

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MITEK SYSTEMS, INC.,
Petitioner,

v.

ROTHSCHILD MOBILE IMAGING INNOVATIONS, LLC,
Patent Owner.

Case IPR2015-00622
Patent 7,450,163 B2

Before JAMESON LEE, DAVID C. McKONE, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

BOUDREAU, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Mitek Systems, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute *inter partes* review of claims 1–31 of U.S. Patent No. 7,450,163 B2 (Ex. 1001, “the ’163 patent”). Rothschild Mobile Imaging Innovations, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, in our Decision to Institute (Paper 7, “Dec.”), we instituted this proceeding as to each of the challenged claims.

After institution of trial, Patent Owner filed a Patent Owner’s Response (Paper 19, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner’s Response (Paper 22, “Reply”). An oral argument was held on April 19, 2016. A transcript of the oral hearing is included in the record. Paper 34 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Decision is a final written decision under 35 U.S.C. § 318(a) as to the patentability of the challenged claims. Based on the record before us, we determine that Petitioner has shown by a preponderance of the evidence that each of the challenged claims is unpatentable.

B. Related Matters

The ’163 patent has been asserted in several lawsuits in the United States District Court for the District of Delaware. Pet. 1–2; Paper 4, 2–3. IPR2015-00621 and IPR2015-00623 involve patents related to the ’163 patent. The oral argument for IPR2015-00623 was consolidated with the oral argument for this proceeding.

C. References Relied Upon

Petitioner relies on the following references:

Ex. 1003	Fukunaga	US 7,502,133 B2	Mar. 10, 2009
Ex. 1004	Safai	US 6,167,469	Dec. 26, 2000
Ex. 1005	Arai	US 6,642,959 B1	Nov. 4, 2003
Ex. 1006	Knowles	US 7,173,651 B1	Feb. 6, 2007
Ex. 1007	Terp	WO 01/31546 A2	May 3, 2001
Ex. 1008	Steinberg	US 6,750,902 B1	June 15, 2004
Ex. 1009	Mattes	US 6,038,295	Mar. 14, 2000

Petitioner also relies on the Declaration of Irfan Essa, Ph.D. Ex. 1010 (“Essa Decl.”).¹

D. The Asserted Grounds

We instituted a trial on the following grounds (Dec. 25–26):

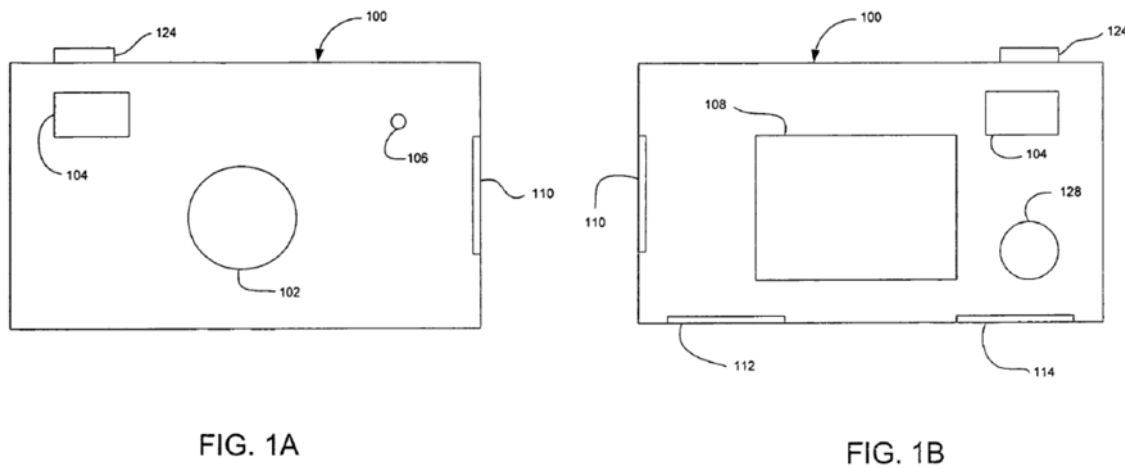
Reference(s)	Basis	Claim(s)
Fukunaga and Safai	§ 103(a)	1–3, 7–10, 12, 13, 15, 16, 19–23, 25, 26, 30, and 31
Fukunaga, Safai, and Arai	§ 103(a)	4, 5, 17, and 28
Fukunaga, Safai, and Knowles	§ 103(a)	6, 18, and 27
Fukunaga, Safai, and Terp	§ 103(a)	11
Fukunaga, Safai, and Steinberg	§ 103(a)	14 and 24
Fukunaga, Safai, and Mattes	§ 103(a)	29

¹ Patent Owner does not rely on testimony from its own technical expert witness in support of its Response.

II. ANALYSIS

A. The '163 Patent

The '163 patent describes a digital imaging device, such as a digital camera, personal digital assistant (PDA), or mobile telephone, that allows embedding information into and retrieving information from digital images. Ex. 1001, Abstract. Figures 1A and 1B, reproduced below, illustrate an example:



Figures 1A and 1B are front and back views, respectively, of a device for capturing digital images and embedding information in the captured images. *Id.* at 2:65–3:1.

As shown in Figure 1A, the front side of device 100 includes lens 102 for capturing an image and microphone 106 for capturing audio information. *Id.* at 3:29–35. As shown in Figure 1B, the rear side of device 100 includes display module 108 (e.g., a touch screen display) for displaying captured images, storage module 110 (e.g., random access memory (RAM) or a removable memory stick) for storing captured images, transmission module 112 (e.g., Bluetooth, Wi-Fi, or parallel or serial cables) for transmitting

digital images to another device, and scanning module 114 for scanning and inputting information to be associated with an image and for reading information from printed images. *Id.* at 3:36–47, 4:27–32, 5:43–55.

The '163 patent describes the functions of the device in terms of modules, depicted in Figure 2, reproduced below:

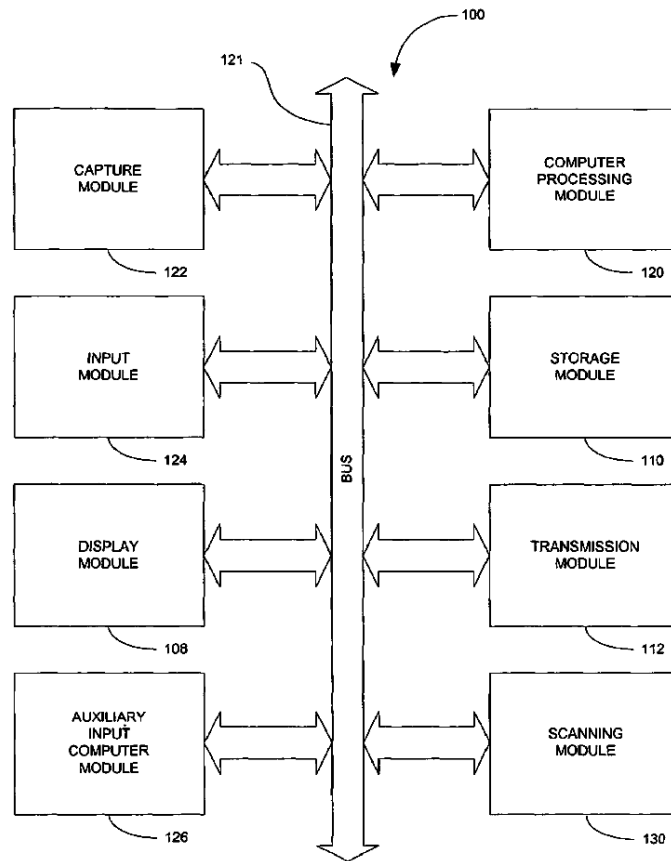


FIG. 2

Figure 2 is a block diagram of the modules of a device for capturing digital images and embedding information in the captured images. *Id.* at 3:2–4.

Display module 108, storage module 110, and transmission module 112 correspond to those depicted in Figures 1A and 1B, above. Capture

module 122 works in conjunction with lens 102 to create a digital image, which is stored in storage module 110. *Id.* at 4:15–32. User input module 124 receives text input, for example from a standard keyboard or a touch screen that overlays display module 108. *Id.* at 4:50–57. Auxiliary input module 126 collects data from other devices, such as a Global Positioning System (GPS) chip (to determine the location where an image was taken), a date chip (to determine the date and time an image was taken), and a voice capture device. *Id.* at 5:18–38.

