

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OLD REPUBLIC GENERAL INSURANCE GROUP, INC.;
OLD REPUBLIC INSURANCE COMPANY;
OLD REPUBLIC TITLE INSURANCE GROUP, INC.;
and OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY;
Petitioner,

v.

INTELLECTUAL VENTURES II LLC,
Patent Owner.

Case IPR2015-01992
Patent 6,546,002 B1

Before GREGG I. ANDERSON, JON B. TORNQUIST, and
ROBERT J. WEINSCHENK, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Old Republic General Insurance Group, Inc., Old Republic Insurance Company, Old Republic Title Insurance Group, Inc., and Old Republic National Title Insurance Company (collectively “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–49 of U.S. Patent No. 6,546,002 B1 (Ex. 1001, “the ’002 patent”). Intellectual Ventures II LLC (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 6, “Prelim. Resp.”). Upon consideration of the Petition and the Preliminary Response, we instituted trial as to claims 1–49 of the ’002 patent. Paper 7, 30 (“Dec. on Inst.” or “Institution Decision”).

Following institution of trial, Patent Owner filed a Patent Owner Response (Paper 11, “PO Resp.”), to which Petitioner filed a Reply (Paper 14, “Pet. Reply”). In support of their respective arguments, Petitioner relies upon the testimony of Dr. Philip Greenspun (Ex. 1003) and Patent Owner relies upon the testimony of Dr. Tim Williams (Ex. 2002).

An oral hearing was held on January 17, 2017, and a transcript of the oral hearing is included in the record. Paper 19 (“Tr.”).

On February 8, 2017, Patent Owner informed the Board that it had “disclaimed claims 25–33 and 49” of the ’002 patent, thereby “rendering the institution of claims 25–33 and 49 in the subject *inter partes* review proceeding moot.” Paper 18, 1; Ex. 2005 (disclaimer of claims 25–33 and 49 pursuant to 37 C.F.R. § 1.321(a)).

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons set forth below, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, 4–12, 14–

24, and 34–48 of the '002 patent are unpatentable. Petitioner has not demonstrated, however, that claims 3 and 13 of the '002 patent are unpatentable.

B. Related Matters

Petitioner and Patent Owner identify the following district court proceedings related to the '002 patent: *Intellectual Ventures I LLC v. Old Republic General Insurance Group, Inc.*, Case No. 2-14-cv-01130 (W.D. Pa.); *Intellectual Ventures I LLC v. Highmark, Inc.*, Case No. 2-14-cv-01131 (W.D. Pa.); *Intellectual Ventures I LLC v. Erie Indemnity Company*, Case No. 1-14-cv-00220 (W.D. Pa.); *Intellectual Ventures I LLC v. Citigroup, Inc.*, Case No. 1-14-cv-04638 (S.D.N.Y.); *Intellectual Ventures I LLC v. PNC Financial Services Group, Inc.*, Case No. 2-14-cv-00832 (W.D. Pa.); and *Intellectual Ventures I LLC v. Capital One Financial Corporation*, Case No. 8-14-cv-00111 (D. Md.). Pet. 1–2; Paper 4, 1–2. The parties also identify IPR2015-00089, IPR2015-00092, and CBM2015-00184 as relating to the '002 patent. Pet. 2; Paper 4, 2.

On March 9, 2017, Petitioner informed the Board that on March 7, 2017, the U.S. Court of Appeals for the Federal Circuit affirmed the district court's decision in *Erie Indemnity Co.*, “holding that all claims of the 002 Patent were patent-ineligible under Section 101.” Paper 20, 1 (citing *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1329–1332 (Fed. Cir. 2017)).

C. The '002 Patent

The '002 patent describes a system and method for using a mobile interface agent (“MIA”) to access information of a user. Ex. 1001, Abstract. The disclosed MIA may be used on a computer, cable set top box, cellular

phone, or other device, so long as the device can be connected to a network.
Id. at 4:44–54, Abstract. Figure 1B of the '002 patent, reproduced below, illustrates a graphic interface used by the MIA:

FIG. 1B

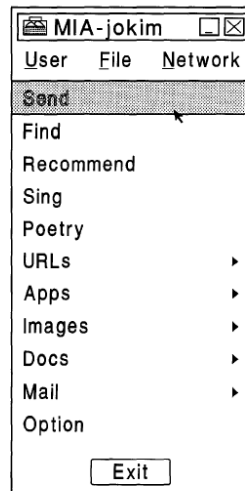


Figure 1B illustrates a graphic interface used by the MIA.

The '002 patent explains that menu items displayed within the MIA “can be used to access and retrieve user specific resources and information,” such as “documents, files, programs, applications, URL bookmarks, IP addresses, telephone numbers, television channels, [and] radio stations.” *Id.* at 4:49–54, 6:13–16.

The '002 patent notes that “[m]ost software programs and applications are currently licensed on either a node locked paradigm in which the software is usable on a per device basis or as a floating license in which a fixed number of licenses are available to a certain group of users limited by the number of concurrent users.” *Id.* at 3:23–28. The '002 patent notes, however, that:

The trend in the future is that many software programs and the like may be licensed per user rather than per device/platform or number of concurrent users in a network. In this case, the user

has a license to use such programs from any computer that is capable of running such programs. The present invention provides a system and method for implementing such a licensing model so that the user can access and run programs from any computer and from any geographical location.

Id. at 3:48–56.

D. Illustrative Claim

Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method for retrieving user specific resources and information stored either on a local device or a network server, the method comprising the steps of:

retrieving a mobile interface from the network server to the local device;

displaying the mobile interface on the local device, the mobile interface including a plurality of pointers corresponding to the user specific resources and information; and

retrieving the user specific resources and information using the plurality of pointers displayed on the mobile interface.

Ex. 1001, 17:9–21.

E. Grounds of Unpatentability¹

Reference(s)	Basis	Claim(s)
Huang ²	§ 102	1, 2, 7–12, 17–23, 34, 38, 40–45, 47, and 48
Huang	§ 103	4, 14, and 21–23
Huang and Boyer ³	§ 103	3, 5, 13, and 15

¹ As noted above, Patent Owner has disclaimed claims 25–33 and 49 of the '002 patent. Paper 18, 1. Thus, we do not address those claims in this Final Written Decision.

² U.S. Patent No. 6,571,248 B2 (Ex. 1005, “Huang”).

³ U.S. Patent No. 6,268,849 B1 (Ex. 1006, “Boyer”).

