

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INGENICO INC.,
Petitioner,

v.

IOENGINE, LLC,
Patent Owner.

IPR2019-00879
Patent 9,059,969 B2

Before ELIZABETH M. ROESEL, SHEILA F. McSHANE, and
SCOTT B. HOWARD, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

Final Written Decision
Determining Some Challenged Claims Unpatentable
Dismissing Petitioner's Motion to Exclude
Dismissing Patent Owner's Motion to Exclude
Denying Petitioner's Motion for Entry of Deposition Exhibits
35 U.S.C. § 318(a); 37 C.F.R. § 42.64(c);
37 C.F.R. § 42.123(b)

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons discussed herein, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1, 2, 4–8, 13–16, 19–21, 24, 25, and 27–29 of U.S. Patent No. 9,059,969 B2 (Ex. 1001, “the ’969 patent”) are unpatentable and has not shown, by a preponderance of the evidence, that claims 3, 10–12, and 26 of the ’969 patent are unpatentable.

A. Procedural Background

Ingenico Inc. (“Petitioner”)¹ filed a Petition requesting *inter partes* review of claims 1–8, 10–16, 19–21, and 24–29 (“the challenged claims”) of the ’969 patent pursuant to 35 U.S.C. §§ 311–319, along with the supporting Declaration of James T. Geier. Paper 1 (“Pet.”); Ex. 1002. IOENGINE, LLC (“Patent Owner”) filed a Preliminary Response to the Petition, along with the supporting Declaration of Kevin Butler, Ph.D. Paper 11 (“Prelim. Resp.”); Ex. 2003. Pursuant to 35 U.S.C. § 314(a), on September 26, 2019, we instituted *inter partes* review on the grounds of:

¹ Petitioner identifies Ingenico Corp. and Ingenico Group S.A. as other real parties-in-interest. Pet. 3.

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1–8, 10–16, 19–21, 24, 25, 27–29	§ 102 ²	Iida ³
1–8, 10–16, 19–21, 24–29	§ 103	Iida, Fuji Guide ⁴
4	§ 103	Iida, Shaffer ⁵
4	§ 103	Iida, Fuji Guide, Shaffer

See Pet. 4, 5; Paper 16 (“Inst. Dec.” or “Dec.”).

Patent Owner filed a Patent Owner Response (“PO Resp.”). Paper 36. Patent Owner also filed another Declaration of Dr. Kevin Butler to support its positions. Ex. 2099. Petitioner filed a Reply (“Pet. Reply”) to the Patent Owner Response. Paper 41. Patent Owner filed a Sur-Reply to Petitioner’s Reply (“PO Sur-reply”). Paper 43.

² Petitioner asserts that the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), which was effective March 16, 2013, applies because the application for the ’969 patent was filed after the Act’s effective date, that is, on August 6, 2013. Pet. 7. More specifically, Petitioner contends that there is no mention or written description of the upload of program code to a communications network node as recited in claim 9 in any of the parent applications, so the ’969 patent is only entitled to the priority date of its application, and the post-AIA statutes therefore apply. *Id.* at 7–8. We need not determine the effective priority date of the ’969 patent, however, because Petitioner’s asserted references are prior art to the ’969 patent, even if it is entitled to its earliest possible priority date of March 23, 2004. We also note that our unpatentability analysis remains the same under either the pre- or post- AIA versions of 35 U.S.C. §§ 102 and 103.

³ U.S. Publication No. 2003/020813 (published January 30, 2003) (Ex. 1003).

⁴ Software Quick Start Guide, Publication No. BL00002-201(1) (Fujifilm 2001) (Ex. 1004).

⁵ U.S. Patent No. 5,784,461 (issued July 21, 1998) (Ex. 1006).

Petitioner filed a Motion to Exclude (Paper 48 (“Pet. Mot. Exclude”)), with Patent Owner filing an Opposition (Paper 52 (“PO Opp. Mot. Exclude”)), and with Petitioner filing a Reply in Support of its Motion to Exclude (Paper 58 (“Pet. Reply Mot. Exclude”)). As authorized by the Board (Paper 64), Petitioner filed a Motion for Entry of Deposition Exhibits (Paper 66 (“Pet. Mot. Entry”)), with Patent Owner filing an Opposition to the Motion for Entry of Deposition Exhibits (Paper 67 (“PO Opp. Mot. Entry”)).

Patent Owner filed a Motion to Exclude (Paper 50 (“PO Mot. Exclude”)), with Petitioner filing an Opposition (Paper 51 (“Pet. Opp. Mot. Exclude”)), and with Patent Owner filing a Reply in Support of its Motion to Exclude (Paper 59 (“PO Reply Mot. Exclude”)).

An oral hearing was held on June 24, 2020. A transcript of the hearing is included in the record. Paper 65 (“Tr.”).

B. Related Proceedings

The parties indicate that the ’969 patent, as well as U.S. Patent Nos. 8,539,047 (“the ’047 patent”) and 9,774,703 (“the ’703 patent”), are asserted in *Ingenico Inc. v. IOENGINE, LLC*, No. 1:18-cv-00826-WCB (D. Del.) consolidated with *IOENGINE, LLC v. PayPal Holdings, Inc.*, No. 1:18-cv-00452-WCB (D. Del.) (“the district court proceedings”). Pet. 2; Paper 3, 2. The district court proceedings are stayed. *IOENGINE, LLC v. PayPal Holdings, Inc.*, Nos. 18-452, 18-826, 2019 WL 3943058 (D. Del. Aug. 21, 2019) (stay order) (Circuit Judge Bryson, sitting by designation); *IOENGINE, LLC v. PayPal Holdings, Inc.*, Nos. 18-452, 18-826 (D. Del. Jan. 27, 2020) (denying motion to vacate stay).

The parties also indicate that *inter partes* review petitions were filed by Petitioner in IPR2019-00416 (challenging claims of the '047 patent), which was instituted, as well as challenges to claims in the '703 patent in IPR2019-00584, where institution was denied, and in IPR2019-00929, which was instituted. Pet. 3; Paper 3, 2. A final decision in IPR2019-00416 issued on July 13, 2020, and a final decision in IPR2019-00929 is being issued concurrently with this decision. The parties also indicate that petitions were filed by another party, PayPal, Inc. ("PayPal") in IPR2019-00884, IPR2019-00885, IPR2019-00886, and IPR2019-00887 (challenging claims of the '047 patent); IPR2019-00906 and IPR2019-00907 (challenging claims of the '969 patent); as well as IPR2019-00930 and IPR2019-00931 (challenging claims of the '703 patent). *Id.* Institution was denied for PayPal's challenges. *See* IPR2019-00884, Paper 22; IPR2019-00885, Paper 21; IPR2019-00886, Paper 21; IPR2019-00887, Paper 21; IPR2019-00906, Paper 16; IPR2019-00907, Paper 16; IPR2019-00930, Paper 16; IPR2019-00931, Paper 16.

C. The '969 Patent

The '969 patent is entitled "Apparatus, Method and System for a Tunneling Client Access Point" and issued on June 16, 2015 from an application filed on August 6, 2013. Ex. 1001, codes (22), (45), (54). The '969 patent claims priority to (1) U.S. Application No. 12/950,321 filed on November 19, 2010 (now the '047 patent); and (2) U.S. Application No. 10/807,731 filed on March 23, 2004 (now U.S. Patent No. 7,861,006 ("the '006 patent")). *Id.*, code (63).

A goal of the invention of the '969 patent is to provide a means to securely access, execute, and process data that is available in an extremely

compact form. Ex. 1001, 2:25–28. The '969 patent discloses the use of a tunneling client access point (TCAP) that may be plugged into access terminals (ATs) such as servers, workstations, desktop computers, laptops, and portable digital assistants (PDAs). *Id.* at 3:44–49. Use of a TCAP “requires the user to simply plug the device into any existing and available desktop or laptop computer, through which, the TCAP can make use of a traditional user interface and input/output (I/O) peripherals, while the TCAP itself, otherwise, provides storage, execution, and/or processing resources.” *Id.* at 2:41–46. The TCAP “provides certain kinds of accessing of remote data in an easy and secure manner.” *Id.* at 2:49–51. The TCAP may be packaged in plug-in sticks and has “a highly portable ‘thumb’ footprint.” *Id.* at 2:47–48, 21:55–56.

Figure 1 of the '969 patent is reproduced below:

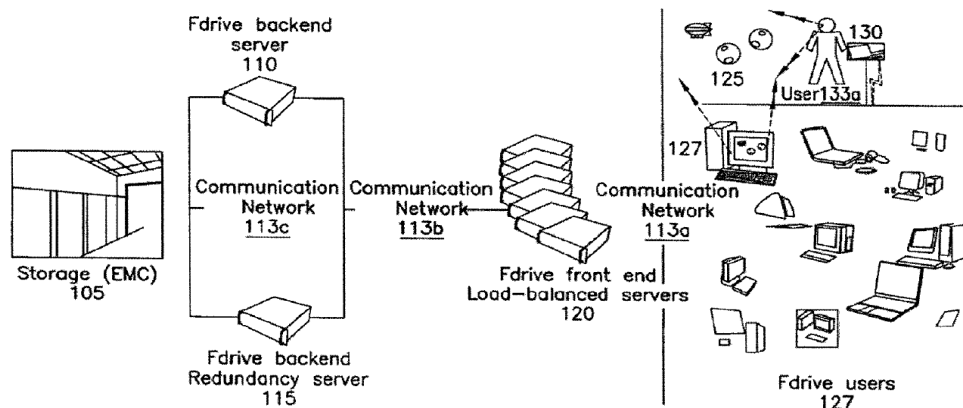


Fig. 1

Figure 1, above, is a flow diagram illustrating a topology between a TCAP and TCAP server, and, more specifically, illustrates embodiments where user 133a may plug in TCAP 130 into different ATs 127. Ex. 1001, 3:13–14, 41–49. If the AT is connected to communications network 113, “the

TCAP may then communicate beyond the AT.” *Id.* at 3:64–65. In an embodiment, TCAP 130 can provide extended storage and/or processing resources by engaging servers 110, 115, 120 and can access to provide a user extended storage 105 to the TCAP through the AT. *Id.* at 3:65–4:2. With this, to user 133a “the contents of the TCAP 130 appear on the AT as being contained on the TCAP 125 even though much of the contents may actually reside on the servers 115, 120 and/or the servers’ storage facilities 105.” *Id.* at 4:21–24.

Figure 10 of the ’969 patent is reproduced below.

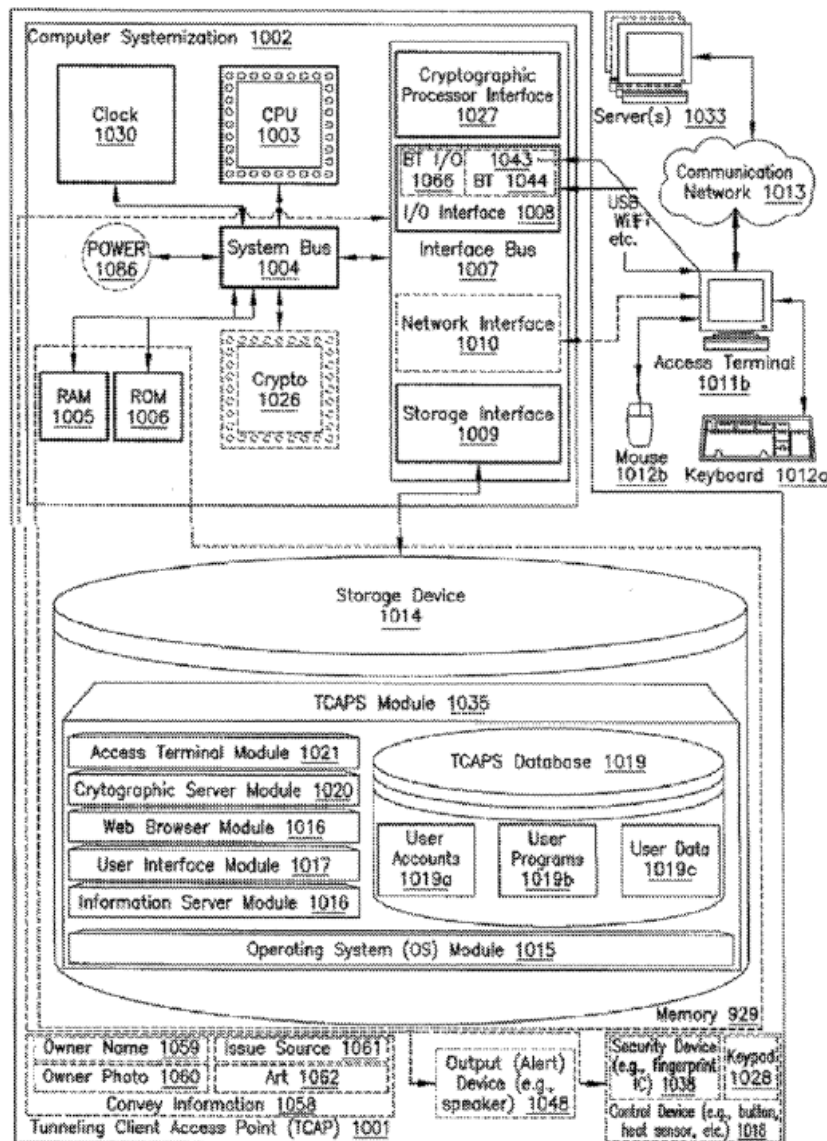


Fig.10

Figure 10, above, is a block diagram illustrating embodiments of a tunneling client access point controller (TCAP controller). Ex. 1001, 3:30–31. TCAP controller 1001 may include a central processing unit (“CPU”) 1003, clock 1030, central processing unit (CPU) 1003, read only memory (ROM) 1006, random access memory (RAM) 1005, and/or interface bus 1007. *Id.* at 22:51–54. Interface bus 1007 may accept, connect, and/or communicate to a number of interface adapters including input output interfaces (I/O) 1008,

storage interfaces 1009, and network interfaces 1010. *Id.* at 23:21–25.

TCAP controller 1001 may be connected to and/or communicate with users from access terminal 1011b and may be connected to peripherals such as user input devices (e.g., keyboard 1012a, mouse 1012b, etc.), and/or communications network 1013. *Id.* at 21:61–67.

Challenged claims 1, 28, and 29 of the '969 patent are independent. Claim 1, an illustrative independent claim of the '969 patent, is reproduced below.

1. A portable device configured to communicate with a terminal comprising
 - a processor, an input component, an output component, a network communication interface, and a memory configured to store executable program code, including
 - first program code which, when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component, and
 - second program code which, when executed by the terminal processor, is configured to provide a communications node on the terminal to facilitate communications to the portable device and to a communications network node through the terminal network communication interface,
 - the portable device comprising:
 - an external communication interface configured to enable the transmission of communications between the portable device and the terminal;
 - a processor; and
 - a memory having executable program code stored thereon, including:
 - third program code which, when executed by the portable device processor, is configured to provide a

communications node on the portable device to coordinate with the communications node on the terminal and establish a communications link between the portable device and the terminal, and facilitate communications to the terminal and to a communications network node through the terminal network communication interface; and

fourth program code which is configured to be executed by the portable device processor in response to a communication received by the portable device resulting from user interaction with the interactive user interface;

wherein the portable device is configured to facilitate communications through the communication node on the terminal and the terminal network interface to a communications network node.

Ex. 1001, 30:60–31:29.