Using input module 124, a user inputs data that will be associated with the digital image. *Id.* at 4:65–5:1. The data can be stored in a separate file or in the header of the image file. *Id.* at 5:1–17. The data can include a file location on a local computer or server on the Internet at which to store the image file. *Id.* at 7:46–52. Audio information (e.g., collected using auxiliary input module 126) also can be associated with the digital image. *Id.* at 7:53–63. After the digital image is captured and data is associated with it, the digital image file, along with any associated files, is transmitted (using transmission module 112) to the local computer or a server on the Internet, where it is stored in a relational database according to the location information. *Id.* at 5:39–67, 8:19–26.

When the digital image is printed out, it prints with symbology (e.g., a bar code) that encodes the file name of the image or other information that provides access to the file name and file location. *Id.* at 6:1–18. This symbology can be scanned by integrated scanning module 130 (e.g., a light-emitting diode (LED) light source and photocell) of the device to extract the name and location of the digital image and pull up the image file and any

associated files (assuming the device is connected through transmission module 112 to the local computer or Internet server). *Id.* at 6:19–47.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A digital imaging camera device comprising:
 - a capture module for capturing an image and creating a digital image file;
 - an input module disposed on the camera device for inputting storage location information regarding each captured image, the storage location information being indicative of a storage location on a separate external computing device for storing each digital image file after transfer from the digital imaging camera device;
 - a processing module for associating the inputted information to the digital image file;
 - a transmission module for transmitting the digital image file and the associated information to the external computing device for storage;
 - a scanning module for reading a symbology associated with a printed version of the digital image file, wherein the transmission module is adapted to transmit the symbology to the external computing device and receive the digital image file and associated information retrieved at the external computing device based on the symbology; and
 - a display module disposed on the camera device for displaying the retrieved digital image file and associated information.

Ex. 1001, 9:2–25.

Independent claim 15 is similar to claim 1, but additionally recites a communication module coupled to an antenna for wirelessly

receiving and transmitting communication messages and specifies that the transmission module is also coupled to the antenna. *Id.* at 10:4–32. Independent claim 25 is a method claim in which the steps essentially track the functions of the modules recited in claim 1. *Id.* at 10:65–11:23.

B. Claim Construction

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs. LLC v. Lee*, No. 15-446, 2016 WL 3369425, at *12 (U.S. June 20, 2016) (holding that 37 C.F.R. § 42.100(b) “represents a reasonable exercise of the rulemaking authority that Congress delegated to the . . . Office”). In applying a broadest reasonable construction, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

1. Terms Construed in the Decision to Institute

In the Decision to Institute, we gave the following constructions:

Term	Construction
“storage location information” (claims 1, 15, 25)	“information identifying where data may be stored”
“symbology” (claims 1, 15, 25)	“a machine-readable symbol encoding information about a digital image”

Dec. 8–13.

The parties do not challenge our construction of “symbolology” in the Response or Reply, and we maintain that construction on the full record for the reasons stated in our Decision to Institute. *Id.*

Although the parties also do not expressly challenge our earlier construction of “storage location information,” Patent Owner asserts that the complete phrase “storage location information being indicative of a storage location on a separate external computing device,” also recited in each of independent claims 1, 15, and 25, separately requires construction, as discussed in the following section.

2. “*storage location information being indicative of a storage location on a separate external computing device*”
(claims 1, 15, 25)

Claim 1 recites “an input module disposed on the camera device for inputting storage location information regarding each captured image, the *storage location information being indicative of a storage location on a separate external computing device* for storing each digital image file after transfer from the digital imaging camera device” (emphasis added).

Similarly, independent claim 15 recites “an input module disposed on the mobile communication device for inputting storage location information regarding each captured image, *the storage location information being indicative of a storage location on a separate external computing device* for storing each digital image file after transfer from the mobile communication device” (emphasis added); and independent claim 25 recites “receiving

storage location information from the user for each digital image, the *storage location information being indicative of a storage location on a separate external computing device* for storing each digital image file after transfer from the digital imaging device” (emphasis added).

Patent Owner contends that the phrase “storage location information being indicative of a storage location on a separate external computing device” should be construed as “information indicating where data may be stored on a separate external computing device.” PO Resp. 11. Patent Owner asserts:

[I]f the purpose of the limitation “storage location information being indicative of a storage location on a separate external computing device” was to simply mean “information identifying where data may be stored,” such as an external server, then the limitation would read certain limitations out of the claims, as indicated by the marked-up version of the claim limitation below:

an input module disposed on the camera device for inputting, ~~storage location information~~ regarding each captured image, ~~the storage location information being indicative of a storage location on of a separate external computing device~~ for storing each digital image file after transfer from the digital imaging camera device.

PO Resp. 13–14.

We disagree with Patent Owner’s assertion. Although we construed “storage location information” in the Decision to Institute, we did not separately construe the complete phrase “storage location information being indicative of a storage location on a separate external computing device.” See Dec. 8–10. Substituting the construction of “storage location

information” provided in our Decision to Institute into the recited limitation, we do not obtain Patent Owner’s asserted “marked-up version,” but instead obtain:

an input module disposed on the camera device for inputting ***information identifying where data may be stored*** regarding each captured image, the ***information identifying where data may be stored being indicative of a storage location on a separate external computing device*** for storing each digital image after transfer from the digital imaging camera device.

Patent Owner does not articulate, nor can we discern, any meaningful difference between “the information identifying where data may be stored being indicative of a storage location on a separate external computing device” and Patent Owner’s suggested construction. To the extent that Patent Owner suggests elsewhere in its Response that the claims require the “storage location information” to indicate *a particular location within* the recited “separate external computing device”—such as a specific folder within the file system of a “service server” (*see* PO Resp. 25)—we agree with Petitioner both that the claims and Specification of the ’163 patent do not require indication of an “exact location within” an external device and that even the adoption of Patent Owner’s proposed construction would not so limit the claim scope (Reply 2). Accordingly, we determine that there is no need to construe expressly “storage location information being indicative of a storage location on a separate external computing device” except as follows directly from our construction of “storage location information” provided in the Decision to Institute. Only those terms that are in controversy need to be construed, and only to the extent necessary to resolve

the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

3. “*prompting*” (claim 25)

Claim 25 recites “*prompting* a user with the camera device for information regarding the captured image” (emphasis added).

Patent Owner contends that “prompting” means “inciting or providing a cue, for information regarding a captured image.” PO Resp. 14. As an initial matter, claim 25 already recites “for information regarding the captured image.” Accordingly, we will not read that phrase into the construction of “prompting.”

As to whether “prompting” means inciting or providing a cue, Patent Owner argues that its proposed construction is consistent with certain dictionary definitions. PO Resp. 15–16 (citing MERRIAM-WEBSTER ONLINE DICTIONARY, 2015, available at, <http://www.merriam-webster.com/dictionary/prompt>).

Petitioner contends that “prompting” refers to “a visual or audible indication that the device is ready to receive input.” Reply 5. Petitioner argues that we should discount Patent Owner’s dictionary, as its 2015 date is not contemporaneous with the 2004 priority date of the ’163 patent. *Id.* at 4. The definition of “prompt[ing],” however, has not changed meaningfully during that time. *See* AMERICAN HERITAGE COLLEGE DICTIONARY 1115 (4th ed. 2004) (Ex. 3001). In any case, we are unable to discern a meaningful difference between the parties’ respective proposals. Indeed, at the oral argument, Petitioner was unable to identify a difference. Tr. 17:6–18:11.

We conclude that “inciting or providing a cue” is consistent with the Specification. For example, the Specification states that “[t]he prompting step includes displaying at least one question to the user or audibly producing at least one question to the user.” Ex. 1001, 2:41–43. In another example, “the display module may include an audio output device for audibly prompting a user to input information regarding the captured image.” *Id.* at 2:6–8. Thus, “prompting” means “inciting or providing a cue.”