Reference(s)	Basis	Claim(s)
Huang and Hayes ⁴	§ 103	6, 16, 39, and 46
Huang and Raman ⁵	§ 103	24

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, “[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b). In determining the broadest reasonable construction, we presume that claim terms carry their ordinary and customary meaning. See *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). A patentee may define a claim term in a manner that differs from its ordinary meaning; however, any special definitions must be set forth in the Specification with reasonable clarity, deliberateness, and precision. See *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In the Institution Decision, we construed the terms “mobile interface” and “pointer,” as well as several uncontested means-plus-function claim terms (as set forth in challenged claims 25–33 and 49). Dec. on Inst. 7–11. We declined to construe several disputed mean-plus-function claims terms because Patent Owner did not assert in the Preliminary Response that the prior art of record failed to disclose those limitations. *Id.* at 11–12.

⁴ U.S. Patent No. 6,339,826 B2 (Ex. 1007, “Hayes”).

⁵ T.V. Raman, *Emacspeak—A Speech Interface*, PROC. OF THE SIGCHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS 66 (April 1996) (Ex. 1010, “Raman”).

In the Patent Owner Response, Patent Owner asserts that our construction of “mobile interface” and “pointer” are incorrect and that express construction of the disputed term “means for accessing the user specific resources and information using the plurality of pointers” in claim 25 is, in fact, necessary to resolve the parties’ dispute. PO Resp. 16. Subsequent to the filing of the Patent Owner Response, however, Patent Owner disclaimed claims 25–33 and 49 of the ’002 patent, and during oral argument both parties agreed that construction of “mobile interface” is not necessary to resolve the parties’ dispute. Tr. 6:20–25, 31:21–32:9. Thus, only the term “pointer” remains in dispute.

Pointer

The term “pointers” is recited in independent claims 1, 11, 34, and 40. Ex. 1001, 17:16, 17:58, 19:24, 20:2. Claims 1, 11, and 34 do not define “pointer” expressly, but indicate that the disclosed pointers correspond to “user specific resources and information.” *Id.* at 17:15–17. Claim 40 indicates that “the pointers provide links to access the corresponding user specific resources and information.” *Id.* at 20:4–6.

The ’002 patent written description describes pointers as follows:

Most computers and portable digital assistants (PDA) have an operating system (OS) such as MS-DOS, UNIX, Windows 98INT/CE, or Linux loaded thereon for managing basic operations.

. . . A user interface in an OS generally includes “pointers” to software programs, applications, files, folders, documents, and other menu items. A pointer in this context is a reference to a type of menu item that can be accessible on the computer, PDA or server.

Ex. 1001, 1:22–25, 1:34–38.

As discussed earlier, a pointer is a link/shortcut to an item such as a file, URL, IP address, telephone number, television channel, radio station, application, or service.

Id. at 10:8–10.

Consistent with Petitioner’s proposed construction and the construction provided by the Board in IPR2015-00089, we preliminarily construed the term “pointer” to mean “a link or shortcut to an item.” Dec. on Inst. 10; Pet. 8 (citing Ex. 1003 ¶ 71; Ex. 1001, 1:31–38, 10:8–10; IPR2015-00089, Paper 8, 9–10).

Patent Owner contends our preliminary construction of “pointer” is incorrect. According to Patent Owner, the patentee of the ’002 patent, acting as his own lexicographer, defined “pointer” as “a reference to a type of menu item that can be accessible on the computer, PDA, or a server,” and the statement in the ’002 patent that “a pointer is a link/shortcut to an item” is merely an “incomplete” restatement of this more precise definition. PO Resp. 11–13 (quoting Ex. 1001, 1:39–38, 10:8–10). Patent Owner further contends that one of ordinary skill in the art would have understood that the term “reference” within this lexicography–based definition requires that location information be associated with each pointer, which Patent Owner contends is consistent with the well-understood meaning of the term “pointer” in the computer field: “[a] data item that specifies the location of another data item.” *Id.* at 12 (quoting Ex. 2001, 785), 22.

In response, Petitioner notes that the portion of the ’002 patent specification relied upon by Patent Owner is found in the background of the invention section, and is discussed in the context of prior art operating systems and their user interfaces, whereas the passage describing a pointer as “a link/shortcut to an item” is found in the detailed description of the

invention section. Pet. Reply 5–6. Thus, according to Petitioner, “to the extent that the inventor of the 002 Patent can be said to have acted as his own lexicographer for the claim term ‘*pointer*,’ he did so in column 10, not in column 1.” *Id.* at 6.

The ’002 patent discusses a broad array of electronic devices that may be used in conjunction with the mobile interface agent, including “a computer, cable set top box, cellular phone, or other device.” Ex. 1001, 4:44–45. Patent Owner does not explain why the description of a “pointer” in *one* “context,” i.e., on a computer or PDA, represents a clear and deliberate attempt to define the term in *all* contexts, such that all pointers must be a “reference” to “a type of menu item” and be “accessible on a computer, PDA, or server.” See *In re Paulsen*, 30 F.3d at 1480 (noting that an inventor is “free to define the specific terms used to describe his or her invention,” but “this must be done with reasonable clarity, deliberateness, and precision”).

The broadest definition of the term “pointer” in the ’002 patent is “a link/shortcut to an item.” Ex. 1001, 10:8–10 (“As discussed above, a pointer is a link/shortcut to an item such as”); Dec. on Inst. 10. This definition is consistent with the description of “pointers” in the ’002 patent written description and claims. Ex. 1001, 20:4–6 (“wherein the pointers provide links to access the corresponding user specific resources and information.”). Accordingly, we construe “pointer” to mean “a link or shortcut to an item.”

B. Anticipation by Huang

Petitioner contends that claims 1, 2, 7–12, 17–23, 34–38, 40–45, 47, and 48 of the '002 patent are anticipated by Huang.⁶ Pet. 3, 15–49.