II. ANALYSIS

A. The Parties' Arguments

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that at least claims 1, 2, 4–8, 11, 13–15, 19–20, 24, 25 and 27–29 of the '969 patent would have been unpatentable under 35 U.S.C. § 102 as anticipated by Iida; claims 1–8, 11–16, 19–21, and 24–29 would have been obvious over Iida and Fuji Guide; and claim 4 would have been obvious over Iida and Shaffer, with or without Fuji Gide. Inst. Dec. 29–64. Here, we determine whether Petitioner has established by a preponderance of the evidence that the challenged claims are obvious. 35 U.S.C. § 316(e). We previously instructed Patent Owner that “any arguments for patentability not raised in the response may be deemed waived.” Paper 17, 7; *see also* 37 C.F.R. § 42.23(a) (“Any material fact not specifically denied may be considered

admitted.”); *In re Nuvasive, Inc.*, 842 F.3d 1376, 1379–82 (Fed. Cir. 2016) (holding Patent Owner waived an argument addressed in the Preliminary Response by not raising the same argument in the Patent Owner Response). Additionally, the Board’s Trial Practice Guide states that the Patent Owner Response “should identify all the involved claims that are believed to be patentable and state the basis for that belief.” Consolidated Trial Practice Guide, 66 (November, 2019).⁶

On the record before us, we note that we have reviewed arguments and evidence advanced by Petitioner to support its unpatentability contentions, where Patent Owner chose not to address certain limitations in its Patent Owner Response. In this regard, the record contains persuasive arguments and evidence presented by Petitioner regarding the manner in which the prior art discloses the corresponding limitations of claims 1, 2, 4–8, 13–16, 19–21, 24, 25, and 27–29 and does not contain persuasive evidence and argument that the prior art discloses the corresponding limitations of claims 3, 10–12, and 26 of the ’969 patent.

B. Level of Ordinary Skill in the Art

In the Decision on Institution, we determined that Petitioner’s proposed description of the qualifications of a person of ordinary skill in the art aligned with the technology and claims of the ’969 patent. Inst. Dec. 24. Patent Owner does not challenge this determination and states that it has applied the Board’s adopted definition of one of ordinary skill in the art. PO Resp. 2. Dr. Butler testifies that the adopted level of art in the art would not have any effect on the opinions presented in his declaration, even though Dr.

⁶ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

Butler had previously presented a different proposed qualifications.

Ex. 2011 ¶ 13. Accordingly, for the reasons given in the Decision on Institution, we adopt Petitioner’s proposed level of ordinary skill, which is that a person of ordinary skill in the art should have:

a Bachelor of Science degree in Electrical Engineering, Computer Science, Computer Engineering or related discipline, and experience in programming software and firmware for computer peripheral devices and databases/servers and would have had a working understanding of computer hardware, operating systems, encryption, data storage, user interfaces, and peripheral and portable device communication protocols (e.g., parallel ports, serial ports, RS-232, USB, Bluetooth, WiFi and the like).

Pet. 12–13 (citing Ex. 1002 ¶ 13); *see also* Inst. Dec. 23.

C. Claim Construction

The Board interprets claim terms in accordance with the standard used in federal district court in a civil action involving the validity or infringement of a patent. 37 C.F.R. § 42.100(b) (2019). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1015, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). *Phillips* directs us to diverge from the general principle of using

the ordinary and customary meaning when a special definition is given to the term because the inventor acted as a lexicographer. *Phillips*, 415 F.3d at 1316.

1. “interactive user interface”

In the Decision on Institution, we construed the term “interactive user interface” (“IUI”) as “a display with which a user may interact to result in the portable device taking action responsively.” Inst. Dec. 19. The parties have presented additional arguments in additional briefing on the term’s construction, which we have further considered, and, as discussed below, we modify the interpretation of the term. *See* PO Resp. 7–16; Pet. Reply 1–3.

a. Petitioner’s Assertions

In the Petition, Petitioner asserts that the term “interactive user interface” should be interpreted as “a display with which a user may interact to result in the computer taking action responsively.” Pet. 14. Petitioner argues that this proposed interpretation is consistent with the plain and ordinary meaning of the term. *Id.* at 13. Petitioner also contends that although the term “interactive user interface” is not used in the ’969 patent specification, the specification consistently describes the terminal output component as a “display mechanism,” and the interactive user interface is presented on the terminal output component in the claims. *Id.* (citing Ex. 1001, 4:40). Petitioner contends that a number of displays in the ’969 patent respond to text inputs from an input component to elicit a responsive action, and refers to an example of the input of registration information in screen 515 in Figure 5, where, if the input is successful, follow-up screen 517 is produced, but otherwise there is an error message. *Id.* at 13–14 (citing Ex. 1001, 9:52–54, 7:53–56).

In its Reply, Petitioner asserts that the ordinary meaning of the term “interactive user interface” is “a presentation (display) with which a user may interact to result in the computer (portable device) taking action responsively.” Pet. Reply 1. This is similar to the construction that Petitioner previously proposed in the Petition, however, Petitioner now proposes that the “computer” can be considered to be a “portable device,” and a “display” can also be considered to be a “presentation. *See* Pet.14.

According to Petitioner, the claims require that the interactive user interface be presented on the terminal output component. Pet. Reply 1. Petitioner argues that the specification describes that it is a portable device that responds to user interaction with the IUI, such as the interaction with a login screen text box. *Id.* at 2 (citing Ex. 1046, 52:11–55:13; Ex. 1001, 7:55–56). Petitioner asserts that the claims require that it is the portable device that responds to user interaction, with the “fourth program code” executing in response to user interaction with the interactive user interface. *Id.* Petitioner compares the claim of the parent ’047 patent, which was narrowed to refer to “the interactive user interface is configured to enable the user to cause the portable device processor to execute program code stored on the portable device memory,” to the claims here. *Id.* Petitioner also asserts that “[p]resentation” is used and described in the ’969 patent as corresponding to a “display.” *Id.* at 1.

Petitioner also asserts that the claims do not require a graphic user interface elements, or “GUI,” interface elements, as a GUI is only one type of user interface that may be used. Pet. Reply 3 (citing Ex. 1001, 26:9–14). Petitioner argues that the portion of the ’969 patent describing the user interface module makes no mention of interface elements (Ex. 1001, 26:7–

27), and instead broadly references “display, execution, interaction, manipulation, and/or operation of program modules and/or system facilities through textual and/or graphical facilities” (*id.* at 26:16–19). Pet. Reply 3.

b. Patent Owner’s Assertions

Patent Owner asserts that the term “interactive user interface” should be construed as “a display containing interface elements with which a user may interact to result in the terminal taking action responsively by responding to the user.” PO Resp. 7 (citing Ex. 2099 ¶¶ 50–51). Patent Owner argues that the Petitioner agrees that it is the terminal that must take action in response to user interaction with its statement in the Petition that it is text inputs from an input component that “elicit[s] a responsive action from the terminal.” *Id.* at 14 (citing Pet. 13–14). Patent Owner further contends that a “computer,” which Petitioner’s construction refers to, is the device on which the interface is presented, and is not a different device. *Id.* (citing Pet. 13). Patent Owner contends that the Board’s inclusion of “result[s] in the portable device taking action responsively” in the construction in the Decision on Institution incorporates the functionality of the claimed fourth program code into the construction of interactive user interface itself, and it is the terminal and not the portable device which takes action responsively. *Id.* (citing Inst. Dec. 17; Ex. 2099 ¶ 66). Patent Owner argues that, according to the claims, it is the terminal that stores and executes the first program code “configured to present an interactive user interface,” and in order to present the interactive user interface, “the terminal must provide the interface it presents with the required interactivity.” *Id.* at 15 (emphasis omitted). Patent Owner asserts that the specification is replete with examples of the terminal responding to the user, with no

counterexamples. *Id.* (citing Ex. 1001, 1:52–61, 9:37–48, 10:19–23, 10:35–38, 10:64–11:4, 11:13–31, 11:61–66, Figs. 5a–8). Patent Owner contends that “the portable device does not execute fourth program code in direct response to user interaction with the interactive [user interface], but rather in response to a ‘communication’ from the terminal ‘resulting from user interaction with the interactive user interface.’” *Id.* (citing Ex. 1001 31:23–25, 9:28–32) (emphasis omitted).

On the issue of the interface elements, Patent Owner alleges that the specification, under the “User Interface” paragraph of the “Background” section, references “[c]omputer interaction interface elements,” which provides support for user interaction with the interactive user interface being done through interface elements. PO Resp. 7 (citing Ex. 1001, 1:52–61; Ex. 2099 ¶ 53). Dr. Butler’s testimony relies on the specification’s disclosure that “[c]omputer interaction interface elements such as check boxes, cursors, menus, scrollers, and windows . . . facilitate the access, operation, and display of data and computer hardware and operating system resources, functionality, and status.” Ex. 2099 ¶ 53 (citing Ex. 1001, 1:52–61). Patent Owner argues that the ’969 patent specification emphasizes that the interface elements are what allow the user to interact with, or “engage,” with the interactive user interface. PO Resp. 7 (citing Ex. 1001, 10:32–35, 10:41–43, 12:56–58, 11:13–17, 1:52–56, 8:19–21, 9:37–48, 10:19–23, 10:64–11:4, 11:61–66; Ex. 2099 ¶ 54). Patent Owner asserts that the qualifying language in the specification, such as “might,” regarding interaction with interaction interface elements, indicates that the lists provide examples of necessary interface elements or pertains to the user’s option to access certain functionality. *Id.* at 12 (citing Ex. 1001, 1:47–56, 10:32–35; 11:4–5,

11:13–17; Ex. 2099 ¶¶ 55–56). Patent Owner further contends that because the specification indicates that interface elements are what “allow for the display, execution, interaction, manipulation, and/or operation of program modules and/or system facilities through textual and/or graphical facilities[,]” and “provide[] a facility through which users may affect, interact, and/or operate a computer system,” this supports that an interactive user interface must include “interface elements with which a user may interact.” *Id.* (citing Ex. 1001, 17:58–63; Ex. 2099 ¶¶ 57–58). Patent Owner refers to extrinsic evidence, with Dr. Butler testifying that “a fundamental difference between a purely text interface and an IUI is that the interface elements of an IUI receive input beyond mere characters—*e.g.*, positional input—whereas a purely text-based interface does not,” and pointing to the Shaw article⁷ for support. *Id.* at 13 (quoting Ex. 2099 ¶ 64; citing Ex. 2100, 9).

c. Analysis

We have considered the parties’ arguments and construe “interactive user interface” to mean “a display containing interface elements with which a user may interact to result in a computer taking action responsively.”

As Petitioner argues, the specification does not use the term “interactive user interface.” *See* Pet. 13. The specification does, however, disclose in its “User Interface” section that “[t]he user interface provides a facility through which users may affect, interact, and/or operate a computer system.” Ex. 1001, 26:19–20. This disclosure is consistent with Mr. Geier’s testimony that a person of ordinary skill would have understood that a “user

⁷ Shaw, Mary, *An Input-Output Model for Interactive Systems*, Conference on Human Factors in Computing Systems (April 1986) (“the Shaw article”).

interface” is an interface that enables a user to interact with a computer. Ex. 1002 ¶ 30. This disclosure is also consistent with definition in The Computer Glossary that a “user interface” is “[t]he combination of menus, screen design, keyboard commands, command language and help screens, which create the way a user interact with a computer.” Ex. 1009, 3. We therefore agree with Petitioner’s proposed claim construction to the extent that an interactive user interface is something with which a user may interact to result in the computer taking action responsively. That interpretation is consistent with the plain and ordinary meaning of the term “user interface” in the view of one of ordinary skill in the art.

Using the generic term of “computer” in IUI claim construction is also consistent with the ’969 patent specification. The specification describes how, in response to a user interacting with the interface, the AT (terminal) may treat the TCAP (portable device) as memory and retrieve information from the TCAP—which describes an instance where the terminal is taking responsive action. *See* Ex. 1001, 4:47–53. The specification also describes the TCAP (portable device) processor used only for processing and spooling files. *See id.* at 4:53–60. The use of the more general term “computer” in claim construction is therefore consistent with embodiments in the specification where a responsive action could be taken either by a portable device or by a terminal.

Turning to the issue of whether the claim term requires “interface elements,” as Patent Owner argues, we note that both Petitioner and Patent Owner agree that the “interactive user interface” must be interactive. *See* Pet. 13; PO Resp. 7. And both Petitioner and Patent Owner agree that this interaction includes the use of “interface elements.” For instance, Mr. Geier

testifies that, “a user interface includes a combination of elements, such as menus, screen design, keyboard commands, command language, and help screens, which create the way a user interacts with a computer” (Ex. 1002 ¶ 30 (citing Ex. 1009, 3)), and “there’s going to be some sort of element that the user is going to interact with” (Ex. 2110, 15:14–16). Dr. Butler refers to the ’969 patent and testifies that an interactive user interface “must have interface elements with which a user may interact.” Ex. 2099 ¶¶ 52–53 (citing Ex. 1001, 1:52–61). Thus, we agree with Patent Owner that an “interactive user interface” requires a “display⁸ containing interface elements with which a user may interact.” We do not, however, agree with Patent Owner to the extent that it is argued that the claims are limited to the use of certain types of interface elements such as “check boxes, cursors, menus, scrollers, and window” or that the interaction with the interface elements has to be done in a certain way, e.g., by positional input, as allegedly disclosed by Shaw. *Cf.* PO Resp. 13; Ex. 2099 ¶ 64. As discussed in the Decision on Institution, the ’969 patent specification uses open-ended terms when discussing interface elements and interactions including “such as,” “may,” “might,” “perhaps,” “for example,” “in this case,” and/or indicates that the descriptions refer to embodiments only. *See* Inst. Dec. 18 (citing Ex. 1001, 1:52–62, 9:37–48, 10:16–23, 10:64–11:4, 11:13–31, 14–18, 61–64, 17:58–63).

⁸ We do not agree with Petitioner’s view that “presentation” may be used interchangeably with “display.” *See* Pet. Reply 1. The ’969 patent specification refers to the use of a “display,” and “presentation” is what is shown on a display. *See e.g.*, Ex. 1001, code (57), 4:39–40, 4:65–5:3, 6:64–67, 7:12–14, 8:37–41, 15:1–12 (“display”), *id.* at 12:46–49 (“presentations”).

Accordingly, for the reasons discussed above we conclude that “interactive user interface” means “a display containing interface elements with which a user may interact to result in a computer taking action responsively.”⁹

2. “*graphic user interface (“GUI”)*”

Claim 21 depends from claim 1 and recites “the interactive user interface comprises a graphic user interface.” Ex. 1001, 32:50–51. Petitioner refers to examples in the ’969 patent specification that provide examples of “a conventional graphic user interface,” including “operating systems and/or operating environments such as Apple Macintosh OS, e.g., Aqua, Microsoft Windows (NT/XP), Unix XWindows (KDE, Gnome, and/or the like).” Pet. 14 (citing Ex. 1001, 26:11–13, 1:58–60). Petitioner contends that a graphic user element is one that includes a graphical element. *Id.* Petitioner asserts that “graphic user interface” should be interpreted as “a display with which a user may interact, facilitated by a graphic element displayed thereon, to result in the computer taking action responsively.” *Id.* at 14–15.

Patent Owner asserts that the term “graphic user interface” should be given a plain meaning construction. PO Resp. 21. Patent Owner refers to Petitioner’s expert testimony that these interfaces are conventional and a person of skill would have been familiar with them. *Id.* (citing Ex. 2122, 37:1–10, 38:10–39:4). Patent Owner alternately asserts that, if any

⁹ We note that including “interface elements” in the construction is in accordance with the position taken by Patent Owner related to this claim term. *See* PO Resp. 7–13. We further note that the revised language—“to result in a computer taking action responsively”—is taken from Petitioner’s proposed construction. *See* Pet. 13–14.

construction is required, the definition of GUI should be a “graphical IUI.” *Id.* Patent Owner contends that the ’969 patent not only discloses graphical interfaces, but also contemplates audio or tactile interfaces. *Id.* (citing Ex. 1001, 14:58–15:12). Patent Owner contends that Petitioner’s proposed construction attempts to read out “interactive user interface” from the term “graphic user interface.” *Id.* at 17. Patent Owner asserts that claim 21 further limits the IUI of claim 1 to include only IUIs that are graphical, and the “difference between an IUI and a GUI is thus not the level of interactivity that is required, but rather the graphical form of the interface.” *Id.* at 21. Patent Owner argues that the IUI of the independent claims is as interactive as a GUI, but need not be graphical. *Id.* at 21–22 (citing Ex. 2099 ¶ 84).

In the Decision on Institution the plain and ordinary meaning of the term “graphic user interface” was adopted as the interpretation of the term Dec. 20. Although Patent Owner refers to the specification’s disclosure of the use of audio or tactile interfaces, Patent Owner does not argue that the term should be construed to include these embodiments; instead, Patent Owner’s arguments indicate that the interpretation of the term should be that it is an interactive user interface that includes graphics. *See* PO Resp. 17. We agree, and therefore, consistent with the Decision on Institution, we adopt the ordinary meaning of the term, that is, that a “graphic user interface” is an interactive user interface that includes graphical elements.

