

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

OpenTV, Inc.,
Patent Owner.

Case IPR2015-00969
Patent 5,884,033

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

Petitioner Apple Inc. submits this reply under 37 C.F.R. § 42.23 in response to OpenTV's Response to Petition filed on December 23, 2015. Paper No. 14 ("Resp."). OpenTV did not submit a motion to amend. The Board instituted *inter partes* review of U.S. Patent No. 5,844,033 (the "'033 Patent") based on a reasonable likelihood that Petitioner would prevail in showing that claims 1, 2, 15, and 23 are anticipated by U.S. Patent No. 5,790,554 ("Pitcher") and that claim 9 is obvious over Pitcher. Paper No. 8, Institution Decision at 31. OpenTV argues in response that a prosecution history estoppel limits the claimed filtering methods to operating between layers 6 and 7 of the seven-layer ISO protocol model. OpenTV is wrong; there is no clear and unmistakable estoppel:

- The '033 Patent is devoid of any disclosure of the ISO protocol or the presentation and application layers making the alleged limitation completely lacking.
- Adding the alleged limitation to the claims would impermissibly introduce new matter.
- The arguments presented in the prosecution history fail to indicate how the alleged limitation would be implemented in the claimed method—for example, which method steps are limited to the operation of filtering at between layers 6 and 7 of the ISO protocol model.
- The alleged limitation would render the claims invalid under 35 U.S.C. § 112(a), first paragraph, for failure to comply with the written description

requirement—the '033 Patent discloses use of the TCP/IP protocol that is implemented in networks, and not the ISO model which is not implemented.

OpenTV also asserts that the preamble of Claim 1 of the '033 Patent is limiting and that Pitcher's filters do not anticipate the claims because they are implemented on a local area network (LAN) and not on the Internet. The preamble of Claim 1 is not limiting; OpenTV's assertion is based on cases that do not apply to the '033 Patent. Pitcher anticipates the claims because its filtering methods create an internetworking environment capable of hosting "Internet sites" and sending and receiving messages from an Internet server as contemplated by the '033 Patent. For these reasons the challenged claims should be canceled.

II. PITCHER ANTICIPATES CLAIMS 1, 2, 9, 15, AND 23 OF THE '033 PATENT AND RENDERS CLAIM 9 OBVIOUS

A. Pitcher Discloses "Filters Specifying Immediate Action" and "Filters Specifying Deferred Action" (All Challenged Claims)

OpenTV's argument that an estoppel limits the claims should be rejected because the alleged limitation is unsupported by the claims, specification, or the prosecution history and would render the claims invalid. The estoppel alleged by OpenTV is based on the following remarks during prosecution:

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 11. 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[.]

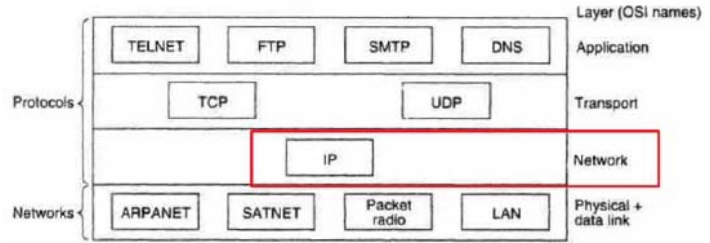
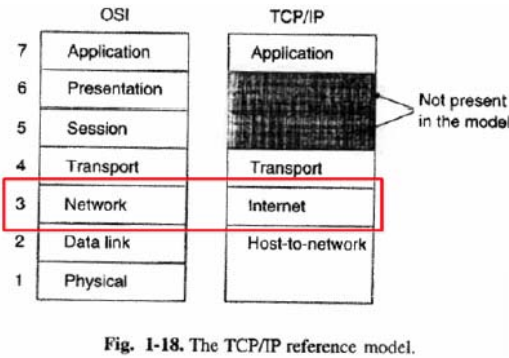
Apple Ex. 1007.064 (emphasis original). The Applicants did not identify support in the specification for the alleged requirement of operation of the claimed filtering method "between the presentation and applications levels (layers 6 and 7, respectively) of the seven-level ISO protocol model." *See* Apple Ex. 1007.064. Nor could the Applicants identify any support; the '033 Patent never mentions the ISO protocol model or identifies any of the levels of the ISO protocol model. Notably, the Applicants did not amend the claims to specify that the claimed filtering method operates between layers 6 and 7 of the ISO protocol model.