1. Huang

Huang discloses a system for providing a virtual desktop to a user over a computer network. Ex. 1005, 1:10–12. Figure 1 of Huang, reproduced below, depicts the “Internet-based computer network of the invention:”

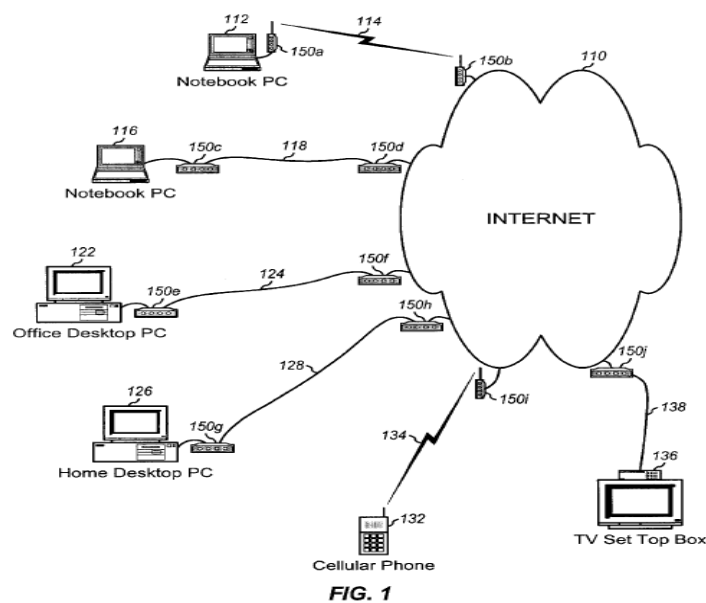


Figure 1 of Huang is a diagram illustrating the interconnectivity provided by the computer network of the invention.

As shown in Figure 1, the systems of Huang may gain access to Internet 110 through a wide range of communication channels. *Id.* at 3:56–60. For

⁶ The Petition asserts that claims 1, 2, 6–12, 16–23, 25, 26, and 30–49 of the '002 patent are anticipated by Huang. Pet. 3, 15–49. We did not institute trial, however, with respect to claims 6, 16, 39, and 46 on this ground and, as discussed above, Patent Owner subsequently disclaimed claims 25–33 and 49 of the '002 patent.

example, portable notebook PCs 112 and 116 can access Internet 110 through wireless link 114 and wireline link 118, respectively. *Id.* at 3:60–63. Office desktop PC 122 may access the Internet through high speed modem link 124, mobile cellular phone 132 may access the Internet over cellular link 134, and television set top box 136 may access the Internet through cable link 138. *Id.* at 3:63–4:1.

In the system of Huang, a web page representing the virtual desktop of the user is retrieved from a file server and delivered to the local system. *Id.* at 2:26–32. Figure 3, reproduced below, depicts a representative virtual desktop:

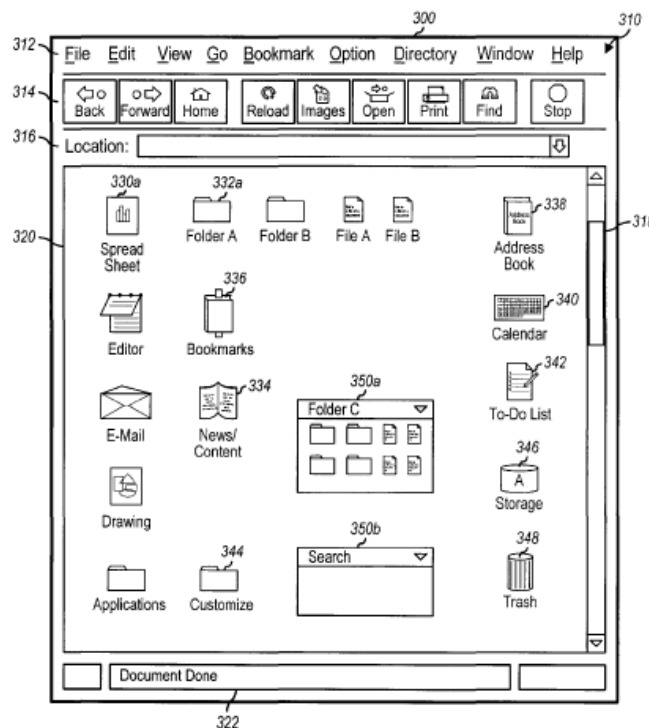


Figure 3 is a browser display of a virtual desktop.

As shown in Figure 3, browser display 300 includes pull down menus 312, functionally selectable buttons 314, typing field 316, display area 320, and URL field 322. *Id.* at 6:40–52.

Display area 320 represents the virtual desktop of the user and includes icons for applications 330, folders and files 332, sources of news and information 334, browser bookmarks 336, address book 338, calendar 340, and to-do list 342. *Id.* at 6:58–7:1. Huang explains that whenever a user passes a mouse pointer over a link in display area 320, URL field 322 displays “the URL associated with” that link. *Id.* at 6:49–52. “To execute a particular application, the user (double) clicks on the icon representing that application and, in response, the site server cooperates with the application server to allow execution of the selected application.” *Id.* at 7:33–36.

Huang discloses that a user’s files or applications may also be accessed using pull down menus 312. For example, selection of the “bookmark” pull down menu results in the display of available bookmarks. *Id.* at 12:46–49. “The user is then able to scroll through the bookmarks, click on a particular bookmark, and the URL corresponding to that bookmark is launched.” *Id.* at 12:49–52.

According to Huang, numerous advantages can be achieved using the disclosed virtual desktop. *Id.* at 5:35–37. “First, the user enjoys a ‘virtual’ desktop work environment regardless of the computer through which access is gained to the Internet.” *Id.* at 5:37–39. “Second, because of the ubiquitous nature of the Internet, the user is able to gain access to a familiar computing environment through numerous means and from almost anywhere.” *Id.* at 5:41–44. “Third, the virtual work environment allows the

user to have access to the same files and resources from anywhere.” *Id.* at 5:46–50.

2. Analysis

To anticipate a claim a “prior art reference must disclose each and every feature of the claimed invention, either explicitly or inherently.” *Eli Lilly & Co. v. Zenith Goldline Pharm.*, 471 F.3d 1369, 1375–76 (Fed. Cir. 2006). An inherent disclosure may be found when an asserted prior art reference “necessarily” includes the unstated limitation. *Transclean Corp. v. Bridgewood Servs., Inc.*, 290 F.3d 1364, 1373 (Fed. Cir. 2002).

a. Independent Claims 1, 11, 34, and 40

Petitioner identifies where each limitation of independent claims 1, 11, 34, and 40 is disclosed in Huang. For example, with respect to claim 1, Petitioner shows where Huang discloses downloading a “virtual desktop” from a network server to a local device (“retrieving a mobile interface”) and displaying this “virtual desktop” on the local device (“displaying the mobile interface”). Pet. 15–19. Petitioner further demonstrates that the “virtual desktop” of Huang may include icons, or links (identified by Petitioner as “pointers”), to folders and files, browser bookmarks, or a to-do list (“user specific resources and information”), and that these icons can be used to retrieve selected information from a network server (“retrieving the user specific resources and information”). *Id.* at 19–21; *see also id.* at 15–25, 29–33 (identifying where each limitation of claims 1, 11, 34, and 40 is disclosed in Huang).