We note, however, that the parties’ respective proposals do not capture the actual dispute as to the meaning of “prompting.” Rather, Patent Owner, in distinguishing Fukunaga (discussed below), argues that Fukunaga describes a user selecting a menu if voice information is to be attached to an image. PO Resp. 35–36. At the oral argument, although Patent Owner would not commit to precise language it would use to make this distinction, Patent Owner essentially argued that the prompting must be automatic, or without any action on the part of the user between capturing an image and prompting the user to input information. Tr. 36:4–37:25.

We find no such requirement in the ordinary meaning of “prompting,” as evidenced by Patent Owner’s dictionary definition. Patent Owner also does not point to evidence in the Specification that would support its position. In its most detailed example, describing a user taking pictures of his wife and child during a trip to Las Vegas, the Specification explains that

[a]t end of taking pictures or alternatively, immediately after taking each individual picture, the user goes back to the device 100, 200 and using either keystroke input via input module 124 or voice recognition software via a microphone, or any other

input means the user is prompted to provide . . . information regarding the pictures, i.e., the images taken (step 304)[, including a file location to store the pictures].

Ex. 1001, 7:38–45. This suggests that, in one embodiment, the user is not prompted to input storage location information until he returns to the device after taking several pictures. After inputting location information, “[t]he user is then asked via the speaker, or prompted on the display module 108, 208, if he wants to attach any audio or video to the images.” *Id.* at 7:53–55. The Specification does not require such prompting to be automatic or without any intervening action on the part of the user to elicit the “prompt,” and, indeed, it is described as occurring in response to the user inputting other information.

In sum, on the complete record and under the rule of broadest reasonable interpretation, “prompting” means “inciting or providing a cue.”

C. Obviousness over Fukunaga and Safai

Petitioner contends that claims 1–3, 7–10, 12, 13, 15, 16, 19–23, 25, 26, 30, and 31 would have been obvious over Fukunaga and Safai. Pet. 11–48.

A 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.” We resolve the question of obviousness on the basis of underlying factual determinations, including: (1) the scope and content of

the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.² *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In an obviousness analysis, some reason must be shown as to why a person of ordinary skill would have combined or modified the prior art to achieve the patented invention. *See Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 (Fed. Cir. 2008). A reason to combine or modify the prior art may be found explicitly or implicitly in market forces, design incentives, the “interrelated teachings of multiple patents,” “any need or problem known in the field of endeavor at the time of invention and addressed by the patent,” or the background knowledge, creativity, and common sense of the person of ordinary skill. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–21 (2007)).

1. Scope and Content of the Prior Art

a. Overview of Fukunaga

Fukunaga describes a camera-equipped cellular phone capable of uploading an image along with additional information attached to the image, such as voice information, position (e.g., GPS) information, text information, or music information. Ex. 1003, Abstract, 1:15–20, 6:21–24, 6:48–66. Fukunaga explains that the cellular phone also has an e-mail

² The record does not contain any evidence of secondary considerations.

function or a function for inputting a Uniform Resource Location (“URL”) to access a Web site in addition to a typical calling function, and the image shot by the phone may be stored in a medium in the phone or may be sent to a destination. *Id.* at 6:18–24.

Fukunaga discloses that the images and additional information are uploaded to a server for storage, where they are received as a unit referred to as “image+information” (*id.* at 7:26–35), and the server produces a URL for accessing the image+information (*id.* at Abstract, 7:42–48). The URL may be converted into a code, such as one of Quick Response (“QR”) codes 27A to 27D shown in Figure 4 (*see, e.g., id.* at 7:49–54, 9:13–21), and “a photo print having the image and the QR code printed on a print paper is produced” (*id.* at Abstract).

Figure 4 of Fukunaga is reproduced below.

FIG.4

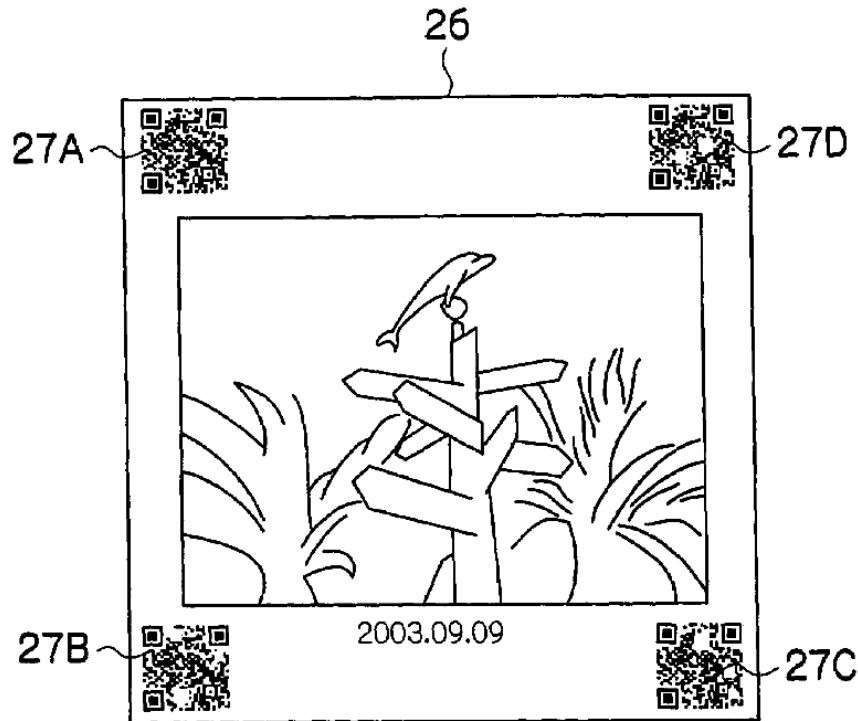


Figure 4 is a depiction of a photo print having QR codes printed thereon. *Id.* at 4:66–67. Alternatively, the URL string itself, or a two-dimensional code such as a bar code, may be printed. *Id.* at 9:59–62.

Fukunaga further explains that the cellular phone also “has a function of identifying the QR code printed on the photo print and decrypting the identified QR code to acquire the URL” (*id.* at 6:36–38), which can be used “for accessing the image+information” (*id.* at 7:42–45). *See id.* at Abstract, 5:41–43, 5:51–60, 6:18–20, 7:61–8:4, 9:17–19.

b. Overview of Safai

Safai describes a digital camera that associates additional information (e.g., text describing a subject) to a digital image and transports the image and information (e.g., by email) to a destination. Ex. 1004, Abstract.

Figure 1, reproduced below, illustrates an example:

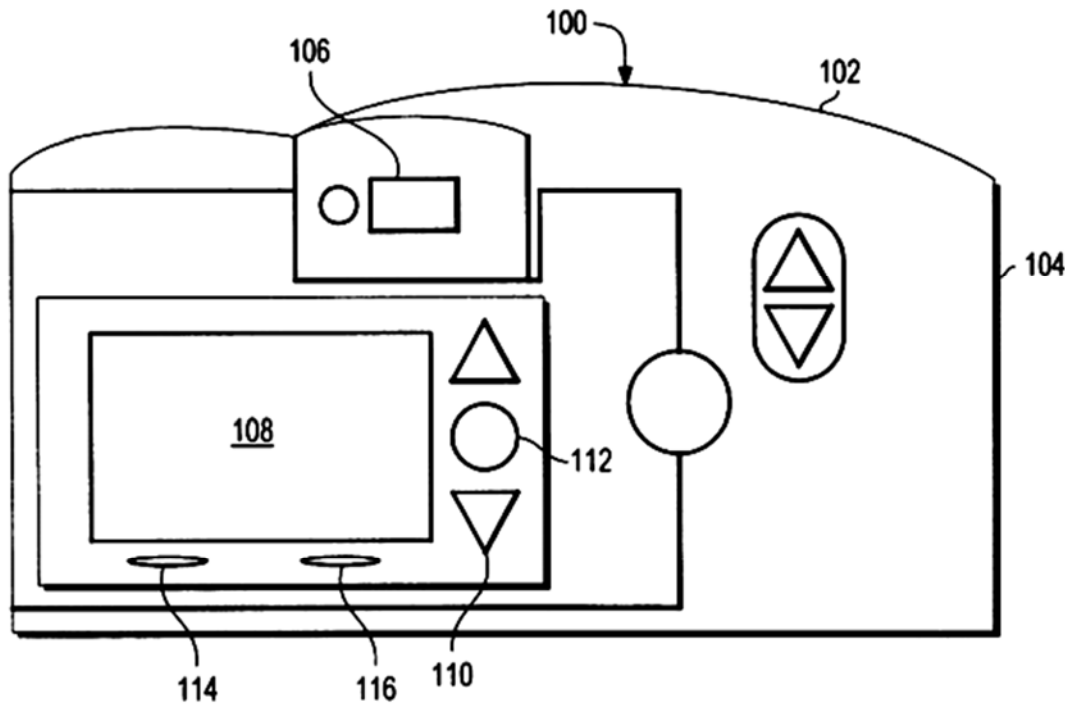


Fig. 1

Figure 1 is a rear view of a personal handheld digital camera. *Id.* at 4:33–34.

