

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC.  
Petitioner

v.

OPENTV, INC.  
Patent Owner

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Case IPR2015-00969  
Patent 5,884,033

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**Patent Owner's Response  
to Petition for *Inter Partes* Review  
of U.S. Patent No. 5,884,033**

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## **I. Preliminary Statement**

The Board instituted review on the following two grounds:

- (1) claims 1, 2, 15, and 23 as anticipated by Pitcher; and
- (2) claim 9 (which depends from claim 1) as obvious over Pitcher.

The Board should confirm all challenged claims because the claims are fundamentally different from the only remaining reference in this proceeding, Pitcher, in at least two respects.

First, the content filters claimed in the '033 patent operate between the presentation and application levels (layers 6 and 7) of the seven-level ISO protocol model. The inventors added this limitation via disclaiming statements during prosecution that unequivocally limited the claimed filters to operation between layers 6 and 7, in order to distinguish a reference that disclosed packet-based filters operating between lower layers 2 and 3 of the ISO protocol model. In contrast to the claimed filters—and just like the filters in the reference distinguished during prosecution—Pitcher discloses a packet-based filter implemented on a device that operates at the data link level (layer 2) of the ISO protocol model. Pitcher therefore does not disclose the claimed filters because Pitcher discloses the very same lower level packet-based filters that the inventors disclaimed during prosecution.

Second, the claimed invention is directed to filtering messages sent over the Internet. Each challenged claim requires “allow[ing] or prevent[ing] access to Internet sites.” Each challenged claim except for claim 15 also requires either “opening a data stream to send a message . . . to an Internet server” or “opening a data stream to receive a message . . . from an Internet server.” In contrast, Pitcher’s filtering methods are implemented on a closed, local area network (LAN). Pitcher does not disclose that the LAN is connected to the Internet, and does not disclose sending or filtering messages over the Internet. Pitcher’s closed-network filtering techniques, which are concerned with improving the speed and scalability of an organization’s internal LAN, are fundamentally different from the claimed Internet filtering techniques of the ’033 patent, which are primarily concerned with preventing access to objectionable Internet content.

Because Apple has not carried its “burden of proving . . . unpatentability by a preponderance of the evidence,” 35 U.S.C. § 316(e), the Board should confirm the challenged claims as patentable.

## **II. Background of the Patented Technology**

### **A. The ISO Protocol Model**

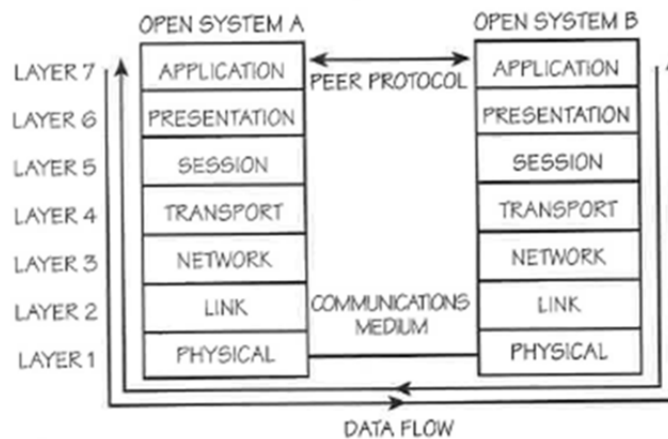
A general understanding of the ISO protocol model is important for understanding the scope of the ’033 patent claims. At the time of the ’033 patent, the International Standards Organization (ISO) had created the Open Systems

Interconnection (OSI) Reference Model (“the ISO protocol model”) in an effort to standardize network protocols used for communication among computers on a network. Ex. 2002 ¶ 16. The ISO protocol model specifies seven protocol levels or “layers,” each of which performs a different function. *Id.* ¶ 17. The ISO protocol model is typically described with reference to a protocol stack, such as the one shown below:



*Id.* (citing Ex. 2004 at 32). This protocol stack shows all seven protocol levels in the ISO protocol model, from the lowest physical level (layer 1) to the highest application level (layer 7). *Id.*

The dual arrows shown above demonstrate how the different layers interact with each other to send data. For example, data may be received at one layer, processed in accordance with functionality associated with that layer, and then passed to an adjacent layer for further processing. *Id.* ¶ 18 (citing Ex. 2004 at 37-38). The figure below demonstrates how two computers labeled Open System A and Open System B may pass data from one layer to the next in order to transmit data to each other in accordance with the ISO protocol model.



*Id.* (citing Ex. 2005 at 5, Fig. 3). For example, the computer “Open System A” shown above may send data originating in the application layer down the protocol stack, from the application layer to the physical layer, for transmission over a physical communications medium, such as a wired or wireless link. *Id.* (citing Ex. 2005 at 5-8). As data is passed down the protocol stack, each protocol level segments the data into smaller units, sometimes called protocol data units (PDU) or data packets, and adds a corresponding header and/or trailer to encapsulate the

PDU. *Id.* (citing Ex. 2004 at 21-25). “Open System B” may then receive the transmitted data over the physical medium and send the data up its copy of the protocol stack until the original data is recovered at its application layer. *Id.* (citing Ex. 2005 at 5-8).

One of ordinary skill in the art would have understood that data at the application level are often referred to as “messages” that are processed by the lower protocol levels in the ISO protocol model. *Id.* ¶ 19 (citing Ex. 2004 at 22-23). For example, the application level may implement the HyperText Transfer Protocol (HTTP), in which case the data exchanged between the presentation and application levels are HTTP messages. *Id.* Similarly, the application level may implement an e-mail protocol or file transfer protocol (FTP), such that the data exchanged between the presentation and application levels include e-mail messages or FTP messages, respectively. *Id.*

One of ordinary skill in the art would also have understood that data at lower levels, such as the data link (layer 2), network (layer 3), and transport (layer 4) levels, are often called “packets.” *Id.* ¶ 20 (citing Ex. 2004 at 22-23). In particular, when sending the application level message, data is typically segmented into smaller and smaller data fragments (e.g., PDUs or packets) at each lower protocol level until the data is transmitted by the physical layer. *Id.* (citing Ex. 2004 at 22-26). The transmitted data consists of data units including all of the

header/trailer encapsulations added by the higher levels. *Id.* During data receipt, the physical layer receives the transmitted data units from the physical medium.

*Id.* Then, each protocol level receives a sequence of PDUs or packets from its adjacent lower level, processes the received data units in accordance with the level's associated protocol, and passes the processed PDUs or packets to the next higher level in the ISO protocol model. *Id.*

### **B. The '033 Patented Technology**

The '033 Patent, titled "Internet Filtering System for Filtering Data Transferred Over the Internet Utilizing Immediate and Deferred Filtering Actions," was filed on May 15, 1996. Around the time of the '033 Patent, Congress passed the Communications Decency Act (CDA) to prohibit dissemination of indecent material over the Internet. Ex. 1001 at 1:12-20. Many viewed the CDA as censorship and believed that parents—rather than the government—should be responsible for controlling their children's activities on the Internet. *Id.* at 1:20-24. To address the problem of the accessibility of indecent material over the Internet, the inventors developed a system and method that allowed users, such as parents, to filter transmissions of such objectionable material. *Id.* at 1:27-29.