Patent Owner contends Huang does not anticipate independent claims 1, 11, 34, and 40 because the links of Huang are not “pointers.” PO Resp. 17, 21–25. Patent Owner reasons that a pointer must contain location

information for the underlying item, yet Huang “is devoid of information regarding what information is contained with the icons.” *Id.* at 22–23 (citing Ex. 2003 ¶ 57). According to Patent Owner, the icons of Huang may “simply represent a defined command or set of macros to be executed by the backend servers of Huang,” with no location information necessarily associated with the icons themselves. *Id.* at 23.

In response, Petitioner notes that there is no dispute that Huang’s icons are links or shortcuts to the underlying items that they represent. Pet. Reply 8. Petitioner further notes that each icon in Huang “is a link containing a URL that identifies the location of an HTML page or other file on a server.” *Id.* at 10–11 (citing Ex. 1005, 2:30–32, 6:5–7). Thus, Petitioner asserts that Huang discloses “pointers” under either Petitioner’s or Patent Owner’s proposed construction of the term. *Id.* at 9–11.

As discussed above, a “pointer” is “a link or shortcut to an item.” Huang’s virtual desktop contains “links for applications available to the user and files accessible by the user.” Ex. 1005, 2:29–32. Accordingly, we find that Huang’s icons are “pointers.” Pet. 19–20; Pet. Reply 10.

Huang also discloses that each icon, or link, on the virtual desktop is associated with a URL that points “to a specific site or location of a computer and its contents on the web.” Pet. Reply 9–10 (quoting Ex. 1005, 5:60–62); *see also* Ex. 1005, 6:49–52 (disclosing that URL field 322 in Huang “indicate[s] the URL associated with a link in display area 320 whenever the user passes the mouse pointer over the link”); Pet. 20–21 (citing Ex. 1005, 8:13–17 (explaining that the virtual desktop may include icons “corresponding to, or including, URL links to news and content sources”)). Huang also discloses that double clicking one of these icons

results in the download of the associated file or application to the user's device, which may include a computer or cellular phone. Pet. Reply 9–10 (citing Ex. 1005, 5:60–66, 6:40–7:10); Pet. 20 (citing Ex. 1005, 7:33–36 (“To execute a particular application, the user (double) clicks on the icon representing that application and, in response, the site server cooperates with the application server to allow execution of the selected application.”)).

Thus, we find that Huang discloses “pointers” under Patent Owner’s more restrictive construction of the term requiring that a pointer include location information for underling menu items that are accessible on a “computer, PDA, or server.”⁷ See Ex. 1032, 78:22–80:15 (Dr. Williams testifying that, in the context of a URL pointing to a file, the file would be the item and the “URL would be the pointer”); Pet. Reply 8–10 (citing Ex. 1005, 5:60–66, 6:40–7:10).

Upon review of Petitioner’s arguments and supporting evidence, we are persuaded that Petitioner has identified where each limitation of independent claim 1 is disclosed in Huang. Claims 11, 34, and 40 contain limitations similar to claim 1, Petitioner provides detailed arguments as to where each limitation of these claims is disclosed in Huang, and Patent Owner does not present any arguments for these claims separate from those

⁷ At oral argument, Patent Owner asserted that we should not consider Petitioner’s argument that the icons of Huang contain URL information because this argument was presented for the first time in Petitioner’s Reply. Tr. 32:19–35:5. Patent Owner did not file a motion to exclude this evidence, however, or request a sur-reply to address any allegedly new issues raised for the first time in Petitioner’s Reply. *Id.* at 34:18–23. Nor is it evident why Petitioner’s arguments are not appropriate rebuttal arguments addressing Patent Owner’s proposed construction of “pointer.” Accordingly, we decline to exclude Petitioner’s URL arguments and evidence.

presented for claim 1. Pet. 21–25, 29–33. Accordingly, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 11, 34, and 40 of the '002 patent are anticipated by Huang. Pet. 15–39; Pet. Reply 8–18.

b. Undisputed Claims 2, 7, 8, 10, 12, 17–18, 20–23, 35, 36, 38, 41–43, 45, 47, and 48

Petitioner contends that each limitation of dependent claims 2, 7, 8, 10, 12, 17–18, 20–23, 35, 36, 38, 41–43, 45, 47, and 48 is disclosed in Huang. Pet. 39–49. Patent Owner does not address Petitioner's arguments or supporting citations to Huang with respect to these claims. The Scheduling Order entered in this case provided, among other things, that "patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived." Paper 8, 3.

i. Claims 2, 12, 35, and 41

Claims 2, 12, 35, and 41 recite "wherein the user specific resources and information comprise programs, applications, files, documents, bookmarked URLs, and user profiles." See Ex. 1001, 17:22–25.

As noted by Petitioner, Huang explicitly discloses each of the user specific resource and information types recited in claims 2, 12, 35, and 41. Pet. 40–41 (citing Ex. 1005, 6:16–25 (noting that browser bookmarks allow URLs to be accessed without entering a website name into a URL user interface field), 6:60–63 (browser bookmarks), 7:4–7 (applications and programs, such as Word and Excel), 10:45–51 (files and documents), 18:27–46 (user profiles)); see also Ex. 1003 ¶¶ 119, 142–145 (Dr. Greenspun explaining where each of the specific types of information recited in claims 2, 12, 35, and 41 are disclosed in Huang).

ii. Claims 7, 17, 36, and 42

Claims 7, 17, 36, and 42 require retrieving “user profile and configuration data via the Internet” (claims 7 and 17) or using a plurality of pointers to access “the user specific resources and information stored on the network server via the Internet” (claims 36 and 42). *See* Ex. 1001, 17:38–41, 19:4–6.

As noted by Petitioner, Huang’s “virtual desktop” includes files, bookmarks, and personal information of the user (user profile and configuration data) and is provided through a web browser that interfaces “the user with a backend server on a network such as the Internet” (claims 7 and 17). *Pet.* 22–23, 43 (citing Ex. 1005, 5:31–34, 12:20–37). Huang further discloses that the various icons on the virtual desktop may be used to access user specific resources and information stored on the network server via the Internet (claims 36 and 42). *Id.* at 43 (citing Ex. 1005, 6:58–7:1); Ex. 1005, 4:18–5:14, Figs. 1–3.

iii. Claims 8, 18, and 43

Claims 8, 18, and 43 require retrieving the mobile interface (claim 8), user profile and configuration data (claim 18), or user specific resources and information (claim 43) from the network server “via one of a LAN, a MAN, and a WAN.” *See* Ex. 1001, 18:20–24, 20:14–17; *see also id.* at 2:12–14 (“Computers in many environments are connected to a network such as a local area network (LAN), a metropolitan area network (MAN), or a wide area network (WAN).”).

