

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARISTA NETWORKS, INC.,
Petitioner,

v.

CISCO SYSTEMS, INC.,
Patent Owner.

Case IPR2015-00978
Patent 7,340,597 B1

Before BRYAN F. MOORE, MATTHEW R. CLEMENTS, and
PETER P. CHEN, *Administrative Patent Judges*.

CHEN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318 and 37 C.F.R. § 42.73

I. INTRODUCTION

Petitioner, Arista Networks, Inc., filed a Petition for *inter partes* review of claims 1, 14, 15, 29, 39–42, 63, 64, 71–73, and 84–86 of U.S. Patent No. 7,340,597 B1 (Ex. 1001, “the ’597 patent”). Paper 2 (“Pet.”). Patent Owner, Cisco Systems, Inc., filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). On October 6, 2015, we instituted an *inter partes* review of claims 1, 14, 29, 39–42, 63, 64, 71–73, and 84–86. Paper 7 (“Dec. to Inst.”).

After institution of trial, Patent Owner filed a Patent Owner Response (Paper 15, “PO Resp.”), to which Petitioner filed a Reply (Paper 18, “Pet. Reply”). Pursuant to our authorization, Patent Owner filed a paper alleging certain arguments and evidence cited in Petitioner’s Reply were beyond the scope permitted, and Petitioner filed a response to Patent Owner’s assertions. Paper 25; Paper 26. An oral hearing was held on July 27, 2016, consolidated with the oral hearing for IPR2015-00975. *See* Paper 31 (“Tr.”).

A. *Related Matters*

The parties state that the ’597 patent is the subject of *Cisco Systems, Inc. v. Arista Networks, Inc.*, No. 4:14-cv-05343-JSW (N.D. Cal.), filed December 5, 2014, and ITC Investigation No. 337-TA-944 (Network Devices, Related Software and Components Thereof (II)), filed December 19, 2014. Pet. 1; Paper 5 (Patent Owner’s Mandatory Notice). Petitioner has also filed petitions requesting *inter partes* review of other patents owned by Patent Owner: IPR2015-00973 (U.S. Patent No. 6,377,577), IPR2015-00974 (U.S. Patent No. 7,224,668), IPR2015-00975 (U.S. Patent No. 8,051,211), IPR2015-00976 (U.S. Patent No. 7,023,853), IPR2015-01049 (U.S. Patent No. 6,377,577), IPR2015-01050 (U.S. Patent No. 7,023,853),

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IPR2015-01710 (U.S. Patent No. 7,224,668), IPR2016-00018 (U.S. Patent No. 8,051,211), IPR2016-00119 (U.S. Patent No. 7,047,526), IPR2016-00244 (U.S. Patent No. 7,953,886), IPR2016-00301 (U.S. Patent No. 6,377,577), IPR2016-00303 (U.S. Patent No. 6,377,577), IPR2016-00304 (U.S. Patent No. 7,023,853), IPR2016-00306 (U.S. Patent No. 7,023,853), IPR2016-00308 (U.S. Patent No. 7,162,537), and IPR2016-00309 (U.S. Patent No. 7,224,668).

B. The '597 Patent

The '597 patent is titled, "Method and Apparatus for Securing a Communications Device Using a Logging Module," and relates generally to security for communications devices, and more specifically, to including in a communications device a logging module that communicates information regarding changes occurring to a configuration of a subsystem of the communications device. Ex. 1001, (54), Abstract. Figure 1 of the '597 patent is reproduced below.

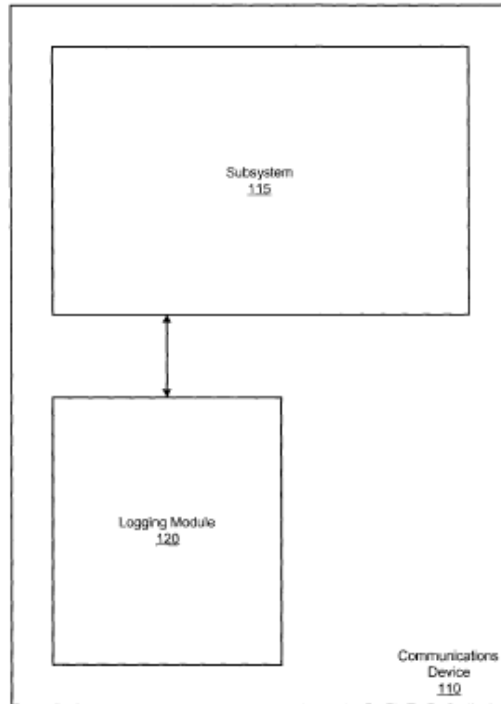


Fig. 1

Figure 1 depicts a block diagram of communications device 110 including subsystem 115 coupled to logging module 120, which determines a configuration of subsystem 115, detects changes to subsystem 115 and indicates that the change has occurred. Ex. 1001, 6:3–10. Figure 2 of the '597 patent is reproduced below.