The patented system and method includes a database of filtering information that is used to determine whether to prevent or allow the transmission of a message over the Internet. *See, e.g. id.* at claim 1. The database includes two types of

filters: “filters specifying immediate action” and “filters specifying deferred action.” *Id.* As the names indicate, and as the Board held in its institution decision, filters specifying immediate action specify whether to allow or block a transmission immediately, while filters specifying deferred action defer the specification of whether to allow or block a transmission until additional conditions are satisfied. *Id.* By comparing information in a message to the claimed filters, the system determines whether to allow or block transmission of the message. *Id.*

### **C. The '033 Patent Prosecution History**

The '033 patent was allowed after three office actions. In responding to these office actions, the inventors altered the scope of the claims in two important ways. First, when distinguishing a prior art reference, the inventors stated repeatedly that the recited filters specifying immediate action and filters specifying deferred action operate between the presentation and application levels (layers 6 and 7) of the seven-level ISO protocol model, and thus do not include packet-based filters that operate at lower levels in the protocol stack, such as layers 2 and 3. Ex. 1007 at 64, 84. Second, the inventors amended the claims to recite, “to prevent or allow access to Internet sites” in order to further distinguish over the prior art. *Id.* at 81-83.

In the first office action, the examiner rejected the claims under 35 U.S.C. § 102 or § 103 based on U.S. Patent No. 5,606,668 (“Shwed”). Ex. 1007 at 47-51. Shwed discloses a system for filtering data packets communicated in a computer network. Ex. 2006, Abstract. Shwed explains that its packet-based filtering techniques operate between the data link and network levels (layers 2 and 3) of the seven-level ISO protocol model. *Id.* at 6:44-7:7, Fig. 5.

In response to the first office action, the inventors amended the independent claims at issue to recite “filters specifying immediate action” and “filters specifying deferred action.” Ex. 1007 at 58-63. The inventors then distinguished Shwed by explaining that the claimed filters operate at different layers of the seven-level ISO protocol model because the claimed filters operate between the presentation and application levels (layers 6 and 7), while Shwed’s filters operate between the data link and network levels (layers 2 and 3):

As discussed during the interview, *the Schwed system and Applicants’ methods operate at different layers of the seven-level ISO communication protocol model . . . .* As made clear at Fig. 5 and col. 6 ll. 3-7, the packet filters of Schwed operate between the network interface hardware (level 2) and the network software (level 3). *Applicants’ filtering methods, by contrast, operate between the presentation and applications levels (layers 6 and 7, respectively) of the seven-level ISO protocol model.* Schwed . . . specifically *teaches away* from a system operating on the applications level (layer 7) of the

ISO communication protocol model, such as Applicants' filtering methods[.]

*Id.* at 64 (emphases added).

In the second office action, the Examiner recognized this distinction between the claimed filters (which operate between the presentation and application levels), and Shwed's packet-based filters (which operate between the data link and network levels). In particular, instead of maintaining a rejection based on Shwed alone, the examiner incorporated a second reference, Canale. The examiner determined that Canale disclosed comparing messages to filtering information "at the application level," while Shwed disclosed packet-based filtering "at the network level." *Id.* at 71-72. The examiner then reasoned that it would have been obvious to combine Shwed with Canale. *Id.* at 72.

In response to the second office action, the inventors explained that because Shwed's filters operated on different levels (i.e., layers 2 or 3) than the claimed filters (i.e., layers 6 or 7), it would not have been obvious to combine Shwed with Canale:

[B]ecause *Schwed et al. operates at different layers of the seven-level ISO communication protocol model from applicants' inventions*, there is no motive to combine the teachings of Schwed with those of Canale et al.

*Id.* at 84 (emphases added).

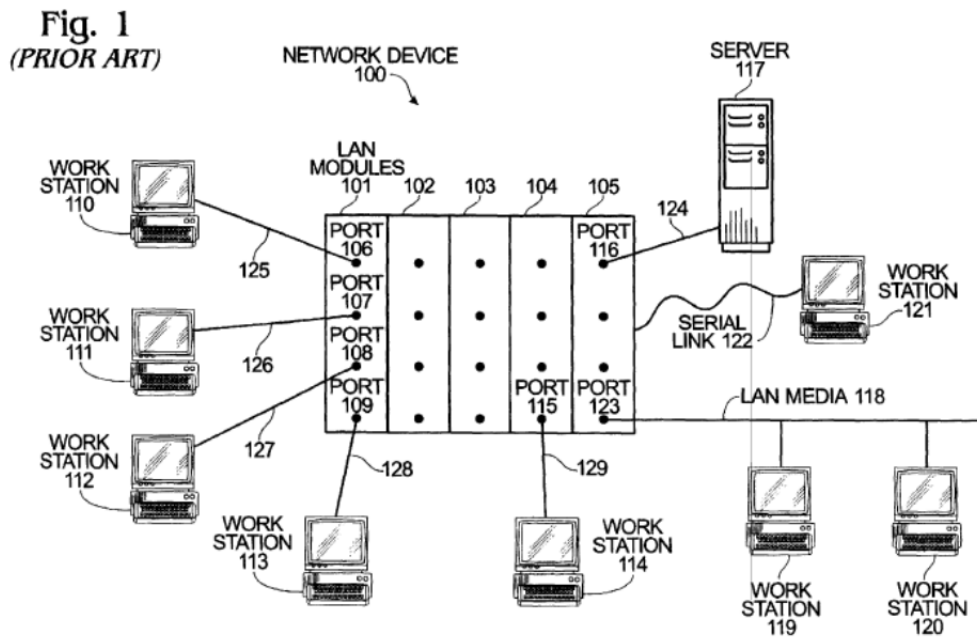
In the same response, the inventors also amended the preamble of all of the independent claims to recite “to prevent or allow access to Internet sites.” *Id.* at 81-83. The inventors stated that the amendments were “to more particularly point out the differences between the claimed invention and the prior art of record,” and that “applicants’ invention is directed toward methods of preventing access to undesired sites on the Internet and allowing access to desired sites.” *Id.* at 83.

In the third office action, the examiner indicated that the claims that would eventually issue as the ’033 patent claims were allowable, but rejected other claims that the inventors canceled in response to the third office action. *Id.* at 91 (third office action), 95 (response to third office action). The examiner subsequently issued a notice of allowance, *id.* at 109-10, and the ’033 patent issued on March 16, 1999, Ex. 1001 at 1.

#### **D. Overview of Pitcher**

Pitcher is the only reference remaining in this proceeding. Pitcher discloses a method and apparatus for filtering data packets from a network device such as a local area network (LAN) switch. Ex. 1005, Abstract. Pitcher discloses that LANs are strained due to the growing bandwidth demands from increasingly powerful applications and a greater number of connected computers, Ex. 1005 at 1:23-27, and that network administrators of these LANs must find ways to increase bandwidth to meet their organization’s needs, *id.* at 1:50-60. Pitcher discloses that

replacing existing network equipment with LAN switches is “a very effective technology for addressing the problems” discussed above because LAN switches are scalable, fast, and cheap. *Id.* at 2:34-55. Pitcher further discloses that “LAN switches operate at MAC sublayer of the Data Link layer (layer 2)” of the ISO protocol model. *Id.* at 2:39-41. Pitcher’s data packet filtering techniques are implemented on the LAN switch 100 shown connecting the LAN segments in Fig. 1 below:



*Id.* at 5:9 (“Network device 100 is a LAN switch”). “LAN switch 100 interconnects multiple LAN segments each via a port on a LAN module,” *id.* at 5:12-14, and filters packets transmitted between the segments connected to each port, *id.* at 6:23-33.

