

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Singh et al.
U.S. Patent No.: 9,900,766 Attorney Docket No.: 50048-0056IP1
Issue Date: February 20, 2018
App. Serial No.: 15/640,594
Filing Date: July 3, 2017
Title: AUTOMATIC MULTIMEDIA UPLOAD FOR
PUBLISHING DATA AND MULTIMEDIA CONTENT

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Patent Trial and Appeal Board
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**PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT
NO. 9,900,766 PURSUANT TO 35 U.S.C. §§ 311-319, 37 C.F.R. § 42**

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LIST OF EXHIBITS

TTI-1001–1002 RESERVED

TTI-1003 U.S. Patent No. 9,900,766 to Singh et al. (“the ’766 patent”)

TTI-1004 Excerpts from the Prosecution History of the ’766 patent

TTI-1005 RESERVED

TTI-1006 Excerpts from the Prosecution History of U.S. Pat. No. 11,234,121

TTI-1007-1008 RESERVED

TTI-1009 U.S. Patent App. Pub. No. 2009/0172129 to Singh et al. (“Singh129”)

TTI-1010 U.S. Patent App. Pub. No. 2008/0103906 to Singh (“Singh906”)

TTI-1011 Certified Translation of JP 2003-60953 (“Hiroishi”)

TTI-1012 Certificate of Translation for Hiroishi

TTI-1013 Original Japanese Publication of Hiroishi

TTI-1014–1016 RESERVED

TTI-1017 U.S. Patent App. Pub. No. 2004/0004737 to Kahn (“Kahn”)

TTI-1018 RESERVED

TTI-1019 Bluetooth Specification Version 2.1 + EDR [vol 0]-[vol 4]
 (“Bluetooth”)

TTI-1020–1024 RESERVED

TTI-1025 U.S. Patent App. Pub. No. 2007/0073937 to Feinberg et al.
 (“Feinberg”)

TTI-1026–1029 RESERVED

- TTI-1030 Declaration of David Lett
- TTI-1031 Archived Webpage Bluetooth™ Core Specification v2.1 + EDR
(<https://web.archive.org/web/20071011031607/http://bluetooth.com/Bluetooth/Learn/Technology/Specifications/Default.htm>)
- TTI-1032 C. Bisdikian, "An overview of the Bluetooth wireless technology," in IEEE Communications Magazine, vol. 39, no. 12, pp. 86-94, Dec. 2001, doi: 10.1109/35.968817. ("The Bluetooth Overview")
- TTI-1033 Excerpts from the Prosecution History of U.S. Patent App. No. 14/503,401
- TTI-1034 Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (USPTO June 21, 2022) ("Interim Guidance")
- TTI-1035 TikTok Stipulation letter regarding IPR grounds in District court litigation
- TTI-1036 Cellspin Preliminary Infringement Contentions in *CellSpin Soft, Inc. v. ByteDance, Ltd. et al.*, Case No. 2:23-cv-496 (E.D. Tex.)

LISTING OF CHALLENGED CLAIMS

Claim 1	
1.P	A short-range wireless enabled data capture device, comprising:
1.1	a memory device;
1.2	a processor coupled to said memory device;
1.3	a short-range wireless communication device configured to establish a short-range paired wireless connection between the short-range wireless enabled data capture device and a short-range wireless enabled cellular phone,
1.4	wherein establishing the short-range paired wireless connection comprises cryptographically authenticating identity of the short-range wireless enabled cellular phone, and
1.5	wherein establishing the short-range paired wireless connection further comprises the short-range wireless enabled data capture device using an association protocol;
1.6	a data capture circuitry;
1.7	said processor configured to acquire new-data in the short-range wireless enabled data capture device using the data capture circuitry,
1.8	wherein the new-data is data acquired after establishing the short-range paired wireless connection between the short-range wireless enabled data capture device and the short-range wireless enabled cellular phone;
1.9	said processor further configured to store the new-data in the memory device;
1.10	said processor further configured to create a new-data object, wherein the new-data object comprises:
1.11	signal to notify, wherein the signal to notify corresponds to the acquiring of the new-data for transfer to the cryptographically authenticated short-range wireless enabled cellular phone;
1.12	the acquired new-data; and
1.13	associated new-data, wherein the associated new-data corresponds to data associated with the new-data; and