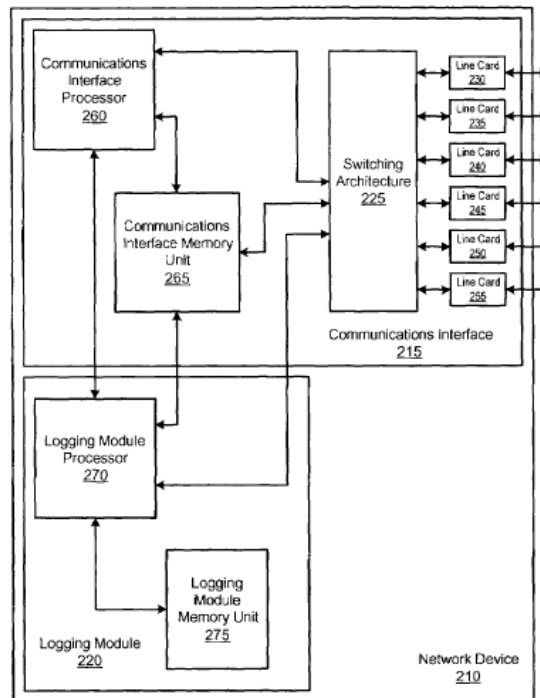


Fig. 2

Figure 2 depicts a block diagram of network device 210 with communications interface 215 connected to logging module 220, which includes logging module processor 270 connected to logging module memory unit 275. Ex. 1001, 6:54–63. Logging module processor 270 is configured to control operations of logging module 220, and writes data to and reads data from logging module memory unit 275, which stores a configuration of logging module 220. *Id.* at 7:10–15.

Logging module 270 monitors a configuration of communications interface 215 and detects a change in the configuration of communications interface 215 and indicates such change. *Id.* at 7:20–25. This indication can take any of a number of forms, including a simple mechanism (e.g., an indicator lamp, a message to a display, a message to another network device, broadcast message to specially-configured security devices, or other such

mechanisms). *Id.* at 7:25–30. In one embodiment, logging module processor 270 may be coupled to switching architecture 225 and can broadcast the change in configuration of communications interface 215 to one or more security monitors on the network. *Id.* at 7:38–42. The ’597 patent also describes information being “broadcast on the network.” *Id.* at 12:44, 12:66–13:2, 13:11–13, Fig. 7.

C. Illustrative Claim

Claims 1, 39, 71, and 84 of the ’597 patent are independent. Claim 1 is illustrative of the claimed subject matter:

1. An apparatus comprising:
 - a communications device comprising:
 - a subsystem; and
 - a logging module, coupled to said subsystem, and configured to detect a change to a configuration of said subsystem of said communications device, and communicate information regarding said change to said configuration of said subsystem of said communications device.

Ex. 1001, 16:44–53.

D. Instituted Grounds of Unpatentability

We instituted trial on the following specific grounds.

References	Basis	Challenged Claims
Sheikh ¹	35 U.S.C. § 102	1, 14, 39–42, 71, and 72
Sheikh	35 U.S.C. § 103	71, 72, 84, and 85
Sheikh and Iwayama ²	35 U.S.C. § 103	29, 63, 64, 73, and 86

¹ U.S. Patent Application Pub. No. 2002/0078382 A1, filed May 15, 2001 (Ex. 1005, “Sheikh”).

² European Patent Application Pub. No. 1,033,844 A2, published Sept. 6, 2000 (Ex. 1006, “Iwayama”).

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may provide a meaning for a term that is different from its ordinary meaning by defining the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In the Decision to Institute, we construed “broadcast” to have its ordinary and customary meaning to one of skill in the art: “a transmission of a message simultaneously to all destinations in a network.” Dec. to Inst. 6; *see also* Pet. 7. Petitioner’s declarant Prasant Mohapatra, Ph.D., testified that “broadcast has a well understood meaning of ‘transmitting a communication to all members of a group’” and that the “ordinary technical meaning” of broadcast is “a one-to-all transmission.” Ex. 1003 ¶¶ 67, 131; Ex. 2013, 47:14–21. At oral hearing, Petitioner indicated its lack of objection to our construction in the Decision to Institute. Tr. 37:1–9.

Patent Owner argues for a different construction: “transmitting data to one or more devices without specifying what device(s) will ultimately receive the data.” PO Resp. 7–11. Patent Owner sought the same

construction in its Preliminary Response (Paper 6 at 8–12), which we declined to adopt in the Decision to Institute. Dec. to Inst. 6.

Petitioner asserts, “[n]othing in the ’597 patent supports Cisco’s narrowing of the term ‘broadcasting.’” Pet. Reply 12. Petitioner notes the ’597 patent never states that the logging module does not specify the device receiving the broadcast, and indeed, suggests the opposite, that the logging module actually specifies the devices receiving broadcasts. *Id.*, citing Ex. 1001, 7:38–41, 11:50–51, 13:62–65. Petitioner also asserts that in related litigation, Patent Owner’s declarant Dr. Stephen Wicker initially advanced the construction, “transmitting to one or more receivers,” which lacks the additional phrase “without specifying what device(s) will ultimately receive the data.” Pet. Reply 12 n.2, citing Ex. 1016, 13:18–14:8.