3. “communications . . . to a communications network node through the terminal network communications interface;” “communications through the communication node on the terminal and the terminal network interface to a communications network node”

Patent Owner argues that the terms quoted above (hereinafter the “communications terms”) should be construed as “communications . . . through the . . . terminal network communication interface, without the terminal having access to information being communicated.” PO Resp. 17 (citing Ex. 2099 ¶¶ 73–81). Patent Owner alleges that the ’969 patent is directed to the concept of “tunneling,” where the term “TCAP” is used to refer to its “tunneling client access point” and that abbreviation is used over 400 times in the specification. *Id.* Patent Owner argues that the intrinsic record consistently refers to a portable device configured to communicate with a remote networked device by tunneling data such that the terminal does not have access to the data being communicated. *Id.* (citing Ex. 1001, code (57), 1:19–25, 2:39–51, 3:40–4:31, 18:12–14, Figs. 1, 5a–5b, 9a–b, 10a–b). Patent Owner contends that the specification explains what “tunneling” means: the terminal acts as a “conduit” or “bridge” for the TCAP to communicate with the server/network devices, with data transmitted accessed only by the TCAP and/or the server, but not the terminal. *Id.* at 17–18 (citing Ex. 1001, 4:60–64, 9:5–7, 13:1–4, 27:28–28:15, 28:54–56, Fig. 10b). Patent Owner further contends that the ’969 patent discloses that, to prevent the terminal from accessing information sent between the TCAP and the server, the TCAP and the server preferably include cryptographic server modules, which encrypt data sent through the terminal. *Id.* at 18 (citing Ex. 1001, 19:38–20:24, 27:28–28:15, Figs. 9a–b, 10a–b; Ex. 2099 ¶¶ 74–75). Patent Owner argues that tunneling

does not require encryption, although encryption is one way to accomplish what tunneling requires, that is, the terminal not have access to the tunneled information. *Id.* at 18, n.3.

Patent Owner asserts that it does not dispute the generic meaning of “through,” but rather the issue is what that term means in the context of the claims and specification. PO Resp. 19. Patent Owner points to deposition testimony of Petitioner’s expert, Mr. Geier, where the testimony admitted that, in the context of communications from one device “through” an intermediary, the content was not accessible to the intermediary devices. *Id.* at 19–20 (citing Ex. 2110, 117:15–24, 119:11–15).

Petitioner asserts that that the claim terms should be construed according to their ordinary and customary meaning as understood by one of ordinary skill in the art. Pet. 13. Petitioner argues that the ’969 patent is a continuation of the ’006 patent, and the ’006 patent claimed a “portable tunneling storage and processing apparatus;” however, patentee then sought broader protection in claiming a “portable device.” Pet. Reply 4 (citing Ex. 1015, 30:60). Petitioner contends that, although the specification describes embodiments that “may tunnel data through an AT,” “tunnel” is absent from the claims, which indicates a broader and ordinary meaning is intended. *Id.* (citing Ex. 1001, 4:27–30, code (57), 1:14). Petitioner argues that “through” is entitled to its ordinary meaning, “[w]hereas Patent Owner associates ‘tunneling,’ ‘tunneling client,’ and ‘TCAP’ (all missing from the claims) with preventing access to information, the same cannot be said for the word ‘through.’” *Id.* (citing Ex. 3001). Petitioner also argues that Mr. Geier’s testimony cited by Patent Owner was referring to the prior art reference Iida,

rather than the specification of the '969 patent. *Id.* at 5 (citing PO Resp. 20; Ex. 2110, 116:14–119:10).

In the Decision on Institution, we determined that:

The language of claim 1 itself does not recite a limitation that the terminal cannot access information being communicated and there is no recital of “tunneling.” Although the specification includes embodiments where data is transmitted through the terminal without access to information being communicated, we decline to add this limitation based on embodiments of the invention. *See Phillips*, 415 F.3d at 1323; *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (the specification may aid in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims). We do not discern that the specification indicates disavowal of claim scope of these claim terms. Moreover, we do not discern that there was any special meaning attributed to the term “through,” or any of the other individual words in this claim term. The communications terms use the term “through” consistently with definitions such as “used as a function word to indicate movement into at one side or point and out at another and especially the opposite side of,” “by way of,” or “used as a function word to indicate passage from one end or boundary to another.” Ex. 3001. Therefore, we decline to adopt Patent Owner’s proposed interpretation of the communications terms, and the ordinary meaning for them will be adopted for the purposes of this Decision.

Inst. Dec. 22. The additional arguments that Patent Owner presents do not persuade us to modify the determination made in the Decision on Institution. The claim language itself does not recite tunneling nor TCAP, nor is there any limitation that states that the terminal does not have access to the information being communicated. *See* Ex. 1001, 30:60–34:35.

As Petitioner points out, some of the claims of the '006 patent stand in contrast to the instant claims because, for instance, claim 1 of the '006 patent

explicitly recites a “portable tunneling storage and processing apparatus.” Ex. 1015, 30:60. Each claim of the ’006 patent includes a limitation for tunneling and/or encryption, with Patent Owner stating that encryption has the same result as tunneling, that is, the terminal does not have access to the tunneled information, as discussed above. *See id.* at 30:60–36:10. We agree with Petitioner’s view that the language of the claims of the ’006 patent demonstrates that the applicant knew how to claim tunneling and the absence of similar language in the claims of the ’969 patent shows that the patent applicant did not intend to so limit the claims in the ’969 patent.

Further, we do not discern that the specification indicates disavowal of claim scope of these claim terms. At most, for instance, the specification discusses various embodiments that, for example, encrypt data. *See, e.g.*, Ex. 1001, 13:2–4, 27:28–28:15. And, although the abstract of the ’969 patent states that the TCAP “enables the user to observe data stored on the TCAP without it being resident on the AT,” it uses the word “may” to indicate that tunneling the data through the AT to a communication network is possible and to indicate that tunneling is optional. *See id.*, code (57). We determine that the claim terms should be accorded their plain and ordinary meaning, consistent with the use of the terms in the specification, including the term “through,” with an ordinary meaning of a passage from one end to another (Ex. 3001), and we decline to add a limitation prohibiting the terminal from access to information being communicated.

We do not find the Patent Owner’s argument on alleged admissions by Mr. Geier to be persuasive. A review of Mr. Geier’s testimony in context indicates that the references to communications from one device “through” an intermediary referred to his understanding of Iida and not the ’969 patent.

See Ex. 2110, 117:15–120:1 (testimony including reference to Iida by name, as well as several references to a camera, which is used in Iida); *see also id.* at 112:7–117:14 (testimony referring to particular portions of Iida).

Further, we find the case law cited by Patent Owner in support of its arguments to be distinguishable from the circumstances here. *See* PO Resp. 18–19. For instance, Patent Owner relies on *VirnetX Inc.*, however, in that case the Federal Circuit determined that there was no plain and ordinary meaning for a term and a construction had to be determined by reference to the specification. *See VirnetX Inc. v. Cisco Sys. Inc.*, 767 F.3d 1308, 1317 (Fed. Cir. 2014). Here, however, the claim term has a plain and ordinary meaning. In *Eon-Net*, the Federal Circuit construed terms in accordance with the specification which “repeatedly and consistently defines the invention as a system that processes information derived from hard copy documents.” *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1321–22 (Fed. Cir. 2011). In the instance case, the ’969 patent specification instead states that the TCAP “may” tunnel data through the AT to a communication network, and, as discussed above, the applicant did not to use the term “tunneling” in the claim, but rather opted for the use of broader language. Ex. 1001, code (57). And, while explicit disavowal of the ordinary meaning of a term is not required, and the specification is highly relevant to the construction of a claim term, in this case, as discussed, we have not only considered whether there was disavowal, but have also considered the disclosures of the specification as well as the claim language that the applicant sought. *See Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1364 (Fed. Cir. 2016)

Accordingly, and consistent with the Decision on Institution, we adopt the ordinary meaning of the communications terms.

4. Other Claim Terms

We determine that it is not necessary to provide an express interpretation of any other term of the claims. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”); *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

D. Alleged Anticipation by Iida

Petitioner contends that claims 1–8, 10–16, 19–21, 24, 25 and 27–29 are anticipated by Iida. Pet. 15–53. To support its contentions, Petitioner provides explanations as to how Iida discloses each claim limitation. *Id.* Petitioner also relies upon the Geier Declaration (Ex. 1002) to support its positions. Patent Owner alleges that Iida fails to disclose some of the limitations of the claims. PO Resp. 22–41. Patent Owner relies upon the Butler Declarations (Exs. 2003, 2099) to support its positions.

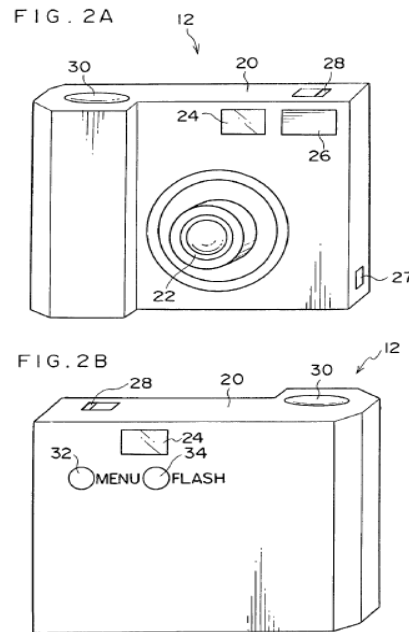
On this record, we are persuaded by Petitioner’s explanations and evidence in support of the Iida anticipation ground for claims 1, 2, 4–8, 13–16, 19–21, 24, 25, and 27–29, and do not find them persuasive for claims 3 and 10–12. We begin our discussion with a brief summary of Iida and then address the evidence, analysis, and arguments presented by the parties on the anticipation ground.

1. Iida (Ex. 1003)

Iida is directed to a system for image photography and for ordering prints. Ex. 1003 ¶ 2. The priority date of Iida is July 25, 2002, the filing

date, which is prior to the earliest possible filing date of the '969 patent of March 23, 2004.

Iida discloses the use of a digital camera as depicted in Figures 2A and 2B reproduced below.



Figures 2A and 2B above illustrate perspective views showing the external appearances of digital camera 12. Ex. 1003 ¶ 52. Figure 1A, a block diagram of the digital camera is reproduced below.

FIG. 1A

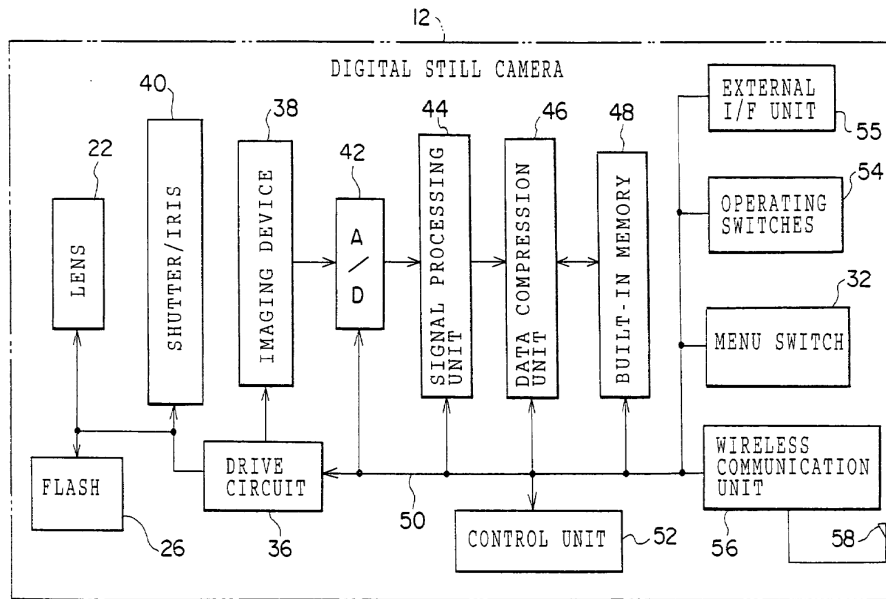


Figure 1A above depicts a block diagram of digital camera 12 that includes imaging device 31, an analog/digital (A/D) converter, signal processing unit 44, built-in memory 48, bus 50, and control unit 52 (which contains a CPU, RAM, and ROM). Ex. 1003 ¶¶ 63, 65. Additionally, digital camera 12 includes wireless communications unit 56 for performing wireless communication. *Id.*

Iida uses portable terminal 14 in its system, which may be a user's portable telephone or a PDA, wearable computer, or mobile computer. Ex. 1003 ¶¶ 57, 144. A block diagram of portable terminal 14 depicted in Figure 1B reproduced below.

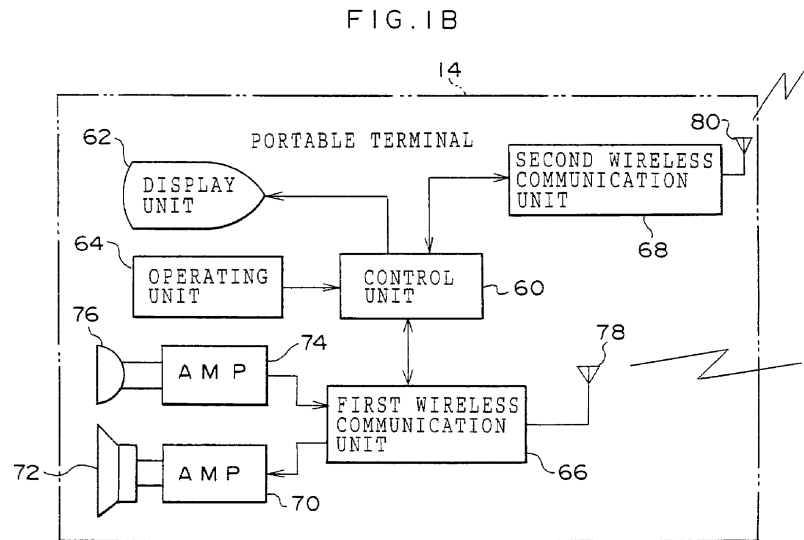
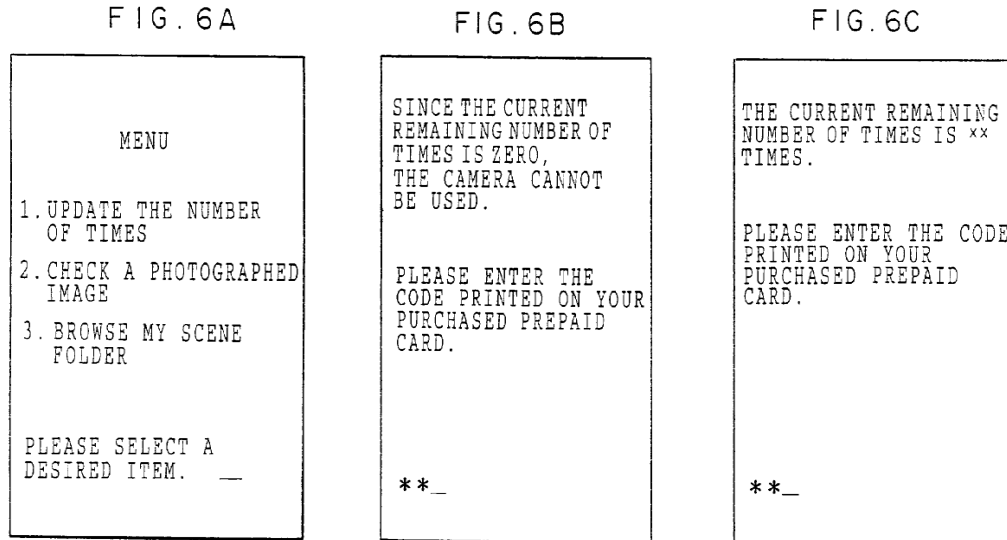


Figure 1B above depicts block diagram of portable terminal 14 which includes display unit 62, operating unit 64 (which may have keys, touch pad or the like), among other components. Ex. 1003 ¶ 68. Portable terminal 14 also includes first wireless communication unit 66 that communicates with a base station connected to a telephone network which provides an Internet connection. *Id.* ¶¶ 68, 69. Portable terminal 14 includes second wireless communication unit 68 which performs wireless communication with digital camera 12 via its wireless communication unit 56. *Id.* ¶ 69.