1.14	said processor further configured to transfer automatically the new-data object to the cryptographically authenticated short-range wireless enabled cellular phone, over the established short-range paired wireless connection,
1.15	wherein the cryptographically authenticated short-range wireless enabled cellular phone is configured to listen to the signal to notify and receive the new-data object over the established short-range paired wireless connection,
1.16	[1.16.1] wherein a mobile client application for the cryptographically authenticated short-range wireless enabled cellular phone is configured to process the signal to notify and [1.16.2] store the received new-data in a memory device of the cryptographically authenticated short-range wireless enabled cellular phone,
1.17	wherein the mobile client application for the cryptographically authenticated short-range wireless enabled cellular phone is configured to use HTTP to upload the received new-data along with user information to a user data publishing website over a cellular data network, and
1.18	wherein the user information corresponds to a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.
Claim 2	
2.	The short-range wireless enabled data capture device of claim 1, wherein the short-range paired wireless connection is one of a Bluetooth paired wireless connection, a Wi-Fi paired wireless connection, and other wireless personal area networking technologies that use pairing.
Claim 3	
3.	The short-range wireless enabled data capture device of claim 1, wherein the new-data comprises one or more of audio data, video data,

	image data, text data, digital data, and data associated with the new-data.
Claim 4	
4.P	A system, comprising:
4.1	a data capture device, comprising:
4.2	a first memory device;
4.3	a first processor coupled to the first memory device;
4.4	a first short-range wireless communication device configured to establish a short-range paired wireless connection with an internet connected cellular phone,
4.5	wherein establishing the short-range paired wireless connection comprises, the data capture device cryptographically authenticating identity of the cellular phone, and
4.6	wherein establishing the short-range paired wireless connection further comprises the data capture device using an association protocol;
4.7	a data capture circuitry;
4.8	said first processor configured to acquire new-data in the data capture device using the data capture circuitry,
4.9	wherein the new-data is data acquired after establishing the short-range paired wireless connection with the cellular phone;
4.10	said first processor further configured to store the new-data in the first memory device;
4.11	said first processor further configured to create a new-data object, wherein the new-data object comprises:
4.12	signal to notify, wherein the signal to notify corresponds to the acquiring of the new-data for transfer to the cryptographically authenticated cellular phone;
4.13	the acquired new-data; and
4.14	associated new-data, wherein the associated new-data corresponds to data associated with the new-data; and

4.15	said first processor further configured to transfer automatically the new-data object to the cryptographically authenticated cellular phone, over the established short-range paired wireless connection;
4.16	said cellular phone, comprising:
4.17	a second memory device;
4.18	a second processor coupled to said second memory device;
4.19	a cellular network communication device configured to connect to the internet via the cellular data network;
4.20	a second short-range wireless communication device configured to establish the short-range paired wireless connection between the cellular phone and the data capture device;
4.21	a mobile client application for the cellular phone comprising executable instructions that, when executed by the second processor controls the second processor to:
4.22	listen for the signal to notify;
4.23	receive the new-data object from the data capture device;
4.24	store the received new-data in the second memory device; and
4.25	use HTTP to transfer the new-data along with user information to a user data publishing website over the cellular data network,
4.26	wherein the user information corresponds to a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.
Claim 5	
5.	The system of claim 4, wherein establishing the short-range paired wireless connection comprises the data capture device using an association protocol.
Claim 6	
6.	The system of claim 4, wherein the short-range paired wireless connection is one of a Bluetooth paired wireless connection, a Wi-Fi paired wireless connection, and other wireless personal area networking technologies that use pairing.

Claim 7	
7.	The system of claim 4, wherein the new-data comprises one or more of audio data, video data, image data, text data, digital data, and data associated with the new-data.
Claim 8	
8.	The system of claim 4, wherein a graphical user interface (GUI) is provided in the cryptographically authenticated cellular phone, and wherein the graphical user interface (GUI) is for the received new-data.
Claim 9	
9.P	A short-range wireless enabled cellular phone, comprising:
9.1	a memory device;
9.2	a processor coupled to said memory device;
9.3	a cellular network communication device configured to connect to internet via a cellular data network;
9.4	a short-range wireless communication device configured to establish a short-range paired wireless connection between the short-range wireless enabled cellular phone and a short-range wireless enabled data capture device,
9.5	wherein the short-range wireless enabled data capture device is configured to cryptographically authenticate identity of the short-range wireless enabled cellular phone when establishing the short-range paired wireless connection, and
9.6	wherein establishing the short-range paired wireless connection comprises the short-range wireless enabled mobile device using an association protocol;
9.7	a mobile client application for the short-range wireless enabled cellular phone comprising executable instructions that, when executed by the processor controls the processor to:
9.8	receive a new-data object from the short-range wireless enabled data capture device over the established short-range paired wireless connection,