The Applicants' statements regarding Schwed and the alleged limitation on the claimed method do not amount to a "clear and unmistakable" disavowal. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). First, reading a limitation into the claims which requires that the claimed filtering method operates between layers 6 and 7 would improperly introduce new subject matter to the '033 Patent. *See* 35 U.S.C. § 132; *TurboCare Div. of Demag Delaval Turbomachinery Corp. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001).

Here, there was no disclosure in the abstract, specification, drawings, or claims at the time of filing of a limitation based on the ISO protocol model.

Second, the arguments presented in the prosecution history do not indicate how the alleged limitation would be applied to method steps in Claim 1. For example, step (a)—opening a data stream—is a generic step that would happen with or without the claimed filtering method, and step (b)—maintaining a database—is unrelated to the ISO protocol model (or the disclosed TCP/IP protocol). The specification simply states that the database is “maintained in the client computer’s hard drive” but makes no mention of protocol layers. *See* Apple Ex. 1001 at 3:46-49.

Third, the specification provides no support for filtering methods operating between layers 6 and 7 of the ISO model. There is no discussion of the ISO protocol anywhere in the patent. The ’033 Patent makes clear that TCP/IP is the protocol used in networks implementing the claimed invention—not the ISO model—and the TCP/IP protocol does not define or include a presentation layer (layer 6). *See, e.g.*, Apple. Ex. 1001 at 2:42-44; OpenTV Ex. 2004 at 36-37 (annotated):



It would not make sense for Claims in the '033 Patent to be limited to a filtering method operating at the presentation layer because the disclosed TC/IP model does not include a presentation layer.

Fourth, the alleged limitation would render the claims invalid under 35 U.S.C. § 112(a), first paragraph, for failure to comply with the written description requirement. In order to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. *See, e.g., Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1320-21 (Fed. Cir. 2003). Here, the issue is not whether there is a sufficient description of the claimed invention set forth in diagrams, words, or structures, as required under the statute. The issue is that there is no description at all of the alleged limitation that the claimed filtering method operates between layers 6 and 7 of the ISO protocol model. It would be impossible for one skilled in the art to

reasonably conclude the inventor had possession of a filtering method operating at levels 6 and 7.

The Board should reject OpenTV's argument that a purported prosecution disavowal limits the claims to filtering methods operating between levels 6 and 7 of the ISO protocol model.

B. Pitcher Discloses “Prevent[ing] or Allow[ing] Access to Internet Sites” Because a Local Area Network (LAN) Can Host Internet Sites (All Challenged Claims)

OpenTV does not and cannot dispute that a site containing filterable content can be hosted on a computer connected to a LAN. Instead, OpenTV argues that a LAN does not use the “Internet” and therefore does not disclose “prevent[ing] or allow[ing] access to Internet sites.” But a person of ordinary skill in the art would understand that the LAN disclosed by Pitcher creates an internetworking environment capable of hosting “Internet sites” as contemplated by the '033 Patent. And the '033 Patent explains that its filtering method can be applied on “the client's own network.” See Apple Ex. 8:18-26.

Apple disagrees with OpenTV that the preamble is limiting. A preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). OpenTV incorrectly relies on *Catalina Marketing*, a case holding that a statement of purpose

in a preamble was not limiting, for the proposition that the Applicants' reliance on an amendment to the preamble transforms the preamble into a claim limitation.

See Catalina Mktg. Int'l, Inc. v. Coolsavings.com, 289 F.3d 801, 808-09 (Fed. Cir. 2002). Here, *Catalina* is not categorically determinative, and the broadest reasonable interpretation of "Internet sites" requires that the Board find the preamble is not limiting. *See In re Taylor*, 484 F. App'x 540, 543-44 (Fed. Cir. June 14, 2012) (distinguishing *Catalina* and finding that a preamble was not limiting under the broadest reasonable interpretation of those claims).

Because the use of the "Internet" in the preamble is a statement of purpose and not a limitation, the method disclosed in the specification applies to communications over any network, whether a wide area or a local area. Dr. Knutson supports this claim scope, stating, "The term 'Internet sites' is generally understood in the field of computer networking to refer to a resource that a user can access using the Internet." Knutson Decl. ¶ 38. The "Internet" can be understood as "a collection of networks over which messages may be sent using a protocol known as Transmission Control Protocol/Internet Protocol, or TCP/IP." *Id.* Put another way, the Internet can be described as an internetwork. *See id.* ¶ 95; OpenTV Ex. 2004 at 19 ("[T]he connection of two or more networks is called an internetwork. The worldwide Internet is a well-known example of an internetwork.").