In Iida, the control unit 52 of the camera reads and outputs information to the wireless communication unit 56 and instructs this unit 56 to transmit the information to the portable terminal 14. Ex. 1003 ¶ 83. The control unit 60 of the portable terminal 14 analyzes the received information and executes a process that results in a menu screen on display unit 62 by using the received information, as shown, for example, in embodiments depicted in Figures 6A–6C reproduced below, which are image diagrams

showing examples of various screens displayed on the display unit of a portable apparatus.. *Id.* ¶¶ 56, 83.



Figures 6A–6C, above, are image diagrams showing examples of various screens which are displayed on the display unit of a portable apparatus. Ex. 1003 ¶ 56. A user may input a number in response to one of the menu screens, which is transmitted to the camera for subsequent processing. *Id.* ¶ 84.

Figures 6E and 6F depicting screens displayed on the display unit 62 of portable terminal 14 are reproduced below. Ex. 1003 ¶ 56.

FIG. 6E

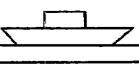
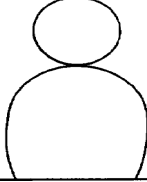
PLEASE SELECT AN IMAGE. —	
IMAGE 1	IMAGE 2
	
IMAGE 3	IMAGE 4
	

FIG. 6F

DO YOU WISH TO SAVE THE IMAGE IN MY SCENE FOLDER OR TO YOUR PC? yes: 1 / No: 2 —


Figures 6E and 6F, above, show menu screens for allowing a user to select and save prints photographed images. Ex. 1003 ¶¶ 93–107, 126–134.

2. Analysis

A claim is unpatentable under 35 U.S.C. § 102 if a prior art reference discloses each and every limitation of the claimed invention, either explicitly or inherently. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995); see *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999) (“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention”; any limitation not explicitly taught must be inherently taught and would be so understood by a person experienced in the field); *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991) (the dispositive question is “whether one skilled in the art would reasonably understand or infer” that a reference teaches or discloses all of the limitations of the claimed invention).

a. Independent claim 1

(1) Terminal Elements

Petitioner asserts that Iida's portable digital camera 12 corresponds to the claimed portable device and Iida's portable terminal 14 corresponds to the claimed terminal. Pet. 15–16. Petitioner's mapping of the claim elements to Iida's disclosures is reproduced below:

CLAIM 1	IIDA, Ex. 1003
[1a] 1. A portable device configured to communicate with	[0111] "digital still camera 12 ... [is] equipment carried by the user." See Figs. 1A, 2A and 2B
[1b] a terminal comprising	[0047] "any of the portable telephone, PDA, wearable computer and mobile computer which the user possesses." Fig. 1B, portable terminal 14
[1c] a processor,	[0068]-[0069]"terminal 14 " has "control unit 60 which comprises a <u>CPU</u> , a ROM and a RAM,"
[1d] an input component,	[0068] "operating unit 64 comprising a ten-keys, touch pad or the like,"
[1e] an output component,	[0068]"display unit 62 ,"
[1f] a network communication interface, and	[0068] "first wireless communication unit 66 " and
[1g] a memory configured to store executable program code, including	[0068] "a ROM and a RAM."

Pet. 16. The figure reproduced above is a chart identifying various limitations (1a–1g) of claim 1, with Petitioner's mapping of the claimed terminal elements to components of Iida. *Id.* Patent Owner does not present

arguments directed to the mapping of these elements. *See generally* PO Resp. We find that the evidence of record sufficiently supports Petitioner’s assertions.

(2) First Program Code

Petitioner asserts that the first program code limitation, which recites that “when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component,” is disclosed by Iida’s control unit 60 of terminal 14 that executes a process to display the menu screen on display unit 61. Pet. 17–18. Mr. Geier testifies that:

The first program code of claim 1 corresponds to the control unit 60 executing a process that displays a menu screen on display unit 62. Ex. 1003, [0083][.] The menu screen displays choices which can be selected by the user making the screen thereby interactive. The menu and its choices may be determined by the information received from the camera 12.

Ex. 1002 ¶ 51.

Patent Owner argues that the “first program code” limitation is not disclosed by Iida because it “does not disclose the terminal executing code to ‘present’ an IUI.”¹⁰ PO Resp. 23. Patent Owner asserts that “[i]n Iida, if the alleged terminal determines that it has received an image, it merely displays that image, without alteration.” *Id.* at 23–24. We do not find this argument persuasive because it is based on limitations not appearing in the claim. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). The claim element requires only that the first program code “present” an interactive user interface. We find Petitioner’s reliance on Iida’s execution of a process

¹⁰ Patent Owner makes several other arguments related to Iida’s teaching of an interactive user interface which we address in the section below on the fourth program code.

by control unit 60 to display a menu screen on display unit 62 of the terminal to be persuasive evidence of the disclosure of this limitation.

(3) Second Program Code

Petitioner contends that the second program code limitation is disclosed by terminal 14 communications to portable device (camera 12) and communications to the computer network. Pet. 18–19. Mr. Geier testifies that with respect to terminal 14, a node is configured to communicate on a Bluetooth or HomeRF network to form a communication link with the camera 12 and a node is also configured for network communications on a communication network link with a base station. Ex. 1002 ¶ 52.

Patent Owner contends that there is no disclosure in Iida of an ability to secure communications between the server and camera and therefore Iida does not meet the limitations of “communication . . . through.” PO Resp. 30. Patent Owner asserts that Iida is silent on any program that might be used to provide a communications node on the portable apparatus. *Id.* at 31. Patent Owner also argues that “the Petition conflates the ‘terminal’ with the ‘communications node on the terminal,’ by contending that Iida’s portable apparatus 14 is the claimed terminal . . . while simultaneously contending that the same portable apparatus 14 is the communications node on the terminal.” *Id.* at 32 (emphasis omitted). Patent Owner contends that a single structure cannot satisfy two different claim limitations and the language of the claims requires both a terminal and a communications node on the terminal as separate and distinct structures. *Id.*

The majority of the arguments that Patent Owner presents on the necessity of secure communications are based on its proposed claim construction on “communication . . . through.” As discussed in Section

II.C.3 above, we do not adopt Patent Owner’s proposed claim construction for these terms and, therefore, Patent Owner’s arguments do not apply.

On the issue of Patent Owner’s contention that Iida is silent regarding any program code that provides a communication node, we are not persuaded. Mr. Geier explains that in Iida’s terminal 14, initialization/configuration information is sent to one of its communication units 66 or 68 and a person of skill “would understand that the operation of control unit 60 when sending this information to one of the communication units 66 or 68 would involve the CPU of control unit 60 fetching the code from the ROM or RAM of control unit 60 and executing it.” Ex. 1002 ¶ 53 (citing Ex. 1003, Fig. 1B). We credit Mr. Geier’s testimony because he provides this reasoned technical analysis as support for his conclusion on the second program code limitation from the viewpoint of one of ordinary skill in the art. Dr. Butler does not refute Mr. Geier’s testimony on a technical basis, and instead limits his testimony to the issue that Iida does not explicitly disclose the use of program code. *See* Ex. 2099 ¶ 116. But Patent Owner asks too much—anticipation need not satisfy *ipsissimis verbis* disclosure and instead the dispositive issue is whether one of ordinary skill in the art would infer that a reference discloses a limitation. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990); *In re Baxter*, 952 F.2d at 390.

We also do not agree with Patent Owner’s argument that Petitioner is required to identify separate hardware structures for the terminal and its communications node because the ’969 patent describes that the terminal or portable device may act as a communication node. As Petitioner asserts, the ’969 patent specification states that “[a] computer, other device, software, or

combination thereof that facilitates . . . is commonly referred to as a ‘node’.” Pet. Reply 10 (citing Ex. 1001, 2:7–11). The specification further states that “the TCAPS . . . may serve as node within a virtual private network (VPN).” Ex. 1001, 19:66–20:1. As Mr. Geier testifies, Iida’s control unit 60, which is in the terminal, executes code that performs configurations to enable terminal communications on a communication network link (for communication to a base station) and on a Bluetooth or HomeRF network (for communication with the camera), and this configuration is done within the terminal. *See* Ex. 1002 ¶ 52; Pet. 19–20. We do not discern any deficiency with Petition’s assertion that the configuration of the terminal by code, as disclosed by Iida, comprises the claimed “communication node” as the claim requires.

(4) Portable Device Elements

Reproduced below is Petitioner’s mapping of camera 12 components to the claim elements.

[1j] the portable device comprising: (a) an external communication interface configured to enable the transmission of communications between the portable device and the terminal;	[0066] " <u>wireless communication unit 56</u> for performing wireless communication . . . with the portable terminal 14."
[1k] (b) a processor; and	[0065] "control unit 52, which includes a CPU ..."

[11] (c) a memory having executable program code stored thereon, including:	[0065] "A control unit 52 , which includes ... a ROM (which stores therein a program for executing digital camera control processing to be explained later), and a RAM ..."; Figs. 4A-4D and [0054] "flow charts showing the contents of digital camera control processing which is executed by control unit included in the digital still camera"
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Pet. 21–22. The figure reproduced above is a chart identifying various limitations (1j, 1k, and 1l) of claim 1, with Petitioner’s mapping of portions of Iida where Petitioner asserts those elements are disclosed. Patent Owner does not present arguments directed to this element mapping. *See generally* PO Resp. We find that the evidence of record persuasively supports Petitioner’s assertions.

(5) Third Program Code

Petitioner contends that Iida discloses the third program code limitation by its disclosure of camera 12 communications to terminal 14 and communications to the computer network. Pet. 22–24. Mr. Geier testifies that in order to communicate with the terminal via Bluetooth or HomeRF, camera 12 necessarily includes code for establishing camera 12 as a node to coordinate communication and establish a link. Ex. 1002 ¶ 54. Mr. Geier further testifies that control unit 52 establishes camera 12 as a network node by executing code that sends initialization/configuration information to wireless communication unit 56. *Id.*

Patent Owner presents the same arguments for the third program code as those presented for the second program code. PO Resp. 30–33. We do not find these arguments persuasive for the reasons discussed above.

On this record, we find that Petitioner provides persuasive evidence that Iida discloses the third program code limitation of claim 1.

(6) Fourth Program Code

Petitioner asserts that Iida discloses the fourth program code by the user input on terminal 14 of a number that is transmitted to camera 12. Pet. 24–26 (citing 1003 ¶¶ 84, 105, 131). Based on the instruction inputted by the user and then transmitted, Petitioner contends that the code stored on the camera’s ROM performs the steps shown in Figures 4A–4D. *Id.* at 25–26. Petitioner asserts that steps 236–249 of Figure 4C, like all the steps shown in Figures 4A to 4D, are performed by control unit 52 of camera 12, based on stored program code. *Id.* at 26 (citing Ex. 1003 ¶¶ 54, 65). Petitioner argues that these steps generate an interactive user interface on the terminal’s screen (step 236), and then receive instructions from the user, and perform steps responsive to user selection from choices displayed on the interactive user interface. *Id.* (citing Ex. 1003 ¶¶ 99–114; Ex. 1002 ¶ 57).

Petitioner’s more specific assertions on the operation of Iida are that the menu screen on display unit 62 of the portable terminal constitutes the interactive user interface, and the menu screen offers choices for user interaction. Pet. 19 (citing Ex. 1003 ¶ 83). Petitioner contends that when the user inputs a number into the operating unit 64 of portable terminal 14, it is transmitted to camera 12, and there is a response, that is, steps are executed by camera 12. *Id.* at 24–26. In support, Mr. Geier testifies “[t]he menu screen displays choices which can be selected by the user making the screen thereby interactive,” and then the control unit and code of the camera performs steps “responsive to the user selection from choices displayed on the interactive user interface.” Ex. 1002 ¶¶ 51, 57.

Petitioner contends that the activity disclosed in Iida is interactive because the “user’s inputs are dependent on the displayed user interface.” Pet. Reply 5. Petitioner points to the example in Iida illustrated on Figures 6A, 6E, and 6F, where if a user enters “2” when the Figure 6A is presented, the display is changed. *Id.* (citing Ex. 1003 ¶¶ 94–95). Petitioner further asserts that if a user selects a “2” when Figure 6E is presented, the image corresponding to the input number has its resolution transformed for the thumbnail image display, and if there is a user selection of “2” when Figure 6F is presented, the routine returns and Figure 6A is displayed. *Id.* at 5–6 (citing Ex. 1003 ¶¶ 99, 102). Petitioner asserts that:

The camera responds to the number “2” in each case depending on what is displayed in the interface. The interaction between the user input and what is seen in the interface determines what happens next. This is one way a user interacts with the displayed menu.

Pet. Reply 6.

Petitioner additionally contends that Iida discloses that the portable device is configured to facilitate communications through the communications node on the terminal and the terminal network interface to communication network node by its disclosure of the function of control unit 52 causing portable terminal 14 to dial a telephone number to connect it to the Internet. Pet. 26–27 (citing Ex. 1003 ¶ 113). Petitioner also asserts that Iida discloses that image data is transferred to image server 18 via portable terminal 14. *Id.* at 27 (citing Ex. 1003 ¶ 114).

Patent Owner alleges Iida does not disclose the “fourth program code” and Iida’s screen is not an interactive user interface because (1) there is no user interaction with Iida’s display; (2) Iida does not disclose an interactive

user interface “present[ed]” by execution of program code on the terminal and Iida’s display is a static image which has no interactive properties; (3) Iida’s mode of operation in presenting images is fundamentally different than an interactive interface; and (4) the fourth program code requires “a communication resulting from user interaction with the interactive user interface,” and Iida only discloses pushing a button on a keypad, which is not part of the interactive user interface. PO Resp. 22–24.

More specifically, Patent Owner asserts that Petitioner relies on static menu images displayed on the display unit of Iida’s portable apparatus. PO Resp. 25 (citing Pet. 17–18). Patent Owner argues that Iida’s static images “are not interactive and do not present a display with which a user may interact.” *Id.* Patent Owner asserts that a user does not engage with any interactive elements, but only presses a button on a keypad. *Id.* at 26 (citing Pet. 16). Patent Owner contrasts Iida’s disclosures with the interactive user interface of the ’969 patent which discloses user “engagement” with an interactive user interface. *Id.* (citing Ex. 1001, 1:52–61, 10:32–35, 10:41–43, 12:56–58; 11:13–17, 8:19–21, 9:37–48, 10:19–23, 10:64–11:4, 11:61–66, Figs. 5a–8; Ex. 2099 ¶¶ 98–102). Patent Owner also contends that the keypad operation of Iida is unlike interactive user interfaces known at the time, such as that disclosed in the Shaw article, which distinguished “typescript-oriented” interfaces from those with user interactions based in part on the locations and/or movement of the user’s point of interaction with the display. *Id.* (citing Ex. 2100, 4–6, 9)¹¹.

¹¹ Patent Owner’s references to the page numbers of Shaw are unclear. As best we can ascertain, they appear to relate to the order of the pages in the

Patent Owner also argues that Iida does not teach the terminal taking action responsively by responding to the user because it is the camera, and not the terminal, that analyzes the key-press information, determines what action to take, and responds to the user. PO Resp. 27–28. Patent Owner contends that “[t]he terminal in Iida does not take any action that responds to the user but simply conveys the inputted key-press information to the camera [,] regardless of what it is.” *Id.* at 28 (emphasis omitted). Patent Owner asserts that this is inconsistent with what a person of ordinary skill would expect from an interactive user interface, as under the Shaw article and the ’969 patent disclosures. *Id.* at 28–29 (citing Ex. 2100, 5; Ex. 2099 ¶¶ 105–108; Ex. 1001, 11:61–66).