Petitioner demonstrates that Huang retrieves the virtual desktop, user profile and configuration data, and user specific resources and information from a network server via the Internet, which Petitioner demonstrates is a

wide area network (WAN). Pet. 43–44 (citing Ex. 1005, 5:12–14, 5:31–34, 6:58–7:1; Ex. 1011, 507 (defining a wide area network, or WAN, as “[a] communications network that connects geographically separated areas”)). Huang also discloses that “the invention can be implemented within any computing network, including [a] local area network, a campus network, [or] a wide area network.” *Id.* at 44 (quoting Ex. 1005, 19:22–32).

iv. Claims 10, 20, 38, and 45

Claims 10, 20, 38, and 45 require retrieving a “mobile interface” (claim 10), “user profile and configuration data” (claim 20), or “user specific resources and information” (claims 38 and 45) stored on a network server “via a television network.” Ex. 1001, 17:50–53, 18:29–32, 19:40–43, 20:21–23.

As noted by Petitioner, Huang discloses accessing information over the Internet using “a television set top box” and “a cable link,” which Petitioner demonstrates is cable *television network*. Pet. 45–46 (citing Ex. 1005, 3:67–4:1, Fig. 1; Ex. 1003 ¶ 184; Ex. 1001, 3:15–21). Petitioner also identifies where Huang contemplates transmitting a mobile interface, user profile and configuration data, and user specific resources and information using the television network. *Id.* at 46 (citing Ex. 1003 ¶¶ 184, 229, 285, 304, 331).

v. Claims 21–23, 47, and 48

Claim 21 requires “exporting user profile and configuration data from a first network to a second network”; claim 22 depends from claim 21 and further requires that the first network “comprises an Internet network and the second network comprises one of a cellular network and a telephone network”; and claim 23, which depends from claim 21, requires that the first

network “comprises one of a cellular network and a telephone network and the second network comprises an Internet network.” Ex. 1001, 18:33–47.

Claim 47 requires that the mobile interface is “adapted to be loaded onto the local device from any geographical location as long as the local device is communicating with the network server” and claim 48 requires that “the mobile interface is permanently stored in the network server.” *Id.* at 20:27–32.

Petitioner identifies where Huang discloses exporting user profile and configuration data from a first network, such as the Internet, to a second network, such as a cellular network (claims 21 and 22). Pet. 46–48 (citing Ex. 1005, 3:56–4:24, 4:47–67, Fig. 1; Ex. 1003 ¶¶ 190–200, 232–234); Ex. 1003 ¶ 232 (Dr. Greenspun testifying that one of ordinary skill in the art would understand the “wireless, wireline, cellular and cable links” of Huang are each a “network”). Petitioner also notes that when a user saves profile and configuration information back to the network server, the network identifications would be reversed, with the first network comprising the cellular network and the second network comprising the Internet (claim 23). *Id.* at 47–48.

With respect to claims 47 and 48, as noted by Petitioner, Huang discloses downloading a virtual desktop to a local device from “virtually any location with Internet access,” as well as “permanently” or “persistently” storing a mobile interface on a network server, such that the mobile interface may be downloaded to the user from any geographical location. *Id.* at 48–49 (citing Ex. 1005, 4:31–67, 5:37–39, 5:46–50, 6:35–38, 15:29–36; Ex. 1003 ¶¶ 337, 340).

vi. Conclusion with Respect to the Undisputed Dependent Claims

As set forth above, Petitioner identifies where every limitation of dependent claims 2, 7, 8, 10, 12, 17–18, 20–23, 35, 36, 38, 41–43, 45, 47, and 48 of the '002 patent is disclosed in Huang. We adopt Petitioner's identifications and determine that Petitioner has demonstrated by a preponderance of the evidence that claims 2, 7, 8, 10, 12, 17–18, 20–23, 35, 36, 38, 41–43, 45, 47, and 48 of the '002 patent are anticipated by Huang.

c. Challenged Dependent Claims 9, 19, 37, and 44

Claims 9, 19, 37, and 44 require retrieving the mobile interface (claim 9), user profile and configuration data (claim 19), or user specific resources and information (claims 37 and 44) from the network server “via a cellular network.” Ex. 1001, 17:46–49, 18:25–28, 19:36–39, 20:18–20.

Huang discloses transferring a mobile interface, user profile and configuration data, and user specific resources and information using the devices depicted in Figure 1, including a “mobile cellular phone” communicating over a “cellular link.” Pet. 45 (citing Ex. 1005, 3:66–67, Fig. 1; Ex. 1003 ¶¶ 180, 181, 226, 282, 301, 328); Ex. 1005, 4:23–24 (“Computer systems 210 can represent the various systems depicted in [Figure 1].”). Petitioner presents uncontroverted evidence that one of ordinary skill in the art would have considered a “mobile cellular phone” accessing the Internet over a cellular link to be communicating “via a cellular network.” Pet. 45 (citing Ex. 1005, 3:66–67, 4:23–24, 6:8–10, Fig. 1; Ex. 1003 ¶ 180; Ex. 1012, 2:58–3:29) (emphasis omitted).

Patent Owner does not dispute that Huang discloses every limitation of challenged claims 9, 19, 37, and 44, but contends Huang does not anticipate these claims because the cellular link described in Huang “would

not have enabled a person of ordinary skill to implement Huang's virtual desktop over a cellular network without undue experimentation." PO Resp. 27 (citing *ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1344 (Fed. Cir. 2012)).

In support of Patent Owner's enablement argument, Dr. Williams testifies that "bit rate limitations of cellular networks during the timeframe of the '002 Patent," would have prevented "reliable transport" of Huang's virtual desktop. *Id.* at 27–28 (citing Ex. 2003 ¶ 63). Dr. Williams further testifies that, because every user interaction in Huang "requires processing by backend servers," long latencies associated with processing such commands "would have led to a poor user experience" and rendered Huang's virtual desktop "unusable in most scenarios." *Id.* at 29–30 (citing Ex. 2003 ¶ 65).