The filtering disclosed by Pitcher operates on a LAN that facilitates internetworking. *See* Apple 1005 at 2:62-64 (“LAN switches enlarge router subnets, flatten the internetwork, simplify management, and reduce the cost of internetworking.”). Specifically, Pitcher operates in a client-server environment to filter messages to or from internetworked servers:

High powered workstations and servers may be connected directly to the LAN switch to provide dedicated bandwidth while devices having lower bandwidth demands can continue to share LAN segments coupled to the switch. As high bandwidth needs arise, the shared LANs can be segmented until all users eventually receive dedicated segments.

Apple 1005 at 2:49-55; *see also* Knutson Decl. ¶ 95.

That the network of Pitcher is a LAN is immaterial to whether Pitcher discloses the claimed method of filtering content on a network. Because the Internet is a “connection of two or more networks,” and an Internet site is a resource hosted on the Internet, Pitcher’s filters prevent and allow access to Internet sites containing content. *See, e.g.,* Apple 1005 at 3:47-53 (“The present invention relates to the field of data networking. Specifically, the present invention relates to a method and apparatus for filtering, i.e., controlling the forwarding of, data packets from a network device, such as a LAN switch, onto a network coupled thereto based on the content of the data packets.”). And the fact

that a server is part of a LAN in no way prevents the server from hosting an Internet site and serving content. Nearly every server that hosts an “Internet site” is part of a LAN.

Thus, Pitcher discloses “prevent[ing] or allow[ing] access to Internet sites.”

C. Pitcher Discloses “Opening a Data Stream to Send/Receive a Message . . . to/from an Internet Server” by Sending Messages Via TCP/IP Protocols (Claims 1, 2, 9, and 23)

OpenTV’s argument that Pitcher does not disclose “opening a data stream to send/receive a message . . . to/from an internet server” should be rejected for at least two reasons. First, Pitcher’s LAN uses TCP/IP protocols that would necessarily require “opening a data stream to send/receive a message . . . to/from an internet server.” Second, OpenTV’s assertion that Pitcher’s network interface card 526 does not send the same message as the message that is filtered by its LAN switch has no basis.

A person of ordinary skill in the art would have known that any network communication using TCP/IP protocols would necessarily require “opening a data stream to send/receive a message . . . to/from an internet server.” Knutson Decl.

¶ 48. The ’033 Patent describes transmitting messages over the Internet using a network protocol within the TCP/IP suite:

Messages are transmitted over the Internet among computers with a transport protocol known as Transmission Control Protocol/Internet Protocol (TCP/IP). This protocol provides an

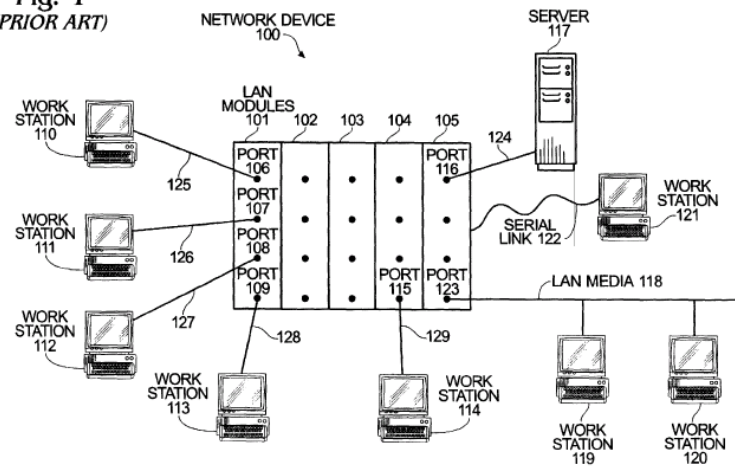
error-free data connection between computers and sits underneath and works in conjunction with higher level network protocols, including HyperText Transfer Protocol (HTTP); File Transfer Protocol (FTP); Network News Transmission Protocol (NNTP); Internet Relay Chat (IRC); and GOPHER.