Camera 100 includes display device 108 (e.g., a touchscreen LCD display) for displaying stored digital images. *Id.* at 5:17–21, 6:37–50. Through a series of software menus, a user can use the display device to enter text describing a subject of a digital image and an email address to which to transmit the image and subject text (or, alternatively, a URL of a

designated server or web site to which to upload the photos). *Id.* at 8:48–9:5, 14:59–64. Examples of successive menus for entering address and subject information are shown in Figures 3, 4A, and 4B. Specifically, a user (through the touch screen), selects “Mail” button 302 from the Photo Access menu shown in Figure 3; the user is presented with the Photo Mail menu shown in Figure 4A; the user selects “Address” button 402 from the Photo Mail menu; and the user then is presented with an address entry display 412, shown in Figure 4B (reproduced below). *Id.* at 7:66–8:12, 8:21–52.

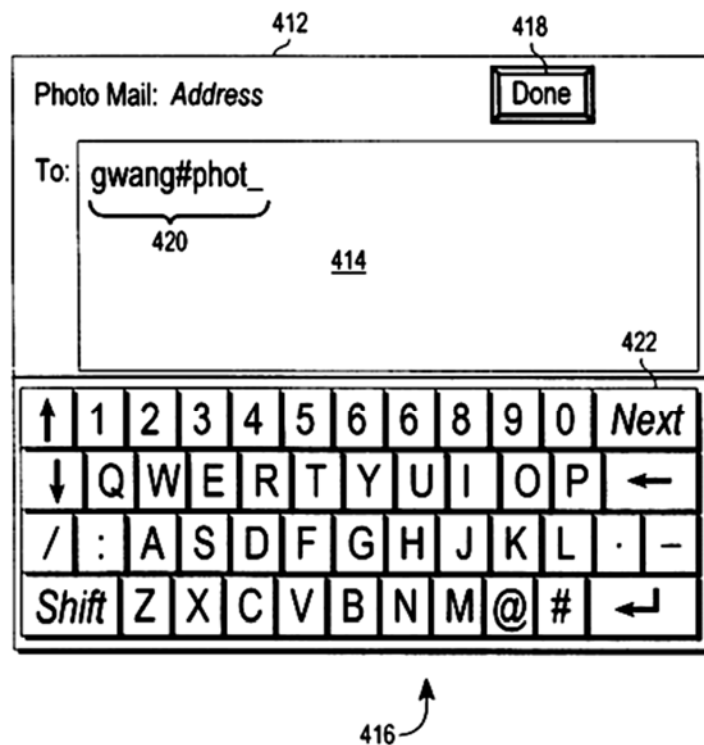


Fig. 4B

Figure 4B is a block diagram of a display generated during an addressing step of an image transport application. *Id.* at 4:44–45. Display 412 includes address entry field 414 and virtual keyboard 416, through which the user enters address 420, such as an email address. *Id.* at 8:52–65.

Display 412 also can include a subject data entry field (not shown) next to address entry field 414, into which the user may enter text for a subject. *Id.* at 9:1–8. The subject text is stored in a variable associated with the address. *Id.* at 9:10–13.

The user then selects one or more stored images to be sent to the address. *Id.* at 10:24–59. The selected images are associated with the address and stored in a data structure maintained in a storage device of the camera. *Id.* at 11:21–26.

Camera 100 also can include a microphone for receiving voice commands or recording sound to be associated with the digital images. *Id.* at 6:19–36. For example, digitized voice information can be stored in a file and associated with the selected digital images, address information, and subject information. *Id.* at 11:49–54.

The camera also includes input/output devices, such as a communications port for transmitting data to and receiving data from another computer via, for example, modems and an Ethernet interface. *Id.* at 6:5–18. The user initiates transmission of the email by pressing a send button. *Id.* at 13:10–12. The camera transmits the digital images and associated information to a server, which parses the email address and forwards the images using electronic mail. *Id.* at 13:54–14:24. Alternatively, if the user specified a web site to which to upload the photos, the server creates a HyperText Markup Language (“HTML”) file with the images and transmits it using a protocol, such as File Transfer Protocol (“FTP”), to the identified web server. *Id.* at 14:61–15:11.

2. Level of Ordinary Skill in the Art

The Petition does not take a position on the level of ordinary skill in the art, although Dr. Essa states his opinion in his Declaration. See Ex. 1010 ¶ 11. Patent Owner does not take a position on the level of ordinary skill. With regard to the level of ordinary skill in the art, we determine that no express finding is necessary and that the level of ordinary skill in the art is reflected by the prior art of record. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

3. Differences Between the Prior Art and Claims 1–3, 7–10, 12, 13, 15, 16, 19–23, 25, 26, 30, and 31; Reasons to Combine

a. Uncontested claim limitations

The features of Fukunaga and Safai are summarized above. Regarding independent claims 1, 15, and 25 of the '163 patent, we have considered Petitioner's evidence, including Dr. Essa's testimony (Ex. 1010 ¶¶ 29–54, 68–76, 82–92), presented at pages 11–26, 35–40, and 42–45 of the Petition, and make the following findings regarding matters not disputed in the Patent Owner Response:

Fukunaga's "camera-equipped cellular phone" (see Ex. 1003, Abstract, 1:15–20, 6:21–24, 6:48–49) is a "digital imaging camera device" (claims 1, 25) or "mobile communication device" (claim 15);

Fukunaga's camera-equipped cellular phone includes "a communication module coupled to an antenna for wirelessly

receiving and transmitting communication messages” (*see id.* at 5:11–17 (disclosing that the user terminal (e.g., camera-equipped cellular phone) may be connected with a service server through the Internet or a wireless LAN), Figs. 1, 3 (illustrating a user terminal in the form of a cellular phone with an antenna));

Fukunaga’s camera-equipped cellular phone includes “a capture module for capturing an image and creating a digital image file” (*see id.* at 6:22–24 (“[T]he image shot by the [camera-equipped] cellular phone 30 may be stored in a medium in the cellular phone, or may be attached to an e-mail and sent to a destination.”), 6:48–49, 6:53–58 (describing digital image file format in which images may be stored));

Fukunaga’s camera-equipped cellular phone includes “an input module” disposed thereon (*see id.* at 6:18–20 (“The camera-equipped cellular phone 30 . . . has an e-mail function or a function of inputting the URL to access a Web site . . .”), 6:66–7:5 (disclosing that camera-equipped cellular phone 30 includes “a menu for inputting . . . voice information,” “a recording start button” that may be “pressed to input voice,” and “a recording stop button” that may be “pressed to finish inputting the voice”));

Fukunaga’s camera-equipped cellular phone includes “a processing module for associating . . . information to the digital image file” (*see id.* at 6:48–67 (describing attaching GPS information,

voice information, text information, music information, “and the like” to the image file). Although Fukunaga does not explicitly disclose associating “storage location information” (i.e., the inputted information, per the antecedent basis provided for that phrase in claims 1, 15, and 25), Safai’s CPU 210 executing software modules (Ex. 1004, 5:63–6:1, 6:66–7:56), which associates images with addresses and stores them in a data structure that conceptually serves as an “out-box” (*id.* at 11:21–26), teaches “a processing module for associating the inputted information to the digital image file”;