We find that the evidence and argument presented by Petitioner is persuasive to demonstrate that Iida discloses the fourth program code limitation as claimed. Applying the construction for an interactive user interface adopted *supra* Section II. C.1, which is “a display containing interface elements with which a user may interact to result in a computer taking action responsively,” we agree with Petitioner that the menus of Iida are interface elements that users interact with. Mr. Geier’s testimony on user input for the selection of options on menus is supported by Iida’s disclosure of menu screens, such as those depicted in Figures 6A, 6E and 6F, which display choices that a user can select. *See* Ex. 1002 ¶¶ 51, 57. We agree with the Petitioner that the evidence supports that the menu screens are

Shaw article, but these numbers are not reflected in the record copy. *See* Ex. 2100.

interactive elements¹² because Iida discloses that a user can input option choices, such as, as Petitioner asserts, if a user enters “2” when the Figure 6A is presented, the display is changed. *See e.g.*, Ex. 1003 ¶¶ 83, 93–95. User selection of the numerical input is “user interaction,” where, as Mr. Geier testifies, “[t]he menu screen displays choices which can be selected by the user making the screen thereby interactive,” and actions are taken responsive to user selections from the choices displayed on the interactive user interface. Ex. 1002 ¶¶ 51, 57.

We do not find persuasive Patent Owner’s arguments on the keypad operation of Iida based on the Shaw article. *See* PO Resp. 25. As discussed in claim construction *supra* Section II. C.1, as part of the consideration of the interpretation of interactive elements, we decline to import a limitation requiring that user interaction be based on location and/or movement of a user’s point of interaction as Patent Owner argued was required based on the Shaw article. Additionally, we note that Shaw is directed to detailing the deficiencies of batch-style input-output and presenting a new model for input-output for modern interactive systems. *See* Ex. 2100, 14, Abstract.¹³ Shaw states that “advances in software and hardware have introduced new problems” that may include “interactive input.” *Id.* at 18. In Shaw, cursor location may be accounted for if a pointer device is supported by a terminal or workstation, however, “interactive input” also includes feedback during input which “may be a[s] simple as echoing characters,” which would apply

¹² This view is consistent with the ’969 patent specification’s disclosure of “[c]omputer interaction interface elements such as check boxes, cursors, *menus*, scrollers, and windows.” Ex. 1001, 1:52–53 (emphasis added).

¹³ For references to Shaw, we use the annotated page numbers in the lower right hand corner of the document.

to input such as keyboard entry such as that disclosed in Iida, for instance. *Id.* at 22. As such, Shaw is consistent with the claim construction adopted, as well as our determinations on the sufficiency of Iida's disclosures.

Finally, we also do not find persuasive Patent Owner's argument that Iida does teach not the terminal taking action responsively because that is not required under the claim construction adopted here. Patent Owner attempts to read in limitations not appearing in the claims. Instead, it is undisputed that it is the portable device, that is, the camera of Iida, that takes the action responsively, and that falls within the claim construction adopted here. *See* PO Resp. 27–28.

Based on the entirety of the record, we determine that Petitioner has presented persuasive evidence Iida discloses the fourth program code limitation.

(7) Summary for claim 1

To summarize, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 1.

b. Dependent claim 2

Claim 2 depends from claim 1 and recites the portable device “wherein the fourth program code which, when executed by the portable device processor, is configured to cause a communication to be transmitted to the communication network node.” Ex. 1001, 31:30–33. Petitioner relies upon Figure 4C of Iida which discloses steps performed by the camera, including transmission of a user identifier (“ID”) and password to an image server, with Petitioner mapping the image server to a communication network node. Pet. 28–29 (citing Ex. 1003 ¶¶ 113–114, Fig. 4C; Ex. 1002 ¶ 59).

Patent Owner provides no additional arguments related to claim 2, beyond those related to independent claim 1, which we do not find persuasive for the reasons explained above. *See generally* PO Resp.

On this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 2.

c. Dependent claim 3

Claim 3 depends from 2 and recites the portable device “wherein the communication caused to be transmitted to the communication network node facilitates verification of the portable device.” Ex. 1001, 31:34–37.

In the Petition, Petitioner relies upon Iida’s disclosure of steps for writing and transmitting a user ID and password for authentication purposes. Pet. 29–30. Patent Owner argues that Iida’s user ID is associated only with the current user, and not with the camera. PO Resp. 33 (citing Pet. 29; Ex. 1003 ¶¶ 75, 113; Ex. 2099 ¶¶ 120–121).

In Reply, Petitioner argues that “[i]n Iida, the shop writes a user ID and password into the camera, uniquely identifying it.” Pet. Reply 11 (citing Ex. 1003 ¶ 75). Petitioner asserts that the identifying information is not entered by the user, so it verifies the camera, and the renter may hand anyone the camera to use. *Id.* (citing Ex. 1003 ¶ 125).

In the Decision on Institution, we determined that Iida did not anticipate this claim because Iida discloses only that the user is authenticated, however, there is no verification of the portable device. *See* Inst. Dec. 40. Based upon the entirety of the record, we are not persuaded that Petitioner has provided persuasive evidence of Iida’s disclosure of the limitation of this claim because Iida discloses that camera 12 may be rented to multiple users, the shop assigns a user ID to the user when the camera 12

is rented, writes it into the camera's memory, communicates it to a company managing image server 18, with an image data saving area dedicated to a user. Ex. 1003 ¶¶ 12, 57, 75, 76. Log-in processing is executed, with the user ID and password transmitted to image server 18, and "the user renting the digital still camera 12 is authenticated by the image server 18 and is thereby able to use the service offered by the image server 18" (*id.* ¶ 113). The evidence therefore supports Patent Owner's argument (PO Resp. 33), that Iida's user ID is associated with the current user of the camera, not the camera itself, and does not "facilitate verification of the portable device," as required in claim 3.

Accordingly, on this record, we determine that Petitioner has not demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 3.

d. Dependent claim 4

Claim 4 depends from claim 2, and recites the portable device "wherein the communication caused to be transmitted to the communication network node facilitates the transmission of encrypted communications from the communication network node to the terminal." Ex. 1001, 31:38–42.

Petitioner argues that in Iida the camera performs access point determination and log-in processing with the image server, and a person of ordinary skill in the art would understand that a connection/channel has been established from the image server to the camera through the terminal. Pet. 30. With that, Petitioner asserts that "transmissions from the image server, whether encrypted or not, have been facilitated." *Id.* (citing Ex. 1002 ¶ 63). Petitioner further asserts that the claimed function is facilitating communications and whether the information is encrypted or not is merely

the difference in the information content being transmitted, which is not entitled to patentable weight. *Id.* at 31. Petitioner contends that under the printed matter doctrine no patentable weight is afforded to information content that is not functionally related to its substrate. *Id.* at 31–32.

Patent Owner argues that the printed matter doctrine does not apply because the claim does not merely recite encrypted information, it recites a communication that “facilitates the transmission of encrypted communications” as a result of execution of fourth program code by the portable device processor. PO Resp. 34. Patent Owner asserts that facilitating transmission of encrypted communications could include setting up appropriate digital certificates or performing any necessary public key management that are technical steps are necessary to facilitate encrypted communications and that demonstrate the functional relationship to the invention and the claimed portable device. *Id.* (citing Ex. 1001, 27:39–44; Ex. 2099 ¶¶ 122–128). Patent Owner contends that the case law cautions against applying the printed matter doctrine to information that is processed by a computer, such as the claimed encrypted communications. *Id.* at 34–35 (citing *In re Lowry*, 32 F.3d 1579, 1583 (Fed. Cir. 1994) (“The printed matter cases have no factual relevance where...the information [is] processed . . . by a machine, the computer.”)).

In Reply, Petitioner argues that the transmitted encrypted communication is subject to the two-step printed matter doctrine. Pet. Reply 12 (citing *In re Distefano*, 808 F. 3d 845, 848 (Fed. Cir. 2005)). Petitioner asserts that, contrary to the Patent Owner’s arguments, the encrypted data is not functionally related to the communication carrying it or to any other element in the claim. *Id.* at 13. Petitioner contends that, even where

information in computer storage is manipulated by a computer in accordance with recited limitations in a claim, “the nature of the information being manipulated ‘does not lend patentability to an otherwise unpatentable computer-implemented product or process.’” *Id.* at 14 (quoting *Ex parte Nehls*, 88 U.S.P.Q.2d 1883, 1889 (BPAI 2008) (precedential)).

In our Decision on Institution, we stated:

If a limitation claims (a) printed matter that (b) is not functionally or structurally related to the physical substrate holding the printed matter, it does not lend any patentable weight to the patentability analysis. *In re Gulack*, 703 F.2d 1381, 1384–85 (Fed. Cir. 1983). Under *DiStefano*, “printed matter must be matter claimed for what it communicates,” that is, “matter claimed for its communicative content.” *In re DiStefano*, 808 F.3d 845, 849–50 (Fed. Cir. 2015). If the limitation in question is determined to be printed matter, one turns to the question of whether the printed matter nevertheless should be given patentable weight. *Id.* at 850. “Printed matter is given such weight if the claimed informational content has a functional or structural relation to the substrate.” *Id.*

As Patent Owner argues, Petitioner does not refer to any case law to support that data in a computer application should be subject to the printed matter doctrine. *DiStefano*, however, included a limited discussion of the issue. *See DiStefano*, 808 F.3d at 850. In its discussion relating to *Lowry*, the Federal Circuit stated that “a computer-based structural database was not printed matter, *not because it involved a computer*, but because the data structures ‘contain[ed] both information used by application programs and information regarding their physical interrelationships within a memory.’” *Id.* (emphasis added) (quoting *In re Lowry*, 32 F.3d at 1583–84); *see also In re Nuijten*, 500 F.3d 1346, 1365 (Fed. Cir. 2007) (information stored on claimed storage medium cannot distinguish from prior art storage medium absent a functional relationship between the stored information and the storage medium).

Inst. Dec. 41–42.

The claim requires only that the “communication caused to be transmitted to the communication network node facilitates the transmission of encrypted communications.” Patent Owner argues that the printed matter doctrine does not apply because the facilitation of the transmission of encrypted communications could include setting up digital certificates or performing public key management, which requires a functional relationship. *See* PO Resp. 34. We do not agree. The claim requires only that there be facilitation of the *transmission* of encrypted communications, and we discern nothing in the claim that requires anything beyond sending and receiving data, even if the data is in an encrypted form. Thus, we determine that “encrypted communications” claims only communicative content, i.e. printed matter. *See In re DiStefano*, 808 at 849–50. We turn to whether there is a functional relationship of the content and the claimed communications. Outside of the communications being transmitted being in an encrypted form, we discern nothing else recited in the claim directed to the data being used or manipulated, that is, there is nothing in the claim requiring any processing of encrypted data beyond the transmission of the same. As such, there is no functional relationship of the encrypted data to the communication carrying it, and, accordingly, we afford no patentable weight on the basis of the “encrypted” nature of the communication.

Petitioner asserts that Iida’s disclosures relating to the fourth program code show the facilitation of transmissions, that is, the opening a channel of communications, so the claim element is disclosed regardless of the contents of the communications. *See* Pet. 30; Pet. Reply 12. Considering the specific language of the claim itself, we agree that, as disclosed in Iida, the

establishment of these communications facilitates the transmission of communications. *See id.*

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 4.

e. Dependent claims 5, 6, and 8

Claim 5 depends from claim 2 and further recites the portable device “wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates access to the communication network node database.” Ex. 1001, 31:43–47. Claim 6 depends from claim 2 and recites “the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of content on the communication network node database to the terminal.” *Id.* at 31:48–52. Claim 8 depends from claim 2 and recites “the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the upload of content on to the communication network node database.” *Id.* at 31:58–62.

Petitioner relies upon Iida’s disclosure of a large number of image data saving areas in storage medium 88 connected to image server 18 as the claimed databases. Pet. 33 (citing Ex. 1003 ¶ 70, Fig. 1C). Mr. Geier provides testimony in support of the contention. Ex. 1002 ¶ 66. Petitioner asserts that Iida discloses communication transmissions, access, download, and upload to/from the image data saving areas as mapped. Pet. 33–35.

For arguments on claims 5–8, 10, and 11, Patent Owner asserts that a person of ordinary skill would understand that a database is more than a

collection of files because it has to be an organized collection of data, as Petitioner recognizes, and there is no evidence presented by Petitioner that the image data saving areas are organized in any way. PO Resp. 35 (citing Ex. 2122, 20:16–22, 21:9–22, 22:19–23:2; Ex. 2099 ¶¶ 129–133).

In Reply, Petitioner points to Iida’s disclosure of a storage medium “organized to provide ‘a large number of image data saving areas for separately saving image data for individual users.’” Pet. Reply 15 (quoting Ex. 1003 ¶ 70). Petitioner argues that Patent Owner presents no argument that overcomes Iida’s explicit teaching of organization of the storage medium by separating it into areas for each user. *Id.* (citing Ex. 1002 ¶ 66).

Dr. Butler testifies that a person of skill in the art would understand that “a database is commonly understood to be ‘an organized collection of data.’” Ex. 2099 ¶ 129. Dr. Butler goes on to testify that the “image data saving areas” of Iida “do not qualify as databases because they are described as a mere collection of files.” *Id.* ¶ 133. Dr. Butler identifies other references that, for instance, use special software, or are a set of records organized by creating relations between sets of records. *See id.* ¶¶ 132–133.

We are not persuaded by Patent Owner’s arguments, nor Dr. Butler’s testimony in support of the arguments on this issue, because Patent Owner itself presents an understanding of a broad interpretation of “database” which only requires that it be “an organized collection of data.” *See* Ex. 2099 ¶ 129. Iida’s disclosure of separately saving image data for individual users is sufficient to qualify as a “database” under Patent Owner’s construction of the term.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claims 5, 6, and 8.

Like claims 5, 6, and 8, claims 7, 10, and 11 also recite that “the communication network node comprises a database,” and we find that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses this limitation of claims 7, 10, and 11 for the same reasons as discussed above.

f. Dependent claim 7

Claim 7 depends from claim 2 and further recites the portable device “wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of program code on the communication network node to the terminal.” Ex. 1001, 31:53–57.

Petitioner contends that downloading of program code is no different than downloading any other kind of data, and there is no function recited for the downloaded program code, other than it is received by the terminal. Pet. 34. Petitioner argues that the information content of what gets received is not entitled to patentable weight. *Id.*

Patent Owner argues that Petitioner misapplies the printed matter doctrine. PO Resp. 36. Patent Owner asserts that Petitioner’s contention that the program code in claim 7 “provides no function . . . disregards that the purpose of program code is to impart functionality to the apparatus that runs it” because “software update is functionally related to the device receiving it. *Id.* (citing Ex. 2099 ¶¶ 134–139). Patent Owner contends that a “reasonable interpretation of Claim 7 is that the downloaded code is

intended to be executed by the portable device or terminal referenced in the claims,” and the ’969 patent specification, which discusses updating program code on the TCAP and/or access terminal, explains that purpose. *Id.* (citing Ex. 1001, 9:32–35, 19:12–17; Ex. 2099 ¶ 135) (emphasis omitted). Patent Owner further asserts that it is undisputed that Iida does not teach facilitating the download of program code. *Id.* at 37.

After considering the entire record, we determine that the recital of “program code” in claim 7 is not entitled to patentable weight. The recital of “downloading” of program code in claim 7 is limited to downloading (sending or transmitting) the code, which is a communication, and no other function is recited in the claim. We decline Patent Owner’s request to import non-recited functions into claim 7 because Patent Owner does not explain why we should do so.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 7.

g. Dependent claim 10

Claim 10 depends from claim 2 and recites the portable device “wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates synchronizing content on the portable device with content on the communication network node database.” Ex. 1001, 32:1–6.

Petitioner argues that Iida’s program code provides the user with the tools for synchronizing content. Pet. 35. Petitioner asserts that in Iida saving the data on camera 12 into data storage medium 88 of image server

18 and saving data from data storage medium 88 into camera 12 serves to synchronize the content. *Id.* (citing Ex. 1002 ¶ 70).

Patent Owner argues that “Petitioner and its expert contend that any pair of devices with the capability of storing data must ‘facilitate synchronizing data’ . . . because a user could take the initiative to save images of his or her own choosing.” PO Resp. 38 (citing Pet. 35; Ex. 1002 ¶ 70). Patent Owner contends that Iida says nothing about synchronization, Petitioner’s argument is hindsight speculation, and the assertion is inconsistent with Mr. Geier’s previous statement. *Id.* (citing Ex. 2099 ¶¶ 140–141; Ex. 2124, 92).

