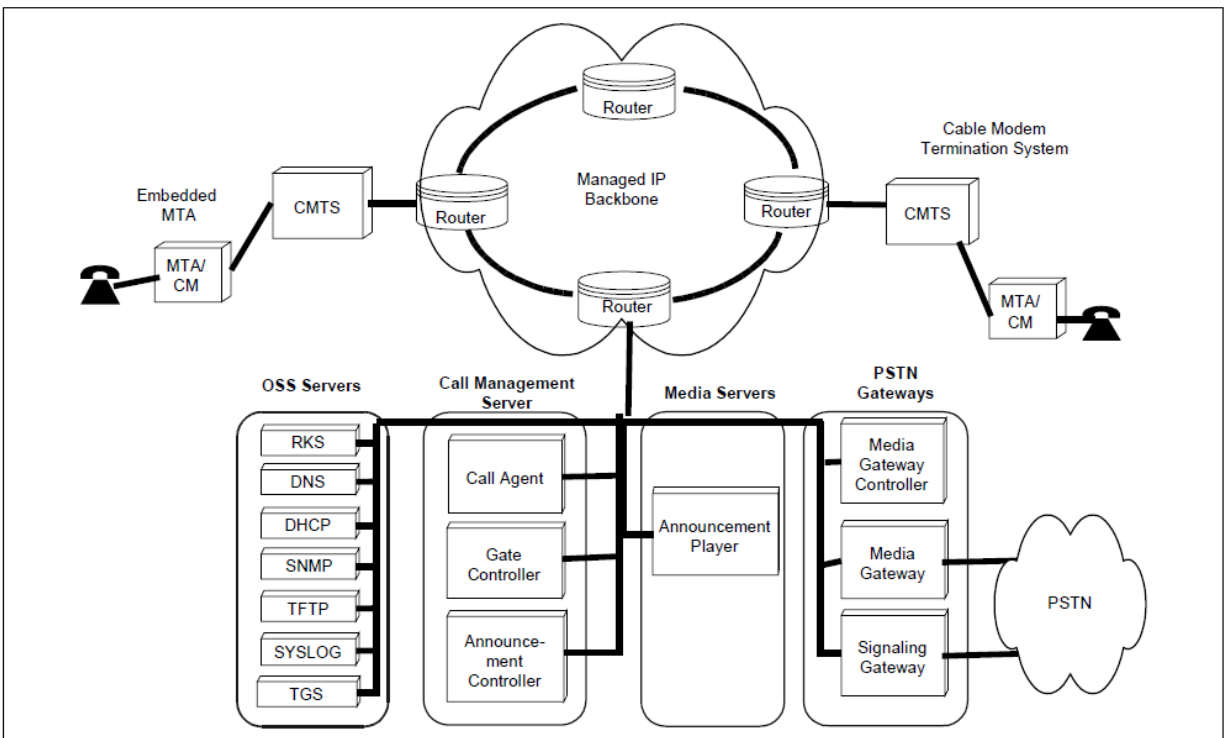


**Figure 3. PacketCable Component Reference Model**

According to PacketCable, one of the “General Architectural Goals” of PacketCable is to “Leverage existing protocol standards.” *Id.* 15. PacketCable states that “[t]he IETF standard RTP (RFC 1899 - Real-Time Transport Protocol) is used to transport all media streams in the PacketCable network.” *Id.* 31. It also states that “[t]he packet format for RTP data transmitted over IP over Ethernet” used by PacketCable “is depicted in Figure 7 below.”

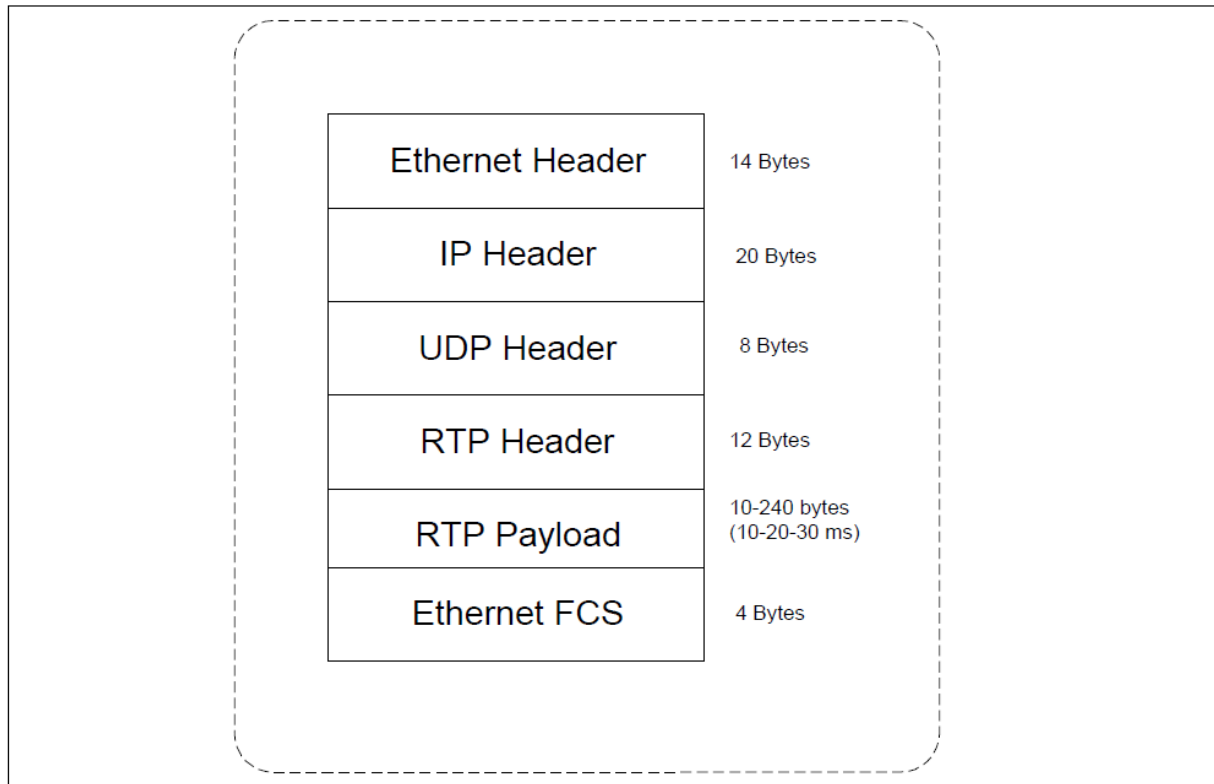


**Figure 7. RTP Packet Format**

PacketCable says that the PacketCable architecture “specif[ies], for each defined protocol interface, the underlying security mechanisms (such as IPSec) that provide the protocol interface with the security services it requires, e.g., authentication, integrity, confidentiality.” *Id.* 42. It also says that MTAs are responsible for “[a]uthentication, confidentiality and integrity of some messages between the MTA and other PacketCable network elements.” *Id.* 19. PacketCable states that for MTA-MTA or MTA-MG communications, “RTP packets are encrypted directly with RC4, without any additional security layers,” and that “[a]n MMH-based MAC (Message Authentication Code) optionally provides message integrity.” *Id.* 45.

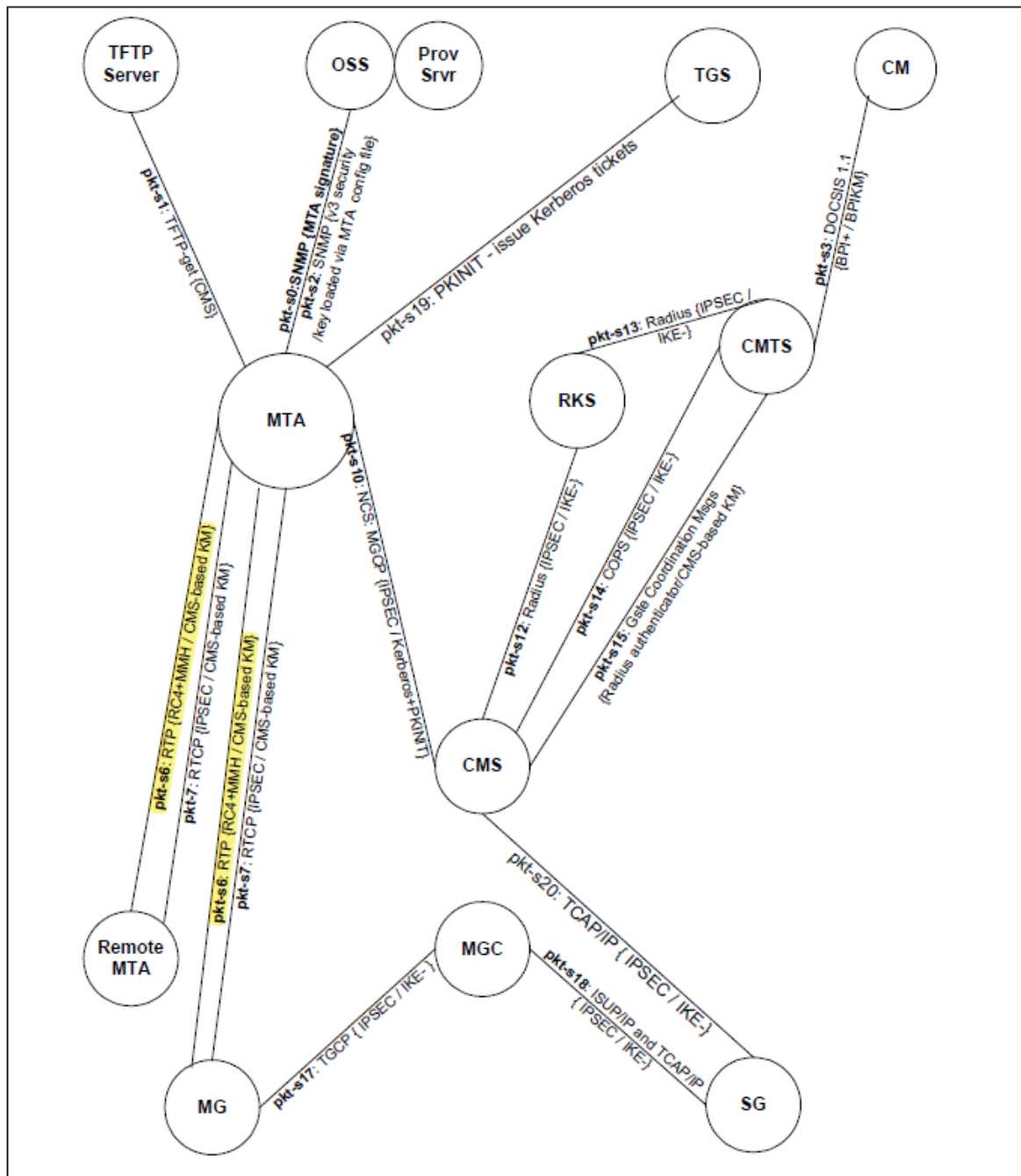


Figure 13. PacketCable Security Interfaces

EX1007, 44 (annotated)

According to PacketCable, “[e]ncryption is applied to the packet’s payload but not to its header,” and “[t]he MAC computation” for the optional MAC “spans the packet’s unencrypted header and encrypted payload.” *Id.* 47.