Fukunaga’s camera-equipped cellular phone includes “a transmission module [coupled to the antenna] for transmitting the digital image file and . . . associated information to [an] external computing device for storage” (*see, e.g.*, Ex. 1003, Abstract (describing a camera-equipped cellular phone that uploads an image and additional information), 7:26–33 (disclosing that image data is uploaded along with other information, subsequently referred to as “image+information,” when a “sending button” is pressed on the camera-equipped cellular phone)). Although Fukunaga does not explicitly disclose transmitting “storage location information” (i.e., “the” associated information, per the antecedent basis provided for that phrase in claims 1, 15, and 25), Safai’s communications port 214 and CPU 210 executing transport application 230 (Ex. 1004, 6:5–18) teach “a transmission module for

transmitting the digital image file and the associated information to the external computing device for storage.” Moreover, we find that the designated server or web site (indicated by email address or URL) is an external computing device;

Fukunaga’s camera-equipped cellular phone includes “a scanning module for reading a symbology associated with a printed version of the digital image file” (claim 1), “decoding a symbology captured by the capture module from a printed version of the digital image file” (claim 15), and “scanning . . . a symbology associated with a printed version of the digital image file” (claim 25) (*see* Ex. 1003, Abstract (describing a camera-equipped cellular phone that reads a QR code on a photo print to access the image and additional information from a database corresponding to a URL acquired by decrypting the QR code), 6:36–38 (disclosing that the camera-equipped cellular phone has “a function of identifying [a] QR code printed on the photo print and decrypting the identified QR code to acquire [a] URL”), 7:55–8:4, Fig. 3 (showing in steps 7 & 8 camera-equipped cellular phone 30 scanning a QR code and accessing image and information from external computing device (service server 10) as identified by URL)). Consistent with the construction in Section II.B.1 above, we find that a QR code is an example of a “symbology”; and

Fukunaga’s camera-equipped cellular phone includes a monitor (Ex. 1003, 7:64–8:4, 8:13–22) that teaches “a display module” disposed on the camera device (claims 1, 25) or mobile communication device (claim 15) “for displaying the retrieved digital image file and associated information” (*see also id.* at 6:63–7:5 (disclosing that “the image is displayed on [camera-equipped] cellular phone 30”)).

b. *“inputting storage location information regarding each captured image” / “receiving storage location information from the user for each digital image”*

The parties dispute whether the combination of Fukunaga and Safai discloses “inputting storage location information regarding each captured image,” as recited in independent claims 1 and 15, and “receiving storage location information from the user for each digital image,” as recited in independent claim 25.

As explained in Section II.C.3.a above, we find that Fukunaga discloses transmitting a digital image file and associated additional information from a camera-equipped cellular phone to an external computing device (or “service server”) for storage. Petitioner contends that, in order to transmit images and additional information to the service server, the camera-equipped cellular phone necessarily must know the address of the service server. Pet. 13 (citing Ex. 1010 ¶¶ 32–33). Petitioner concedes that Fukunaga does not disclose “inputting storage location information regarding each captured image” explicitly, but further contends that it would

have been obvious to a person of ordinary skill in the art at the time of the alleged invention of the '163 patent to modify input components described in Fukunaga to implement this feature based on the disclosure of Safai. *Id.* Petitioner asserts, for example, “*Safai* describes a digital camera device capable of ‘transporting an image formed by the digital camera’ to ‘at least one address that identifies an addressee to whom the image is to be sent,’” where “[a]n ‘address is entered by touching or pressing one or more keys of the virtual keyboard 416,’ which ‘is a graphical representation of an alphanumeric keyboard.’” *Id.* at 14 (quoting Ex. 1004, 2:28–38, 8:48–62, and further citing *id.* at Abstract, 7:34–37, 8:18–47, 12:1–3, 13:10–14:11, 14:59–15:11, 15:33–46, Figs. 4A, 4B). Accordingly, Petitioner contends, “*Safai* describes a virtual keyboard that constitutes ‘an input module disposed on the camera device for inputting storage location information regarding each captured image,’” and “*Safai* also discloses that the virtual keyboard is used to input storage location information that is ‘indicative of a storage location on a separate external computing device for storing each digital image file after transfer from the digital imaging camera device,’” as recited in claim 1, and similar recitations in claims 15 and 25. *Id.* at 14 (citing Ex. 1004, 14:9–11, 14:59–15:11), 36–37, 43.

In its Response, Patent Owner asserts that “Petitioner’s understanding of Safai is incorrect,” as “Safai . . . discloses inputting addresses collectively for all the selected images to be sent and not ‘inputting storage location information regarding each captured image.’” PO Resp. 17–18. According to Patent Owner, “Safai teaches the selection of one image at a time to be sent to, for example, an e-mail address, and not the entry of location

information for each and every image that is captured.” *Id.* at 18. Pointing to a passage in the Background section of the ’163 patent stating that, “with the technological advances in file size compression and increased capacity of storage media, several hundred images may be taken before a user downloads the images to a computer or other device, making it a very time consuming task to associate information to each image” (Ex. 1001, 1:37–41), Patent Owner contends that the ’163 patent “describes and claims an invention where information is entered for ‘each and every’ captured image for storage and later retrieval.” PO Resp. 19. Patent Owner further contends that “[t]he embodiments described in Safai . . . do not recognize or appreciate the need to associate information about ‘each and every’ captured image,” but “[i]nstead, Safai describes sending a selected one or more images to an e-mail or physical address.” *Id.* According to Patent Owner:

There is no real-world use for e-mailing each and every captured image on a device to someone. The ’163 Patent on the other hand is used for later storage and retrieval of the image file. Such an idea is borne out of practicality with many real-world applications. No one, however, sends an image to an e-mail address (like in Safai) expecting to later be able to search and retrieve that file (as in the ’163 Patent). Safai, therefore, actually teaches away from inputting storage location about “each and every” captured image as is required by the claims of the ’163 Patent.

Id. at 19–20. Patent Owner also argues:

The Petition and the Decision fail to demonstrate that one skilled in the art would have been motivated to look to Safai to compliment [sic] the system and processes of Fukunaga to implement the feature of “inputting storage location information regarding each captured image, the storage location information

being indicative of a storage location on a separate external computing device for storing each digital image file after transfer from the digital imaging camera device.”

PO Resp. 23–24.

Petitioner replies that, contrary to Patent Owner’s contentions, “claims 1, 15, and 25 do not require entry of storage location information for ‘each and every’ captured image.” Reply 6–7. Petitioner argues that each of those claims recites only the capture of a single image, and, moreover, that claims 1 and 15 are apparatus claims that recite an input module that is capable of being used for inputting storage location information regarding each captured image, rather than method claims containing an active step of inputting such information. *Id.* at 7–8. Petitioner further argues that even under Patent Owner’s interpretation, *Safai* “teaches or suggests inputting or receiving storage location information for ‘each captured [digital] image,’ as recited in claims 1, 15, and 25.” *Id.* at 9. Petitioner points out that, “[i]ndeed, Patent Owner acknowledges that *Safai* ‘discloses inputting addresses collectively for all the selected images’ and ‘teaches the selection of one image at a time to be sent to, for example, an e-mail address.’” *Id.* at 9–10 (quoting PO Resp. 18). “By disclosing the ability to input addresses for ‘one or more images,’” Petitioner contends, “*Safai* discloses that the user can input an address to be associated with each and every captured image, either one image at a time or multiple images at a time.” *Id.* at 10. Lastly, Petitioner contends that Patent Owner’s argument that *Safai* “teaches away from inputting storage location [information] about ‘each and every’ captured image” (PO Resp. 19–20) is “unsupported” and also “ignores that

Safai is not limited to e-mailing captured images, but instead explicitly provides for the storage of images on a separate external server for later retrieval” (Reply 10). Petitioner argues, for example, that “*Safai* explains that a user can input a URL identifying a location on a website or web server for storing captured images, which images are later made available to the user worldwide via the internet.” *Id.* (citing Ex. 1004, 14:59–15:11). Petitioner concludes that, “far from teaching away, *Safai encourages* storing each and every captured image on a separate external server.” *Id.* at 11.

We are persuaded by Petitioner’s arguments. As Petitioner points out, claims 1 and 15 are apparatus claims, not method claims, and merely recite, in relevant part, an “input module . . . *for* inputting storage location information regarding each captured image.” Reply 7–8. Thus, whereas those claims require the *capability* for inputting storage location information for each captured image, they do not require actual input of such information. See *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1217–18 (Fed. Cir. 2014) (holding that claims including the term “for” recite capability and not actual operation); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204–05 (Fed. Cir. 2010) (same).