We agree with Petitioner’s arguments and decline to adopt Patent Owner’s construction. We also decline expressly to construe any other terms in the challenged claims.

B. Principles of Law

To prevail in its challenges to the patentability of the claims, a petitioner must establish facts supporting its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is unpatentable under 35 U.S.C. § 102 if a single prior art reference either expressly or inherently discloses every limitation of the claim. *Orion IP, LLC v. Hyundai Motor Am.*, 605 F.3d 967, 975 (Fed. Cir. 2010). A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the instituted grounds of unpatentability, with Petitioner being required to prove unpatentability by a preponderance of the evidence, in accordance with the above-stated principles.

C. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we determine the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner’s Declarant, Dr. Mohapatra, testifies that a person of ordinary skill in the art at the time of the ’597 patent would have had a bachelor’s degree in computer science, electrical engineering, or a closely related field, along with at least 2 to 3 years of experience in computer networks and systems. Ex. 1003 ¶ 15; Pet. 6–7. Patent Owner’s Declarant, Dr. Wicker, testifies similarly that one of ordinary skill in the art at the time of the ’597 patent would have had a bachelor of science degree in electrical engineering, computer engineering, computer science, or a related field, and either a master of science degree in one of those fields or approximately two

years of related experience in the field of network devices. Ex. 2011 ¶ 56; PO Resp. 6–7.

Based on our review of the '597 patent and the types of problems and solutions described in the '597 patent and cited prior art, we conclude a person of ordinary skill in the art at the time of the '597 patent would have a Bachelor's degree in electrical engineering, computer engineering, computer science, or related field, and at least two years of work experience in computer networks and network devices. We further note that the applied prior art reflects the appropriate level of skill at the time of the claimed invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. Assignor Estoppel

Patent Owner argues the Petition should be denied based on the defense of assignor estoppel. PO Resp. 42–58; *see* Prelim. Resp. 13–29. Petitioner disagrees. Pet. 2 n.1. We maintain our position from the Decision to Institute declining to apply assignor estoppel to this proceeding. As we and other panels of the Board have noted, “Congress has demonstrated that it will provide expressly for the application of equitable defenses when it so desires.” *See Redline Detection, LLC, v. StarEnviroTech, Inc.*, Case IPR2013-00106, slip op. at 4 (PTAB Oct. 1, 2013) (Paper 40) (citing *Intel Corp. v. Int'l Trade Comm'n*, 946 F.2d 821, 836–38 (Fed. Cir. 1991)). Accordingly, we decline to apply assignor estoppel to this *inter partes* review proceeding. *Cf. Husky Injection Molding Systems Ltd. v. Athena Automation Ltd.*, No. 2015-1726 (Fed. Cir. Sep. 21, 2016) (dismissing appeal due to lack of jurisdiction to review Board's determination on

whether assignor estoppel precludes Board from instituting *inter partes* review).

E. Asserted Anticipation by Sheikh: claims 1, 14, 39–42, 71, and 72

Petitioner contends that claims 1, 14, 39–42, 71, and 72 are unpatentable under 35 U.S.C. § 102 as anticipated by Sheikh. Pet. 15–28. Relying on the testimony of Dr. Mohapatra, Petitioner explains how Sheikh allegedly discloses each limitation of the claims. *Id.* (citing Ex. 1003).

1. Sheikh (Ex. 1005)

Sheikh is titled, “Scalable System for Monitoring Network System and Components and Methodology Therefore,” and relates generally to monitoring of network security systems for security purposes. Ex. 1005, (54), ¶ 3. Sheikh describes a security software system that monitors and tracks configuration changes made to information systems and their applications within a network. *Id.* at Abstract, ¶ 11.

In particular, Sheikh describes “agent transport[s],” which are small software packages installed on monitored systems and including “sensors,” or executable blocks of code, for monitoring various aspects of the system on which the agent is installed. *Id.* ¶¶ 33–36. Agent transports monitor the sensors, gather information generated by the sensors, encrypt that information, store it locally until requested by a master transport on a central server, and then deliver information to a master transport. *Id.* ¶¶ 32, 34–35, 40. Figure 1A of Sheikh is reproduced below.