9.9	wherein the new-data object comprises:
9.10	signal to notify and acquired new-data,
9.11	wherein the acquired new-data is data acquired by the short-range wireless enabled data capture device after the short-range paired wireless connection is established between the short-range wireless enabled cellular phone and the short-range wireless enabled data capture device, and
9.12	wherein the signal to notify corresponds to the acquiring of the new-data for transfer; and
9.13	associated new-data, wherein the associated new-data corresponds to data associated with the new-data;
9.14	listen and process the signal to notify;
9.15	store the received new-data in the memory device; and
9.16	use HTTP to transfer the new-data along with user information to a user data publishing website over the cellular data network,
9.17	wherein the user information corresponds to a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.
Claim 10	
10.	The short-range wireless enabled cellular phone of claim 9, wherein the short-range paired wireless connection is one of a Bluetooth paired wireless connection, a Wi-Fi paired wireless connection, and other wireless personal area networking technologies that use pairing.
Claim 11	
11.	The short-range wireless enabled cellular phone of claim 9, wherein the new-data comprises one or more of audio data, video data, image data, text data, digital data, and data associated with the new-data.
Claim 12	
12.	The short-range wireless enabled cellular phone of claim 9, wherein a graphical user interface (GUI) is provided in the cryptographically authenticated short-range wireless enabled cellular phone, and wherein the graphical user interface (GUI) is for the received new-data.

Claim 13	
13.P	A system, comprising:
13.1	a short-range wireless enabled data capture device, comprising:
13.2	a first memory device;
13.3	a first processor coupled to the first memory device;
13.4	a first short-range wireless communication device configured to establish a short-range paired wireless connection between the short-range wireless enabled data capture device and a short-range wireless enabled cellular phone,
13.5	wherein establishing the short-range paired wireless connection comprises cryptographically authenticating identity of the short-range wireless enabled cellular phone, and
13.6	wherein establishing the short-range paired wireless connection further comprises the short-range wireless enabled data capture device using an association protocol;
13.7	a data capture circuitry;
13.8	said first processor configured to acquire new-data using the data capture circuitry, wherein the new-data is data acquired after the short-range paired wireless connection between the short-range wireless enabled data capture device and the short-range wireless enabled cellular phone is established;
13.9	said first processor further configured to store the acquired new-data in the first memory device;
13.10	said processor further configured to create a new-data object, wherein the new-data object comprises:
13.11	signal to notify, wherein the signal to notify corresponds to the acquiring of the new-data for transfer;
13.12	the acquired new-data; and
13.13	associated new-data, wherein the associated new-data corresponds to data associated with the new-data; and

13.14	said first processor further configured to receive a data transfer request from the short-range wireless enabled cellular phone, over the established short-range paired wireless connection,
13.15	wherein the data transfer request is for the acquired new-data that was acquired by the short-range wireless enabled data capture device before receiving the data transfer request; and
13.16	said first processor configured to transfer the new-data object to the short-range wireless enabled cellular phone over the established short-range paired wireless connection;
13.17	a mobile client application for the short-range wireless enabled cellular phone comprising executable instructions that, when executed by a second processor of the short-range wireless enabled cellular phone controls the second processor to:
13.18	receive a request through a graphical user interface (GUI) of the cryptographically authenticated short-range wireless enabled cellular phone for new-data and send a data transfer request to the short-range wireless enabled data capture device, over the established short-range paired wireless connection,
13.19	wherein the data transfer request is for the acquired new-data that was acquired by the short-range wireless enabled data capture device before receiving the data transfer request;
13.20	receive the new-data object from the short-range wireless enabled data capture device, over the established short-range paired wireless connection;
13.21	store the new-data received over the established short-range paired wireless connection, in a second memory device of the short-range wireless enabled cellular phone; and
13.22	use HTTP to upload the new-data along with user information to a user data publishing website over the cellular data network,
13.23	wherein the user information corresponds to a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.

Claim 14	
14.	The system of claim 13, wherein the short-range paired wireless connection is one of a Bluetooth paired wireless connection, a Wi-Fi paired wireless connection, and other wireless personal area networking technologies that use pairing.
Claim 15	
15.	The system of claim 13, wherein the new-data comprises one or more of audio data, video data, image data, text data, digital data, and data associated with the new-data.

TikTok Inc. (“Petitioner”) petitions for *Inter Partes* Review of claims 1-15 (“the Challenged Claims”) of U.S. Patent No. 9,900,766 (“the ’766 patent”).

Notably, in IPR2019-00127 and IPR2019-00131, similar claims in related U.S. Patent No. 9,258,698 (“the ’698 patent”) were found unpatentable over the prior art. Although the challenged claims of the ’766 patent recite at least one additional limitation (*e.g.*, using HTTP to upload user information and other obvious variants) the Challenged Claims are likewise not patentable.