Apple 1001 at 2:41-20. Each of the network protocols listed by the '033 Patent is a protocol by which messages can be sent and received using TCP/IP. Knutson Decl. ¶ 40. Pitcher discloses sending messages using TCP/IP protocols. *See* Apple 1005 at 6:1-7 (“Network interface card 526, in conjunction with appropriate data communications protocols (e.g., the TCP/IP suite of internetworking protocols), provide the means by which a network management system operating on computer system 500 exchanges information with other devices coupled to the same computer network such as LAN switch 100.”).

OpenTV’s argument that the message sent from an Internet server in Pitcher is not the message being filtered is without basis. OpenTV argues that because the network interface card 526 is “part of the computer that sets up the filtering settings for the LAN switch” (workstation 121) and is “not part of a computer that sends messages to be filtered by the LAN switch,” the message sent from the network management station is not the same as the message that is filtered. Resp. at 37. However, to the extent network interface card 526 is part of network management station 121, Figure 1 shows that these devices are connected via serial

link 122. According to Pitcher, “device 121 may be coupled to LAN switch 100 via a serial asynchronous communications cable 122 to a serial port (not shown) or it may be attached to a LAN port, depending on the type

Fig. 1
(PRIOR ART)



of LAN environment.” Apple Ex. 1005 at 5:26-29. Under this configuration, the same message that is sent by a network management system could be the same message that is filtered by LAN switch 100 by virtue of the above-described architecture.

Pitcher discloses “opening a data stream to send/receive a message . . . to/from an internet server.”

D. Pitcher Renders Claim 9 Obvious

Claim 9 is rendered obvious by Pitcher because it indicates that its filtering could also be performed on other devices and further discloses a strategy of dividing a network LAN into LANs to conserve bandwidth which culminates in a single workstation. OpenTV’s arguments that the Board should confirm claim 9 should be rejected.

Pitcher indicates that its filtering could be performed on other devices.

Apple 1005 at 5:9-12 (“[I]t is understood by those of ordinary skill in the art that an embodiment of the present invention may be applied to other network devices such as a hub or bridge.”). According to OpenTV, however, Pitcher does not suggest that a client computer performs the filtering or includes a database of filtering information, and to the contrary, describes several “advantages” of the filtering functionality being present at a centralized LAN switch. Resp. at 38.

However, this argument should be rejected for two reasons. First, OpenTV has provided examples that merely detail how the centralized filtering functionality is carried out. The patent does not characterize this functionality as an “advantage” as OpenTV suggests. *See, e.g.*, Resp. at 38 (“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.”). Second, one of ordinary skill would have known that implementing the filters of Pitcher on any of a proxy server, a LAN switch or router, or a client computer was likely to be successful, and that the selected location of the functionality was a matter of design choice. Knutson Decl. ¶ 118 (“[T]he choice of where to locate the filtering operations would have been a design choice between two known alternatives, would have involved the application of ordinary engineering skill, and would not have led to any unexpected results.”).

OpenTV is incorrect that Figure 1 of Pitcher demonstrates that this reference does not render obvious storing the database of filtering information at the client computers in Pitcher's system. The fact that Figure 1 shows a single-device LAN segment does not limit Pitcher's teachings to a single-device LAN. LAN switches and bridges are used to isolate a local network from the larger Internet, and one of the benefits of doing so is conserving bandwidth on the LAN by eliminating unnecessary traffic. *Id.* ¶ 117. Pitcher demonstrates that partitioning a network into LANs results in a single client workstation behind the LAN switch. See Apple 1005 at 1:30-34 ("A common strategy to reduce traffic in a congested LAN is to segment the LAN into smaller LANs so that bandwidth is shared among fewer users. Carried to its end, segmentation results in each LAN having only one device attached . . .").

Claim 9 should be canceled as obvious over Pitcher.

III. CONCLUSION

For the reasons set forth in the Petition and above, the challenged claims of the '033 Patent are unpatentable and should be canceled.

Respectfully submitted,

/s/ Mark E. Miller
Mark E. Miller (Reg. No. 31401)

CERTIFICATE OF SERVICE

I hereby certify that on March 23, 2016, I caused a true and correct copy of the foregoing Petitioner's Reply to Patent Owner's Response to Petition for *Inter Partes* Review of U.S. Patent No. 5,884,033 to be served via Express Mail or an equivalent service on the following attorney of record as listed on PAIR:

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