### **III. PRIORITY DATE OF THE ’682 PATENT**

Petitioners state that “[t]he earliest potential effective filing date of the ’682 Patent’s claims is January 18, 2000.” Pet. 4. The ’682 patent, which issued from U.S. Application No. 10/181,564, filed on July 18, 2002 as a national stage entry under 35 U.S.C. § 371 of PCT Application No. PCT/DE01/00021, filed on January 5, 2001, “claims priority to German Application No. 100018556 file on 18 Jan. 2000” and incorporates its content by reference. EX1001 1:10-12. Petitioners do not dispute that any of the ’682 patent’s claims are entitled to the priority date of January 18, 2000. Pet. 4.

### **IV. LEVEL OF ORDINARY SKILL**

Petitioners set forth a level of ordinary skill. Pet. 9. Patent Owner reserves the right to dispute Petitioners’ definition if IPR is instituted. For present purposes, this Preliminary Response establishes that institution should be denied even under Petitioners’ preferred definition of the level of ordinary skill.

## **V. RELATED MATTERS**

Patent Owner filed suit against Petitioners in the District of Delaware on May 24, 2022, alleging infringement of the '682 patent. *VideoLabs, Inc., et al. v. Meta Platforms, Inc. et al.*, No. 1-22-cv-00680 (D. Del.).

The '682 patent was the subject of litigation in the Western District of Delaware, which has ended. *VideoLabs Inc et al v. Amazon.com Inc. et al*, No. 6-22-cv-01167 (W.D. Tex.).

## **VI. CLAIM CONSTRUCTION**

Petitioners provide no claim construction analysis for any term in the '682 patent or identify how the claims are to be construed, despite being expressly required to do so per 37 C.F.R. § 42.104(b)(3). Petitioners merely state that “Petitioners present no terms for construction” and that “the Board does not need to construe any claim.” Pet. 9. Petitioners have not identified how the challenged claims are to be construed, nor demonstrated that their claim interpretations are consistent with the governing standard.

The Board construes claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips*

*v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Accordingly, “[t]he words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips*, 415 F.3d at 1313). However, “if the specification reveals a special definition given to a claim term by the inventor, then the inventor’s lexicography governs, even if it differs from the term’s ordinary meaning.” *David Netzer Consulting Eng’r LLC v. Shell Oil Co.*, 824 F.3d 989, 994 (Fed. Cir. 2016) (citing *Phillips*, 415 F.3d at 1316).

Below is Patent Owner’s preliminary claim construction analysis.

**A. Patent Owner’s Claim Construction Analysis<sup>2</sup>**

The inventors of the ’682 patent acted as their own lexicographers in defining “application layer,” “application protocol,” and “the receiver knows the transmitter.” Those definitions govern. *Grace Instrument Indus., LLC v. Chandler Instruments Co., LLC*, 57 F.4th 1001, 1010 (Fed. Cir. 2023) (“Where the specification instructs as to the meaning of a claim term, ‘the inventor’s lexicography governs.’” (quoting

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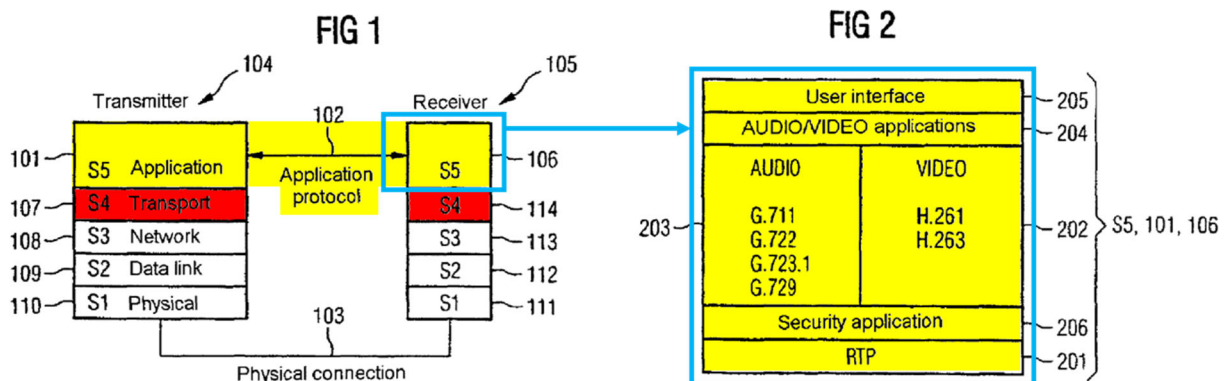
<sup>2</sup> Patent Owner reserves the right to make additional claim construction arguments if trial is instituted. To the extent this Preliminary Response does not address claim interpretations advanced in the Petition (whether made explicitly or implicitly), Patent Owner does not concede that such interpretations are correct or proper under the governing standard.

*Phillips*, 415 F.3d at 1316)). Patent Owner offers the following preliminary constructions for these terms:

| Term                                 | Patent Owner’s Proposed Preliminary Construction                                                                                                                                |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “application layer”                  | “the layers above the transport layer (layers above 4)”                                                                                                                         |
| “application protocol”               | “the protocol for communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer” |
| “the receiver knows the transmitter” | “the transmitter is successfully authenticated with respect to the receiver”                                                                                                    |

**“application layer” and “application protocol.”** The specification of the ’682 patent expresses a clear intent to define “application layer” and “application protocol.” The specification states that “[w]hen referring to application layer below, this denotes the layers above the transport layer (layers above 4)” and “[t]he application protocol also denotes the protocol for communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer.” EX1001 2:6-11. Here, “layers above 4,” “application layer,” and “transport layer” refer to layers of the OSI reference model. *See id.* 1:19-45. The ’682 patent explains that “[t]he OSI reference model (OSI model for short) from the International Standards Organization (ISO) has seven layers, each of which has a different functionality (in terms of

abstraction).” *Id.* (describing layers 1 through 7). Each layer also has a dedicated protocol for transmitter-receiver communication at the respective layer. *See id.* (e.g., “layer 7 corresponds to an application layer using an application protocol”); *see also id.* 6:12-32, Figs. 1-2. Layer 4 of the OSI model is the “transport layer,” layer 7 is the “application layer,” and layers 5 and 6 are between them. *Id.* 1:19–45. The ’682 patent explains, however, that “[i]n practice, many applications do not always permit exact nomination of strict boundaries specifically between the upper protocol layers, particularly layers 5 to 7,” such that “the three layers above the transport layer 4 combine to form an ‘application layer’ for which . . . an ‘application protocol’ is used.” *Id.*; *see id.* at 5:65-6:2, Figure 1 (“protocol architecture”), Figure 2 (“application layer with possible protocols”).



EX1001, Figures 1 and 2 (annotated)

Accordingly, the specification of the ’682 patent clearly states that “[w]hen referring to application layer below, this denotes the layers above the transport layer (layers above 4)” and “[t]he application protocol also denotes the protocol for

communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer.” EX1001 2:6-11. In this way, the patent’s specification informs the reader of what, given the above-described practice of combining layers 5-7, is meant by “application layer” and “application protocol” in the patent’s specification. The patent sets forth these definitions in a preliminary section (“Background of the Invention”), indicating how these terms are to be interpreted when referenced “below” in other sections of the specification, which includes the “Summary of the Invention,” “Detailed Description of the Preferred Embodiment,” and the claims. *See* EX1001, 2:6-11. The patent thus indicates that its definitions of “application layer” and “application protocol” apply to the patent’s descriptions of the invention generally, and not just to a particular or preferred embodiment. *See Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) (finding a patentee’s lexicography that “signal[ed] an intent to define the word to which it refers” was not limited to the preferred embodiment).

Furthermore, the patent’s use of the word “denotes” signals a clear intent to expressly define “application layer” and “application protocol.” Indeed, in *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1344-45 (Fed. Cir. 2009), the court found a patentee’s use of the word “denotes” demonstrated that the patentee “clearly chose” to act as its own lexicographer to define the term “sanitize.” There, the court noted

that “the patent explicitly states that the term ‘sanitize’ ‘denote[s] a bacterial population reduction to a level that is safe for human handling and consumption,” and held that by this statement in the specification, the patentee “clearly chose” “to act as his own lexicographer to define a patent term.” *Id.* (citing *Phillips*, 415 F.3d at 1316).

Here, the patent explicitly states that the term “application layer” “denotes the layers above the transport layer (layers above 4)” and that “application protocol” “denotes the protocol for communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer.” EX1001 2:6–11. Accordingly, as the patentee in *Ecolab*, the inventors here “clearly chose” to act as their own lexicographers to define “application layer” and “application protocol.” *See* 569 F.3d at 1344–45. Indeed, the inventors use the word “denotes” here to explain what the “application layer” and “application protocol” referred to in their patent are, which—just like use of the word “is” in a patent specification—signifies the inventors were acting as their own lexicographers. *See Sinorgchem Co., Shandong v. International Trade Com’n*, 511 F.3d 1132, 1136–39 (Fed. Cir. 2007) (“Moreover, the word ‘is,’ ... may ‘signify that a patentee is serving as its own lexicographer.’”).

**“the receiver knows the transmitter.”** The ’682 patent explains that “if the receiver knows the transmitter,” then “the message from the transmitter is accepted”

by the receiver. EX1001 4:3-10. “Otherwise, i.e. if the receiver does not know the transmitter, the data are rejected.” *Id.* The patent explains that, in this context, “if the receiver knows the transmitter” means “if the transmitter is successfully authenticated with respect to the receiver.” *See* EX1001 4:3-7 (“If the receiver knows the transmitter, i.e. particularly if the transmitter is successfully authenticated with respect to the receiver, the message from the transmitter is accepted, in particular the data are stored.”). The patent sets off this definition using “i.e.” (*id est*, or “that is”). *See Tf3 Ltd. v. Tre Milano, LLC*, 894 F.3d 1366, 1372 (Fed. Cir. 2018). It is well-settled that “[t]he usage ‘i.e.’” in a patent specification “signals an intent to define the word to which it refers.” *Id.* (quoting *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009)). The inventors of the ’980 patent thus defined “the receiver knows the transmitter” to mean “the transmitter is successfully authenticated with respect to the receiver.”