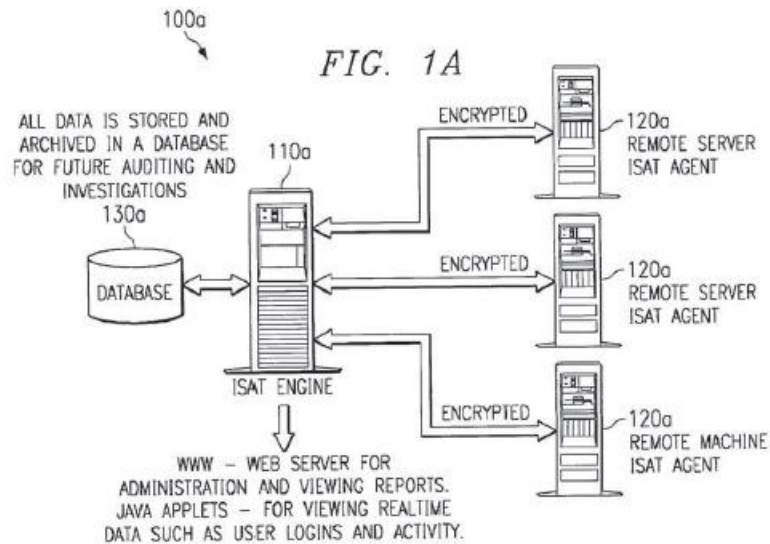


Figure 1A depicts network 100a with master transport located on central server 110a. *Id.* ¶ 32. Agent transports are located throughout network 100a on remote host servers 120a. *Id.* Central server 110a initiates contact with its agent transports, polls one or more agent transports, receives results, decrypts the information, evaluates and stores the information, and reports the information upon a user's request. *Id.* ¶¶ 32, 40.

Figure 11 of Sheikh is a table listing, in non-exclusive manner, various components that are monitored by the sensors in agent transports. *Id.* ¶ 68.

2. *Petitioner's Reply Beyond the Scope of Patent Owner's Opposition*

Preliminarily, Patent Owner asserts portions of Petitioner's Reply are beyond the scope permitted by 37 C.F.R. § 42.23(b). Paper 25. Patent Owner contends Petitioner's Reply exceeded the scope of the Patent Owner Response on how Sheikh meets claims 1, 39, 41, and 71, in particular the limitation "communicate information regarding the change" in a configuration of the subsystem. Paper 25, 1. Patent Owner asserts the

Petition cited to paragraph 34 of Sheikh, which discloses a time stamp, while the Reply for the first time cited instead to paragraphs 54 and 123, which disclose file names. *Id.* Petitioner contends its Reply was permissible because the additional disclosure “is not new and does nothing more than to explain Petitioner’s original position,” and also “is necessitated by issues raised in the Patent Owner Response.” Paper 26, 1.

We have reviewed the parties’ contentions on this issue, and exercise our discretion to determine that Petitioner’s Reply was not beyond the permissible scope of reply. We find that the Petition sufficiently outlined Petitioner’s position on the alleged disclosure by Sheikh of information regarding a change in subsystem configuration. *See* Pet. 18, 21. We further find that Petitioner’s reply did not present an entirely new rationale of unpatentability based on Sheikh, but rather, argued in response to assertions in the Patent Owner Response. Pet. Reply 5–7; PO Resp. 19–22. *Cf. Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369–70 (Fed. Cir. 2016) (affirming Board’s exclusion of reply brief and declaration that changed unpatentability theory to “an entirely new rationale”).

3. Analysis

Petitioner contends that Sheikh discloses all the limitations of independent claims 1 and 39. Pet. 15–21, 24. For claim 1, Petitioner contends Sheikh discloses an apparatus comprising a communications device (Pet. 15, citing Ex. 1005 ¶¶ 67–68); a subsystem (Pet. 15–16, citing Ex 1005 ¶ 34 and Fig. 11, which lists “numerous subsystems”); a logging module, namely, an agent transport which is divided into sensors and is a “small software package, which is installed on each monitored host server,”

and compiles and transports to a central database the detected changes to a subsystem (Pet. 18, citing Ex. 1005 ¶¶ 32–34; Pet. Reply 1–3, citing Ex. 1005 Fig. 2); the logging module coupled to the subsystem and configured to detect a change in configuration of the subsystem (Pet. 19–21, citing the agent transports’ sensors, which “only generate a result when a change has been detected;” Ex. 1005 ¶¶ 46, 51, 64, 73, 82, Fig. 1); and, the logging module communicating information regarding the change to subsystem configuration, as the agent transport sends such information to the master transport (Pet. 21, citing Ex. 1005 ¶¶ 12, 40, 46, 51, 93).

Patent Owner asserts Sheikh’s communications device and subsystem are one and the same, yet “those elements are claimed separately” in the ’597 patent. PO Resp. 15–18. Petitioner responds, “[c]ontrary to Cisco’s arguments . . . Petitioner does not assert the same element satisfies both the communications device and the subsystem limitations.” Pet. Reply 3. The Reply further states that in Sheikh:

For example, Fig. 1A shows that the Agent may be installed on any server. In addition, Fig. 4 shows that the servers may be any number of systems including firewalls, proxies, and world wide web servers. Fig. 11 further provides an exemplary, non-exhaustive list of the components that the Agents installed on each system monitor. [Citing Ex. ¶¶ 26, 68.] Specifically, Fig. 11’s reference to a “Network Routes, Interfaces, and ARPS Configuration Monitor” refers to monitoring the routers’ interfaces and configuration subsystems. [Citing Ex. 1005 Fig. 11.]