Fig. 2, shown below, is a graphical user interface that includes “packet filters” used by Pitcher’s LAN switch 100 to filter various data packets exchanged over LAN switch 100. *Id.* at 6:21-29. As discussed in greater detail below when responding to Apple’s positions, these packet filters are different from the claimed filters of the ’033 patent because they operate solely between layers 2 and 3 of the ISO protocol model, instead of layers 6 and 7.

**Fig. 2**

NAME	SEQ	TYPE	OFFSET	VALUE (HEX)	COND	MATCH	FAIL	FWD	MON DEST	ADDL DEST
FLTR_001	1	LLC	0	AA.AA.03.00.00.00.81.37	EQ	2	255	NORM		
	2	LLC	16	04.52	EQ	3	255	NORM		
	3	LLC	22	00.07	EQ	0	255	ALT		2:3,2:4
FLTR_002	1	MAC	2	00.80.00.02.31.54	EQ	255	255	NORM	2:1	
FLTR_003	1	LLC	0	AA.AA.03.00.00.00.08.00	EQ	0	255	DROP		

ADD FILTER   ADD SEQ   DELETE SEQ

### **E. Person of Ordinary Skill in the Art**

One of ordinary skill in the art would be someone with a bachelor’s degree or the equivalent in the field of computer science or electrical engineering and one to two years of experience with computer programming and/or computer networking. Ex. 2002 ¶ 23. This is similar to the level of skill in the art proposed by Apple. Pet. at 10.

### III. Claim Construction

#### A. Applicable Law

Because the '033 patent will expire on May 15, 2016, prior to an expected final written decision in this proceeding, the Board construes its terms under the same claim construction standard applied by the district courts. *See* Institution Decision, Paper No. 8, at 6-7; *see also In re Rambus Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Under that standard, claims terms “are generally given their ordinary and customary meaning,” which “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (citations omitted).

There are two exceptions to this general rule: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Computer Entm’t Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). A disavowal of claim scope must be “clear and unmistakable” and may occur “when the patentee explicitly characterizes an aspect of his invention in a specific manner to overcome prior art.” *Purdue Pharma L.P. v. Endo Pharms. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006). Prosecution history disclaimer also applies under the broadest reasonable interpretation. *See Microsoft Corp. v.*

*Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (“The PTO should also consult the patent’s prosecution history in proceedings in which the patent has been brought back to the agency for a second review.”).

Where, as here, a district court has previously construed a particular term, the Board should consider its reasoned analysis, particularly where the Board is applying the same claim construction standard applied by the district court. Institution Decision, Paper No. 8, at 9; *see also Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326 (Fed. Cir. 2015) (“The fact that the board is not generally bound by a previous judicial interpretation of a disputed claim term does not mean, however, that it has no obligation to acknowledge [or assess] that interpretation.”).

**B. “filters specifying immediate action” and “filters specifying deferred action”**

The terms “filters specifying immediate action” and “filters specifying deferred action” should be construed as follows.

<b>Claim Term</b>	<b>OpenTV’s Proposed Construction</b>
“filters specifying immediate action”	“filters that, once they are retrieved, specify whether to allow or block a transmission immediately and unconditionally <i>and operate between the presentation and application levels of the seven-level ISO protocol model</i> ”
“filters specifying	“filters that, once they are retrieved, defer the specification of whether to allow or block a transmission until additional

deferred action”	conditions are satisfied <i>and operate between the presentation and application levels of the seven-level ISO protocol model</i> ”
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These constructions are identical to the district court’s constructions in the related litigation, *OpenTV, Inc. v. Apple, Inc.*, Case No. 3:14-cv-01622-HSG (N.D. Cal.) (“the district court litigation”). Ex. 2001 at 22:5-12.

Moreover, the non-emphasized portions of the construction are identical to the Board’s construction in the institution decision. Institution Decision, Paper No. 8, at 11. OpenTV agrees with the Board’s construction in the institution decision that includes the non-emphasized portion for the reasons set forth in the Board’s institution decision and OpenTV’s preliminary response, and adopts and incorporates that reasoning. For example, the non-emphasized portions of the constructions above are required by the claim language, which temporally distinguishes between “immediate” and “deferred” action filters, and are supported by the specification, which explains that immediate action filters filter immediately and unconditionally, whereas deferred action filters defer the decision of whether to allow or block transmission of a message based on additional conditions. *E.g.*, Ex. 1001 at 1:42-52; 4:15-20; 4:45-52; 4:65-5:29.

However, OpenTV asserts that, like the district court found, the correct construction of these terms also includes the emphasized requirement—that both

claimed filters “operate between the presentation and application levels of the seven-level ISO protocol model.” As the district court correctly held, this feature is required of both filters because during prosecution the inventors clearly and unmistakably limited the scope of the claimed filters to operation between the presentation and application levels (layers 6 and 7) of the seven-level ISO protocol model. Ex. 2001 at 8:1-9:13. In particular, in response to a rejection based on prior art Shwed, the inventors unambiguously stated:

As discussed during the interview, *the Schwed system and Applicants’ methods operate at different layers of the seven-level ISO communication protocol model . . . .* As made clear at Fig. 5 and col. 6 ll. 3-7, the packet filters of Schwed operate between the network interface hardware (level 2) and the network software (level 3). *Applicants’ filtering methods, by contrast, operate between the presentation and applications levels (layers 6 and 7, respectively) of the seven-level ISO protocol model.* Schwed . . . specifically *teaches away* from a system operating on the applications level (layer 7) of the ISO communication protocol model, such as Applicants’ filtering methods[.]

Ex. 1007 at 64 (emphases added). When the examiner subsequently relied on a combination of Shwed and another reference, the inventors argued that the new combination was improper, again making clear that “Schwed et al. operates at different layers of the seven-level ISO communication protocol model from

applicants' inventions.” *Id.* at 84. The examiner subsequently allowed the application that issued as the '033 patent. *See id.* at 109-10.

As the district court correctly concluded, “the '033 Patent prosecution history disclaimer that the filters operate only between layers six and seven of the seven-level ISO protocol model is ‘clear and unmistakable.’” Ex. 2001 at 9:10-13 (quoting *Biogen Idec, Inc. v. Glaxosmithkline LLC*, 713 F.3d 1090, 1096 (Fed. Cir. 2013)). Apple does not appear to dispute that the statements disclaiming the scope of the claims were clear and unmistakable. Indeed, Apple concedes that the disclaiming statements were with regard to the filters *recited in the claims*, as opposed to simply a disclosed embodiment: “The patentee during prosecution argued that *the claimed filters* operate ‘between the presentation and application levels (layers 6 and 7, respectively) of the seven-level ISO protocol model.” Pet. at 17 (emphasis added).

Instead, Apple’s only arguments against finding disclaimer here are that the disclaiming statements are either (1) not supported by the specification; or (2) contradicted by dependent claims 3 and 4. *Id.* Apple is wrong on both counts.