In *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1202 (Fed. Cir. 2013), the court considered whether “[t]he inventors also used the phrase ‘i.e.’ elsewhere in the specification ... to introduce an explanation or definition of a word or phrase,” and whether that use was “consistent ... throughout the specification.” There, the court found the inventors consistently used “i.e.” twelve other times to introduce an explanation or definition of a word or phrase, finding “there is no reason to believe that the inventors did not intend for the abbreviation to signal an intent to define the

word it followed when they stated “[t]he cells are cultured in . . . beads (i.e., two-dimensions) or, preferably, in three-dimensions.” *Id.* The court held that the inventors “explicitly define[d] beads as a two-dimensional culture method.” *Id.*

Similarly, the inventors of the ’980 patent consistently use “i.e.” seven other times in the specification to introduce an explanation or definition of a word or phrase. *See* EX1001, 1:40-45, 3:11-15, 3:56-60, 3:60-65, 4:7-8, 4:8-9, 4:26-30. Accordingly, as in *SkinMedica*, there is no reason to believe that the inventors did not intend for the abbreviation “i.e.” to signal an intent to define the phrase it followed when they stated “[i]f the receiver knows the transmitter, i.e. particularly if the transmitter is successfully authenticated with respect to the receiver, the message from the transmitter is accepted, in particular the data are stored.” *See SkinMedica*, 727 F.3d at 1202. The inventors thus “explicitly” defined “the receiver knows the transmitter” to mean “the transmitter is successfully authenticated with respect to the receiver.” *See id.*

\* \* \* \*

As discussed in detail in Section VII, *infra*, Petitioners’ arguments ignore the meaning and significance of claim terms defined in the patent’s specification, such as “application layer,” “application protocol,” and “the receiver knows the transmitter.” To the extent Petitioners intended for these terms to be construed differently, Petitioners were obligated under 37 C.F.R § 42.104(b)(3) to identify the

construction expressly and explain, with particularity, the basis for the construction, including supporting evidence from the intrinsic record of the '682 patent. 35 U.S.C. § 312(a)(3) (“particularity”); 37 C.F.R. § 42.104(b)(3) (“How the challenged claim is to be construed.”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.”); *see, e.g., Abbot Diabetics Care Inc., v. Dexcom, Inc.*, IPR2022-00918, Paper 17 at 24 (P.T.A.B. Nov. 3, 2022) (finding no reasonable likelihood of success where petitioner’s claim interpretation was not supported by the specification); *Samsung Electronics Co., v. Rightquestion, LLC*, IPR2022-00251, Paper 17 at 23–26 (P.T.A.B. Jun. 9, 2022) (finding no reasonable likelihood of success where petitioner did not explain with particularity the meaning of a claim term and how the asserted reference disclosed it or rendered it obvious).

## **VII. DISCRETIONARY DENIAL IS WARRANTED**

### **A. Petitioners’ abusive citation practices warrant discretionary denial under § 314(a).**

#### **1. Petitioners’ use of incorporation by reference violates the wordcount limit and renders the Petition deficient under 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.22(a)(2).**

Incorporation by reference, whether express or through broad and unexplained citations to supporting declarations, is prohibited to prevent petitioners from engaging in self-help to circumvent the wordcount limit on petitions. *Cisco*

*Systems, Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 at 7-10 (PTAB Aug. 29, 2014) (informative). Petitioners' Certificate of Compliance states that the Petition includes 13,945 words—55 words under the limit. Pet. 76; 37 C.F.R. § 42.24. However, the Petition expressly, and through the use of broad and unexplained citations to supporting declarations, incorporates by reference thousands of additional words, including argument, thereby circumventing the wordcount limit for petitions.

Petitioners expressly “incorporate[] by reference” an entire section of their expert’s declaration, amounting to approximately 675 words. Pet. 4 (“Petitioners’ challenge is based on the following prior art, for which a detailed overview is provided in the Declaration of Dr. Houh, which is incorporated by reference. EX1003, Section VI.”). Worse, this section includes arguments and characterizations that go beyond providing a mere “overview.” For example, Dr. Houh argues that all three asserted references were allegedly “published” or otherwise publicly available, which is not an “overview” of the reference, but instead seeks to demonstrate that they allegedly constitute prior art under the legal standard. *See* EX1003, ¶¶ 59-61. Dr. Houh also provides his opinion of what each reference allegedly “teaches” or “discloses,” which are opinions that Petitioners improperly incorporate by reference. *See id.*

The Petition also incorporates by reference (through the use of broad, unexplained citations) a second section of Dr. Houh’s declaration amounting to another approximately 2,600 words, in similar fashion. Pet. 9 (“An overview of the ’682 Patent, including a summary of the technology, claims, and prosecution history is provided in the Declaration of Dr. Houh. EX1003, Section IV.”). But this section includes numerous substantive opinions of Dr. Houh that Petitioners attempt to wholesale incorporate into the Petition, including his opinions: of what the ’682 patent is purportedly directed to and what solutions it purportedly describes (§§ 34-35); that the patent purportedly describes “known” methods and elements, including with reference to alleged “prior art” (§§ 35, 37-41); of the PTO examiner’s purported reasons for allowance (§ 42); of an alleged definition of a POSITA (§ 45); and of the purported “state of the art,” purported details of alleged “prior art,” and what was purportedly “known in the art” (§§ 46-55).

The Petition similarly incorporates by reference (through the use of broad, unexplained citations) the entirety of the Hall-Ellis expert declaration (EX1010), which is 36 pages long (excluding attachments), addressing alleged public accessibility of the Zhao reference. Pet. 5 (“*Secure Transport Protocols for High-Speed Networks* was publicly available by at least September 1, 1995. *See* EX1010.”); *see* § VIII.A, *infra*. Petitioners thus incorporate by reference their entire

substantive argument regarding Zhao's alleged prior art status from a supporting declaration.

The Board has authority to deny a Petition for violations of its rules. *See Intervet Inc. v. Boehringer Ingelheim Vetmedica, Inc.*, IPR2018-01788, Paper 9, at 8-9 (P.T.A.B. Apr. 6, 2019) ("Here, we discern a violation of [37 C.F.R. § 42.22(a)(2) and § 42.6(a)(3)] that pervades every ground of unpatentability raised in the Petition, and warrants denial of review on that basis alone."). Petitioners' improper incorporations by reference here pervade every ground of the Petition, at least because each ground is based on references that Petitioners have attempted to show to be qualifying prior art using improper incorporation by reference. Petitioners' incorporations by reference also sweep in other substantive arguments from the Houh declaration pertinent to each asserted Ground.

Alternatively, the Board can decline to consider testimony and evidence improperly incorporated by reference. *See, e.g.*, Patent Trial and Appeal Board Consolidated Trial Practice Guide, November 2019, at 35-36; *Cisco*, IPR2014-00454, Paper 12 at 9-10. This is so even when the consequence of non-consideration is that the petitioner's argument or ground fails, resulting in non-institution. *See Clim-A-Tech Industries, Inc. v. William A. Ebert*, IPR2017-01863, Paper 13 at 27-28 (P.T.A.B. Feb. 12 2018) ("Even if Petitioner's expert declaration were to provide such particularity, arguments and information that are not presented and developed

in the Petition, but instead are incorporated by reference, are not entitled to consideration, as it is improper to incorporate by reference arguments from one document into another document.”); *Icon Health & Fitness, Inc. v. Nautilus, Inc.*, IPR2017-00494, Paper 11, at 4 (P.T.A.B. Oct. 27, 2017) (“There is no question that Mr. Ganaja’s testimony in these paragraphs addresses the issues that we found lacking in the Petition. The problem for Petitioner, however, is that the Petition itself did not include these arguments . . . . Citing to these paragraphs of Mr. Ganaja’s declaration without providing any explanation of the significance thereof in the Petition itself is insufficient. *See* 37 C.F.R. § 42.6(a)(3).”); *Unified Patents Inc. v. William Grecia*, IPR2016-00789, at 15-16 (P.T.A.B. Sept. 9, 2016) (“Such reliance on Mr. Cherukuri’s declaration testimony is an improper incorporation by reference of arguments asserted in a declaration, which we will not consider here. *See* 37 C.F.R. § 42.6(a)(3) . . . . Petitioner’s asserted ground fails for this reason.”); *Valeo North America*, IPR2014-01206, Paper 13, at 14; *Conopco, Inc. v. The Proctor & Gamble Co.*, IPR2013-00510, Paper 9, at 8-9 (P.T.A.B. Feb. 12, 2014).

Whether the Board considers Petitioners’ flagrant and unabashed incorporations by reference of multiple thousands of words a sufficiently egregious violation of its rules to warrant denial of the Petition, or instead declines to consider the improperly incorporated testimony and evidence and finds the Petition insufficient as a result, the outcome should be the same—the Petition should be

denied. Either way, the basis for denial boils down to a violation of the Boards rules, thus the Board can (and should) discretionarily deny the Petition under its § 314(a) authority.

**2. Petitioners' use of cross-referencing renders the asserted Grounds unclear.**

Petitioners' use of cross-referencing to other sections of the Petition and Dr. Houh's declaration creates an indecipherable morass of unpatentability theories such that Petitioners have failed to identify the asserted reasons for unpatentability with requisite particularity and detail. *See* 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.22(a)(2). Petitioners' Ground II, for example, asserts the combination of PacketCable and Handley. Pet. 5. For many claim elements addressed in Ground II, Petitioners assert that PacketCable alone discloses or renders obvious the claim element while also asserting that that it would have been obvious over the combination of PacketCable and Handley, with no more than a bare citation to their Ground I arguments. *See, e.g.*, Pet. 45, 48, 50, 51, 53, 54, 57. Ground I, however, asserts the combination of Handley and Basturk, not Handley and PacketCable. In each case, Petitioners fail to explain how their arguments regarding the combination of Handley and Basturk in Ground I demonstrate that the combination of PacketCable and Handley in Ground II allegedly renders the claims obvious. Petitioners' unexplained cross-references also obscure their position regarding

“which reference, and which portion of which reference, teaches or suggests each element.” *See DIRECT TV, LLC v. Qurio Holdings, Inc.*, IPR2015-02007, Paper 6 at 10, 15 (P.T.A.B. Apr. 4, 2016). The particular basis for alleged unpatentability in Ground II is therefore unclear. *See* 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.22(a)(2).