Pet. Reply 3. These three sentences do not clarify the issue. Petitioner’s declarant, Dr. Mohapatra, however, testified that a communication device could also be a subsystem:

Q. Okay. And, in your opinion, what element in Sheikh is the claim subsystem?

A. I am giving some examples in Paragraph 80, operating system, configuration of firewalls, web servers, proxy servers, the log files, e-mail servers.

Q. And those are examples of subsystems?

A. Yes.

Q. Okay. And why is an e-mail server a subsystem and not a communication device?

A. It could be both.

Q. It could be both. Okay. And what is the distinction between communication device and a subsystem?

A. The communication device could be a subsystem having the functionality of communications.

Q. Okay. So, in your opinion the claimed communication device could be a subsystem?

A. Yes.

Ex. 2013, 82:7–83:6. Dr. Mohapatra, however, also testified that the recited communication devices and the recited subsystems are different elements in Sheikh, as the communication devices include Sheikh’s web servers, firewalls, proxy servers, log servers, intrusion detection systems, and routers, and the subsystems include operating systems and configurations of these devices. Pet. Reply 4, citing Ex. 2013, 79:18–81:19, 82:7–12.

At oral hearing, Petitioner similarly argued there are different elements of Sheikh being cited for disclosure of the ’597 patent’s recited communications device and subsystem:

JUDGE CHEN: So you're saying it -- that you can have an element that can constitute both, but not necessarily -- not necessarily so.

MS. DEGNAN: Well, what I'm saying is that in this reference they are not the same things because there's the -- the communications device is 440 here in the figure [4], the web server as a whole hardware and its software. And

then what's being monitored, as we saw in Figure 11, there were actually two subsystems on the overall hardware server 440 and those are something separate. The subsystems are the web server software that resides on the overall communications device. So, I mean, could they be the same I think is the question that maybe doesn't need to be reached because the reference very clearly -- you know, what we're relying on are two different items to satisfy those two different claim elements.

Tr. 29:7–21; *see also* Pet. 12 (citing Sheikh, Fig. 4), 16-17 (citing Sheikh, Fig. 11). We are persuaded by Petitioner's evidence and arguments. We agree with Patent Owner that the claims' recited communications device and subsystem are separate devices. Nevertheless, although Sheikh discloses certain individual elements that may meet the recited limitations of both communications device and subsystem, Sheikh also discloses elements that are separate devices that meet those limitations. As Dr. Mohapatra testified, the recited communication devices and the recited subsystems are different elements in Sheikh. The communication devices include Sheikh's web servers, firewalls, proxy servers, log servers, intrusion detection systems, and routers, and the subsystems include operating systems and configurations of these devices. Ex. 2013, 79:18–81:19, 82:7–12; *see* Pet. Reply 3–4. For example, as Petitioner argues, the worldwide web firewall server (WWW1 server) 440 depicted in Sheikh Figure 4 is a communications device, and the web server monitor and web server configuration monitor in Figure 11 are subsystems. Ex. 1005, Figs. 4, 11.

Patent Owner also argues that Sheikh fails to disclose communicating information regarding a change in configuration of a subsystem, recited in independent claims 1, 39, and 71. PO Resp. 19–22. In particular, Patent Owner cites Sheikh's disclosure that “[i]f a change has occurred then the

entire configuration for that particular application is retrieved and prepared for transport to the master transport.” *Id.* at 14 (citing Ex. 1005 ¶ 51). Patent Owner asserts, “communicating the entire configuration is not necessarily equivalent to communicating information regarding the specific change detected by the logging module.” *Id.* at 20, citing Ex. 2011 ¶ 130.

Petitioner notes in response that the ’597 patent describes the logging module can indicate a change in configuration by such generalized means as an indicator lamp or a message to display. Pet. Reply 5, citing Ex. 1001, 7:25–30. Petitioner further contends Sheikh does disclose that an “actual change” to configuration may be time-stamped and named, using the time stamp and the detecting sensor. *Id.* at 5, citing Ex. 1005 ¶¶ 34, 36, 54, 123. We agree with Petitioner because Sheikh discloses communicating information regarding a specific change in configuration, by means ranging from an indicator lamp, to a specific, time-stamped file.

On dependent claim 41, Patent Owner argues Sheikh fails to disclose the recited occurrence of the detected change. PO Resp. 22; Ex. 1001, 19:32–34. Petitioner contends Sheikh does so, in describing transmission of files whose “naming convention . . . indicate the sensor that detected the change and when the change was detected.” Pet. Reply 7, citing Ex. 1005 ¶¶ 36, 54, 123–124. We agree with Petitioner that Sheikh discloses an occurrence of the change in configuration, by using its file names identifying the detecting sensor and time of detection.

On dependent claim 42, Patent Owner argues Sheikh fails to disclose the recited communication of information that “comprises a change made” to the subsystem configuration. PO Resp. 23–24; Ex. 1001, 19:35–37. Petitioner contends Sheikh does disclose communicating information

comprising the change, citing to the discussion of the “communicating” limitation of independent claims 1, 39, and 71, and we agree, for the reasons discussed above. Pet. Reply 8, citing Pet. 25; Ex. 1016 (deposition of Dr. Wicker, 41:14–42:4).