First, the disclaiming statements are consistent with and supported by the specification and original claims, which disclose and claim filtering “messages” and not “packets.” *E.g.*, Ex. 1001 at Abstract, 1:30-52; Ex. 1007 at 26-30 (original claims). One of ordinary skill in the art would have understood that a “message” is

a higher level construct that would be present at a higher level in the ISO protocol model (such as layer 7) than a “packet,” which is a lower level construct that would be present at lower layers in the ISO protocol model (such as layers 2 or 3).

Ex. 2002 ¶¶ 19-20, 32. Moreover, the specification expressly describes filtering messages and transmissions sent over HTTP, NNTP, and IRC, which are all application layer (layer 7) protocols. Ex. 1001 2:42-50, 5:52-65, 6:10-18; Ex. 2002 ¶ 32. Thus, Apple is wrong that the disclaiming statement has “no support in the specification.” Pet. at 17.

Second, the disclaiming statement is not inconsistent with dependent claims 3 and 4. Apple argues that because claims 3 and 4 both require “an Internet Protocol (IP) address,” and because “[IP] addresses are well known to be part of layer 3 (network layer),” then the filters cannot be limited to operate between layers 6 and 7. Pet. at 17-18. Apple is incorrect.<sup>1</sup> The use of an IP address is not limited to only the network layer (layer 3), and IP addresses can be used at higher protocol levels in the ISO protocol model. Ex. 2002 ¶ 33. For example, DNS is an application level protocol that uses IP addresses. *Id.* (citing Ex. 2004 at 108-16). Indeed, the ’033 patent expressly describes using IP addresses with the DNS protocol. Ex. 1001 3:13-19; Ex. 2002 ¶ 33. Apple also admitted during the

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<sup>1</sup> The court rejected a similar argument proffered by Apple in the district court litigation. Ex. 2001 at 8:26-9:9.

technology tutorial in the district court litigation that “all of this data [including the IP address] is available at every layer.” *See* Ex. 2003 at 53:10-54:11; Ex. 2001 at 9:3-9. Thus, the fact that the dependent claims require filtering based on an IP address does not render them inconsistent with the requirement that those filters operate between the presentation and application layers of the ISO protocol model.

Besides not being *inconsistent* with claims 3 and 4, OpenTV’s proposed construction is *consistent* with claims 6, 7, 13, and 14, which require the message to include a uniform resource locator (URL). URLs are typically present at the application layer and used by application layer protocols such as HTTP, FTP, etc. Ex. 2002 ¶ 34. Therefore, the dependent claims actually support OpenTV’s position that the filters recited in the independent claims must operate between the presentation and application layers, and on higher level messages in those layers.

Apple hints at but does not expressly make two additional arguments why disclaimer should not apply here. First, Apple suggests that the inventors distinguished Shwed on other grounds, in addition to the disclaiming statements discussed above. Pet. at 12. This is irrelevant because “an applicant’s argument that a prior art reference is distinguishable on a particular ground can serve as a disclaimer of claim scope even if the applicant distinguishes the reference on other grounds as well.” *Anderson Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1374 (Fed. Cir. 2007). *See also Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d

1366, 1377-78 (Fed. Cir. 2008) (“This court observes that applicants distinguished their invention from the prior art in multiple ways. Nonetheless, a disavowal, if clear and unambiguous, can lie in a single distinction among many.”).

Distinguishing a reference on multiple grounds does not nullify the disclaimer.<sup>2</sup>

Second, Apple argues that the examiner “evidently rejected” the inventor’s disclaiming statements. Pet. at 13. To the extent Apple is suggesting that the disclaimer does not apply because the examiner rejected the statements, Apple is on the wrong side of both the facts and the law. As discussed above, the examiner expressly recognized and relied on the inventor’s statements in response to the first office action because in the second office action, the examiner introduced a second reference that the examiner stated operated “at the application level,” as opposed to Shwed’s system which operated “at the network level.” Ex. 1007 at 71-72. But even if the examiner had not agreed with the statements, the fact that the inventors made them is enough to create the disclaimer. “[T]he interested public has the right to rely on the inventor’s statements made during prosecution, without attempting to decipher whether the examiner relied on them, or how much weight they were given.” *Fenner Investments, Ltd. v. Cellco P’ship*, 778 F.3d 1320, 1325 (Fed. Cir. 2015); *see also Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340,

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<sup>2</sup> The court rejected this argument by Apple in the district court litigation as unsupported by precedent. Ex. 2001 at 8:16-20.

1350 (Fed. Cir. 2004) (“[A] patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation.”). Thus, the inventors’ statements constitute a disclaimer regardless of the examiner’s agreement with or reliance on them.

The inventors expressly and unequivocally limited the claimed filters to operation between the presentation and application levels of the seven-level ISO protocol model. The Board should construe the claimed “filters” to reflect this disclaimer, as the district court properly did.

### **C. “Internet sites”**

In the district court litigation, Apple and OpenTV agreed that “Internet sites” be construed as “resources available over the Internet.” Ex. 2007 at 2. Indeed, the construction “resources that are accessible on the Internet” is consistent with the plain meaning of “Internet sites.” The Board should adopt this construction as well.

Apple, however, now proposes that this term be construed as “resources accessible on the Internet *using TCP/IP*.” Pet. at 20 (emphasis added). Apple’s additional phrase, “using TCP/IP” improperly imports a limitation from the specification that is both unnecessary and unsupported by the plain language of the claims. *See* Pet. at 21 (importing the TCP/IP limitation from the specification at 2:41-50); *see also* Ex. 1010 ¶ 40 (“Each of these network protocols listed [in the

specification] is a protocol by which messages can be sent and received using TCP/IP.”). “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims.” *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (citations omitted). Nothing in the plain language of the term “Internet sites” requires specification of the protocols used to access the sites. Indeed, it was well known at the time of the ’033 patent that resources available over the Internet could be retrieved or accessed with protocols other than TCP/IP. *E.g.*, Ex. 2004 at 83 (“The Internet has two main protocols in the transport layer, . . . TCP [and] UDP.”); 104 (“The Internet protocol suite also supports a connectionless transport protocols, UDP (User Data Protocol).”). The term should be construed consistently with the parties’ prior agreement and with the plain meaning, to be “resources accessible on the Internet.”

OpenTV notes that the term “Internet sites” appears only in the preamble of the challenged independent claims. By identifying this term for construction, Apple effectively concedes that the preambles of the independent claims are limiting. In any event, the phrase in the preambles, “prevent or allow access to Internet sites” is limiting here because the inventors added this part of the preamble during prosecution in order to further distinguish their invention over the prior art. In response to a prior art rejection, the inventors added this phrase and stated that:

Applicants have amended [the independent claims] to more particularly point out the differences between the claimed invention and the prior art of record. As pointed out in the interview, applicants' invention is directed toward methods of preventing access to undesired sites *on the Internet* and allowing access to desired sites.

Ex. 1007 at 83 (emphasis added). This amendment to the preamble and reliance on it to distinguish prior art transforms the preamble into a claim limitation. *Catalina Marketing Int'l, Inc. v. Coolsavings.com*, 289 F.3d 801, 808-09 (Fed. Cir. 2002) (“Clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.”). Accordingly, the Board should determine that the preamble phrase “prevent or allow access to Internet sites” is a claim limitation.