Additionally, for every claim element addressed in Petitioners’ Ground III analysis, the entirety of Petitioners’ argument is an incorporation by reference of their Ground I and Ground II arguments, wholesale and without explanation, cross-referencing as many as eight other claim elements. *See* Pet. 66-72. This fails to identify with particularity the asserted grounds and evidence because (a) Ground III asserts the combination of PacketCable with Basturk, while each of Grounds I and II addresses a different combination of references (Handley with Basturk, and PacketCable with Handley), and (b) it is unclear which reference, and which portion of which reference, the Petition relies on to teach or suggest each element or how they are being combined. *See DIRECT TV*, IPR2015-02007, Paper 6 at 10, 15. The particular basis for alleged unpatentability in Ground III is therefore also unclear. *See* 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.22(a)(2).

The Petition treats Ground IV similarly to Ground III; the entirety of Petitioners’ argument for each of claims 22 and 24 is merely a citation to arguments in Grounds I, II, and III without explaining particularly which reference, and which portion of which reference, the Petition relies on to teach or suggest each element or

how they are being combined. *See DIRECT TV*, IPR2015-02007, Paper 6 at 10, 15. The particular basis for alleged unpatentability in Ground IV is therefore also unclear. *See* 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.22(a)(2).

Numerous Board panels have found petitions employing similar techniques for reducing word count lack the particularity, specificity, and detail necessary to demonstrate a reasonable likelihood of success. *See, e.g., Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00800, Paper 7 at 11-16, 18-19 (P.T.A.B. Nov. 2, 2021) (“This approach of forcing the reader to follow a web of nested cross-references to find Petitioner’s arguments improperly shifts the burden of deciphering Petitioner’s arguments onto Patent Owner and the Board.”) (“Petitioner has not complied with our rules.”); *Juniper Networks, Inc. v. Core Optical Techs. LLC*, IPR2020-01664, Paper 9 at 22-23 (P.T.A.B. Apr. 16, 2021) (“Although utilizing internal cross-references might be acceptable in some cases, here the cross-referencing to multiple sections that lack specificity and particularity further obscures whatever proposed combination Petitioner relies on as rendering obvious the respective challenged claim as a whole.”); *Lyft, Inc. v. Quartz Audio Techs. LLC*, IPR2020-01535, Paper 7 at 13-16 (P.T.A.B. Mar. 2, 2021) (finding nested cross-references and lack of explanation in the Petition to “not comply with Board rules”); *DIRECT*, IPR2015-02007, Paper 6 at 10, 15 (“This web of internal cross references results in multiple levels of abstraction, obscuring Petitioner’s position regarding which reference, and

which portion of which reference, teaches or suggests each element.”); *Apple Inc. v. Contentguard Holdings, Inc.*, IPR2015-00451, Paper 11 at 3-5 (P.T.A.B. Oct. 14, 2015) (use of “vague, nested citations to broad sections of the record,” “improper incorporation by reference,” and “pervasive use of unclear internal cross references” “cause the Petition to fall below the standards of particularity and specificity required of supporting evidence” (cleaned up)).

While the examples of abusive and improper cross-referencing discussed above pertain to Grounds II-IV, Petitioners’ Ground I is deficient for the reasons explained in § VII.A.1 above and § VIII.B below. All four Grounds asserted in the Petition are thus deficient, warranting denial of the Petition.

### **VIII. PETITIONERS HAVE NOT DEMONSTRATED A REASONABLE LIKELIHOOD OF PREVAILING ON ANY CHALLENGED CLAIM**

**A. The Petition fails to identify, “with particularity,” arguments or evidence sufficient to establish a reasonable likelihood that the asserted references were publicly accessible or qualify as prior art.**

**1. The Petition identifies insufficient evidence to meet  
Petitioners’ burden.**

To meet Petitioners’ burden, the Petition must “identify *with particularity* the grounds for institution and evidence supporting such grounds,” including “the prior art relied upon *and evidence that it qualifies as such.*” *Hulu, LLC, v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 12–13 (PTAB Dec. 20, 2019) (Precedential) (emphasis added). As explained in *Hulu*, “[t]his standard is far more

than is required in typical notice pleading, which only require that a party make a plausible claim.” *Id.* (citing *ABB Turbo Sys. AG v. Turbousa, Inc.*, 774 F.3d 979, 984 (Fed. Cir. 2014)). “Thus, at the institution stage, the petition must identify, *with particularity*, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.” *Id.* (emphasis added).

“Whether a reference qualifies as a printed publication under § 102 is a legal conclusion based on underlying fact findings,” including as to “public accessibility.” *Acceleration Bay, LLC v. Activision Blizzard, Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018) (citing cases). “Public accessibility” has been called “the touchstone in determining whether a reference constitutes a ‘printed publication.’” *Id.* (quoting *Jazz Pharms., Inc. v. Amneal Pharms., LLC*, 895 F.3d 1347, 1356 (Fed. Cir. 2018) (cleaned up)). “A reference is considered publicly accessible if it was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *Id.* (cleaned up). Petitioners bear the burden to prove that the asserted references qualify as printed publications. *Id.*

The Petition fails to identify, “with particularity,” evidence sufficient to establish a reasonable likelihood that Handley, Basturk, or PacketCable was publicly accessible at the relevant time to qualify as prior art.

**Handley.** Petitioners’ only effort to show that Handley (EX1005) qualifies as prior art is a bare claim that Handley allegedly “published” on “February 11, 1999, in the Computer Networks journal.” Pet. 4. However, Handley bears no indicia of any publication date (let alone the specific date asserted by Petitioner) or that it was published in “the Computer Networks journal.” *See* EX1005. And Petitioners submitted no other evidence or argument to show that Handley “published” on that date or in that purported publication, or that it otherwise qualifies as a prior art printed publication under 35 U.S.C. § 102. Petitioners’ bare claims regarding the alleged publication are wholly conclusory and unsupported by evidence, thus they are insufficient. *See* Pet. 4 (citing no support); *see Hulu*, IPR2018-01039, Paper 29 at 13 (institution threshold is higher than notice pleading). Moreover, beyond its conclusory and unsupported assertions, Petitioners cite no *evidence* that Handley was disseminated or otherwise made publicly available—a showing far less than what the Board and Federal Circuit have previously found insufficient. *See Acceleration Bay*, 908 F.3d at 772–73 (upholding Board determination that a reference, though technically accessible, did not qualify as a printed publication where “there was no evidence that [it] was disseminated to the public” and the

document's source was not "searchable or indexed in a meaningful way so that a person of ordinary skill in the art would have located [it]").

**Basturk.** Petitioners claim that Basturk "was publicly available by at least September 1, 1995." Pet. 5. But the Petition fails to identify, "*with particularity*," sufficient arguments or evidence to support that claim. 35 U.S.C. § 312(a)(3) (emphasis added). Petitioners cite, without explanation, to the *entirety* of EX1010, which is a 36-page expert declaration by Sylvia D. Hall-Ellis. Pet. 5, EX1010. This "practice of citing [a] [d]eclaration to support conclusory statements that are not otherwise supported in the Petition . . . amounts to incorporation by reference," *Cisco*, IPR2014-00454, Paper 12 at 9, which is impermissible. 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document."). The Hall-Ellis declaration is 36 pages long and appends another 133 pages of purported supporting documentation, none of which is addressed or explained in the Petition. *See* Pet. 5; EX1010. Petitioners do not, for example, explain how anything in the Hall-Ellis declaration demonstrates when or how (*e.g.*, through dissemination, accessibility, etc.) Basturk allegedly was publicly available. "Such open-ended incorporation . . . fails to satisfy Petitioner's burden of showing with particularity why the patent it challenges is unpatentable." *See Metall Zug Ag v. Carl Zeiss Meditec AG*, IPR2020-00916, Paper 8 at 21-22 (P.T.A.B. Nov. 4, 2020); *see also Floodbarrier, Inc. v. ILC Dover, LP*, IPR2019-01543, Paper 12 at

15-16 (P.T.A.B. Mar. 11, 2020) (incorporation by reference “fails to satisfy the particularity requirement under 35 U.S.C. § 312(a)(3)); *Clim-A-Tech Industries, Inc. v. William A. Ebert*, IPR2017-01863, Paper 13 at 27-28 (P.T.A.B. Feb. 12 2018) (“Even if Petitioner’s expert declaration were to provide such particularity, arguments and information that are not presented and developed in the Petition, but instead are incorporated by reference, are not entitled to consideration, as it is improper to incorporate by reference arguments from one document into another document.”).

Such incorporation by references also runs afoul of several Board regulations, including: 37 C.F.R. § 42.104(b)(5), which requires that a petition must “identify[] *specific portions of the evidence* that support the challenge” and that “[t]he Board may exclude or give no weight to the evidence where a party has failed to *state its relevance or to identify specific portions of the evidence* that support the challenge” (emphasis added); and 37 C.F.R. § 42.22(a)(2), which requires that a petition “must include . . . [a] full statement of the reasons for the relief requested, including a *detailed explanation of the significance of the evidence*” (emphasis added).

It is also the kind of self-help that was rejected in *Cisco* as effectively “circumvent[ing] the page limits imposed on petitions for *inter partes* review,” and has been rejected on numerous occasions since. *Cisco Systems*, IPR2014-00454, Paper 12 at 10; *see, e.g., Metall Zug Ag*, IPR2020-00916, Paper 8 at 21-22; *Intervet*

*Inc. v. Boehringer Ingelheim Vetmedica, Inc.*, IPR2018-01788, Paper 9 at 8 (P.T.A.B. Apr. 16, 2019) (The Board may ‘decline to consider information that is not identified sufficiently in the Petition, but instead is incorporated by reference to cited portions of’ a supporting declaration.” (quoting *Instrumentation Lab. Co. v. Hemosonics LLC*, Case IPR2017-00855, slip. op. at 14 (PTAB September 1, 2017) (Paper 14)); *Unified Patents Inc. v. Olivistar, LLC*, IPR2015-01217, Paper 15 at 12 n.7 (P.T.A.B. Nov. 20, 2015); *Apple Inc. v. ZiiLabs Inc., Ltd.*, IPR2015-00963, Paper 8 at 20-21 (P.T.A.B. Oct. 1, 2015); *Apple Inc. v. ContentGuard Holdings, Inc.*, IPR2015-00442, Paper 9 at 8-10 (P.T.A.B. Jul. 13, 2015); *ZTE (USA), Inc. v. Electronics and Telecommunications Research Institute*, IPR2015-00028, Paper 12 at 5-7 (P.T.A.B. Mar. 20, 2015).