On dependent claim 14, Patent Owner argues Sheikh fails to disclose the recited subsystem that is a communications interface. PO Resp. 24–27; Ex. 1001, 17:43–44. Patent Owner states that none of the four elements of Sheikh cited by Petitioner—a router’s interface and route configuration, network interface, proxy servers, or email servers—can be a communications interface. PO Resp. 24. Petitioner contends all four elements of Sheikh are monitoring subsystems that are also communication interfaces. Pet. Reply 9–11.

For example, for the network interface, Petitioner contends Sheikh discloses its network sensors perform monitoring of network (communications) interfaces. Pet. Reply 10, citing Ex. 1005 ¶¶ 34, 61, 69, 70, 74, 75, 77, 81–83; Ex. 1016, 69:1–20. Petitioner argues, “[t]here is no dispute that a network interface is a communications interface. In fact, [Patent Owner’s] expert admitted that a network interface is a communications interface [citing Ex. 1016, 69:15–20].” Pet. Reply 10. We agree with and adopt Petitioner’s arguments in this regard.

For Sheikh’s proxy servers and email servers, Petitioner similarly contends Sheikh’s proxy sensors and email sensors monitor proxy and email applications, which are communications interfaces, as explained by Dr. Mohapatra. Pet. Reply 10–11, citing Pet. 22; Ex. 1005 ¶¶ 81, 85; Ex. 2013, 82:19–84:18, 88:13–18 (proxy transmits messages), 89:14–18 (email servers use protocols for transmitting emails). We credit Dr. Mohapatra’s testimony

that proxy and email servers can be communications interfaces, and we agree with and adopt as our own, Petitioner's evidence and arguments that Sheikh discloses the communications interface limitation of dependent claim 14.

Patent Owner did not raise any separate arguments for claims 71 and 72, which recite a processor, computer readable medium, and computer code, all of which were argued by Petitioner as being inherently disclosed by Sheikh. Pet. 27–28, citing Ex. 1003 ¶¶ 102–106. We credit Dr. Mohapatra's testimony on why the elements of claims 71 and 72 would necessarily be present, or inherent, in the Sheikh system, and adopt it as our own. Thus, we are persuaded Sheikh inherently discloses those elements of claims 71 and 72. The remaining limitations of claim 71 — a subsystem, and the processor's detection of a change to subsystem configuration and communication of information regarding the change — are expressly disclosed by Sheikh, as discussed above.

Accordingly, we are persuaded Petitioner has shown by a preponderance of the evidence the unpatentability of claims 1, 14, 39–42, 71, and 72 as anticipated by Sheikh.

F. Asserted Obviousness Over Sheikh: claims 71, 72, 84, and 85

Petitioner contends that claims 71, 72, 84, and 85 are unpatentable under 35 U.S.C. § 103 as obvious over Sheikh. Pet. 29–35. Relying on the testimony of Dr. Mohapatra, Petitioner explains how Sheikh allegedly teaches or suggests each limitation of the claims. *Id.* (citing Ex. 1003).

Claims 71, 72, 84, and 85 do not expressly recite a logging module, but rather, for claims 71 and 72, a communications device comprising a subsystem, a processor coupled to the subsystem, computer readable

medium coupled to the processor, and computer code configured to detect a change in a configuration of the subsystem; and, for claims 84 and 85, a computer program product comprising first and second sets of instructions configured to detect a change in a configuration of a subsystem of a communications device and to communicate information regarding the change, and computer readable media. Ex. 1001, 21:23–34, 22:34–46.

Petitioner explains how Sheikh teaches or suggests the processor, computer readable medium, computer code, and other limitations of claims 71 and 72. Pet. 29–31 (citing Ex. 1003 ¶¶ 108–110). For example, Petitioner asserts:

It was well-known in the art that a server contains the same components as a general-purpose computer, namely a processor and computer readable storage. [Ex. 1003 ¶ 109.] It would have been obvious to one skilled in the art that the repeated references to a host server in Sheikh were referring to a server with a processor and computer readable storage.

Pet. 29 (citing Ex. 1003 ¶ 109).

Petitioner also explains how Sheikh teaches or suggests the computer program product comprising first and second sets of instructions, computer readable media, and other limitations of claims 84 and 85. Pet. 32–34 (citing Ex. 1003 ¶¶ 113–116, 120). For example, Petitioner asserts, “[i]t would have been obvious to a POSITA to organize the program into a first and second set of instructions. [*Id.* at ¶ 113.] One skilled in the art would understand the concepts of modular programming and decomposition and how to apply them when practicing the invention taught by Sheikh.” Pet. 32 (citing Ex. 1003 ¶¶ 113–114).