#### **IV. The Petition Fails to Establish That Any Claim of the '033 Patent Is Unpatentable in View of Pitcher**

The Board instituted review on the following two grounds:

- (1) claims 1, 2, 15, and 23 as anticipated by Pitcher; and
- (2) claim 9 (which depends from claim 1) as obvious over Pitcher.

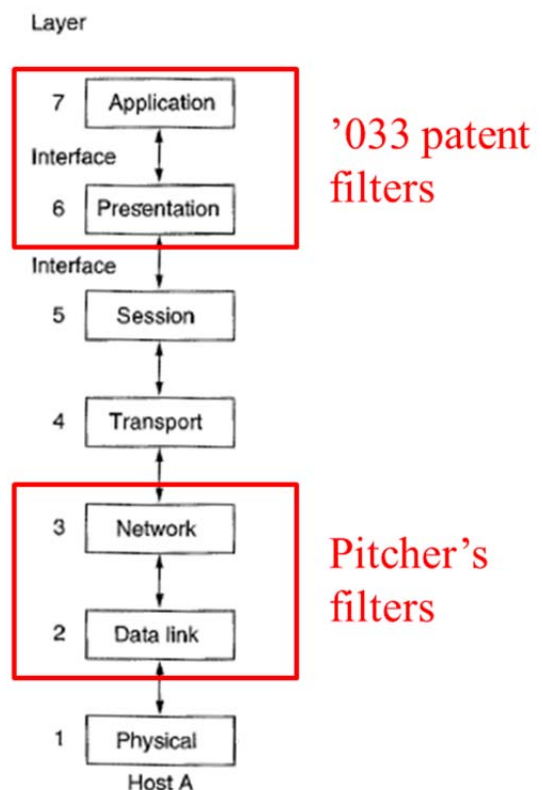
As discussed in Sections A-C below, ground (1) fails because Pitcher's packet-based filters operate at different layers of the ISO protocol model than the claimed filters (Section A) and because Pitcher's closed LAN network does not disclose filtering messages sent over the Internet (Sections B and C).

Ground (2) fails at least because claim 9 depends from claim 1. Moreover, as discussed in Section D below, claim 9 is also patentable over Pitcher because Pitcher does not render obvious maintaining the database of filters at the client computer. Thus, the Board should confirm all challenged claims as patentable over Pitcher.

**A. Pitcher’s packet-based filters do not disclose the claimed “filters specifying immediate action” or “filters specifying deferred action” under the correct construction of these terms (All challenged claims)**

Pitcher’s packet-based filters do not operate between the presentation and application layers of the seven-level ISO protocol model and therefore are not “filters specifying immediate action” or “filters specifying deferred action” under the proper construction of those terms. In fact, as discussed below, Pitcher’s packet filtering techniques operate solely between layers 2 and 3 of the ISO protocol model, not layers 6

and 7. Ex. 2002 ¶ 39 (citing Ex. 2004 at 22, annotations added). All of Pitcher’s disclosed filtering methods are performed “on a network device such as LAN switch 100.” Ex. 1005 at 6:21-26. However, Pitcher explains that “network



devices such as a LAN switch or bridge operate at the MAC sublayer of the *Data Link* layer [i.e., *layer 2*] of the [ISO protocol] model.” Ex. 1005 6:33-37 (emphasis added); *see also id.* at 2:39-42.

Pitcher’s description of the preferred embodiment further confirms that the filtering methods described therein do not operate between the presentation and application layers. For example, Pitcher explains that the LAN switch 100 performing the filtering can employ different “modules,” such as a Token Ring, Ethernet, FDDI, or ATM module. Ex. 1005 at 5:8-21. These are lower level protocols that operate at layers 2 or 3 of the ISO protocol or their equivalents. Ex. 2002 ¶ 39. Moreover, when explaining the “packets” that its system filters, Pitcher uses an IEEE 802.5 Token Ring packet as an example. Ex. 1005 at Fig. 4, 4:54-55, 7:33-8:23. The IEEE 802.5 Token Ring protocol is a layer 2 protocol. Ex. 2002 ¶ 39. Thus, one of ordinary skill in the art would understand that Pitcher’s packet filtering techniques performed by a network device such as a LAN switch do not operate between levels 6 and 7 of the ISO protocol model, as required of the claimed filters. *Id.*

Moreover, as discussed below, the specific filters in Pitcher that Apple asserts are the claimed “filters specifying immediate action” and “filters specifying deferred action” do not operate between the presentation and application layers.

**1. The alleged “filters specifying immediate action” in Pitcher do not operate between the presentation and application layers**

Apple and its expert assert that Pitcher’s filters FLTR\_002 and FLTR\_003 are “filters specifying immediate action.” Pet. at 46, 48; Ex. 1010 ¶¶ 101-02. Apple is wrong because FLTR\_002 and FLTR\_003 are both packet-based filters, and neither operates between the presentation and application levels of the seven-level ISO protocol model.

**Fig. 2**

NAME	SEQ	TYPE	OFFSET	VALUE (HEX)	COND	MATCH	FAIL	FWD	MON DEST	ADDL DEST
FLTR_001	1	LLC	0	AA.AA.03.00.00.00.81.37	EQ	2	255	NORM		
	2	LLC	16	04.52	EQ	3	255	NORM		
	3	LLC	22	00.07	EQ	0	255	ALT		2:3,2:4
FLTR_002	1	MAC	2	00.80.00.02.31.54	EQ	255	255	NORM	2:1	
FLTR_003	1	LLC	0	AA.AA.03.00.00.00.08.00	EQ	0	255	DROP		

ADD FILTER ADD SEQ DELETE SEQ

Pitcher discloses FLTR\_002 and FLTR\_003 with reference to the graphical user interface shown in Fig. 2, reproduced above. Ex. 2002 ¶ 40 (citing Ex. 1005 at Fig. 2, annotations added). But according to Pitcher, the graphical user interface of Fig. 2 is used to enable “packet filtering on a network device such as LAN switch 100.” Ex. 1005 at 6:21-26. And, again, Pitcher discloses that network devices such as LAN switches operate at the data link layer (layer 2) of the ISO

protocol model, not between the presentation and application layers (layers 6 and 7). *Id.* at 6:33-37. In any event, Pitcher explains in further detail that FLTR\_002 and FLTR\_003 do not operate at the presentation or application layers because Pitcher discloses that FLTR\_002 filters “packets” with a particular media access control (MAC) address and FLTR\_003 filters “IP packets.” One of ordinary skill in the art would understand that the “packet” filters enabled on Pitcher’s level 2 LAN switch do not operate between the presentation and application levels (layers 6 and 7) of the ISO protocol model. Ex. 2002 ¶ 40.

Moreover, one of ordinary skill in the art would have understood the operation of FLTR\_002 and FLTR\_003 in the context of the surrounding Figures and description in Pitcher, which confirm that these filters operate at level 2 of the ISO protocol model. Ex. 2002 ¶ 41. For example, the type field 203 (“MAC” or “LLC” in Fig. 2) and the offset field 204 shown in Fig. 2 in connection with FLTR\_002 and FLTR\_003 can be understood in the context of Figs. 3 and 4 and the corresponding discussion, which demonstrate that these two fields indicate the location in a particular packet where the filter should start. Ex. 1005 at 7:30-32. For example, filter type MAC and offset 2 for FLTR\_002 indicates that FLTR\_002 starts two bytes from the beginning of the MAC field of the data packet, whereas filter type LLC and offset 0 for FLTR\_003 indicates that FLTR\_003 starts at the beginning of the LLC field. Ex. 2002 ¶ 41. Again, however, the only embodiment

that Pitcher uses to describe these types of fields (MAC and LLC) is the IEEE 802.5 Token Ring packet shown in Fig. 4, which is a level 2 packet. *Id.*

Because Pitcher's FLTR\_002 and FLTR\_003 each operates several levels beneath the presentation and application levels of the ISO protocol model, these filters cannot be the claimed filters specifying immediate action. This reason is enough for the Board to confirm the claims as patentable over Pitcher.