Further, contrary to the suggestion implied by Patent Owner’s attempt to differentiate *Safai* on the basis that *Safai* “discloses inputting addresses collectively for all the selected images to be sent” (PO Resp. 17–18), claims 1, 15, and 25 do not recite any requirement that *different* or *unique* storage location information must be input or received for each captured image *individually*. Under the broadest reasonable interpretation of the phrase, “inputting storage location information regarding each captured image,” as

recited in claims 1 and 15, includes inputting information identifying where one, a plurality of, or all captured images collectively may be stored.

Likewise, “receiving storage location information from the user for each digital image,” as recited in claim 25, comprehends receiving a single address from the user identifying where all digital images may be stored. Indeed, the Specification of the ’163 patent contemplates the same, stating that “[a]t the end of taking pictures or alternatively, immediately after taking each individual picture, the user goes back to the device 100, 200 and . . . *the user is prompted to provide . . . the file location to store the photos or images* once they are transferred to permanent memory storage, e.g., a local computer or a server residing on the Internet.” Ex. 1001, 7:38–48 (italics added). Although the Specification then provides as an example that the user indicates that he would like a first picture stored under his “baby picture file,” a second picture stored under his “famous art file,” and a third picture under his “file with pictures of his wife” (*id.* at 7:48–52), and elsewhere suggests that it might be “a very time consuming task” to associate information to each image if several hundred images are taken before a user downloads the images to a computer or other device (*id.* at 1:38–41), those additional disclosures do not negate the explicit contemplation that the user may wait until “the end of taking pictures” to provide “the file location” (singular) to store “the photos or images” (plural). Although reading of the claim language may be aided by explanations contained in the written description, it is important not to import limitations that are not a part of the claim. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

We also agree with Petitioner that Patent Owner's argument that Safai teaches away from inputting storage location information about "each and every" captured image is unsupported and ignores Safai's teachings. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant" or "if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Patent Owner does not rely on any evidence in support of its assertions that "there is no real-world use for e-mailing each and every captured image" and that "[n]o one . . . sends an image to an e-mail address (like in Safai) expecting to later be able to search and retrieve that file," but relies instead only on attorney argument. *See In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997) (attorney argument cannot take the place of evidence).

And as Petitioner points out, Patent Owner's argument "ignores that *Safai* is not limited to e-mailing captured images, but instead explicitly provides for the storage of images on a separate external server for later retrieval," such as by explaining that a user can input a URL identifying a location on a website or web server for storing captured images, which images are later made available to the user worldwide via the Internet. Reply 10 (citing Ex. 1004, 14:59–15:11). Consistent with the constructions in Sections II.B.1 above, we find that email addresses (Ex. 1004, 8:48–67) and URLs (*id.* at 14:59–15:11) are examples of information indicative of storage locations on a separate external computing device. We, accordingly,

agree with Petitioner's conclusion that Safai does not teach away but instead "*encourages* storing each and every captured image on a separate external server." Reply 11.

Finally, we disagree with Patent Owner's contention that "[t]he Petition and the Decision fail to demonstrate that one skilled in the art would have been motivated to look to Safai to compliment [sic] the system and processes of Fukunaga." PO Resp. 23–24. Again, Patent Owner relies merely on attorney argument in support of its contention and does not provide any expert testimony or other supporting evidence. In contrast, we are persuaded by the evidence presented in the Petition that Fukunaga discloses transmitting an image and additional information from a camera-equipped cellular phone to a network-connected "service server" for storage and subsequent retrieval using, for example, a URL, and that a person of ordinary skill in the art would have been motivated to incorporate into Fukunaga's disclosure Safai's teaching that a user can input a URL identifying a location on a website or web server for storing captured images, which images are later made available to the user worldwide via the Internet. *See* Pet. 13–16, 36–37, 43 (citing Ex. 1003, 5:34–46, 6:18–21, 6:66–7:5, 7:26–35, 7:42–48, Figs. 1, 3; Ex. 1004, Abstract, 2:28–38, 7:34–37, 8:18–62, 12:1–3, 13:10–14:11, 14:59–15:11, 15:16–19, 15:32–46, Figs. 4A, 4B; Ex. 1010 ¶¶ 32–37, 71, 86).

- c. *“receive the digital image file and associated information retrieved at the external computing device” / “receiving the digital image file and associated information at the camera device”*

The parties dispute whether the combination of Fukunaga and Safai discloses “receiv[ing] the digital image file and associated information retrieved at the external computing device,” as recited in independent claims 1 and 15, and “receiving the digital image file and associated information at the camera device,” as recited in independent claim 25.

As explained in Section II.C.3.a above, we find that the combination of Fukunaga and Safai teaches a transmission module for transmitting a digital image file and associated information to an external coming device for storage. Petitioner contends that Fukunaga discloses that the transmission module is adapted further to transmit a symbology to an external computing device and to “receive the digital image file and associated information retrieved at the external computing device” based on the symbology, as recited in claims 1 and 15 (Pet. 23–25, 39), and that Fukunaga similarly discloses “receiving the digital image file and associated information at the camera device,” as recited in claim 25 (*id.* at 45). More particularly, Petitioner contends as follows:

The process illustrated in Figure 3 [of Fukunaga] shows a user terminal reading a QR code on a photo print (“(7) READ QR”) and then accessing the image and associated additional information stored at the service server (“(8) ACCESS IMAGE AND INFORMATION”). [Ex. 1003], 7:55–8:4, Fig. 3; Ex. 1010, ¶ 51. One skilled in the art would have realized based on the above disclosures, that the one or more components for transmitting the digital image file and associated information . . .

is necessarily adapted to transmit the read QR code to the external server and receive, from the server, the digital image and associated information (e.g., additional information) based on the QR code. Ex. 1010, ¶ 52. Such features must be present because without them, the above described processes disclosed by Fukunaga would not have been able to be performed. *Id.*

Pet. 24–25.

Patent Owner does not dispute expressly Petitioner’s contention that Fukunaga discloses that the transmission module is adapted to transmit a symbology to an external computing device, but responds that “the combination of Fukunaga and Safai . . . fails to demonstrate ‘receiv[ing] the digital image file and associated information retrieved at the external computing device’ from the ‘address’ or ‘addresses’ to which photos are sent in Safai.” PO Resp. 20. According to Patent Owner, the addresses specified in Safai are “1. Physical address, such as a postal mail address; [Ex. 1004,] 8.65–66”; “2. Electronic mail address; *Id.* at 8:62–64”; “3. Web site address, such as a Uniform Resource Locator; *Id.* at 14:61–64”; and “Photo album maintenance service (although user does not input an address in this case). *Id.* at 15:33–37.” PO Resp. 21. With respect to those addresses, Patent Owner argues that “digital image file cannot be retrieved at the physical address of Safai,” to which a tangible copy is sent; that “the user of Safai who inputted the email address in the digital camera so that photos can be sent . . . loses control over sent photos, and hence digital image file cannot be retrieved from email addresses to which the photos are emailed”; that it is clear that only digital photos—and not the associated information—are made

available at the web addresses and photo album maintenance services disclosed by Safai. *Id.* at 21–23.