Patent Owner argues Petitioner’s obviousness challenge “does not address the deficiencies in Petitioner’s anticipation challenge identified by

Patent Owner” and “for these same reasons, Petitioner has not established that claims 71, 72, 84, and 85 are obvious over Sheikh alone.” PO Resp. 28. However, as discussed above, we conclude Petitioner has shown by a preponderance of the evidence that Sheikh does anticipate claims 71 and 72, in part by inherent disclosure of certain limitations. We credit the testimony of Dr. Mohapatra that Sheikh also would have taught or suggested the recited processor, computer readable medium, and computer code limitations of these two claims to one of ordinary skill in the art, and agree with Petitioner’s arguments for claims 71 and 72.

For claims 84 and 85, we likewise credit the testimony of Dr. Mohapatra that Sheikh also would have taught or suggested to one of ordinary skill in the art the recited computer program product comprising first and second sets of instructions, and computer readable media, and agree with Petitioner’s arguments for Sheikh’s teaching or suggestion of the limitations of claims 84 and 85.

In summary, we are persuaded Petitioner’s contentions and adopt them as our own. Thus, Petitioner has shown by a preponderance of the evidence that claims 71, 72, 84, and 85 would have been obvious over Sheikh.

*G. Asserted Obviousness Over Sheikh and Iwayama:
claims 29, 63, 64, 73, and 86*

Petitioner contends that dependent claims 29, 63, 64, 73, and 86 are unpatentable under 35 U.S.C. § 103 as obvious over Sheikh and Iwayama. Pet. 38–42. These claims recite that the change to the subsystem’s configuration is communicated “by broadcasting the change.” Ex. 1001, 18:47–51, 20:59–63, 21:35–39, 22:47–50.

1. Iwayama (Ex. 1006)

Iwayama is titled, “Status Change Notification Method and System,” and explains that “use of communication system on a computer network such as chat system and electronic mail has increased rapidly.” Ex. 1006, (54), ¶ 6. A chat system includes a chat server and chat clients. *Id.* ¶ 2. Iwayama further describes that:

Status changes within the chat channel can easily be observed by the clients communicating on that chat channel. Such changes include a property change of the chat channel, messages transmitted to the chat channel, or users joining or quitting the channel. However, status changes computer activities outside the chat channel cannot be recognized by participants in the chat channel. Examples of such status changes outside network or chat channel include inputting, deleting, and updating of information in external databases, and posting of e-mail associated with a mailing list.

Id. ¶ 4. Iwayama describes a change notification system that notifies users, via the chat system, of status changes that occur outside the chat channel or network, via the chat system. *Id.* ¶ 11. Figure 2 of Iwayama is reproduced below.

Fig. 2

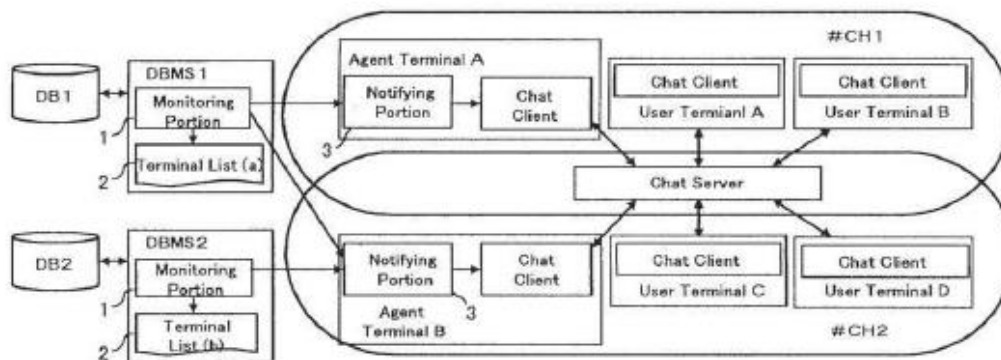


Figure 2 illustrates the structure of Iwayama's status change notification system. "[A] plurality of information terminals in a chat system participate in channel #CH1 via chat clients in each respective information terminal." Ex. 1006 ¶ 17. Monitoring portion, which occurs outside the chat system, "monitors inputting, deletion, or update of information in an external [database] DB." *Id.*

Once a status change to an external DB is detected, Iwayama's "notifying means" transmits a notification of the status change in the external DB to the chat system via a chat message. *Id.* Iwayama explains that "[i]n this way, notification of the status change in the DB is transmitted in a broadcasting manner to all of the information terminals participating in the channel #CH1." *Id.*

In one embodiment of Iwayama, the "external DB" that is monitored can be a "mailing list." *Id.* ¶ 50. As Iwayama describes, "[a] mailing list system refers to a system that distributes electronic mail in a broadcasting manner to a predetermined group of electronic mail addresses." *Id.* ¶ 3. When a new electronic mail message is posted to the mailing list, Iwayama describes determining the "channel ... that corresponds to the mailing list," and sending a chat message "of posting of the electronic mail to the determined channel." *Id.* ¶ 56. Thus, "terminals that are listed in the mailing list are notified of the electronic mail on a real-time basis if they also participate in the channel #CH1." *Id.* For persons that do not participate in the chat channel, Iwayama discloses that "[i]t is also possible to create a special mailing list and send the notification electronic mail to users listed in the special mailing list." Ex. 1006 ¶ 111.