In response, Petitioner asserts that Dr. Williams's unsupported testimony is "wholly insufficient to meet Patent Owner's burden of proving the non-enablement of a prior art U.S. patent." Pet. Reply 17 (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1287–88 (Fed. Cir. 2012)). Petitioner also asserts that unrebutted evidence of record, submitted by Dr. Greenspun in support of the Petition, demonstrates that "a cellular phone was *actually used* to access a web page over a cellular network '[u]sing equipment available in the winter of 1994.'" *Id.* at 16; Ex. 1003 ¶ 181 (citing Ex. 1015, 154–157, Abstract).

As noted by Petitioner, Dr. Williams does not provide any documentary evidence to support his assertion that slow bit rates on cellular networks in 1999 would have rendered Huang's disclosed system inoperable. *See Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776

F.2d 281, 285 (Fed. Cir. 1985) (noting that “[l]ack of factual support for expert opinion going to factual determinations . . . may render the testimony of little probative value in a validity determination”); *Antor Media*, 689 F.3d 1287 (noting that enablement is a question of law, “based on underlying factual findings”). Nor does Dr. Williams address Dr. Greenspun’s testimony and supporting evidence indicating that web pages had been successfully downloaded over a cellular network as early as 1995 using a communication rate of “4800 baud.” Ex. 1003 ¶ 181; Ex. 1015, 154–157, Abstract; Pet. Reply 15–16. Thus, we are not persuaded that Patent Owner provides sufficient argument or evidence to establish that Huang’s cellular phone embodiments are not enabled. *See Antor Media*, 689 F.3d at 1288–89 (noting that the patentee bears the burden of showing a prior art reference is not enabled).

In light of the foregoing, we credit the testimony of Dr. Greenspun and determine that Petitioner has demonstrated by a preponderance of the evidence that claims 9, 19, 37, and 44 of the ’002 patent are anticipated by Huang.

3. Conclusion

For the reasons set forth above, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, 7–12, 17–23, 34–38, 40–45, 47, and 48 of the ’002 patent are anticipated by Huang.

C. Obviousness of Claims 4, 14, 21–23, and 28 over Huang

Claims 4, 14, and 28 require that the user specific resources and information “comprise telephone numbers.” Ex. 1001, 17:29–31. Claims 21–23, as discussed above, require “exporting user profile and configuration

data” over various networks, including the Internet and a cellular network. *Id.* at 18:33–43.

Petitioner contends that adding telephone numbers to an electronic address book was known in the art, as evidenced by Douglas,⁸ and one of ordinary skill in the art⁹ would have sought to add such functionality to Huang’s system in order to “maintain up-to-date personal information” for a user “that is accessible from virtually anywhere.” Pet. 50 (citing Ex. 1005, 13:20–22; Ex. 1003 ¶ 158).

Petitioner further contends that, to the extent it is argued that Huang does not explicitly disclose “exporting user profile and configuration data” over the networks identified in claims 21–23, it would have been obvious to do so in view of Huang’s disclosures as a whole. *Id.* at 50–51. In support of this argument, Dr. Greenspun testifies that the databases of Huang are located among one or more regional networks and one of ordinary skill in the art would have found it obvious (as well as explicitly disclosed in Huang) to use these networks, including the Internet, to export the “user profile and configuration data.” Ex. 1003 ¶¶ 231–234. According to Petitioner, using the disclosed networks of Huang, including the Internet and a cellular network, to export user profile and configuration data would have

⁸ U.S. Patent No. 5,491,783 (Ex. 1009, “Douglas”).

⁹ The parties agree that a person of ordinary skill in the art would have had a Bachelor’s degree in Computer Science or an equivalent field and at least one year of work experience. Pet. 4; Ex. 2003 ¶ 26. Although the parties’ identification of the ordinary artisan differs in other respects, neither party asserts that these differences would impact the outcome of this case and we would reach the same result using either identification. We also note that the level of ordinary skill in the art is reflected by the prior art of record. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

constituted the use of known networks, “for their known purposes,” to achieve predictable results. Pet. 51.

Patent Owner does not address the substance of Petitioner’s arguments with respect to claims 4, 14, 21–23, and 28, but contends these claims would not have been obvious because they depend from claims that Petitioner has not shown to be unpatentable. PO Resp. 30.

Upon review of Petitioner’s arguments and supporting evidence, we are persuaded that Huang, together with the background knowledge and perspective of one of ordinary skill in the art (as confirmed by Douglas with respect to claims 4, 14, and 28), discloses or suggests each limitation of challenged claims 4, 14, 21–23, and 28. *See Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013); *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1365 (Fed. Cir. 2015). And, as noted above, Petitioner explains sufficiently why one of ordinary skill in the art would have sought to add the recited functionality to Huang’s system. Pet. 49–51.

Accordingly, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 4, 14, 21–23, and 28 of the ’002 patent would have been obvious over Huang.

*D. Obviousness of Claims 3, 5, 13, and 15
over Huang and Boyer*

Claims 3 and 13 recite “wherein the user specific resources and information comprise television channels.” Ex. 1001, 17:26–28. Claims 5 and 15 recite “wherein the user specific resources and information comprise television program listings.” *Id.* at 17:32–34. Petitioner contends the subject matter of these claims would have been obvious over Huang and Boyer. Pet. 51–54.

1. Boyer

Boyer discloses “techniques for providing television program guide information and services with embedded real-time data to a user over the Internet.” Ex. 1006, 1:7–9. The television program guide information of Boyer may be distributed to a user’s personal computer using a standard web browser or any other suitable multimedia system. *Id.* at 2:30–33, 2:45–47.

Figure 9, reproduced below, depicts one embodiment of the program guide of Boyer:

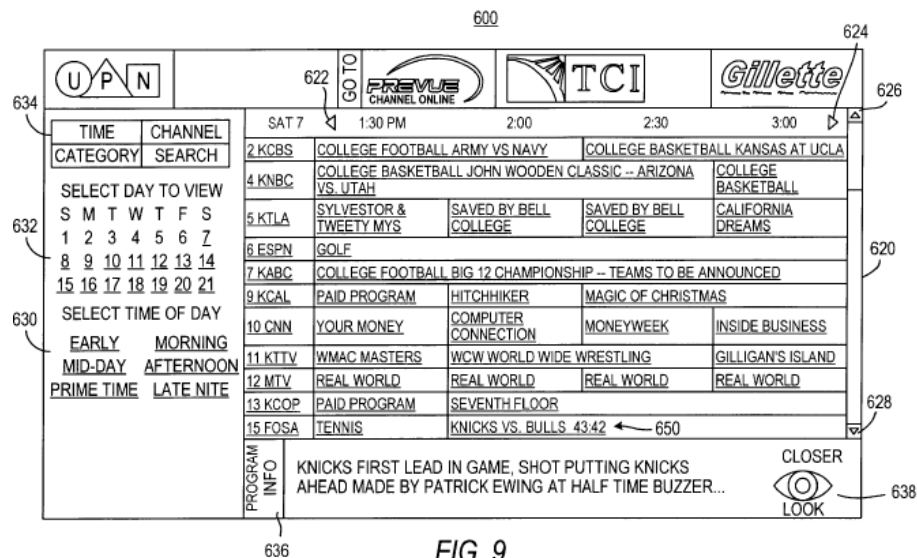


FIG. 9

Figure 9 of Boyer is an illustrative display containing television program guide listings organized by time.