A panel of the Board previously found that a conclusory public availability assertion coupled with a citation to a supporting declaration was insufficient to meet a petitioner’s burden in the context of a post-grant review. *See, e.g., Dynaenergetics US, Inc. v. Geodynamics, Inc.*, PGR2018-00065, Paper 8 at 14–19 (P.T.A.B. Nov. 15, 2018). Although the institution standard for post-grant review<sup>3</sup> is different than that for IPR, the panel’s assessment in *Dynaenergetics* is apt: “We view Petitioner’s naked assertion that [the reference] is publicly available, and blanket citation to

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<sup>3</sup> For a PGR, the standard for institution is whether it is “more likely than not” that the petitioner would prevail at trial, 35 U.S.C. § 324(a).

paragraphs 1 and 12 of the [supporting] declaration, as an invitation to be an archeologist of the record in search of pertinent facts to satisfy the criteria for public accessibility,” which “however, is not [the Board’s] role.” *Id.* at 18.

Conclusory assertions coupled with citations to supporting declarations is also insufficient for IPRs. *See, e.g., Metall Zug Ag v. Carl Zeiss Meditec AG*, IPR2020-00916, Paper 8 at 21-22 (P.T.A.B. Nov. 4, 2020) (“Such open-ended incorporation . . . fails to satisfy Petitioner’s burden of showing with particularity why the patent it challenges is unpatentable.”); *Floodbarrier, Inc. v. ILC Dover, LP*, IPR2019-01543, Paper 12 at 15-16 (P.T.A.B. Mar. 11, 2020) (incorporation by references “fails to satisfy the particularity requirement under 35 U.S.C. § 312(a)(3)); *Apple Inc. v. Contentguard Holdings, Inc.*, IPR2015-00442, Paper 9, at 9-10 (P.T.A.B. Jul. 13, 2015) (“[T]he Petition fails...to provide a sufficiently detailed explanation of the significance of the citations to these references and the Sherman Declaration—as required under 35 U.S.C. § 312(a)(3), 37 C.F.R. § 42.22(a)(2), and 37 C.F.R. § 42.104(b)(4) – (5).”); *ZTE (USA), Inc. v. Huawei Devices USA, Inc.*, IPR2015-00028, Paper 12, at 5-7 (P.T.A.B. Mar. 20, 2015) (“We agree with Patent Owner that ‘standing on its own, the Petition lacks any ‘detailed explanation of the significance of the evidence,’ in violation of 37 C.F.R. § 42.22(a)(2).’ Thus, we conclude that the Petition fails to meet the statutory requirement of 35 U.S.C. § 314(a) because the information presented in the Petition

does not show that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims.”); *DIRECTV, LLC v. Qurio Holdings, Inc.*, IPR2015-02007, Paper 6, at 14-15 (P.T.A.B. Apr. 4, 2016).

**PacketCable.** As with Handley, Petitioners fail to identify “with particularity” evidence sufficient to establish a reasonable likelihood that PacketCable was publicly accessible. Petitioners claim that PacketCable “published” on December 1, 1999 (a date that appears on the face of PacketCable). Pet. 5; EX1007. However, Petitioners fail to support their assertion that PacketCable “published” on that date—PacketCable itself does not describe that date as a publication date, and Petitioners offers no evidence or explanation to support their claim. Moreover, Petitioners offer no explanation or evidence as to how PacketCable would have allegedly been disseminated or otherwise available to the public, *i.e.*, publicly accessible, which is “the touchstone” in determining whether a reference constitutes a printed publication. *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016). The Board has previously found more indicia than Petitioners rely on here to be insufficient. *See In-Depth Geophysical, Inc. v. Conocophillips Co.*, IPR2019-00849, Paper 14 at 4–13 (PTAB Sept. 6, 2019) (conference paper with copyright date of 2012 and date of September 2012 on its cover was insufficient to show that the paper had been disseminated). Accordingly,

Petitioner's bare assertion and the one unexplained date are insufficient to show a reasonable likelihood that PacketCable qualifies as prior art.

**2. Petitioners should not be permitted a reply or to submit supplemental information to address prior art or printed publication status.**

“The rules of *inter partes* review do not automatically authorize a petitioner to file a reply to a patent owner preliminary response; instead, a petitioner seeking to file a reply prior to institution must make a showing of “good cause.” *See* 37 C.F.R. § 42.108(c) (2019).” *Victoria's Secret Stores, LLC v. Andra Group, LP*, IPR2020-00853, Paper 11, at 2 (P.T.A.B. Aug. 13, 2020) (finding no good cause). “When determining whether a petitioner has shown good cause for a reply to a preliminary response, the Board may assess whether the argument at issue in the preliminary response was reasonably foreseeable.” *Id.* at 3-4 (citing cases).

To the extent appropriate and permitted, “submission of supplemental information or evidence occurs *after* institution of trial,” not before. *See RayVio Corp. v. Nitride Semiconductors Co., Ltd. et al*, IPR2018-01139, Paper 14, at 8-9 (P.T.A.B. Oct. 31, 2018) (citing 37 C.F.R. §§ 42.64(b)(2), 42.123) (emphasis added). In any event, “[t]he provision for submitting supplemental information under Rule 42.123(a) ‘is not intended to provide a petitioner an advantageous “wait-and-see” opportunity to use a patent owner’s preliminary response ... in order to refine or

bolster petitioner’s position.’’ *Artesian Home Products et al v. Gutterglove, Inc.*, IPR2018-00031, Paper 24, at 3 (P.T.A.B. May 31, 2018) (citing cases).

No good cause exists to permit Petitioners a reply to this Preliminary Response to address or cure issues of public accessibility and prior art status. That Patent Owner would challenge the sufficiency of Petitioners evidence of public accessibility is entirely foreseeable, demonstrating a lack of good cause. *See Victoria’s Secret Stores*, IPR2020-00853, Paper 11, at 7; *BMW of N. Am. LLC v. Intellectual Ventures*, IPR2017-01558, Paper 8 at 2–3 (PTAB Oct. 25, 2017). Petitioners should not be permitted to bolster their petition through a “wait-and-see” reply when it was their burden to provide their arguments and evidence in the Petition, *see Artesian Home Products*, IPR2018-00031, Paper 24, at 3, especially in light of Petitioners significant violations of the word count limits through incorporation by reference, *see* §§ VI.A and VII.A.1, *supra*, and because the § 315(b) bar date has passed, *Mylan Pharmaceuticals Inc. v. Boehringer Ingelheim Pharmaceuticals Inc.*, IPR2016-01565, Paper 15, at 2-3 (P.T.A.B. Dec. 7, 2016); *Teva Pharmaceuticals USA, Inc., v. Indivior UK Limited*, IPR2016-00280, Paper 21, at 4 (P.T.A.B. May 27, 2016).

The Board is capable of assessing Patent Owner’s arguments—Petitioners need not be heard again on an issue for which they bear the burden. *See, e.g., Unified Patents, LLC f/k/a Unified Patents Inc. v. Velos Media, LLC*, IPR2019-01663

(PTAB) (denying request to file a reply to preliminary response to address case law on public accessibility); *RayVio Corp. v. Nitride Semiconductors Co., Ltd.*, IPR2018-01139 (PTAB) (denying request for reply to “direct [the Board] to portions of the record that support its position, and, separately to provide supplemental information to ‘clarify’ that [a reference] is a publication”); *Franklin Electric Co., Inc. et al. v. Liberty Pumps, Inc.*, IPR2017-00112 (PTAB) (finding no good cause for a reply); *Xactware Solutions, Inc. et al. v. Pictometry International Corp.*, IPR2016-00593 (PTAB) (“To the extent that Petitioner seeks to identify new citations or bolster arguments in the Petition, we are not required to allow Petitioner to do so.”).

**B. The Petition fails to demonstrate that Handley in combination with Basturk (Ground I) discloses or renders obvious every limitation of claim 1.**

**1. “providing transmitter-to-receiver authentication at a Real Time Transport Protocol (RTP) packet level as an application protocol on an application layer by inserting, at the transmitter, authentication data at end of a whole RTP packet payload”**

Petitioners fail to demonstrate that Handley and Basturk, whether considered separately or in combination, disclose or render obvious this claim element. This claim element requires “providing transmitter-to-receiver authentication at a [RTP] packet level” in a particular way, *i.e.*, “as an application protocol on an application layer by inserting, at the transmitter, authentication data at end of a whole RTP

packet payload.” The Petition pulls this element apart, labeling the pieces “Element [1.1]” (from “providing” to “application layer”) and “Element [1.2]” (the remainder), and analyzes them separately, concluding they each were disclosed or obvious. Pet. 15-20. Petitioners’ piecemeal analysis, however, loses sight of what this claim element as a whole describes, which Petitioners fail to show is disclosed or rendered obvious by Handley and/or Basturk.

Petitioners do not even attempt to show that Handley discloses the particular way of “providing transmitter-to-receiver authentication at a [RTP] packet level as an application protocol on an application layer” described in this claim element, *i.e.*, “by inserting, at the transmitter, authentication data at end of a whole RTP packet payload.” Pet. 19-20. Petitioners’ arguments rely solely on Basturk for allegedly teaching the claims’ requirement of “inserting, at the transmitter, authentication data at end of a whole ... packet payload.” *Id.* But Basturk does not disclose—and in fact teaches away from—doing so to “provid[e] transmitter-to-receiver authentication ... *as an application protocol on an application layer.*” *AstraZeneca AB v. Mylan Pharm. Inc.*, 19 F.4th 1325, 1337 (Fed. Cir. 2021) (“[A] prior art reference is said to teach away from the claimed invention if a skilled artisan upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken in the claim.” (cleaned up)). Accordingly, for the reasons explained below, Petitioners

fail to show that the claim *as a whole* was disclosed or rendered obvious by the combination of Handley and Basturk. *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (“[S]ection 103 specifically requires consideration of the claimed invention “as a whole. ... The ‘as a whole’ instruction in title 35 prevents evaluation of the invention part by part.”).