In Reply, Petitioner argues that claim 10 does not require automatic synchronization nor the performance of synchronization. Pet. Reply 17. Petitioner asserts that the claim requires that the “fourth program code executed by the portable device in response to user interaction with an IUI that causes a transmission to the network node so as to facilitate synchronizing content,” and Iida teaches that facilitation by its log-in processing transmission that makes uploading and downloading possible. *Id.* (citing Ex. 1002 ¶ 70).

On the full record, we agree with Patent Owner that Petitioner presents insufficient evidence to support that Iida discloses this limitation, as we found in the Decision on Institution. *See* Inst. Dec. 46. As discussed, Mr. Geier testifies that Iida’s program code provides a user the ability to save data in either uploads, downloads, or in erasing content. *See id.* (citing Ex. 1002 ¶ 70). However, Petitioner provides us with no claim construction to support why we should credit Mr. Geier’s testimony to the extent that the piecemeal saving or erasing data disclosed in Iida on an “as desired” basis

would be sufficient to teach the claimed “facilitate[ing] synchronizing content” in the view of one of ordinary skill in the art.

Accordingly, on this record, we determine that Petitioner has not demonstrated that Iida discloses all the elements of claim 10 by a preponderance of the evidence.

h. Dependent claim 11

Dependent claim 11 recites the portable device of claim 2 “wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of a live data feed to the terminal.” Ex. 1001, 32:7–11. Similar to its arguments for claims 4 and 7, Petitioner alleges that Iida discloses a communication transmitted to image server that can be used to facilitate a download. Pet. 35 (citing Ex. 1002 ¶ 71). Mr. Geier testifies that “Iida discloses a digital still camera [the FinePix6800Z camera] that can *record* a dynamic image with sound.” Ex. 1002 ¶ 71 (emphasis added). Mr. Geier further testifies that “[w]hether the content being downloaded is coming from a storage medium or being delivered live from a server is of no consequence” for facilitating the download. *Id.* And Mr. Geier testifies that “[i]t makes no difference to the claimed facilitating communication whether the short video is a recorded feed or a live feed.” *Id.*

Patent Owner argues that Petitioner disregards the claim element “live data feed,” in its arguments. PO Resp. 38 (citing Pet. 35). Dr. Butler testifies that “live” means “at the actual time of occurrence” and “[d]ownloading an entire file and playing it back later does not count as ‘live,’” and further asserts that Mr. Geier agrees with this interpretation on the meaning of “live data feed.” Ex. 2099 ¶ 145 (citing Ex. 2122, 160:24–

161:2, 185:19–186:18; Ex. 2125, 728). Patent Owner contends that “Iida’s terminal is capable of receiving only discrete image data files, which are downloaded in their entirety before being stored or viewed.” PO Resp. 39 (citing Ex. 1003 ¶¶ 106, 114, 128; Ex. 2122, 176:7–10). Dr. Butler further testifies that live data feeds are handled differently from other types of downloads because of technical differences, such as requiring large bandwidth and protocols such as Real-time Transport Protocol (RTP) or isochronous transfers. Ex. 2099 ¶ 146–148 (citing Ex. 2120, 50, 72; Ex. 2136, 5).

Although Mr. Geier testifies that “it is of no consequence” whether the download is coming from a storage or being delivered live from a server (Ex. 1002 ¶ 71), Mr. Geier also testifies:

Q. Right. *So a prerecorded data file that is transmitted after the recording is complete, that does not count as transmission of a live data feed; correct? . . .*

THE WITNESS: I thought that was the same question you asked before. So we've already stored it and now we're going to send it someplace else and that's just a file you're – you're moving someplace. . .

Q. And that's not a live data feed; correct? Yes or no question.

A. Well, I -- as I -- I thought I answered that before. *I can't think of a reason why that would be a live data feed, so --*

Q. Okay. That's --

A. -- *no*, I mean, I answered that before.

Ex. 2122, 185:19–186:19 (emphases added). We find that, even if Iida implicitly discloses transmission of a dynamic image with sound (Ex. 1003

¶¶ 127, 153), there is no explicit or implicit disclosure that the transmission is a live data feed as opposed to transmission of prerecorded data file, which Mr. Geier concedes is not the same as transmission of a live data feed. *Id.*

On the full record, we agree with Patent Owner that Petitioner presents insufficient evidence to support that Iida discloses the limitation of claim 11. Petitioner provides us with no claim construction to support why we should consider that “download of a live data feed” should be interpreted so broadly as to include the download of pre-stored image data. And both Mr. Geier’s and Dr. Butler’s testimony support that the claim language should not be interpreted so broadly; instead, a pre-stored data file that is later sent is not a “live data feed.” Ex. 2099 ¶ 145; Ex. 2122, 185:19–186:19. And Iida fails to disclose a “live data feed” because its teachings are limited to recording dynamic images.

Accordingly, on this record, we determine that Petitioner has not demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 11.

i. Dependent claim 12

Claim 12 depends from claim 11, and recites that the portable device “wherein live data feed is presented on the terminal output component.” Ex. 1001, 32:12–13. As discussed above, the Petition fails to demonstrate that Iida discloses all the elements of claim 11, and Petitioner’s evidence and arguments presented for claim 12 fail to cure those deficiencies. *See* Pet. 36. By virtue of its dependency on claim 11, we find that that Petitioner has not demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 12.

j. Dependent claims 13–15

Claim 13 recites the portable device of claim 1, “wherein the portable device is further configured to affect the presentation of the interactive user interface on the terminal output device.” Ex. 1001, 32:14–16. Claims 14 and 15 recite, respectively, the portable device of claim 13 “wherein the portable device memory has fifth program code stored thereon, which, when executed, is configured to affect the presentation of the interactive user interface on the terminal output device,” and “wherein the portable device is configured to provide the terminal with access to content stored on the portable device memory which affects the presentation of the interactive user interface on the terminal output device.” *Id.* at 32:17–27. Petitioner predominantly relies upon Iida’s disclosure of software executing the code of Figures 4A–4D for the disclosure of these claim limitations. Pet. 37–38.

Patent Owner does not provide any additional arguments for these claims, beyond those related to independent claim 1, which we do not find persuasive for the reasons explained above. *See* PO Resp. 33–41.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claims 13–15.

k. Dependent claim 16

Claim 16 depends from claim 15 and recites the portable device “wherein the content comprises a user name and/or a portable device identifier, and the interactive user interface is affected to present the user name and/or portable device identifier.” Ex. 1001, 32:28–31. Petitioner asserts that claim 16 requires that the accessible content of the claim be a user name or a portable device identifier, but that is of no patentable

significance as it is merely being presented on a monitor. Pet. 38. Petitioner further contends that Figures 6A–6I of Iida illustrate presenting content from the portable memory device on the terminal output device and patentability cannot be established by changing the words and information being displayed. *Id.* More specifically, Petitioner asserts that the claim requires presenting content identifying either the portable device or the user on the interactive user interface, and this is purely communicative content and is printed matter. Pet. Reply 17 (citing *Praxair Distrib., Inc. v. Mallinckrodt Hosp. Prod. IP Ltd.*, 890 F.3d 1024, 1032 (Fed. Cir. 2018)). Petitioner argues that if there was alternative printed presentations, “a new product with new functionality would not result.” *Id.* at 17–18 (citing *AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1065 (Fed. Cir. 2010)).

Patent Owner asserts the printed matter doctrine does not apply to information presented by a computer and the user name and/or portable device identifier should be given patentable weight because it is stored on the portable device memory and presented on the terminal output component. PO Resp. 39–40.

Here, we are persuaded by Petitioner’s evidence and argument. As *Praxair*, applying *DiStefano*, states “a claim limitation is directed to printed matter ‘if it claims the content of information.’” *Praxair*, 890 F.3d at 1032 (citing *DiStefano*, 808 F.3d at 848). And although claim 15, from which claim 16 depends, requires configuration of the portable device to provide the terminal with access to the content, and claim 16 requires that the accessed content is presented, claim 16 is explicitly directed to “the content.” As such, we determine that the user name and portable device identifier portion of claim 16 is directed to printed matter. Next we turn to

whether the content has a functional or structural relationship to the substrate. Here, we discern that there is a distinction between instances where there was a functional relationship, such as where there was an interrelationship between printed digits on a circular band, and the case here. *See* Pet. Reply 18 (citing *In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1983)). The challenged claims do not recited any functional relationship between the printed matter (a user name and/or a portable device identifier) and the substrate (the interactive user interface on the terminal output component). Instead, as Petitioner asserts, regardless of the content presented, it would not affect functionality as claimed. *See Ex parte Nehls*, 88 U.S.P.Q.2d at 1889.

Thus, we agree with Petitioner that the “content” portion of the claim, i.e. user name and a portable device identifier, is nonfunctional printed matter and should not be afforded patentable weight. Additionally, we agree that Iida discloses presenting content, such as that depicted in Figure 6B. *See* Ex. 1002 ¶ 76.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 16.

l. Dependent claims 19 and 20

Claim 19 depends from claim 1, and recites “wherein the portable device is configured to cause the terminal to execute the first program code and present an interactive user interface on the terminal output component.” Ex. 1001, 32:40–43. Claim 20 depends from claim 19, and recites “wherein the portable device memory has fifth program code stored thereon, which, when executed by the portable device processor, is configured to cause the

terminal to execute the first program code and present an interactive user interface on the terminal output component.” *Id.* at 32:44–49. Petitioner relies upon Iida’s disclosure of software for executing the code for the steps shown in Figures 4A–D. Pet. 39–40.

Patent Owner does not provide any additional arguments for these claims, beyond those related to independent claim 1, which we do not find persuasive for the reasons explained above. *See* PO Resp. 33–41.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claims 19 and 20.

m. Dependent claim 21

Claim 21 depends from claim 1 and recites the portable device “wherein the interactive user interface comprises a graphic user interface.” Ex. 1001, 32:50–51. Petitioner refers to graphic displays of Iida, such as Figure 6E, for the disclosure of the limitations of claim 21. *See* Pet. 40–41. More specifically, Petitioner argues that Iida discloses that “the user interface as described by Iida takes place through the terminal’s ‘operating unit 64 comprising a ten-keys, touch pad or the like.’” *Id.* (citing Ex. 1003 ¶ 68). Petitioner further argues that Figure 6E discloses a “graphic[al] display” and that “a touch pad was known to manipulate a cursor on graphic displays such as shown in Fig. 6E for making a selection of one of the displayed images.” *Id.* at 41 (citing Ex. 1002 ¶ 77).

Patent Owner asserts that Iida does not disclose a graphic user interface because “[t]he user in Iida merely looks at the thumbnails in Iida and presses a numeric key separate from the display.” PO Resp. 40 (citing Ex. 1003 ¶¶ 68, 95–97, 128). Patent Owner also argues that there is no

connection between the touch pad and the display because the only way a user can react to a display is to input a number. *Id.* at 40–41 (citing Ex. 1003 ¶¶ 68, 97, Fig. 6E). Patent Owner also contends that “[n]othing in Iida suggests using a touch pad to enter a number, and the user does not click, tap, use a cursor on, or otherwise interact with the thumbnails in Iida.” *Id.* at 41 (citing Ex. 2099 ¶¶ 155–156).

Patent Owner’s arguments are premised on its proposed interpretation for the term “interactive user interface.” *See supra* Section II.C.1. As discussed, we rejected that interpretation, determining only that an “interactive user interface” means “a display containing interface elements with which a user may interact to result in a computer taking action responsively.” *See id.* Patent Owner’s arguments are also premised on its contention that Iida’s menus are not interactive user interfaces and a user does not engage with the interactive elements. *See supra* Section II.D.2.a.6. As discussed above, we reject those arguments, determining that Iida discloses interface user interfaces with menu screens operating as interactive elements, and with user selection of numerical input serving as user interaction. *See id.*

Here, we have adopted the ordinary meaning of the term “graphic user interface,” that is, it is a user interface that includes graphical elements—and all that is required under claim 21 is that “the interactive user interface comprises a graphic user interface.” *See supra* Section II.C.2. Petitioner relies on the graphic displays of Iida, such as Figure 6E, which discloses graphical elements, and which we determine to be sufficient disclosure to teach the claim element.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claim 21.

n. Dependent claims 24, 25, and 27

Claim 24 depends from claim 1 and recites “a portable device memory comprises one or more of the group consisting of flash memory, read only memory, random access memory.” Ex. 1001, 32:59–62. Claim 25 depends from claim 1 and recites “communications network node comprises a server.” *Id.* at 32:63–64. Claim 27 depends from claim 1 and recites “external communication interface comprises a wireless communication interface.” *Id.* at 33:1–3. Petitioner relies upon Iida’s disclosures of a ROM/RAM memory in the portable device, its image server, and a wireless communication unit. Pet. 41–42.

Patent Owner does not provide any additional arguments for these claims, beyond those related to independent claim 1, which we do not find persuasive for the reasons explained above. *See* PO Resp. 33–41.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claims 24, 25, and 27.

o. Independent claims 28 and 29

Independent claims 28 and 29, recited in method and system forms, have similar limitations to claim 1. We find the evidence and argument presented in the Petition is persuasive for the reasons explained above for claim 1. *See* Pet. 42–54. Patent Owner presents no additional arguments directed to these claims. *See* PO Resp. 22–41.

Accordingly, on this record, we determine that Petitioner has demonstrated by a preponderance of the evidence that Iida discloses all the elements of claims 28 and 29.

p. Summary of Anticipation Challenge

On this record, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 4–8, 13–16, 19–21, 24, 25, and 27–29 of the '969 patent are anticipated by Iida and that Petitioner has not shown by a preponderance of the evidence that claims 3 and 10–12 are anticipated by Iida.

E. Alleged Obviousness over Iida and Fuji Guide

Petitioner contends that claims 1–8, 10–16, 19–21, and 24–29 would have been obvious over Iida and Fuji Guide. Pet. 54–64. To support its contentions, Petitioner provides explanations as to how Iida and Fuji Guide teach each claim limitation. *Id.* Petitioner also asserts that the Fuji Guide was sufficiently available to the public interested in the art. Pet. 10–11; Pet. Reply 21–22. Petitioner relies upon the Geier Declaration (Ex. 1002) to support its positions on obviousness as well as the Widener Declaration (Ex. 1005) to support its position on public accessibility.

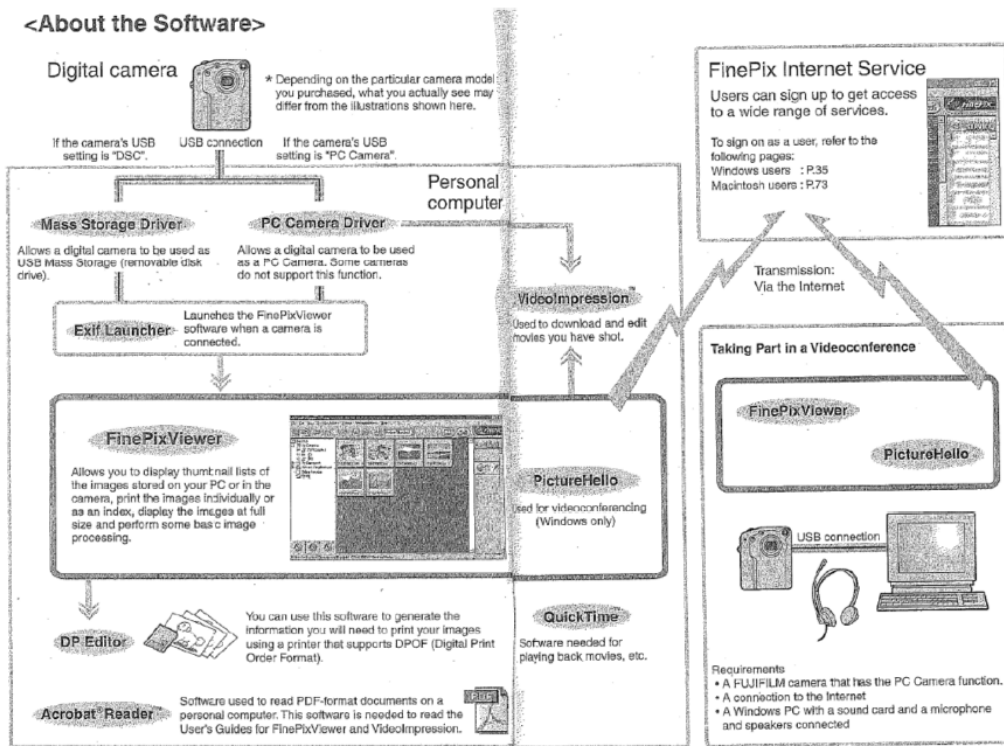
In addition to arguing that the prior art fails to teach some claim limitations and there is insufficient rationale to combine the prior references, Patent Owner argues that Petitioner has failed to prove that the Fuji Guide was sufficiently available to the public interested in the art, is not a printed publication, and therefore the Fuji Guide cannot be used as prior art. PO Resp. 41–56; PO Sur-Reply 20–25. Patent Owner relies upon the Butler Declarations (Exs. 2003, 2099) to support its positions.