**2. The alleged “filters specifying deferred action” in Pitcher also do not operate between the presentation and application layers**

Without support from its expert, Apple asserts that Pitcher's FLTR\_001, shown in Fig. 2, discloses “filters specifying deferred action.” Pet. at 45 (“FLTR\_001 is a ‘deferred action’ filter.”). Apple is wrong again because FLTR\_001 does not operate between the presentation and application levels of the seven-level ISO protocol model.

Fig. 2

The diagram shows a graphical user interface for managing packet filters. At the top, a header bar contains labels 201 through 211 corresponding to the columns of the table below. The table itself is titled 'PACKET FILTERS' and contains several rows of filter data. The first three rows (212, 213, 214) are grouped under the name 'FLTR\_001' and are highlighted with a red border. Below the table are three buttons: 'ADD FILTER', 'ADD SEQ', and 'DELETE SEQ'. The entire interface is labeled with 200 at the bottom right.

	201	202	203	204	205	206	207	208	209	210	211
	NAME	SEQ	TYPE	OFFSET	VALUE (HEX)	COND	MATCH	FAIL	FWD	MON DEST	ADDL DEST
212	FLTR_001	1	LLC	0	AA.AA.03.00.00.00.81.37	EQ	2	255	NORM		
213		2	LLC	16	04.52	EQ	3	255	NORM		
214		3	LLC	22	00.07	EQ	0	255	ALT		2:3,2:4
215	FLTR_002	1	MAC	2	00.80.00.02.31.54	EQ	255	255	NORM	2:1	
216	FLTR_003	1	LLC	0	AA.AA.03.00.00.00.08.00	EQ	0	255	DROP		
217											

220

200

Like all of the other filters in Pitcher discussed above, FLTR\_001 is implemented by LAN switch 100 which operates at layer 2 of the ISO protocol model. Ex. 2002 ¶ 43 (citing Ex. 1005 at Fig. 2, annotations added). Moreover, Pitcher’s description of the operation of FLTR\_001 makes clear that it is a lower-level packet filter that does not operate between the presentation and application layers. In particular, Pitcher explains that FLTR\_001 filters and “redirects all Novell NetWare printer requests.” Ex. 1005 at 6:66-7:3. One of ordinary skill in the art would have known that the Novell NetWare network uses the IPX (“internetwork packet exchange”) protocol, which is a network level (layer 3) protocol. See Ex. 2002 ¶ 43 (citing Ex. 2004 at 48-49). In fact, Pitcher explains that FLTR\_001 includes three sequenced filters 213, 214, and 215, each of which “checks for IPX packets” or printer requests within those IPX packets, and is

therefore a layer 3 filter. Ex. 1005 at 7:7-9; Ex. 2002 ¶ 43. Thus, FLTR\_001 also does not operate between the presentation and application levels of the ISO protocol stack, and cannot be the claimed “filters specifying deferred action.”

Finally, while not explained in any detail in the petition, Apple and its expert cite to column 8 of Pitcher as also disclosing a deferred action filter. Pet. at 48; Ex. 1010 ¶¶ 103-04. This portion of Pitcher, however, describes the exemplary packet in Fig. 4, which as discussed above is an IEEE 802.5 token ring packet—again, a level 2 packet. *See* Ex. 1005 at 7:33-35. Thus, the cited disclosure in column 8 also does not disclose the claimed “filters specifying deferred action.”

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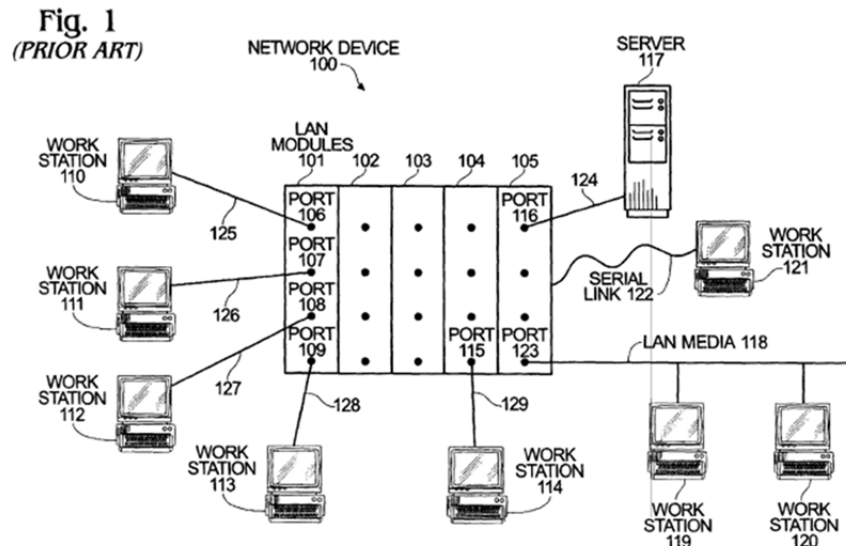
All of Pitcher’s filtering functionality occurs at a network device such as a LAN switch, which Pitcher expressly discloses as operating at level 2 of the ISO protocol model. Apple has not pointed to a single filter in Pitcher that operates between the presentation and application layers of the ISO protocol model. That is because Pitcher discloses no such filter. Accordingly, Pitcher does not disclose the claimed filters specifying immediate action or the claimed filters specifying deferred action. Each of these deficiencies is an independent reason for the Board to confirm the claims as patentable over Pitcher.

**B. Pitcher's confined local area network (LAN) is not connected to the Internet and thus Pitcher does not disclose "prevent[ing] or allow[ing] access to *Internet sites*" (All challenged claims)**

The preamble of each independent claim was amended during prosecution to recite "prevent[ing] or allow[ing] access to Internet sites." As discussed above, this portion of the preamble is limiting because it was added to further distinguish the cited references during prosecution. *Catalina Marketing*, 289 F.3d at 808-09 ("Clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.").

Pitcher does not disclose sending messages over the Internet because Pitcher's system is confined to a local area network (LAN) and because Pitcher discloses filtering packets on that LAN using a LAN switch. Indeed, Pitcher's entire purpose is to route and analyze packets on an internal LAN, such as one that may be operated by an organization. *See, e.g.*, Ex. 1005 at 1:22 ("LAN Management"); 1:50-60 (discussing the challenges of an organization managing its LAN); 2:13-64 (discussing LAN switches and LAN management). In particular, Pitcher's disclosed embodiments are implemented via the system shown in Fig. 1 (below), which includes multiple LAN segments, and which does not disclose any

connection to the Internet. *See* Ex. 1005 5:8-22. Moreover Pitcher explains with reference to Fig. 1 that “Network device 100 is a LAN switch.” Ex. 1005 at 5:9.