Petitioners’ arguments ignore Basturk’s explicit teachings that Basturk’s protocol is for providing security (including authentication) specifically at the *transport layer*—rather than the application layer. *See* § II.D, *supra*. Basturk focuses on “new security concerns” at the transport level, specifically one called “secure delivery.” EX1006 Abstract, 3. The “secure delivery” concern, Basturk says, is “most naturally associated with the *transport level* and [is] best addressed by the design of secure transport protocols.” *Id.* (emphasis added). In describing its solution for this new concern, Basturk explicitly says that it “distinguish[es] security features according to the layer of the communication structure to which they are most naturally associated,” and that “the traditional features are mostly application level, while *the new ones we deem necessary are transport level.*” *Id.* (emphasis added). The “traditional” “application level security features” Basturk identifies are “integrity” and “confidentiality,” which are provided by both “signing” and “encrypt[ing]” the data (*i.e.*, using authentication and encryption) at the application level before passing data to the transport level. *Id.* 3-4.

Basturk teaches that application level security (e.g., authentication) does not ensure *secure delivery*: “Note that the presence of the application level security features does not necessarily imply the security of delivery. The adversary can easily make a sending application believe that whatever it transmitted has been received by the receiving application, *even if the data are signed or encrypted by the upper layer,*” *i.e.*, at the application level (where it is “application level signed”). *Id.* 4. Basturk says that “the lack of secure delivery is a serious security problem” and that secure delivery is an “example of a ***transport level*** security feature that is desirable.” *Id.* 4 (emphasis added). According to Basturk, this “motivate[s] the need for security ***at the transport layer.***” *Id.* 6 (emphasis added). Basturk thus teaches providing security on the transport layer—not the application layer.

Petitioners’ argument that “key elements of Basturk’s authentication technique take place as an application protocol on an application layer because . . . key exchange and selection of a key to use for a communication, occur at the application layer” misapprehends Basturk and fails to show that Basturk teaches providing authentication “as an application protocol on an application layer.” Pet. 19. Basturk does not teach or suggest that its “secure delivery” solution is an application level security feature—to the contrary, Basturk explicitly teaches that it is a “***transport level reliability*** feature,” which is why Basturk calls it “a ***transport level*** feature.” *Id.* 4. Indeed, Basturk teaches tasking a “***transport*** module,” rather

than “the application,” with “applying any cryptographic functions or taking other security steps” to achieve secure delivery, which includes “comput[ing] a signature which covers not only the data but also (relevant parts of) the *transport* header which it creates” and “sign[ing] the acknowledgements messages which exist only at the *transport level*.” *Id.* 4-5 (emphasis added). The key used by the transport module to provide secure delivery is called a session key  $\alpha$ , and Basturk explicitly states that “only the *transport* machines  $M_A$  and  $M_B$  know about the session key.  $A$  and  $B$ ,” *i.e.*, the applications<sup>4</sup>, “never see it.” *Id.* 10 (emphasis added). Accordingly, even if, as Petitioners argue, Basturk’s protocol involves other “keys” that “are passed from the application layer to the transport layer,” Pet. 19, the session key  $\alpha$  used to provide secure transport at the transport layer (including authentication) is not one of them.

Basturk’s explanation of the initialization and key exchange process demonstrates that Basturk’s security technique provides security (including authentication) at the transport level, not the application level. Basturk explains that “we view  $A$  as having a secure machine  $M_A$  with which it interfaces. Similarly,  $B$  interfaces with its secure machine  $M_B$ . *The cross network communication is performed by the two machines, who send each other packets across the network*

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<sup>4</sup> See EX1006, 3 (“Two parties, denoted  $A$  and  $B$ , communicate over a network. *We will naturally view the parties as applications who use a common transport protocol.*” (emphasis added)).

*and are responsible for the secure transport mechanism.”* EX1006, 8 (emphasis added). The machines  $M_A$  and  $M_B$  are “secure transport machines.” *Id.* Thus, secure transport is provided at the transport level by the transport machines, not at the application level. During initialization, “ $A$  initializes  $M_A$  (by passing it  $B$ ’s identity and the shared key  $a$ ),” but it is “the machine”  $M_A$ , not the application  $A$ , that “initiates and executes an authentication and key exchange protocol with  $M_B$ ” to “result[] in the distribution of a new (fresh) session key  $\alpha$  while making sure that this key is authentic (ie. known to  $M_A$  and  $M_B$ ).” EX1006, 9. As mentioned above, “only the transport machines  $M_A$  and  $M_B$  know about the session key.  $A$  and  $B$ ,” *i.e.*, the applications, “never see it.” *Id.* 10. And it is this session key  $\alpha$  (not the initially passed key  $a$ ) that is used by  $M_A$  and  $M_B$  to sign the packet and verify the signature at the transport level, *i.e.*, to provide the authentication of Basturk’s security technique. EX1006, 9. That transport level signature generated with the session key  $\alpha$  is why “a trailer has been added” to the transport packet “that contains the packet signature.” EX1006, 16. In summary, Basturk teaches adding a trailer to a transport level packet to contain a transport level packet signature for adding transport level authentication security features using a transport level protocol.

Basturk’s use of a trailer in a transport layer packet for providing authentication on a transport layer does not disclose or suggest the claimed invention as a whole, which requires “providing transmitter-to-receiver authentication ... as

an *application* protocol on an *application* layer by inserting ... authentication data at end of a whole RTP packet payload.” (emphasis added). As explained above, “application layer” means “the layers above the transport layer (layers above 4),” and “application protocol” means “the protocol for communication between a transmitter application layer situated above the transport layer and a receiver application layer situated above the transport layer.” See § VI.A, *supra*. Basturk’s *transport* layer protocol for providing authentication at the *transport* layer using a trailer added to a *transport* level packet therefore clearly does not disclose (nor does it suggest) the claimed invention as a whole.

Basturk also teaches away from using its trailer to provide authentication in the manner claimed, *i.e.*, “as an application protocol on an application layer.” Basturk unambiguously teaches that providing authentication security on the application layer does not provide “secure delivery.” EX1006, 3-4. It teaches that “the presence of the application level security features,” including “signing” the data (*i.e.*, using authentication), “does not necessarily imply the security of delivery” because “[t]he adversary can easily make a sending application believe that whatever it transmitted has been received by the receiving application, *even if the data are signed or encrypted by the upper layer*,” *i.e.*, even if authentication is used at the application level (where it is “application level signed”). *Id.* (emphasis added). Basturk also teaches that this “serious security problem” “motivate[s] the need for

security *at the transport layer*,” rather than at the application layer. *Id.* 4, 6. Basturk thus discourages the use of its protocol (including its trailer) for providing application level authentication (teaching that application level authentication does not provide “secure delivery”) and leads the reader in the direction of providing authentication at the transport layer, which is divergent from the path taken by the claim of providing authentication at the application layer, *i.e.*, “providing transmitter-to-receiver authentication ... as an application protocol on an application layer” as claimed. *AstraZeneca AB*, 19 F.4th at 1337 (“[A] prior art reference is said to teach away from the claimed invention if a skilled artisan upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken in the claim.” (cleaned up)).

Petitioners do not explain how, in light of Basturk’s teachings above, it would have been obvious to use Basturk’s *transport level* protocol (including its trailer) for providing *transport level* security at an application layer. As explained above, Basturk teaches techniques for securing communication at the transport level specifically, notwithstanding existing application level security features, which Basturk teaches are insufficient for secure delivery. *See analysis supra; see EX1006*, 5. Petitioners do not explain why it would have been obvious, in light of Basturk’s teachings, to implement Basturk’s trailer to provide authentication at the application

level, *i.e.*, to do the very thing that Basturk teaches will not provide secure delivery. *Id.* at 3-4.

Petitioners’ argument that “a POSITA would have understood and found obvious that when combined with *Handley*’s RTP internet conferencing architecture, the trailer, *i.e.*, authentication data or MAC from *Basturk*, would be placed at the end of the whole RTP packet payload” is thus belied by Basturk’s own teachings. Pet. 15-16, 19-20. For the reasons explained above, Basturk unambiguously teaches that its protocol is specifically for adding security at the *transport level* and teaches away from using it to provide authentication at the application layer where authentication security already exists and fails to close the security gap Basturk addresses. *See analysis, supra.*

Petitioners also misrepresent or misapprehend Basturk’s teachings about what enables Basturk’s “on-the-fly” processing. Pet. 20. As explained above, Basturk teaches adding security features to an unsecure transport layer protocol because application layer security is insufficient for securing the transport layer. *See analysis supra*; EX1006, 3-4. To make up for the lack of security at the transport layer, Basturk teaches “a method to transform any transport protocol into a ‘secure’ version” with the addition of “new security features” for the transport layer, while “providing, at least as options, the standard application level security features.” EX1006, 5; *see also analysis supra*. To add the new security features to an unsecure

transport layer packet (that “consists of a header followed by data”) Basturk states that, “[f]ollowing data, a trailer has been added that contains the packet signature.”

*Id.* 16. Basturk adds this “security segment” to “include information needed for authentication and confidentiality” at the transport layer because the transport level lacked authentication and confidentiality mechanisms. *Id.*; *see analysis supra*.

Petitioners argue that placing “the trailer, *i.e.*, authentication data or MAC from Basturk” at the end of the whole RTP packet in Handley would “enable ‘on-the-fly’ signature computation and verification, allowing the transmitter to transmit data while simultaneously computing authentication data.” Pet. 20. In other words, Petitioners attribute the enablement of on-the-fly computation to the use of Basturk’s trailer containing the signature. Petitioners are mistaken. Basturk teaches that “on-the-fly” processing is enabled, not by the use of a trailer (as Petitioners argue), but that it “depends on two major components,” namely “latency in retrieving the information needed to perform the necessary computations” and “the nature of the computations themselves.” EX1006 12-13. Specifically, Basturk teaches minimizing latency by following “two rules”: “First, all data used to generate the signature is present in the packet,” which enables “signature verification [to] begin without waiting for the outcome of context retrieval,” and “Second, MAC computations are kept simple and can start prior to context retrieval,” to “enhance performance in our setting as MAC computation does not have to wait for

[information] to be retrieved from the context.” *Id.* 13<sup>5</sup>. Thus, Basturk teaches that on-the-fly processing is enabled by following those two rules, not by putting a signature in a trailer. Petitioner’s suggestion that the use of a trailer enables on-the-fly processing, rather than following Basturk’s two “rules” is contrary to Basturk’s teachings and is not otherwise supported by anything more than Petitioners’ and Dr. Houh’s say-so. *See* Pet. 20.

Dr. Houh’s declaration is deficient for the same reasons. His testimony regarding Handley and the asserted combination of Handley and Basturk parrots Petitioners arguments, fails to account for Basturk’s teachings above, and misrepresents or misapprehends Basturk’s teachings regarding on-the-fly processing. *See* EX1003 ¶¶ 78-85. Dr. Houh’s testimony thus fails to demonstrate that a POSITA would have been motivated to combine Handley and Basturk to arrive at the claimed invention.