We begin our discussion with a brief summary of Fuji Guide, and then address the evidence and arguments presented.

1. Fuji Guide (1004)

Fuji Gide, entitled “Software Quick Start Guide,” is one of the user manuals which was allegedly provided to purchasers of the FinePix6800Z camera, and this model of camera is referred to in Iida. Ex. 1003 ¶ 153; Ex. 1004;¹⁴ Ex. 1005.

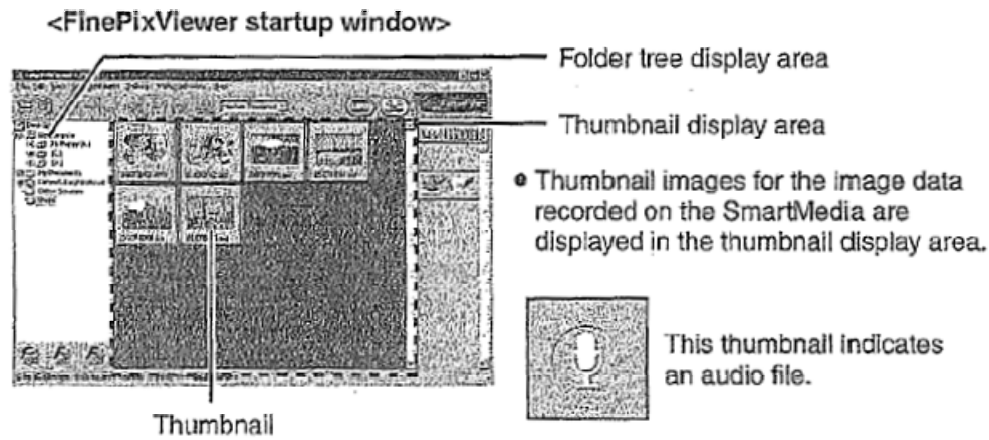
Fuji Guide depicts setting up the camera with an attachment to a personal computer, as depicted in the figure reproduced below. Ex. 1004, 7.



The figure reproduced above depicts an attachment of the camera to a personal computer, and also depicts communications to allow participation in a videoconference. Ex. 1004, 7. This figure also shows that the camera

¹⁴ Hereafter, we refer to the page numbering appended to Fuji Guide and not its original page numbers.

may be attached to the personal computer by a USB cable. *Id.* Fuji Guide also depicts CD-ROMs that can load software on the personal computer. *Id.* FinePixViewer software, which may operate in Windows, allows thumbnail images from the camera to be displayed on the computer screen as depicted in the figure reproduced below. *Id.* at 17.



As depicted in the figure reproduced above, the FinePixViewer startup window launches and thumbnail images are communicated from the camera and displayed. Ex. 1004, 17. The FinePixViewer also includes features for communications with the Internet. *Id.* at 20–21.

2. Analysis

a. Legal Standard for Obviousness

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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 ordinary skill in the art; and when presented (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

b. Availability of the Fuji Guide as Prior Art

i. Legal Standards for Printed Publication

We look to the underlying facts to make a legal determination as to whether a reference is a printed publication. *Suffolk Techs., LLC v. AOL Inc.*, 752 F.3d 1358, 1364 (Fed. Cir. 2014). The determination of whether a given reference qualifies as a prior art “printed publication” involves a case-by-case inquiry into the facts and circumstances surrounding its disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). “A reference is considered publicly accessible if ‘persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.’” *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1369 (Fed. Cir. 2019) (quoting *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018)). “A given reference is ‘publicly accessible’ upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it.” *Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1378 (Fed. Cir. 2006) (citation omitted).

User manuals require evidence of publication or dissemination to be deemed a printed publication. *See ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 865–66 (Fed. Cir. 2010). “[I]t is not enough for Petitioner to

establish that a product was available to the public. Rather, the critical inquiry is whether the document itself was publicly accessible.” *ASM IP Holding B.V. v. Kokusai Elec. Corp.*, IPR2019-00369, Paper 8, 15–16 (PTAB Jun. 27, 2019).

ii. Evidence and Argument Presented

Petitioner asserts that Iida references the “FinePix6800Z” camera manufactured by Fuji Photo Film Co., Ltd. and this camera was available at least by 2001, as confirmed by reviews appearing in magazines. Pet. 10 (citing Ex. 1008; Ex. 1011; Ex. 1002 ¶ 38–40). Petitioner contends that the FinePix6800Z camera was a consumer item with unlimited distribution to a mass market as confirmed by reviews in magazines, and further confirmed by actual sales. Pet. Reply 21 (citing Ex. 1008; Ex. 1011; Ex. 1043, 12; Ex. 1002 ¶ 38–40).

Petitioner relies on the Widener Declaration to support that consumers purchasing the camera received several user manuals, including a document referred to as the Fuji Guide. Pet. 10 (citing Ex. 1004; Ex. 1005). Petitioner contends that Mr. Widener, a purchaser of the camera, testifies that he received the Fuji Guide in a FinePix6800Z camera package that he purchased in 2001. *Id.* (citing Ex. 1005). Petitioner also contends that the date of the Fuji Guide is corroborated by a substantially similar version found online having a modify date of February 20, 2001. *Id.* (citing Ex. 1002 ¶ 41 (determining modify date by the use of metadata); Ex. 1012). Petitioner refers to a comparison of cited pages of the Fuji Guide with the web version. Pet. Reply 22 (citing Ex. 1045). Petitioner also refers to a photograph allegedly taken on March 3, 2003, by the FinePix6800Z camera Mr. Widener had purchased as further corroboration that the camera had

been purchased, as discussed in the deposition testimony of Mr. Widener.¹⁵ *Id.* (citing Ex. 2126, 58:5–60:8).

Petitioner argues that the “Fuji Guide is a booklet that could be freely disseminated by whoever possesses it.” Pet. 10. Petitioner contends that the Fuji Guide is prior art because it is a printed publication that was accessible to the public in 2001 through purchase of the camera. *Id.* (citing Ex. 1005; Ex. 1002 ¶¶ 38–41).

More specifically, Mr. Widener testifies that he purchased a FinePix 6800 Zoom camera a few months after the model was being offered for sale to the general public, and to the best of his knowledge, the purchase was in June, 2001. Ex. 1005 ¶¶ 2–4. Mr. Widener testifies that he retained an original copy the documentation, which came in a variety of languages, which accompanied the purchased camera. *Id.* ¶ 5. Mr. Widener testifies he attached, as Exhibit D, a reproduction of the original English language Software Quick Start Guide that accompanied the camera he purchased in 2001. *Id.* ¶ 14. Mr. Widener testifies that in or around July 2018, he listed the FinePix camera for sale on eBay, and it was purchased by Mr. Timothy Murphy.¹⁶ *Id.* ¶¶ 6–10.

¹⁵ The referenced photograph is not part of the record of the case. Petitioner seeks to enter this photograph, as well as two other documents, which are two screenshots of metadata associated with the photograph, by its Motion for Entry of Deposition Exhibits, which we address below. Paper 66. Although we deny Petitioner’s Motion, we nevertheless address the deposition testimony related to the photograph in our analysis of the printed publication status of the Fuji Guide.

¹⁶ Mr. Timothy Murphy is a counsel of record representing Petitioner in this proceeding.

Mr. Geier testifies concerning a version of a Fujifilm Software Quick Start Guide that he found on the Internet. Ex. 1002 ¶ 41 (citing Ex. 1012). Mr. Geier testifies that he used a metadata analyzer (www.get-metadata.com) to learn that the document had a create date of February 19, 2001, and a modify date of February 20, 2001. *Id.* Petitioner also includes the Declaration of Mr. Steven W. Ramsdell, who also determined dates from the metadata of Exhibit 1012 using the same software. Ex. 1044. Mr. Geier further testifies that “I was unable to determine when the Fuji web page with the guide was made publicly available.” Ex. 1002 ¶ 41. Mr. Geier additionally testifies that the online version of the guide, which he found, is substantially similar to the Fuji Guide that is designated as Exhibit 1004. *Id.*

Patent Owner filed a motion to exclude the Fuji Guide (Ex. 1004); the Widener Declaration (Ex. 1005); the Internet version of the Fuji Guide (Ex. 1012); Fuji’s 2001 Annual Report (Ex. 1043); the Declaration of Mr. Steven W. Ramsdell (Ex. 1044); and Exhibit 1045, a document purported to be a comparison of Exhibits 1004 and 1012. PO Mot. Exclude 1–12. These documents all relate to the printed publication status of the Fuji Guide.

Mr. Widener and Mr. Geier were both deposed by Patent Owner.¹⁷ *See* Ex. 2122; Ex. 2126. Patent Owner asserts that the Widener Declaration

¹⁷ Petitioner sought authorization by motion to file the Declaration of Mr. Christopher Maxwell as supplemental evidence, which related to the status of the Fuji Guide (Ex. 1004) as prior art, as well as for authorization to apply to the District Court for a subpoena compelling the testimony of Mr. Maxwell. *See* Papers 28, 31, 33, 35. The Maxwell Declaration was served on Petitioner, but not filed with the Board. Paper 35, 2, n.1. Petitioner’s motion was denied and the Order identified additional options for obtaining related evidence. *See id.* at 6. Petitioner subsequently did not make any additional requests to the Board related to this issue.

is unreliable because, in his deposition testimony, Mr. Widener testified that the purported date of public accessibility in the declaration was based on Internet searches and not his own personal knowledge. PO Resp. 41–42 (citing Ex. 2126, 12:20–13:5, 47:11–48:5; Ex. 1005 ¶ 7). Patent Owner alleges there is no contemporaneous receipt of the purchase, or other record, to establish when Mr. Widener purchased the camera. *Id.* at 42 (citing Ex. 2126, 24:7–17, 24:18–25:18). Patent Owner contends that, contrary to his declaration, in his deposition Mr. Widener testified that he gave the camera to his father and did not have custody of the camera or any documentation for more than 10 years, until it was retrieved for sale. *Id.* at 41–42 (citing Ex. 2126, 41:3–17, 48:6–13, 48:21–49:19). Patent Owner also alleges that during the deposition, Mr. Widener was unable to identify the Fuji Guide as an attachment to his declaration and instead identified the two out of three documents that were not attached to his declaration. *Id.* at 42 (citing Ex. 2126, 43:10–44:22).

Patent Owner argues that the Widener Declaration fails to establish public accessibility, which requires that persons interested and skilled in the art, exercising reasonable diligence, can locate it. PO Resp. 43–45. Patent Owner asserts that even if the Fuji Guide were available, there is no evidence of any expectation that customers would copy or disseminate it and points to a user license agreement the Fuji Guide prohibiting distribution. *Id.* at 45 (citing Ex. 1004, 4).

Patent Owner additionally argues that Petitioner attempts to corroborate the evidence on the Fuji Guide by relying on a different document that was found online on the web. PO Resp. 46 (citing Ex. 1012). Patent Owner asserts that Exhibit 1012 (the web version) is “clearly not the

same document as the Fuji Guide,” and the on-line web manual is missing numerous passages that are in the Fuji Guide. *Id.* Patent Owner refers to Mr. Geier’s testimony that he was unable to determine when the Fuji web page was made publically available. *Id.* Patent Owner also contests the method used to determine the modification date of the Fuji web page version using a metadata analyzer. *Id.* at 47.

iii. Analysis

The issue before us is whether Petitioner has met its burden to establish that the Fuji Guide (Ex. 1004) is a printed publication. *Hulu, LLC v. Sound View Innovations, LLC*, Case IPR2018-01039, Paper 29, 11 (PTAB Dec. 20, 2019) (precedential) (“To prevail in a final written decision in an *inter partes* review, the petitioner bears the burden of establishing by a preponderance of the evidence that a particular document is a printed publication.” (citations omitted)). We have reviewed the parties’ arguments and evidence presented and determine that Petitioner has not met its burden to demonstrate that the Fuji Guide is a printed publication.

For the purposes of this evaluation, we have considered all the evidence presented, including that which is the subject of Patent Owner’s Motion to Exclude, as well as deposition testimony related to the photograph that is the subject of the Motion for Entry of Deposition Exhibits.

Our view is that Petitioner has presented sufficient evidence that Fuji FinePix 6800 Zoom cameras were on sale by at least November, 2001, as supported by a review of this product in a dated magazine article. *See* Ex. 1008. Patent Owner raises reasonable questions about the date Mr. Widener may have purchased a FinePix 6800 Zoom camera because there is no receipt or other proof evidencing the time of purchase, and additionally

because Mr. Widener's testimony indicates that he determined the approximate date of purchase by Internet searches, rather than from his own personal knowledge. *See* Ex. 2126, 24:7–17, 47:13–18. Nevertheless, we will afford weight to Mr. Widener's testimony concerning the approximate purchase date of the camera. The deposition testimony that a photograph allegedly taken by Mr. Widener's father using the gifted camera is dated March 2, 2003, serves as additional support that the cameras were on sale at least by that date. *Id.* at 58:5–60:8.¹⁸

Although Petitioner may have provided sufficient evidence to support the availability of the FinePix 6800 camera for purchase, the operative issue is whether sufficient evidence has been provided to demonstrate the public availability of the Fuji Guide document designated as Exhibit 1004. The Fuji Guide document is undated. Mr. Widener's testimony is the main support that Petitioner relies upon to demonstrate that consumers purchasing the FinePix 6800 camera received the Fuji Guide at a time of purchase in 2001.

In his Declaration, Mr. Widener testifies that “*I retained* the original copy of documentation, which came in a variety of languages, that accompanied my purchased FinePix camera.” Ex. 1005 ¶ 5 (emphasis added). At deposition, however, Mr. Widener testifies that he had purchased the camera for his father as a birthday gift, the camera and manuals were given to the father in a box, and it was Mr. Widener's father who had kept

¹⁸ We note that Patent Owner objects to consideration of this photograph for several reasons, including that the photograph was not taken by Mr. Widener, and instead the photograph was presumably taken by his father. *See* PO Sur-Reply 21; PO Mot. Exclude; *see also*, Ex. 2126, 40:8–22.

the camera and manuals for over 10 years. *See* Ex. 2126, 41:3–17, 48:6–13, 48:21–49:19. In part, Mr. Widener testified:

Q. So you said that you bought the camera yourself, right?

A. Correct.

Q. Did you buy it for your parents?

A. I did.

Q. Was it like as a gift?

A. It was my dad's birthday present.

Q. And so when you gave it to him for his birthday, you gave it to him in the box with all the manuals and everything, right?

A. Correct.

Q. And so he had it for that whole time until you went and found it in 2018?

A. I'm not sure of the year but when I found it, yes.

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Q. Do you know if your father retained all of the documentation from the camera?

A. He retained what I had.

Q. Well, you gave it to him, right?

A. I did.

Q. And he had it for over 10 years, right?

A. Correct.

Q. Do you know if during that time that he had it if he retained everything that you gave to him or do you know what he did with it?

A. Yes, he retained what he had.

Q. How do you know he didn't get rid of some of the documentation?

A. He wouldn't have it anymore if he got rid of it.

Q. Okay. So what you know is that what you got back when you went and found the camera is what had been retained, correct?