As shown in Figure 9, the television program guide of Boyer provides a variety of information to the user, including the name of television channels, a description of the content available on the listed television channels, and program information, such as real-time sports scores or weather information. *Id.* at 4:44–50, 8:63–7:4. Cursors 622 and 624 allow a user to navigate to earlier or later time periods, respectively. *Id.* at 9:29–30. If the user selects a particular entry displayed on the guide, for example “Knicks vs. Bulls,” program information box 636 may display static or dynamic information

about the event. *Id.* at 9:61–67. Static information may include the program title or running time, whereas dynamic information may include real-time data such as the current score or highlights of the game. *Id.* at 10:1–10.

2. Analysis

Petitioner contends “Boyer’s Internet television program guide web page” includes both television channels (e.g., “10 CNN”) and program listings (e.g., “Your Money”). Pet. 51–53; Ex. 1003 ¶ 150. Petitioner further contends that one of ordinary skill in the art would have looked to add Boyer’s television channels and program guide functionality to Huang’s system in order to “increase the functionality and value of Huang’s virtual desktop to potential users.” *Id.* at 53. According to Petitioner, this modification “would have merely involved adding a new application and application server to Huang’s collection of existing applications and applications servers, each of which is available for inclusion on a user’s virtual desktop.” *Id.*

i. “Television Channels”

Patent Owner contends claims 3 and 13 would not have been obvious over Huang and Boyer because the television program guide of Boyer provides only the names of each television channel and not the underlying television channel content. PO Resp. 31–32.

In response, Petitioner contends that “nothing in the plain language of the claims requires viewing a television program’s audio-visual content from the mobile interface,” and the claim phrase “***user specific resources and information compris[ing] television channels***” indicates that information about television channels is contemplated by claims 3 and 13. Pet. Reply 19. Petitioner further contends the television channels are “menu items” and

nothing in the specification of the '002 patent suggests placing the audio-visual content of a television channel on a menu, or explains how that could possibly have been done in 1999. *Id.* at 19–20 (citing Ex. 1001, 5:58–61 (noting that applications, files, folder, and television channels are “menu items”)). Finally, Petitioner contends that, even if the claims were interpreted to require retrieving audio-visual content, Boyer discloses that a media library may contain “video clips . . . from previously televised sporting events,” which satisfies the “television channels” limitation. *Id.*

We are not persuaded by Petitioner’s arguments. First, we are directed to no disclosure in the '002 patent suggesting that the claim term “user specific resources and information” includes not only user specific resources and user specific information, but also information *about* user specific resources.

Second, although Petitioner questions how the mobile interface of the '002 patent could have successfully displayed a television channel as a menu item (as opposed to the name of each television channel) in the 1999 timeframe, the claims do not require such functionality. Instead, the claims require that the mobile interface include “pointers corresponding to” the “television channels.” Ex. 1001, 17:15–21, 17:26–28; *see also id.* at 6:13–16 (“As described in more detail later herein, the menu items/pointers shown in the user interface can be used to access and retrieve user specific resources and information.”).

Finally, we are directed to no evidence or testimony to support Petitioner’s attorney argument that clips previously presented on a television channel would be considered by one of ordinary skill in the art to be a “television channel.”

In view of the foregoing, we understand claims 3 and 13 to require pointers corresponding to “television channels,” not merely the name of television channels. And, as noted above, Petitioner has not demonstrated by a preponderance of the evidence that Boyer provides such functionality. Accordingly, we are not persuaded that Petitioner has carried its burden to demonstrate that claims 3 and 13 would have been obvious over Huang and Boyer.

ii. Program Listings

As noted above, Boyer discloses providing a web-based television program listing to a user. Ex. 1006, Fig. 9. Petitioner persuasively argues that one of ordinary skill in the art would have sought to add this functionality to Huang’s system in order to provide users with information about television listings when they do not have access to their cable or satellite service. Pet. 51–53.

Patent Owner contends Boyer does not disclose the television program listings of claims 5 and 15, because the television program listings of the ’002 patent must provide a listing of programs available on various television channels *and* allow access to the underlying television channel content. PO Resp. 33–34 (citing Ex. 1001, 16:50–59). In support of this argument, Patent Owner notes that in one embodiment of the ’002 patent “a user can use a listing of television program listings configured on a MIA running on a PC connected to the Internet to program a cable set top box on a cable television network.” *Id.* at 33 (citing Ex. 1001, 16:50–59; Ex. 2003 ¶ 74).

We are not persuaded by Patent Owner’s argument. First, Patent Owner does not assert that the ordinary meaning of “television program

listings” requires providing access to listed television programs. Second, Patent Owner has not demonstrated that the patentee redefined the term “television program listings” within the ’002 patent specification to require such functionality, or to require that all television program listings be capable of programming a cable set top box. PO Resp. 33–34; Pet. Reply 21; *see Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (noting that “[i]t is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must ‘clearly express an intent’ to redefine the term”). Thus, we are not persuaded that the “television program listings” of the ’002 patent must permit a user to access underlying television channel content.

In view of the foregoing, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 5 and 15 of the ’002 patent would have been obvious over Huang and Boyer.

3. Conclusion

For the reasons set forth above, Petitioner has demonstrated by a preponderance of the evidence that claims 5 and 15 would have been obvious over Huang and Boyer. We are not persuaded, however, that Petitioner has demonstrated by a preponderance of the evidence that claims 3 and 13 would have been obvious over those references.

E. Claims 6, 16, 39, and 46 over Huang and Hayes

Claims 6, 16, 39, and 46 require licensing the user specific resources to a user “based on a per user licensing model.” Ex. 1001, 17:35–37. Petitioner contends the subject matter of these claims would have been obvious over Huang and Hayes. Pet. 54–56.