Although Petitioners do not rely on this testimony in the Petition (and thus it should be disregarded), Dr. Houh mentions the structure of another protocol, the Ethernet standard of IEEE 802.3. *Id.* ¶85 (citing EX1014). But that standard, which pertains to “Local Area Networks (LANs),” indicates that it “deals with the Physical and Data Link Layers as defined by the ISO Open System Interconnection Reference

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<sup>5</sup> *See id.* (“The main source of latency when receiving a new packet is the time needed to recover the associated connection context.”)

Model,” not the application layer. EX1014, 7. Dr. Houh does not explain why a POSITA would have been motivated to combine 802.3’s physical and data link layer features with Handley’s architecture at the application layer to arrive at the claimed invention. *See* EX1003 ¶ 85. *See* analysis *supra*. Furthermore, Dr. Houh does not explain how any of the seven pages of EX1014 cited at the end of paragraph 85 of his declaration support his assertion that the Ethernet standard purportedly “employs the same design choice reasoning” as Basturk. *Id.* Regardless, Petitioners do not rely on this testimony of Dr. Houh, thus it should be disregarded. *See* Pet. 20.

Lastly, Petitioners fail to demonstrate why it would have been obvious to add a trailer to Handley’s RTP packet to provide application level authentication if, as Petitioners argue, Handley already “discloses the implementation of authentication at the RTP packet level.” Pet. 17. *See Pro-Dex, Inc. v. Intelligent Automation Design LLC*, IPR2023-00218, Paper 8 at 22-23 (P.T.A.B. Jul. 19. 2023) (“This general desirability of reducing signal noise and extracting meaning from physical sensor signals, however, fails to sufficiently address why a person of ordinary skill in the art would modify Hartung’s system and method which already includes a Bessel filter for smoothing the measuring signal to further include Minogue’s specific weighted averaging algorithm.”). As the panel in *Pro-Dex* recognized, “[t]he question of ‘obviousness concerns whether a skilled artisan . . . *would have been motivated to make* the combinations or modifications of prior art to arrive at

the claimed invention,”” *id.* (quoting *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015),” and “[a] rationale to combine should ‘imply a motivation to pick out those two references and combine them to arrive at the claimed invention,”” *id.* (quoting *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993–94 (Fed. Cir. 2017)). Petitioners fail to demonstrate why it would have been obvious to combine Handley’s architecture with Basturk’s security trailer for adding authentication when, as Petitioners argue, Handley already includes authentication and encryption features.

**2. “ascertaining, by the receiver, whether the receiver knows the transmitter based on the RTP packet level authentication data”**

Petitioners fail to show a reasonable likelihood that the combination of Handley and Basturk discloses or renders obvious this claim element. As explained above, “the receiver knows the transmitter” is defined in the ’682 patent to mean “the receiver is successfully authenticated with respect to the receiver,” and that definition governs. *See* § VI.A, *supra*. As also explained above, the combination of Handley and Basturk does not disclose or render obvious “providing transmitter-to-receiver authentication at a [RTP] packet level as an application protocol on an application layer *by inserting, at the transmitter, authentication data at end of a whole RTP packet payload.*” *See* § VIII.B.1, *supra*. Accordingly, for the same reasons, the combination of Handley and Basturk does not disclose or render obvious

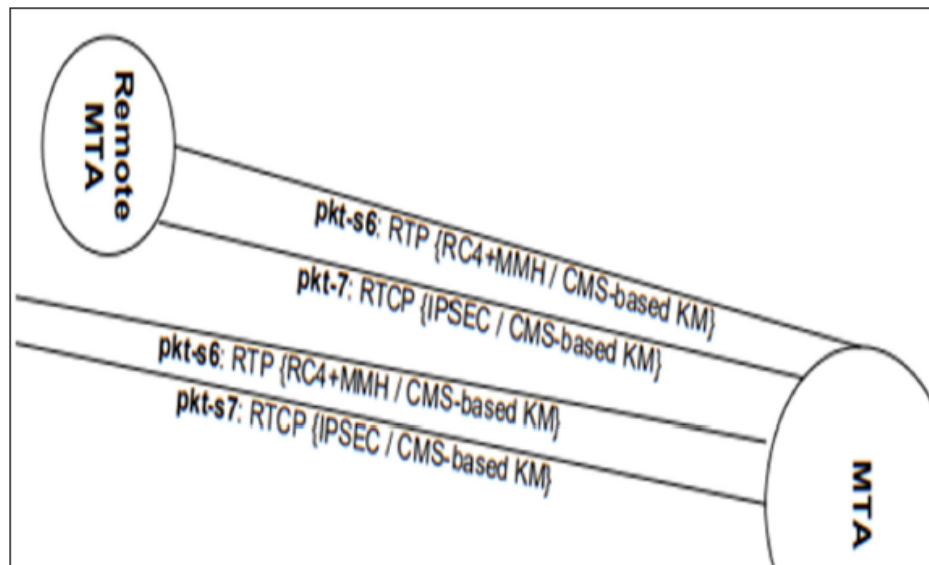
“ascertaining, by the receiver, whether the receiver knows the transmitter,” *i.e.*, whether the receiver is successfully authenticated with respect to the receiver, “*based on the RTP packet level authentication data*” inserted at the end of the whole RTP packet. (emphasis added).

**C. The Petition fails to demonstrate that PacketCable in combination with Handley (Ground II) discloses or renders obvious every limitation of claim 1.**

**1. “providing transmitter-to-receiver authentication at a Real Time Transport Protocol (RTP) packet level as an application protocol on an application layer by inserting, at the transmitter, authentication data at end of a whole RTP packet payload”**

Petitioners fail to demonstrate a reasonable likelihood that PacketCable and Handley, whether considered separately or in combination, disclose or render obvious this claim element.

Petitioners allege that “PacketCable disclosed this element or at least rendered it obvious.” Pet. 44-45 (as to Elements [1.1] and [1.2]). Petitioners assert that “PacketCable discloses MAC utilization for message integrity and illustrates in Figure 13 (reproduced below) that the ‘RC4 + MMH / CMS-based KM’ encrypts and adds authentication to the whole RTP packet in a ‘pkt-s6’ interface. Pet. 45-46 (citing EX1007, 44).



Pet. 46 (excerpting EX1007, Fig. 13)

However, Petitioners do not show where or how PacketCable itself discloses “inserting . . . authentication data at end of a whole RTP packet payload,” as required by claim 1. *See* Pet. 45-48. Instead, citing only Dr. Houh’s declaration, Petitioners attempt to demonstrate what a POSITA would have “understood” or “understood and found obvious” about this limitation vis-à-vis PacketCable. *Id.* Petitioners’ argument fails for multiple reasons.

First, when PacketCable states that “[a]n MMH-based MAC . . . optionally provides message integrity,” PacketCable does not indicate where the MAC is located in the “[e]nd-to-end media packets between two MTAs.” *See* EX1007, 45. PacketCable is silent as to where the MAC located, and Petitioners fail to demonstrate that the MAC is necessarily located in a particular location, let alone

“at end of a whole RTP packet payload.” To the contrary, PacketCable’s “RTP Packet Format” does not show a MAC. EX1007, 32.

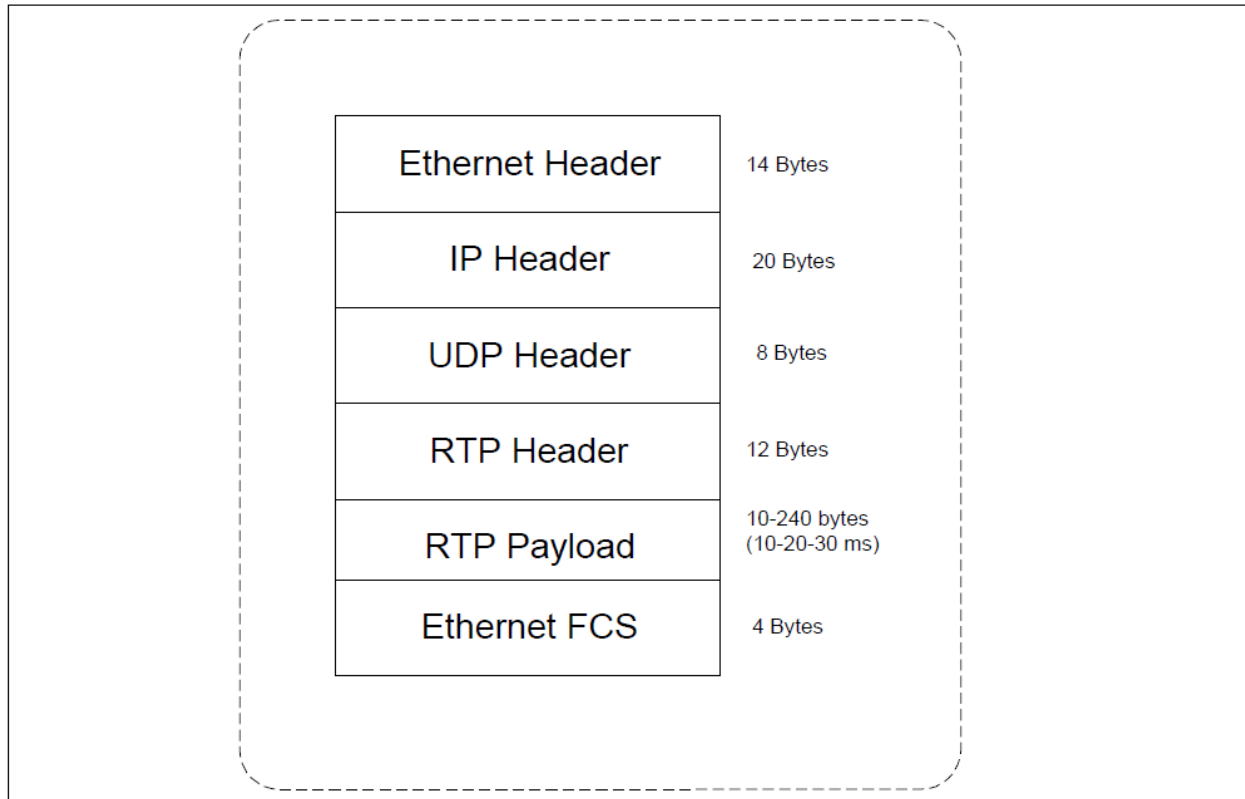


**Figure 7. RTP Packet Format**

Petitioners do not explain how PacketCable allegedly discloses “inserting, at the transmitter, authentication data at end of a whole RTP packet payload” when PacketCable is silent as to the location of the optional MAC and shows something else at the end of the RTP payload.