Patent Owner’s argument is not persuasive. One cannot show non-obviousness by attacking references individually where the grounds of unpatentability are based on combinations of references. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). As stated above and explained in the Reply, the Petition relies on Fukunaga, rather than Safai, as disclosing this limitation. *See* Pet. 23–25, 39, 45; Reply 11–12. Accordingly, Patent Owner’s contentions regarding the alleged failure of Safai to disclose receiving the digital image file and associated information are misplaced. Moreover, we have considered the evidence in the Petition and are persuaded that Petitioner adequately accounts for this limitation with respect to each of claims 1, 15, and 25. *See* Pet 23–25, 39, 45 (citing Ex. 1003, Abstract, 5:41–43, 5:51–60, 6:36–38, 7:42–45, 7:55–8:4 (disclosing reading a QR code on a photo print to acquire a URL that can be used for accessing “image+information”), 8:9–12, Fig. 3; Ex. 1010 ¶¶ 48–52).

d. “prompting a user with the camera device for information regarding the captured image”

The parties dispute whether the combination of Fukunaga and Safai discloses “*prompting a user with the camera device for information regarding the captured image,*” as recited in independent claim 25 (emphasis added). Petitioner contends that Fukunaga discloses that the display component of Fukunaga’s camera-equipped cellular phone is configured to

prompt a user via a menu for inputting voice information that is associated with a captured image. Pet. 27 (addressing a similar limitation in dependent claim 3 and citing Ex. 1003, 6:66–7:14), 43 (referring in connection with claim 25 to discussion of claim 3). According to Petitioner, Fukunaga explains that a user of the camera-equipped cellular phone may attach voice information to an image while each image is selected for print orders, which, Petitioner contends, must be done via the display components providing an interface for the user to perform such tasks. *Id.* at 27 (citing Ex. 1003, 7:18–25; Ex. 1010 ¶ 57), 43 (citing Ex. 1010 ¶ 85).

Patent Owner responds that “Fukunaga does not disclose prompting a user with a camera device to input information regarding the captured image,” but “rather the user on his own ‘[i]f the voice information is [to be] attached to the image by means of the cellular phone 30, for example, a menu for inputting the voice information is selected while the image is displayed on the cellular phone 30.’” PO Resp. 36.

Petitioner replies that Patent Owner’s response is based on an overly narrow construction and that the menu disclosed by Fukunaga “is akin to ‘displaying at least one question to the user,’ which the ’163 patent identifies as prompting.” Reply 12–13 (citing Ex. 1001, 2:41–43, 7:53–56, claim 26). According to Petitioner, Fukunaga discloses this limitation even under Patent Owner’s claim construction, as Fukunaga’s menu incites or provides a cue for information regarding a captured image. *Id.* at 13. Petitioner further contends that, while the disclosure in Fukunaga is sufficient to disclose the prompting limitation, further evidence that this limitation was

known in the art is provided in Safai, which also describes several prompts for information regarding a captured image:

For example, *Safai* discloses that when a user selects to enter an address to which a photo is to be sent, the digital camera “displays an address entry screen on the display device 108,” indicating that the camera is waiting for input. (Ex. 1004 at 8:48–51.) The address entry screen “comprises an address entry field 414, a virtual keyboard 416, and a Done button 418.” (*Id.* at 8:51–54.) *Safai* also describes a process for validating an address, for example, to ensure “the address 420 conforms to Internet addressing protocols.” (*Id.* at 9:30–38.) If the address is not valid, “an error condition occurs” and “the transport application generates a *prompt* to the user that asks whether the user wishes to correct the address or discard it.” (*Id.* at 10:12–16 (emphasis added).) *Safai* also describes “a subject data entry field” in which “a user may . . . enter text describing a subject of the photos or message.” (*Id.* at 9:1–4.) If a user selects the subject data entry field, the application “displays a cursor in the subject data entry field,” indicating that the camera is waiting for the “user [to] enter text for the subject line using the virtual keyboard 416.” (*Id.* at 9:4–8.) *Safai* additionally describes a display prompting a user to enter a voice message to associate with a captured image. (*Id.* at 11:27–39.) The display includes “a Record button 448, a Play button 450, and a DONE button 452.” (*Id.* at 11:33–35.)

Id. at 13–14.

We agree with Petitioner. As explained in Section II.B.3 above, “prompt” means “to incite or provide a cue,” and need not be automatic or without any action on the part of the user between capturing an image and prompting the user to input information. We find that in the examples described in Fukunaga and Safai, the menu for inputting voice information in Fukunaga and the subject entry field and the prompt to the user to correct

an invalid address in Safai all are cues, provided by Fukunaga's and Safai's respective devices, to incite the user to enter information about a captured image. "Voice information," for example, is explicitly and repeatedly disclosed by Fukunaga as an example of "additional information" that may be associated with an image. *See, e.g.*, Ex. 1003, 2:7–9, 2:61–63, 3:20–22, 4:51–52, 6:39–41, 7:66–67. A subject is information regarding the captured image because it may explain the subject matter of the image. Likewise, an email address is information regarding the captured image because it identifies a destination for that image. Thus, we find that both Fukunaga and Safai teach "*prompting* a user with the camera device for information regarding the captured image," as recited in independent claim 25.

e. Patent Owner's remaining challenges to Petitioner's reasons to combine Fukunaga and Safai

Patent Owner also argues that Dr. Essa did not, in his Declaration, analyze the underlying factual determinations outlined in *Graham v. John Deere* and did not provide "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." PO Resp. 29 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir 2006)). According to Patent Owner, "Dr. Essa, in his deposition, was unable to articulate any factors one would need to consider in making an obviousness determination." *Id.* (citing Ex. 2002, 102–104, 165–168). Dr. Essa, however, was offered as a technical expert, rather than a legal expert. *Graham v. John Deere* outlines "factual inquiries" that we, as the trier of fact, must make. 383 U.S. at 17–18; *accord Kahn*, 441 F.3d at 986 ("[T]o

establish a *prima facie* case of obviousness based on a combination of elements disclosed in the prior art, *the Board* must articulate the basis on which it concludes that it would have been obvious to make the claimed invention. In practice, this requires that *the Board* explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.” (emphasis added, internal citation and quotation marks omitted)). A technical expert need not articulate the *Graham* factors to offer testimony on obviousness so long as our findings are guided by those factors. Although the ultimate conclusion of obviousness of a claimed invention is based on all underlying inquiries outlined in *Graham*, that ultimate conclusion of obviousness is a question of law with respect to which we do not rely on expert testimony.

As we explain above, we have considered the evidence, including Dr. Essa’s testimony, and make our findings in the context of the *Graham* factors. Moreover, Dr. Essa explains in a cogent and persuasive manner in paragraphs 37, 40, and 44 of his Declaration why a person of ordinary skill in the art at the time of the alleged invention of the ’163 patent would have been motivated to modify the components that operate as an input module of the user terminal (e.g., camera-equipped cellular phone) described in Fukunaga to enable a user to input storage location information regarding each captured image; to include a storage address as part of the “additional information” Fukunaga attaches to an image; and to modify the transmission components of the user terminal of Fukunaga to transmit the inputted associated information with the digital image to the external server for storage, based on the disclosure of Safai, and in view of the fact that

Fukunaga and Safai are similarly directed to systems and techniques for storing and retrieving digital images in a server. We are persuaded by Dr. Essa's reasoning that the modification of Fukunaga to enable a user to input storage location information in the manner described by Safai would have provided the benefits of allowing a user to control and specify the location that each image is stored, providing organization and management for image files and associated information, and helping to facilitate retrieval of such information. *See id.* ¶ 37. We also are persuaded by Dr. Essa's reasoning that a skilled person would have been motivated to look to Safai to modify Fukunaga's disclosed system and processes to associate a storage address with an image, as disclosed by Safai (*see, e.g.*, Ex. 1004, 11:22–26), particularly given that Fukunaga already discloses associating other information with the an image (*see, e.g.*, 6:48–7:17), and then to transmit the inputted associated information with the digital image file to the external server for storage. Ex. 1010 ¶¶ 40, 44. As Dr. Essa explains, “associating a storage location with an image would have informed the server that stores the image of the precise location to store the image, which may, for example, facilitate image organization and retrieval,” and transmitting that information to the external server for storage would allow the server to store that data for later use in retrieving the image and associated information. *Id.* We agree further that one skilled in the art would have understood that modifying Fukunaga's system in such a way would “have been a common sense and predictable modification that was within the realm of knowledge of [such a person] at the time of the alleged invention.” *Id.* ¶ 40.