One of ordinary skill in the art would have readily understood that a LAN, such as the LANs disclosed in Pitcher, is not the same as the Internet. Ex. 2002 ¶ 46. In particular, one of skill in the art would have understood that a LAN is a privately-owned network that an organization such as a company or university might use to connect devices such as computers, servers, and printers within the organization. *Id.* (citing Ex. 2004 at 12-13). In contrast, one of skill in the art would have understood that the Internet was a publicly connected, worldwide network used to connect organizations and individuals around the globe. *Id.* (citing Ex. 2004 at 19).

The portions of Pitcher cited in Apple’s petition describe a *LAN*, and do not disclose preventing or allowing access to *Internet* sites. *See* Pet. at 46-47. First,

Apple cites to a portion that summarizes “the present invention” of Pitcher, and to Pitcher’s Abstract. Pet. at 46 (citing Ex. 1005 at 3:48-53, Abstract). These portions disclose only a “network device, such as a LAN switch” coupled to a “network”—they do not disclose the Internet, let alone preventing or allowing access to Internet sites. Ex. 1005 at Abstract, 3:48-53; Ex. 2002 ¶ 48.

Second, Apple cites to a portion of Pitcher that discloses filtering based on an “IP address of 129.1.1.1.” Pet. at 47 (citing Ex. 1005 at 3:4-9). This cited portion of Pitcher, however, is in the Background section and is not described as part of the embodiments in Pitcher that allegedly anticipate the claims. In particular, this portion describes “[a] technique that has been employed by prior art network devices” to filter data packets—it is not part of Pitcher’s disclosed embodiments. Ex. 2:66-3:9. Accordingly, it cannot be relied upon to support Apple’s contention that Pitcher anticipates the claims. *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) (“[U]nless a reference discloses within the four corners of the document not only all of the limitations claims but also all of the limitations arranged or combined in the same way as recited in the claim, it . . . cannot anticipate.”). In any event, the mere disclosure of an IP address does not inherently disclose that Pitcher’s LAN is connected to the Internet because, as one of ordinary skill in the art would know, information can be

sent between two computers in a LAN using IP addresses without involving Internet access. Ex. 2002 ¶ 49.

Third, Apple cites to Dr. Knutson's declaration, which in turn cites to an additional portion of Pitcher that does not disclose preventing or allowing access to Internet sites. Ex. 1010 ¶ 97 (citing Ex. 1005 at 2:49-55). Besides also being in the Background section, this cited portion describes only "workstations and servers . . . connected directly to the LAN switch" and multiple LANs connected together. Ex. 1005 at 2:49-55. Nowhere does it disclose access to the Internet.

Pitcher's closed LAN system is therefore fundamentally different from the Internet-based system disclosed and claimed in the '033 patent. These differences are substantive, not just semantic. For example, the types of content and consequently the types of filtering in an Internet-based system like the '033 patent are different from those in a LAN-based system like Pitcher. As the '033 patent makes clear, common concerns for Internet-based filtering center around content control and safety, such as preventing exposure to objectionable material. Ex. 1001 at 1:10-24 ('033 patent describing concerns about preventing children from exposure to objectionable material on the Internet); *see also* Ex. 2002 ¶ 47. In contrast, as Pitcher makes clear, internal filtering mechanisms on a closed network such as a LAN commonly have very different goals, such as network performance and scalability. Ex. 1005 at 1:50-59; *see also id.* at 6:45-46 (using LAN switch

filtering for traffic analysis on the LAN); Ex. 2002 ¶ 47. Because Pitcher’s closed system does not disclose “prevent[ing] or allow[ing] access to Internet sites,” it does not anticipate the challenged claims.<sup>3</sup>

**C. Pitcher does not disclose “opening a data stream to send/receive a message . . . to/from an *Internet server*” (Claims 1, 2, 9, and 23)**

Independent claim 1 recites “opening a data stream to send a message . . . to an *Internet server*,” and independent claim 23 recites “opening a data stream to receive a message . . . from an Internet server.” For similar reasons to those presented above, Pitcher’s closed LAN network does not—and cannot—disclose sending or receiving messages over the Internet, and therefore does not disclose these claim limitations. Apple and its expert assert that this feature is “inherently disclosed by any reference describing TCP/IP communications.” *E.g.*, Ex. 1010 ¶ 98. Apple then cites to a portion of Pitcher which discloses a network interface

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<sup>3</sup> Apple did not assert in its petition that claims 1, 2, 15, and 23 were obvious in view of Pitcher, and the Board instituted review of these claims only under § 102. It is too late in the game for Apple to argue that these claims would have been obvious. *See* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,765 (Aug. 14, 2012) (“Any claim or issue not included in the [Institution Decision] is not part of the trial.”).

card 526 that uses TCP/IP. Pet. at 47 (citing Ex. 1005 at 6:1-7). Apple is wrong for two reasons.

First, Apple is incorrect that the entire limitation is inherent in any reference describing TCP/IP communications. In particular, sending or receiving a message over the Internet is not inherent in a system using TCP/IP. Ex. 2002 ¶ 53. Two clients can communicate with each other using TCP/IP over a network that is not the Internet, such as the LAN that is disclosed in Pitcher. *Id.* Therefore, simply disclosing TCP/IP does not inherently disclose sending or receiving messages to or from an Internet server. *Id.*

Second, even if Apple were correct that network interface card 526 inherently opens a data stream to send “a message” to an Internet server, it is not “the message” being filtered in Pitcher, and thus still does not disclose the claimed subject matter. *Id.* ¶¶ 54-56. In particular, independent claims 1 and 23 each require the same “message” that is sent or received in this step to be the filtered message in subsequent steps. *See, e.g.*, Ex. 1001, claim 1 (reproduced in part below, emphases added):

(a) opening a data stream to send *a message* through an interface to an Internet server; . . .

(c) comparing information *in the message* to filtering information . . .

(d) determining whether to prevent or allow the outgoing transmission  
*of the message* based on the comparison.

In contrast, network interface card 526, which according to Apple sends the alleged message over the Internet in step (a), is a part of a network management station 121 that allows a “network administrator” to “manage[] the configuration and operation of the LAN switch” performing the filtering. Ex. 1005 at 5:23-26; *see also id.* at Fig. 1 (showing workstation 121). In other words, the network interface card 526 is just a part of the computer that sets up the filtering settings for the LAN switch—it is not a part of a computer that sends messages to be filtered by the LAN switch. Ex. 2002 ¶ 54. Thus, even if Apple were correct about inherency (it is not), the message allegedly sent from network management station 121 via network interface card 526 is not “the message” being filtered in Pitcher. Ex. 2002 ¶ 56. Moreover, the data from network management station 121 is sent to the LAN switch, which is not an “Internet server” under any plausible construction of the term. *See id.*

Finally, Apple also cites to another portion of Pitcher, 6:26-33, without explaining how this portion allegedly discloses sending or receiving Internet messages. Pet. at 47. In fact, this portion does not because it simply discloses how the packet filter works inside the LAN switch to forward the packets. Ex. 1005 at

6:26-33. It does not disclose anything about sending a message to an Internet server. Ex. 2002 ¶ 57.

For this additional reason, Pitcher does not disclose all of the elements of claims 1, 2, 9 and 23 (claims 2 and 9 depend from claim 1), which the Board should confirm as patentable over Pitcher.