A. Correct.

Q. But you don't particularly know what happened in the intervening years when your father had the camera?

A. Correct.

Ex. 2126, 41:3–17, 48:21–49:19 (emphases added).¹⁹

We concur with some of Patent Owner's concerns relating to the testimony of Mr. Widener. PO Resp. 41–47. A concern is the lack of credible evidence that the Fuji Guide was included with the FinePix camera at the time it was purchased by Mr. Widener. The accuracy and reliability of Mr. Widener's recollections concerning documentation included with the camera at the time he purchased it nearly twenty years ago is questionable, particularly when Mr. Widener did not regain possession of the camera until recently. A related concern is the credibility of Mr. Widener's testimony in light of the fact that the camera and associated documentation were outside of Mr. Widener's possession for a long period of time, and he appears to have little knowledge of how the documentation was used, stored, and retained during that time. *See* Ex. 2126, 41:3–17, 48:21–49:19.

Our concerns about credibility are not lessened by Mr. Widener's inability at deposition to identify the documentation attached to his declaration; he incorrectly identified two documents that were not attached, but did not identify a copy of the Fuji Guide as being attached. Ex. 2126, 43:10–44:22; PO Resp. 42, n.5. Petitioner attempts to explain some of the potential reasons for misidentification at deposition, such as Mr. Widener limiting his review to some portions of the documents and one document being incorrectly copied out of order. *See* Tr. 38:13–39:9, 116:1–17. We

¹⁹ We note that Patent Owner has filed a Motion to Exclude Mr. Widener's Declaration based on, among other things, lack of firsthand knowledge and foundation. PO Mot. Exclude. 3–4.

nonetheless have concerns about the credibility of Mr. Widener's testimony concerning identification of the camera documentation in light of the facts. The camera was given as a gift,²⁰ the documentation was not in Mr. Widener's possession for over 10 years, and Mr. Widener had no knowledge of what happened to that documentation during the intervening time. Mr. Widener testifies that his father did not get rid of documentation, but a concern is whether a document, such as the Fuji Guide, could have been added to the camera box at a later time.²¹ Accordingly, we afford little weight to Mr. Widener's testimony concerning the document identified as Exhibit 1004, the Fuji Guide.

Petitioner also relies on another version of the Fujifilm Software Quick Start Guide found on the web for corroboration of the date of the Fuji Guide, with metadata used to determine a modify date of February 20, 2001, but with no known publication date. *See* Pet. 10 (citing Ex. 1002 ¶ 41; Ex. 1012). Notably, Petitioner does not rely on the web version of Fujifilm Software Quick Start Guide as prior art.

Although the modify date of the web version the Fujifilm Software Quick Start Guide may be close to that of the alleged date of the availability

²⁰ Mr. Widener does not provide testimony on the detail in which he examined the user guides in the camera box prior to giving the gift away, although at deposition he testified that manuals came with the camera purchase and that his recollection was that the manuals were those that were provided with his declaration. Ex. 2126, 25:19–26:6. In response to a question as to whether all the manuals that came with camera had been included with his declaration, Mr. Widener replied “[t]o the best of my knowledge.” *Id.* at 26:7–9.

²¹ We note that, as discussed above, the Fuji Guide is a software user guide for use with software loaded onto personal computers, and is not *per se* a user guide for the camera itself. *See* Ex. 1004.

of the Fuji Guide, the two versions of the documents are different, so the existence of the web version does not provide support that there was a standard version of the user guide available at that time.²² *See* Exs. 1004, 1012, 2074, 2075. More importantly, however, Petitioner does not identify how or why the web version should serve as probative evidence that the Fuji Guide was provided with the camera sold to Mr. Widener and, therefore, does not serve to corroborate his testimony or otherwise demonstrate that the Fuji Guide was distributed to the public with camera sales in 2001. At most, the web version shows only that a similar document to the Fuji Guide was available on the internet at about the same time.

Petitioner also relies on an advertisement for the Fuji FinePix camera, which briefly discusses software used with the camera, which is asserted to be similar to Kodak's EasyShare System. Ex. 1008; Tr. 114:11–12, 115:16–17. This evidence does not, however, provide support that the document identified as Exhibit 1004, the Fuji Guide, was distributed to consumers purchasing the FinePix 6800 camera in 2001.

Considering the evidence of record as a whole, we determine that Petitioner has not carried its burden to show by a preponderance of the evidence that consumers purchasing the FinePix 6800 camera received the Fuji Guide at a time of purchase in 2001. Therefore, we conclude that the Fuji Guide does not qualify as a prior art printed publication.

c. Summary of Obviousness Challenge

For this ground, Petitioner relies upon Fuji Guide for the teachings of the first and second program codes for all the independent claims of the '969

²² The differences in the documents give rise to concerns that the software user guide was subject to modifications.

patent. Pet. 26. In Petitioner’s obviousness challenge to claim 26, the only claim challenged in the obviousness ground that was not included in the anticipation challenge, Petitioner relies upon Iida’s disclosure of the use of the FinePix6800Z product as the camera, and the use of the USB connection between the camera and the terminal in Fuji Guide. *Id.* at 63–64.

Because we find that Petitioner has not shown that Fuji Guide is a prior art publication, and Petitioner relies on Fuji Guide in combination with Iida for all the claims challenged under this ground, we determine that Petitioner has not demonstrated by a preponderance of the evidence that claims 1–8, 10–16, 19–21, and 24–29 would have been obvious over Iida and Fuji Guide.

Because we determine that Petitioner has not demonstrated obviousness, we need not determine whether Patent Owner’s evidence of objective indicia of nonobviousness weighs even further against a conclusion of obviousness. *See Hamilton Beach Brands, Inc. v. f’real Foods, LLC*, 908 F.3d 1328, 1343 (Fed. Cir. 2018) (holding, in affirming Board decision determining that petitioner had not shown unpatentability, that “objective indicia of nonobviousness” “need not [be] addressed” because the court “affirmed the Board’s findings regarding the failure of the prior art to teach or suggest all [claim] limitations”); *Palo Alto Networks, Inc. v. Finjan, Inc.*, 748 F. App’x 317, 324 (Fed. Cir. 2018) (non-precedential) (affirming Board decision holding that petitioner failed to establish unpatentability due to a lack of disclosure of a claim limitation, without reaching secondary considerations, and holding that “it was not necessary for the Board to consider” expert testimony “limited to the issue of secondary considerations”).

*F. Alleged Obviousness of Claim 4 over Iida and Shaffer,
with or without Fuji Guide*

Petitioner contends that claim 4 would have been obvious over the combination of Iida and Shaffer or over the combination of Iida, Fuji Guide, and Shaffer. Pet. 64–68.

Having found challenged claim 4 of the '969 patent unpatentable as anticipated by Iida, we decline to address Petitioner's additional challenge based on obviousness. *See Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, Nos. 2019-1594, 2019-1604, 2019-1605, 2020 WL 2071962, *4 (Fed. Cir. Apr. 30, 2020); *see also Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (holding that once a dispositive issue is decided, there is no need to decide other issues).

III. PETITIONER'S MOTION TO EXCLUDE

Petitioner moves to exclude Exhibit 2114 because it is not authenticated or relevant and is hearsay. Pet. Mot. Exclude. We do not rely on Exhibit 2114 because it is only relevant to objective indicia of nonobviousness, which we do not address. Accordingly, we need not decide the motion, and we dismiss Petitioner's Motion to Exclude Exhibit 2114 as moot.

IV. PATENT OWNER'S MOTION TO EXCLUDE

Patent Owner moves to exclude Exhibits 1004, 1005, 1012, 1020, 1034, 1037, 1043, 1044, and 1045. *See* PO Mot. Exclude. We address the issues related to the exhibits, or groups of exhibits, in turn.

Patent Owner moves to exclude the Fuji Guide (Ex. 1004) and documents related to the printed publication status of the Fuji Guide, that is, the Widener Declaration (Ex. 1005); the Internet version of the Fuji Guide

(Ex. 1012); Fuji's 2001 Annual Report (Ex. 1043); the Declaration of Mr. Steven W. Ramsdell (Ex. 1044); and Exhibit 1045, and a document purported to be a comparison of Exhibits 1004 and 1012. PO Mot. Exclude 1–12. We have addressed the printed publication status of the Fuji Guide and because Patent Owner's arguments in the motion are substantially duplicative to those addressed in Section II.E.2.b.iii, we dismiss the motion for the exclusion of Exhibit 1004. Further, because Petitioner's Exhibits 1005, 1012, 1043, 1044, and 1045 are offered solely on the issue of the printed publication status of the Fuji Guide, and we find for Patent Owner on that issue, notwithstanding our consideration of these exhibits, we dismiss the motion for the exclusion of these exhibits.

Patent Owner moves to exclude Exhibit 1037, a Reply to Preliminary Response in related case IPR2019-00416, because it is not relevant, it is more prejudicial than probative, and it violates the rule against incorporation by reference. PO Mot. Exclude 8. Petitioner does not rely on Exhibit 1037 anywhere in the record and we do not rely on the exhibit in making our ultimate determination on the patentability of the challenged claims. Accordingly, we need not decide Patent Owner's motion on the exclusion of this exhibit, and we dismiss as moot the motion for the exclusion of this exhibit.

Patent Owner moves to exclude Exhibit 1020 as inadmissible hearsay and as being more prejudicial than probative. PO Mot. Exclude 6–7. Patent Owner also moves to exclude Exhibit 1034 as inadmissible hearsay. *Id.* Patent Owner does not contest Mr. Geier's testimony related to Exhibit 1020. PO Reply Mot. Exclude 3–4. We do not rely on Exhibits 1020 or 1034 in making our ultimate determination on the patentability of the

challenged claims. Thus, we need not decide Patent Owners' motion and we dismiss as moot Patent Owner's motion for the exclusion of these exhibits.

Accordingly, we dismiss Patent Owner's Motion to Exclude Exhibits 1004, 1005, 1012, 1020, 1034, 1037, 1043, 1044, and 1045.

V. PETITIONER'S MOTION FOR ENTRY OF DEPOSITION EXHIBITS INTO THE RECORD

Petitioner moves for entry of a photograph of a receipt, and two screenshots of the metadata associated with that photograph, into the record. *See* Pet. Mot. Entry. The photograph was allegedly of a receipt that was allegedly taken by a purchased camera which was discussed at the deposition of Mr. Widener, which was taken on November 6, 2019. *See* Ex. 2126, 40:8–22. Petitioner argues that the exhibits present proper rebuttal evidence and should be admitted under the Board's discretionary powers. Pet. Mot. Entry 1, 3. Petitioner asserts that Patent Owner has had a fair opportunity to respond to the exhibits and Petitioner's related arguments in Patent Owner's Sur-reply and at the oral hearing. *Id.* at 3–4. Petitioner argues that admitting the exhibits would be in the interests of justice because Petitioner was not aware of the existence of the exhibits until a couple of weeks prior to Mr. Widener's deposition, and the exhibits are relevant because they corroborate the prior art status of the Fuji Guide. *Id.* at 4–5. Petitioner asserts that the exhibits are not supplemental evidence. *Id.* at 4.

Patent Owner opposes the motion, arguing that the exhibits are supplemental information under 37 C.F.R. § 42.123(b), and Petitioner does not explain why they are not so. PO Opp. Mot. Entry 1–2. Patent Owner contends that although Petitioner states that the exhibits were properly presented in Petitioner's Reply as rebuttal evidence (citing Pet. Mot. Entry

3), the exhibits were not presented with Petitioner's Reply. *Id.* at 2. Patent Owner asserts that because the exhibits are untimely and entry would not be in the interests of justice, the motion fails to meet the elements of Rule 42.123(b). *Id.* at 2–4. Patent Owner alleges that Petitioner produced the exhibits to it on the night before the Widener deposition, while counsel was travelling, and Patent Owner lodged objections to the exhibits at the deposition. *Id.* at 3–4.

Although we considered the substance of the import alleged for the photograph argued in Petitioner's Reply based on the Widener deposition testimony, that is, that the camera that the subject of Mr. Widener's Declaration had been bought and was in possession by a certain date (*see supra* Section E.2.b.iii), we nevertheless deny Petitioner's motion for entry of the documents. We agree with Patent Owner that these exhibits are supplemental information because they were not filed with the Widener Declaration nor with Petitioner's Reply as rebuttal evidence. And although Petitioner requests that the exhibits be admitted in the interests of justice because Petitioner was not aware of the existence of the exhibits until a couple of weeks prior to Mr. Widener's deposition, Petitioner provides no explanation for why the exhibits were then produced to Patent Owner only on the night before the deposition. *See* Pet. Mot. Entry 2, 4; Ex. 2126, 40:2–9, 56:13–21, 56:24–57:12. There is also no explanation for Petitioner's delay in seeking entry of these documents once Petitioner became aware of their existence.

Accordingly, we deny Petitioner's Motion under Rule 42.123(b) because filing of the exhibits would be untimely and would not be in the interest of justice.

VI. CONSTITUTIONAL CHALLENGES

Patent Owner raises two constitutional challenges. First, Patent Owner argues that the Board cannot decide this case because “APJs are principal officers under the Appointments Clause” but “are not appointed by the President and confirmed by the Senate,” and the Federal Circuit’s remedy in *Arthrex* is “inadequate to cure the Constitutional violation.” PO Resp. 61–62 (citing *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019)). Second, Patent Owner argues that retroactive application of *inter partes* reviews to pre-AIA patents, such as the ’969 Patent, violates the Takings and Due Process Clauses of the Fifth Amendment, asserting “IPRs are more akin to civil litigation than prior PTO proceedings,” like reexamination, “[y]et an IPR does not give the patentee the same rights as civil litigation” because of the lower burden of proof in IPRs as compared with civil litigation. *Id.* at 62–63.

With regard to the Appointments Clause challenge, the issue has been addressed by the Federal Circuit’s decision in *Arthrex*, 941 F.3d at 1337 (“This as-applied severance . . . cures the constitutional violation.”); *see also Arthrex, Inc. v. Smith & Nephew, Inc.*, 953 F.3d 760, 764 (Fed. Cir. 2020) (Moore, J., concurring in denial of rehearing) (“Because the APJs were constitutionally appointed as of the implementation of the severance, *inter partes* review decisions going forward were no longer rendered by unconstitutional panels.”). Accordingly, we do not consider this issue any further.

With regard to the Takings and Due Process Clause challenge, we note that challenges to retroactive application of IPRs to pre-AIA patents have been addressed by the Federal Circuit in *Celgene Corp. v. Peter*,

931 F.3d 1342, 1357–1363 (Fed. Cir. 2019), *cert. denied* 2020 WL 3405867 (June 22, 2020) (Takings Clause) and *Sound View Innovations, LLC v. Hulu, LLC*, Nos. 2019-1865, 2019-1867, 2020 WL 3583556, *3 (Fed. Cir. July 2, 2020) (non-precedential) (Due Process Clause). Accordingly, we do not consider this issue any further.

VII. CONCLUSION²³

In summary:

Claims	35 U.S.C. §	References	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–8, 10–16, 19–21, 24, 25, 27–29	102	Iida	1, 2, 4–8, 13– 16, 19–21, 24, 25, 27–29	3, 10–12
1–8, 10–16, 19–21, 24–29	103	Iida, Fuji Guide		1–8, 10–16, 19–21, 24–29
4	103 ²⁴	Iida, Shaffer		
4	103 ²⁵	Iida, Fuji Guide, Shaffer		
Overall Outcome			1, 2, 4–8, 13– 16, 19–21, 24, 25, 27–29	3, 10–12, 26

²³ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

²⁴ As explained above, because we determined the challenged claim anticipated by Iida, we decline to address this ground.

²⁵ As explained above, because we determined the challenged claim anticipated by Iida, we decline to address this ground.

VIII. ORDER

For the reasons given, it is:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 4–8, 13–16, 19–21, 24, 25, and 27–29 of U.S. Patent 9,059,969 B2 are unpatentable;

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 3, 10–12, and 26 of U.S. Patent 9,059,969 B2 are unpatentable;

FURTHER ORDERED that Petitioner's Motion to Exclude is *dismissed*;

FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed*;

FURTHER ORDERED that Petitioner's Motion for Entry of Deposition Exhibits is *denied*; and

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

IPR2019-00879
Patent 9,059,969 B2

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