Patent Owner, citing the Board decision in *Ariosa Diagnostics v. Verinata Health, Inc.*, argues that the Petition and Dr. Essa's Declaration are missing an analysis of the differences between the claimed subject matter and the prior art beyond singular statements that one reference is missing a particular element of the claims. PO Resp. 29–30 (citing *Ariosa Diagnostics v. Verinata Health, Inc.*, Case IPR2013-00276, 2014 WL 5454541, at *7 (PTAB Oct. 23, 2014) (Paper 43), *vacated and remanded*, 805 F.3d 1359 (Fed. Cir. 2015)). As explained above, Petitioner presents detailed argument and evidence as to how Fukunaga differs from the claimed invention, what features from Safai would have remedied those deficiencies, and why a skilled artisan would have looked to Safai to combine with Fukunaga. The argument also is without merit because it is Petitioner's position that Fukunaga discloses all elements of the claims other than those for which it specifically relies upon Safai. Petitioner identified the differences between the invention of claim 1 and the prior art, for example, by noting that Fukunaga "does not explicitly disclose 'inputting storage location information regarding each captured image,'" "associating the 'inputted information' (e.g., storage location information) to the digital image file," and "a transmission module for transmitting the associated (inputted) information to the external computing device for storage." Pet. 13, 17, 19–20. There is no requirement that a Petitioner identify all of the differences between the claimed subject matter and "each" prior art reference of record. Here, it is proper and sufficient for Petitioner to identify differences between the claimed invention and the disclosure of Fukunaga, and then how that difference would have been accounted for by disclosure in Safai and the

combined teachings of Fukunaga and Safai. Thus, we are not persuaded by Patent Owner's argument.

Patent Owner, further citing *Ariosa Diagnostics*, argues that the Petition and Dr. Essa's Declaration do not explain how a skilled artisan would have combined disparate elements of Fukunaga and Safai or explain what modifications would have been necessary to do so. PO Resp. 30. The argument is unpersuasive. We detail above the reasons Petitioner gives for combining Fukunaga and Safai, as well as the testimony from Dr. Essa on which Petitioner relies. For the reasons given above, we agree with Petitioner's arguments and evidence and find that a skilled artisan would have had reason to combine Fukunaga and Safai. Also, Petitioner correctly states:

That Dr. Essa did not provide a "design document" illustrating how *Fukunaga's* input module would be modified based on the teachings of *Safai* is of no import. (Ex. 2002 at 104:8–107:22.) A determination of obviousness does not turn on whether and precisely how the references could be physically combined; rather, "the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981); *see also In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (citing *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) ("[T]he criterion [is] not whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.")).

Reply 18–19. The evidence also does not support any argument that one with ordinary skill in the art would not have had sufficient knowledge and skill, if given the specific task, to allow the user to specify storage location

information, to include the storage location information with Fukunaga's "additional information," or to transmit the inputted associated information with the digital image file to the external server for storage. Patent Owner also has not made such an argument. In addition, based on the disclosure of Fukunaga and Safai as discussed above, we disagree with Patent Owner's characterization that Petitioner has relied on "disparate" elements from those references.

Finally, Patent Owner argues that Dr. Essa, in his Declaration and deposition testimony, engaged in hindsight, using the '163 patent's disclosure to guide reconstruction of the invention from Fukunaga and Safai. PO Resp. 30–31 (citing Ex. 1010 ¶ 37; Ex. 2002, 108). We agree with Petitioner (Reply 19–20), however, that Dr. Essa referenced the claims of the '163 patent only in explaining that he "did a thorough analysis of everything" in evaluating whether it would have been obvious to combine Fukunaga and Safai, including "the claims, the specification of the entire patent, and also the other patents" (Ex. 2002, 108), and that "[t]his explanation makes sense, as the claims must be considered in order to determine whether they are obvious in view of the prior art" (Reply 19). Accordingly, we are not persuaded by Patent Owner's argument.

In sum, we find that Fukunaga and Safai teach each limitation of independent claims 1, 15, and 25. We also find that a skilled artisan would have had reason to combine Fukunaga and Safai.

4. Conclusion of Obviousness

a. Claims 1, 15, and 25

As explained above, we find, based on Petitioner's evidence, that Fukunaga and Safai teach each limitation of independent claims 1, 15, and 25. We also find, based on Petitioner's evidence, that a skilled artisan would have had reasons, with rational underpinning, to combine these teachings to arrive at the inventions of claims 1, 15, and 25. We have considered Patent Owner's arguments to the contrary and find them unpersuasive. The parties do not introduce or rely on objective indicia of nonobviousness.

After weighing the evidence, we conclude that Petitioner has shown, by a preponderance of the evidence, that claims 1, 15, and 25 would have been obvious over Fukunaga and Safai.

b. Claims 2, 3, 7–10, 12, 13, 16, 19–23, 26, 30, and 31

Claims 2, 3, 7–10, 12, and 13 depend from claim 1. Claims 16 and 19–23 depend from claim 15. Claims 26, 30, and 31 depend from claim 25. Petitioner introduces evidence and argument as to the obviousness of each of these claims. Pet. 26–35, 40–41, 45–48. Patent Owner does not present separate arguments for claims 2, 3, 7–10, 12, 13, 16, 19–23, 26, 30, and 31. Rather, Patent Owner argues that these claims are patentable for the reasons given for claims 1, 15, and 25. PO Resp. 32, 34, 38. As explained above, these reasons are not persuasive. By not raising them in its Response, Patent Owner has waived any additional arguments regarding claims 2, 3, 7–10, 12, 13, 16, 19–23, 26, 30, and 31. Paper 8, 3 ("The patent owner is cautioned that any arguments for patentability not raised in the response will be

deemed waived.”). Patent Owner confirmed at the oral argument that it is Patent Owner’s position that the dependent claims stand or fall with independent claims 1, 15, and 25. Tr. 27:23–28:3. In any case, we have considered the evidence in the Petition and are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 2, 3, 7–10, 12, 13, 16, 19–23, 26, 30, and 31 would have been obvious over Fukunaga and Safai.

D. Remaining Obviousness Grounds

Claims 4–6, 11, and 14 depend from claim 1. Claims 17, 18, and 24 depend from claim 15. Claims 27–29 depend from claim 25. Petitioner has introduced evidence and argument to show the following:

claims 4, 5, 17, and 28 would have been obvious over Fukunaga, Safai, and Arai. Pet. 48–51;

claims 6, 18, and 27 would have been obvious over Fukunaga, Safai, and Knowles. *Id.* at 51–53;

claim 11 would have been obvious over Fukunaga, Safai, and Terp. *Id.* at 53–55;

claims 14 and 24 would have been obvious over Fukunaga, Safai, and Steinberg. *Id.* at 56–58; and

claim 29 would have been obvious over Fukunaga, Safai, and Mattes. *Id.* at 58–60.

Patent Owner does not present separate arguments for claims 4–6, 11, 14, 17, 18, 24, and 27–29. Rather, Patent Owner argues that these claims are patentable for the reasons given for claims 1, 15, and 25. PO Resp. 32, 34,

38. As explained above, these reasons are not persuasive. By not raising them in its Response, Patent Owner has waived any additional arguments regarding claims 4–6, 11, 14, 17, 18, 24, and 27–29. Paper 8, 3. Patent Owner confirmed at the oral argument that it is Patent Owner’s position that the dependent claims stand or fall with independent claims 1, 15, and 25. Tr. 27:23–28:3. In any case, we have considered the evidence in the Petition and are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 4–6, 11, 14, 17, 18, 24, and 27–29 are unpatentable on the respective obviousness grounds of unpatentability asserted by Petitioner for those claims.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that claims 1–31 would have been obvious.

IV. ORDER

For the reasons given, it is

ORDERED that claims 1–3, 7–10, 12, 13, 15, 16, 19–23, 25, 26, 30, and 31 of U.S. Patent No. 7,450,163 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga and Safai;

FURTHER ORDERED that claims 4, 5, 17, and 28 of U.S. Patent No. 7,450,163 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga, Safai, and Arai;

FURTHER ORDERED that claims 6, 18, and 27 of U.S. Patent No. 7,450,163 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga, Safai, and Knowles;

FURTHER ORDERED that claim 11 of U.S. Patent No. 7,450,163 B2 has been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga, Safai, and Terp;

FURTHER ORDERED that claims 14 and 24 of U.S. Patent No. 7,450,163 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga, Safai, and Steinberg;

FURTHER ORDERED that claim 29 of U.S. Patent No. 7,450,163 B2 has been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Fukunaga, Safai, and Mattes; and

FURTHER ORDERED that, because this is a final written decision, 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.

IPR2015-00622
Patent 7,450,163 B2

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