2. *Analysis*

As noted above, Petitioner concedes that Sheikh does not expressly disclose broadcasting of information regarding a change in subsystem configuration. Pet. 31. Petitioner states that “Iwayama teaches a variety of broadcasting scenarios” and communicates “detected changes by broadcasting notifications to a group.” Pet. 13, 14. Iwayama describes monitoring status changes in a database and generating a notification when a status change occurs. Ex. 1006 ¶¶ 17, 42. Specifically, a “notification of the status change is transmitted to the group of information terminals in a broadcasting manner.” *Id.* ¶ 42. Iwayama uses the term “broadcasting manner” over a dozen times, but does not further specify what that term means.

Petitioner relies on the Mohapatra declaration and explains how Sheikh and Iwayama teach or suggest the recited broadcasting limitations of claims 29, 63, 64, 73, and 86. Pet. 39–42 (citing Ex. 1003 ¶¶ 108–111, 134, 137, 140, 142–143). Patent Owner argues that the combination “fails to render the ‘broadcasting’ claims obvious under” our construction of “broadcasting.” PO Resp. 33–35. Patent Owner argues while that Iwayama discloses a “mailing list system . . . that distributes electronic mail in a broadcasting manner to a predetermined group of electronic mail addresses,” a predetermined group is “not all destinations in a network.” *Id.* at 33; Ex. 1006 ¶ 3. We agree with Patent Owner that “a predetermined group” does not teach or suggest “all destinations in a network.”

Patent Owner further argues that even if Iwayama’s distribution list includes all destinations in a network, Iwayama does not disclose transmitting data to all members of a mailing list. PO Resp. 34. According

to Patent Owner, Iwayama's "third embodiment" describes sending notifications via a mailing list, but that list excludes users who participate in a chat channel. *Id.* at 34–35, citing Ex. 2011 ¶¶ 174–175. We agree with Patent Owner that the third embodiment teaches distributing electronic mail only "to user terminals that are listed in the designated mailing list." Ex. 1006 ¶ 108.

Petitioner cites to claim 20 of Iwayama, which recites sending electronic mail "to each information terminal of a group of informational terminals." Pet. Reply 13–14; Ex. 1006, claim 20. Petitioner further cites to paragraph 55 of Iwayama, contending Iwayama's system "sends the notification . . . to the determined network" of the "group of informational terminals to which electronic mail is addressed based on" a "table correlate[ing] the groups of information terminals and networks." Pet. Reply 14; Ex. 1006 ¶ 55. We are not persuaded that claim 20 and paragraph 55 teach broadcasting to all destinations in a network, as those disclosures describe sending electronic mail, or notification of posting of electronic mail, only to terminals in a group of informational terminals.

At oral hearing, Petitioner elaborated on its arguments, stating that it relies on paragraphs 3 and 54 and claims 1 and 20 of Iwayama, "not the portion of the third embodiment" focused on by Patent Owner. Tr. 88:24–89:4 (referring to "slides 90 and 91," which cite paragraphs 3 and 54 and claims 1 and 20 of Iwayama). *See also* Pet. Reply 13–14.

As discussed above, we are not persuaded that either paragraph 3 or claim 20 of Iwayama teaches or suggests the recited broadcasting. Paragraph 54 and claims 1 and 20, however, were not cited in the Petition. Nevertheless, Paragraph 54's disclosure is similar to paragraph 55 and claim

20, discussed above, in describing only electronic mail being sent to “each information terminal of a group of information terminals.” Claim 1 similarly recites transmitting notification of a status change in a broadcasting manner, to a “plurality of user terminals” over a network. A plurality is commonly understood to be more than one, but less than a majority. Accordingly, none of Petitioner’s arguments demonstrate the transmission of a message simultaneously to *all* destinations in a network.

In summary, we determine that Iwayama teaches or suggests the transmission of information to more than one recipient, but not to “all destinations in a network.” Thus, we are not persuaded there is a preponderance of evidence for the combination of Sheikh and Iwayama teaching or suggesting the recited “broadcasting” of claims 29, 63, 64, 73, and 86. We are, therefore, not persuaded that Petitioner has shown by a preponderance of evidence that claims 29, 63, 64, 73, and 86 would have been obvious over Sheikh and Iwayama.

III. CONCLUSION

Based on the evidence and arguments, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 14, 39–42, 71, and 72 of the ’597 patent are anticipated by Sheikh, and claims 71, 72, 84, and 85 would have been obvious over Sheikh. Petitioner has not demonstrated by a preponderance of evidence that claims 29, 63, 64, 73, and 86 would have been obvious over Sheikh and Iwayama.

IV. ORDER

Accordingly, it is

ORDERED that claims 1, 14, 39–42, 71, 72, 84, and 85 of the '597 patent are unpatentable; and

FURTHER ORDERED that claims 29, 63, 64, 73, and 86 have not been shown to be unpatentable; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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