Second, Petitioners’ arguments about what a POSITA would have known or found obvious with respect to this limitation in view of PacketCable fail to show a reasonable likelihood of unpatentability because they are conclusory assertions that

cite only Dr. Houh’s declaration, which in turn includes only unsupported conclusory assertions. *See* Pet. 44-48; EX1003 ¶¶ 173-179. However, “[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65(a); *Xerox Corp. v. Bytemark*, IPR2022-00624, Paper 9, 15 (PTAB 2023) (precedential) (explaining that declaration testimony that “is conclusory and unsupported” and which “adds little to the conclusory assertion for which it is offered to support . . . is entitled to little weight”); *see also Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000) (“Lack of factual support for expert opinion to factual determinations, however, may render the testimony of little probative value in a validity determination.”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986) (“Although in some circumstances unsupported oral testimony can be sufficient to provide prior knowledge or use, it must be regarded with suspicion and subjected to close scrutiny.”).

Here, with respect to Element [1.1]<sup>6</sup>, Petitioners assert that “a POSITA would have understood (1) that manipulating RTP packets, e.g., implementing RC4 or

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<sup>6</sup> Element [1.1]: “providing transmitter-to-receiver authentication at Real Time Transport Protocol (RTP) packet level as an application protocol on an application layer.”

adding a MAC, results in authentication at the packet level and (2) RTP packets are created at the application layer because RTP is an application protocol.” Pet. 45. Petitioners cite only to paragraph 174 of Dr. Houh’s declaration to support these bare assertions about what a POSITA would have allegedly understood—Petitioners cite no other evidence to demonstrate what a POSITA would have known or understood. But Dr. Houh’s declaration offers nothing more. Paragraph 174 of Dr. Houh’s declaration makes the same factual assertion about what a POSITA allegedly would have known, *verbatim*, without citing any evidence to support those factual assertions (*i.e.*, no facts or data on which the opinion is based). *See Mylan Pharmaceuticals, Inc. v. Bausch Health Ireland Limited*, IPR2022-01104, Paper 24 at 7 (P.T.A.B. Aug. 1, 2023) (“We also did not overlook Dr. Buckton’s opinion based on ‘his uncontested personal experience in the art when stating what a [person of ordinary skill in the art] would have known.’ Req. Reh’g. 8. We stated that Dr. Buckton’s testimony lacks sufficient explanation and is not persuasive to support Petitioner’s burden for institution. Dec. 18 (citing 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.”); *Verlander v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003) (noting that Board has discretion to accord little weight to expert’s “broad conclusory statements that it determined were unsupported by corroborating references”)).”); *Hangsen International Group Ltd. v. Zanoprima Lifesciences, Ltd.*,

IPR2023-00503, Paper 10 at 19 (P.T.A.B. Jul. 28, 2023) (giving expert testimony little to no weight “because it does not disclose the underlying facts or data on which the opinion is based”).

Petitioners’ arguments with respect to Element [1.2]<sup>7</sup> is more of the same. Pages 46 and 47 of the Petition make multiple factual assertions about what a POSITA would have “understood,” “appreciated,” or “found obvious” about PacketCable’s disclosure, for which it cites only paragraph 178 of Dr. Houh’s petition. *See* Pet. 46-47. The Petition cites no other supporting evidence whatsoever for these factual assertions. *Id.* As the Board in *Xerox* observed, “[t]his is particularly problematic in cases where, like here, expert testimony is offered not simply to provide a motivation to combine prior-art teachings, but rather to supply a limitation missing from the prior art,” specifically, “inserting, at the transmitter, authentication data at end of a whole RTP packet payload.” IPR2022-00624, Paper 9 at 16; Pet. 46-47. Petitioners attempt to supply this limitation, which is missing from PacketCable (*see* analysis *supra*), by citing Dr. Houh’s opinion about what a POSITA would have “understood,” “appreciated,” or found obvious about PacketCable’s disclosure. But paragraph 178 of Dr. Houh’s declaration makes little more than the same conclusory assertions as the Petition. EX1003 ¶ 178. Dr. Houh

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<sup>7</sup> Element [1.2]: “by inserting, at the transmitter, authentication data at end of a whole RTP packet payload.”

adds some additional details to what are otherwise the same sentences in the Petition, *compare* Pet. 46-47 *with* EX1003 ¶ 178, but those additional details add little to the Petition’s conclusory assertions and are not supported by additional evidence. *See Xerox*, IPR2022-00624, Paper 9, at 15. In fact, Dr. Houh cites no evidentiary support for any of the factual assertions in the Petition for which his paragraph 178 is cited. *See* Pet. 46-47; EX1003 ¶ 178.

Although it is not specifically cited or discussed in the Petition, and thus the Board should not consider it, Dr. Houh additionally mentions the structure of another protocol, the Ethernet standard of IEEE 802.3. *Id.* ¶178 (citing EX1014). But that standard, which pertains to “Local Area Networks (LANs),” indicates that it “deals with the Physical and Data Link Layers as defined by the ISO Open System Interconnection Reference Model,” not the application layer. EX1014, 7. Dr. Houh does not explain why a POSITA would have been motivated to combine 802.3’s physical and data link layer features with PacketCable at the application layer to arrive at the claimed invention. *See* EX1003 ¶ 178. Furthermore, Dr. Houh does not explain how any of the 7 pages of EX1014 cited at the end of paragraph 178 of his declaration support his assertion that the Ethernet standard purportedly “employs the same design choice reasoning” as PacketCable or how that purportedly renders obvious any modification to PacketCable at the application layer. *Id.* Regardless,

Petitioners do not rely on this testimony of Dr. Houh, thus it should be disregarded. *See* Pet. 46-47.

Petitioners’ alternative obviousness arguments based on PacketCable in view of Handley for Elements [1.1] and [1.2] (Pet. 45, 48) are also conclusory and unexplained, and, to the extent they are cognizable, they fail for the same reasons explained above. *See* § VII.A, *supra*.

**2. “ascertaining, by the receiver, whether the receiver knows the transmitter based on the RTP packet level authentication data”**

Petitioners fail to show a reasonable likelihood that PacketCable in view of Handley discloses this claim element. As explained above, “the receiver knows the transmitter” is defined in the ’682 patent to mean “the receiver is successfully authenticated with respect to the receiver,” and that definition governs. *See* § VI.A, *supra*. As also explained above, the combination of PacketCable and Handley does not disclose or render obvious “providing transmitter-to-receiver authentication at a [RTP] packet level . . . by inserting, at the transmitter, authentication data at end of a whole RTP packet payload.” *See* § VIII.C.1, *supra*. Accordingly, for the same reasons, the combination of PacketCable and Handley does not disclose or render obvious “ascertaining, by the receiver, whether the receiver knows the transmitter,” *i.e.*, whether the receiver is successfully authenticated with respect to the receiver,

“based on the RTP packet level authentication data” inserted at the end of the whole RTP packet. (emphasis added).

Petitioners’ alternative arguments based on PacketCable in view of Handley (Pet. 50) are conclusory and unexplained, and they fail for the same reasons explained above. *See* § VIII.A, *supra*.

**D. The Petition fails to demonstrate that PacketCable in combination with Basturk (Ground III) discloses or renders obvious every limitation of claim 1.**

Petitioners’ arguments for Ground III of the petition consists of cross references to their Ground I and Ground II arguments without further explanation. Grounds I and II, however, do not address the asserted combination of PacketCable and Basturk and instead address combinations of Handley with Basturk and PacketCable with Handley, respectively. It is impossible to discern or guess which reference, and which portion of which reference, Petitioners assert teaches or suggests each element or how Petitioners propose to combine the references. *See DIRECT TV, LLC v. Qurio Holdings, Inc.*, IPR2015-02007, Paper 6 at 10, 15 (P.T.A.B. Apr. 4, 2016).

Nevertheless, PacketCable does not disclose or render obvious all the limitations of claim 1 for the same reasons explained above. *See* § VIII.C, *supra*. Nor does Basturk disclose or render obvious the limitations of claim 1 for the same reasons explained above. *See* § VIII.A, *supra*. The asserted combination of

PacketCable and Basturk therefore fails to disclose or render obvious every element of claim 1.

**E. The Petition fails to demonstrate that Handley in combination with Basturk and PacketCable (Ground IV) discloses or renders obvious claims 22 and 24.**

Ground IV challenges claims 22 and 24, which ultimately depend from claim 1, based on the same combination of Handley and Basturk from Ground I with the addition of PacketCable to address limitations of claims 22 and 24. Because claims 22 and 24 depend from claim 1, Ground IV fails for the same reasons as Ground I. *See* § VIII.A, *supra*.

**F. The Petition fails to demonstrate a reasonable likelihood that independent claims 25-28 are unpatentable for the same reasons as claim 1 (Grounds I-III).**

The Petition incorporates by reference its arguments for claim 1 to address independent claims 25-28. Pet. 36-41 (Ground I), 59-64 (Ground II), 66-72 (Ground III).<sup>8</sup> If the Board finds that Petitioners have not met its burden as to claim 1 for Ground I, II, or III, it should reach the same conclusion as to claims 25-28 for the respective ground for the same reasons. *See* §§ VIII.A-VII.D, *supra*.

**IX. CONCLUSION**

For the reasons stated above, institution of the IPR should be denied.

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<sup>8</sup> Ground IV addresses only two claims, both dependent from claim 1.

Dated: September 8, 2023

By: /Christine E. Lehman/  
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**CERTIFICATE OF COMPLIANCE**

The undersigned hereby certifies that this Patent Owner's Preliminary Response (the "POPR") complies with the type-volume limits of 37 C.F.R. § 42.24 and consists of 13,607 words, excluding the table of contents, table of authorities, mandatory notices under 37 C.F.R. § 42.8, certificate of service, this certificate of compliance, and table of exhibits. The undersigned has relied on the word count feature of the word-processing system used to prepare this paper (Microsoft Word).

Dated: September 8, 2023

Respectfully submitted,

/Christine E. Lehman/

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**Counsel for Patent Owner**

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of the foregoing **PATENT OWNER'S PRELIMINARY RESPONSE** was served on August 24, 2023, via electronic mail to Meta\_VideoLabs@kirkland.com, as agreed to by counsel for Petitioners, upon the following counsel:

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