1. *Hayes*

Hayes discloses a server that “stores access permissions” for each user. Ex. 1007, Abstract. In Hayes, when a user logs onto the system she identifies herself to the server. *Id.* at 4:28–34. “The server uses this information to dynamically buil[d] a list of applications to which the user has access permission.” *Id.* at 4:34–36. “The application list is then used to build a portion of the desktop, preferably a desktop folder, of applications to which the user has access permission.” *Id.* at 4:36–38.

According to Hayes, the disclosed system “allows users to roam, that is, to log-in from any computer in the system at any time and have it configured automatically at run time according to the preferences stored at the server.” *Id.* at 6:18–20.

2. *Analysis*

The ’002 patent discloses that software applications may be licensed on a “node locked,” “floating,” or “per user” basis. A node locked license permits an application to be used only on a particular device; a floating license provides “a fixed number of licenses,” barring a user from accessing an application if “the number of concurrent users” of that application is equivalent to the number of licenses available; and a per user license grants a particular user a license to use the software from any computer and from any geographical location. Ex. 1001, 3:23–56.

Petitioner asserts that, as demonstrated in Hayes, “[l]icensing resources based on a per user licensing model was well known by early 1999.” Pet. 54 (citing Ex. 1003 ¶ 167). Petitioner further asserts that one of ordinary skill in the art would have sought to use this well-known licensing

method in Huang in order to “allow users to roam, that is, to log-in from any computer in the system at any time.” *Id.* at 56 (quoting Ex. 1007, 4:14–39).

Patent Owner contends the challenged claims would not have been obvious over Huang and Hayes because Hayes describes “access permissions,” not a per user license, and to the extent a license is granted in Hayes it might be a floating license and not based on a per user licensing model. PO Resp. 35–39. In response, Petitioner asserts that a “per user licensing model” is described in the ’002 patent as one that allows a user “to access and run programs from any computer and from any geographical location,” which is identical to Hayes’s system, which “allows a user to roam, that is, to log-in from any computer in the system at any time and have it configured automatically at run time.” Pet. Reply 22–23 (quoting Ex. 1001, 3:23–56). Petitioner further asserts that the access permissions of Hayes “*implement* the per user licensing model because they permit a user to ‘access and run programs from any computer and from any geographical location.’” *Id.* at 23 (citing Ex. 1003 ¶¶ 167–169).

As noted by Patent Owner, Hayes does not explicitly disclose the type of license granted to each user of the system. Hayes does disclose, however, that the server uses the *identity* of the user—not the number of concurrent users on the system—to build a list of applications “to which the user has access permission.” Ex. 1007, 4:28–36, 7:54–62. Hayes also discloses providing the same type of broad global access to resources that the ’002 patent attributes to the implementation of a user specific license. *Compare* Ex. 1001, 3:52–56 (noting that the use of a per user license allows a user to “access and run programs from any computer and from any geographical location”) *with* Ex. 1005, 5:35–50 (noting that the disclosed system allows a

user to access files and application from any computer and from “anywhere”). Thus, we credit the testimony of Dr. Greenspun that one of ordinary skill in the art would have understood the license granted in Hayes to be based on a per user licensing model.¹⁰ Ex. 1003 ¶ 167.

We also find persuasive Petitioner’s argument and Dr. Greenspun’s supporting testimony that one of ordinary skill in the art would have sought to implement Hayes’s per user licensing model in Huang in order to allow a user to roam, i.e., to “log-in from any computer in the system at any time” and access desired applications and files. Pet. 55–56 (citing Ex. 1007, 4:14–39). Thus, Petitioner has demonstrated by a preponderance of the evidence that claims 6, 16, 39, and 46 of the ’002 patent would have been obvious over Huang and Hayes.

F. Obviousness of Claim 24 over Huang and Raman

Claim 24 depends from claim 11 and recites “wherein the step of displaying the user interface on the local network comprises the step of audioloy presenting the user interface on a cellular device.” Ex. 1001, 18:44–47. Petitioner contends the subject matter of this claim would have been obvious over Huang and Raman. Pet. 56–59.

1. Raman

Raman discloses a speech interface that allows a visually impaired user to access information displayed on a computer screen. Ex. 1010, 66.

¹⁰ Dr. Williams testifies that the license of Hayes could be a floating license, as Hayes discloses purchasing licenses instead of individual copies of software for each user. Ex. 2002 ¶ 82 (citing Ex. 1007, 1:38–42). Dr. Williams does not explain adequately, however, why this disclosure indicates that the purchased “licenses” are based on a floating model, as opposed to representing individual licenses purchased for each individual user. *Id.*

Raman explains that the audio interface may be used to “browse a WWW page just like any other document” and allows an application to both “display its results in a visually pleasing manner” and render “the same in an aurally pleasing way.” *Id.* at 69.

2. Analysis

Petitioner contends it would have been obvious to access Huang’s browser based virtual desktop using Raman’s aural interface to allow visually impaired users to access user specific data and applications in Huang’s system. Pet. 59. According to Petitioner, this combination represents a “simple arrangement of old elements, each performing the same function it had been known to perform, to yield no more than one would expect from such an arrangement.” *Id.*

Patent Owner does not directly address Petitioner’s arguments with respect to the combination of Huang and Raman, but asserts that “Raman does not provide any of the claimed elements missing from Huang.” PO Resp. 40.

Upon review of Petitioner’s arguments and supporting evidence, we find that Huang and Raman disclose every limitation of claim 24 and that one of ordinary skill in the art would have sought to implement Raman’s aural interface in Huang in order to allow visually impaired users to access Huang’s content. Pet. 58–59; Ex. 1010, 66, 69, 71; Ex. 1003 ¶ 244. Thus, Petitioner has demonstrated by a preponderance of the evidence that claim 24 would have been obvious over Huang and Raman.

III. CONCLUSION

For the reasons set forth above, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, 4–12, 14–24, and 34–48 of

the '002 patent are unpatentable. We are not persuaded, however, that Petitioner has demonstrated by a preponderance of the evidence that claims 3 and 13 of the '002 patent are unpatentable.

IV. ORDER

For the foregoing reasons, it is

ORDERED that claims 1, 2, 4–12, 14–24, and 34–48 of U.S. Patent No. 6,546,002 B1 are *unpatentable*;

FURTHER ORDERED that claims 25–33 and 49 are disclaimed; and

FURTHER ORDERED that any party to the proceeding seeking judicial review of this Final Written Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Patent 6,546,002 B1

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