**D. Dependent claim 9 is patentable over Pitcher for additional reasons**

Claim 9 depends from independent claim 1 and further recites “maintaining the database [of filtering information] in storage residing on the client computer.” Ex. 1001, claim 9. Pitcher does not disclose or render obvious this feature, so the Board should confirm claim 9.

As discussed above, Pitcher discloses that the filtering functionality is present on “a network device such as a LAN switch.” Ex. 1005 at 4:24-26, 5:8-10. Pitcher also explains that the “network device” could be a “hub or bridge,” *id.* at 5:10-13, but never discloses or suggests that a client computer performs the filtering or includes a database of filtering information. In fact, Pitcher describes several advantages of the filtering functionality being present at a centralized LAN switch. For example, a workstation 121 is connected to the LAN switch 100 to allow a “network administrator [to] manage[] the configuration and operation of the LAN switch,” including the filter settings. Ex. 1005 5:23-26; *see also id.* at Figs. 2, 3, 6:21-7:29 (describing displays presented on the workstation 121 that

allow the network administrator to configure the filter settings of the LAN switch). Similarly, packet filtering at the centralized LAN switch may be used to analyze LAN traffic. Ex. 1005 at 6:45-46.

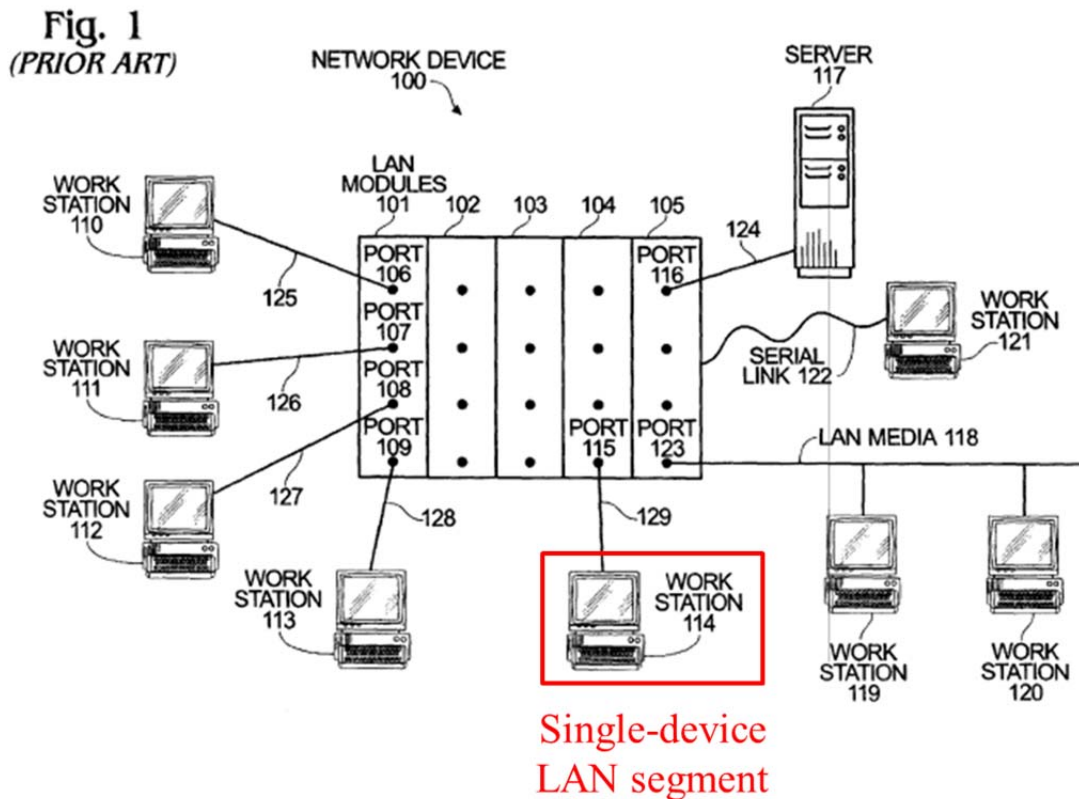
Apple asserts that a portion of Pitcher's background section that discusses segmenting a larger LAN into smaller LAN segments would have rendered obvious storing the database of filtering information at the client computers in Pitcher's system. Pet. at 51-52. Apple's argument can be summarized as follows:

- (1) Pitcher discloses that larger LANs can be segmented into smaller LAN segments, and that when carried to its end, this results in each LAN segment having only a single device (server or workstation);
- (2) In this single-device scenario, there would be a single LAN switch for each LAN segment to control the filtering for the one device in that segment; and
- (3) It would be more efficient to move the filtering functionality of the LAN switch into the device, to save the hardware costs associated with installing a LAN switch at every segment.

*See Id.* Thus, Apple's obviousness argument is premised on its assumption (2) above—that each single-device LAN segment would require its own LAN switch.

Figure 1 of Pitcher demonstrates that Apple's assumption (2) is wrong because it shows a single-device LAN segment sharing a LAN switch with other

segments. Pitcher explains with reference to Fig. 1 that “LAN switch 100 interconnects *multiple LAN segments* each via a port on a LAN module,” Ex. 1005 5:12-14 (emphasis added). But one of the LAN segments displayed in Fig. 1 is the *single-device LAN segment* of workstation 114, which shares LAN switch 100 with the remaining LAN segments, directly contradicting Apple’s assumption (2) that a single-device LAN segment must have its own switch:



Ex. 2002 ¶ 60 (citing Ex. 1005 at Fig. 1). This is consistent with Pitcher’s Background section which explains that LAN switches may be connected directly to single-device LAN segments as bandwidth needs arise. Ex. 1005 at 2:46-55; Ex. 2002 ¶ 60.

Thus, Apple's entire reason for modifying Pitcher is based on a faulty assumption that is expressly contradicted by Pitcher itself. Pitcher does not disclose or render obvious moving the filtering functionality from the LAN switch to individual devices on Pitcher's LAN. In addition to there being no reason to make such a modification in the case of single-device LAN segments (because Pitcher already has the solution as shown in Fig. 1), the proposed modification would detract from Pitcher's stated advantages of having a centralized filtering system accessible by a network administrator via a single workstation and of enabling traffic analysis on the LAN. Ex. 2002 ¶ 60.

The Board should confirm the patentability of claim 9 over Pitcher for the additional reason that Pitcher does not render obvious "maintaining the database [of filtering information] in storage residing on the client computer."

**V. Conclusion**

Apple has failed to prove that any of challenged claims 1, 2, 9, 15, and 23 is unpatentable. Accordingly, the Board should confirm claims 1, 2, 9, 15, and 23 as patentable over Pitcher.

Respectfully submitted,

Dated: December 23, 2015

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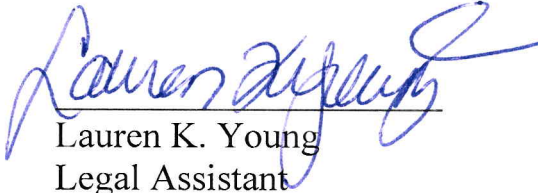
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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that copies of the foregoing Patent Owner's Response to Petition for *Inter Partes* Review of U.S. Patent No. 5,884,033 was served on December 23, 2015 via FedEx and e-mail directed to counsel of record for the Petitioner at the following:

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