I. REQUIREMENTS FOR IPR

A. Standing

Petitioner certifies that the ’766 patent is available for IPR and Petitioner is not barred from requesting IPR.

B. Challenge and Relief Requested

Petitioner requests IPR of the Challenged Claims on the grounds listed below. A declaration from David Lett (TTI-1030) supports this Petition.

Ground	Claims	Basis
1	1-15	§103: Singh129 in view of Singh906
2a	1-15	§103: Kahn in view of Bluetooth
2b	1-15	§103: Kahn in view of Bluetooth and Feinberg

No challenged claim can claim priority before the filing date of the application that issued as the ’766 patent (July 3, 2017) because the priority documents fail to disclose the subject matter arranged as in the claims (as will be

explained in Section V). Therefore, Singh129 and Singh906 each qualifies as prior art under AIA 35 U.S.C. § 102(a)(1). Each reference published approximately 8 years before the filing of the application that issued as the '766 patent.

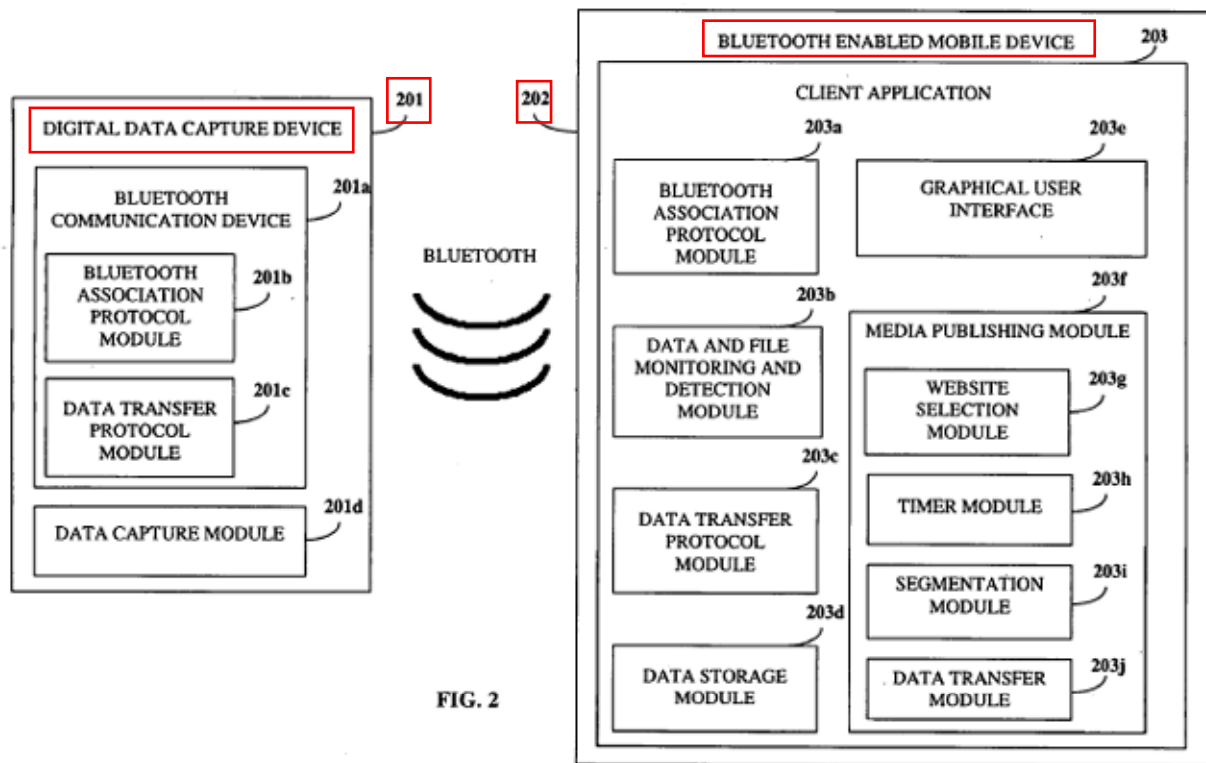
As shown below, each remaining reference pre-dates the '766 patent's earliest claimed priority date of December 28, 2007 (the alleged "Critical Date").

Reference	Publication Date	Prior Art At Least Under
Kahn	Jan. 8, 2004	Pre-AIA § 102(b)
Feinberg	March 29, 2007	Pre-AIA § 102(a)/102(e)
Bluetooth	July 26, 2007	Pre-AIA § 102(a)

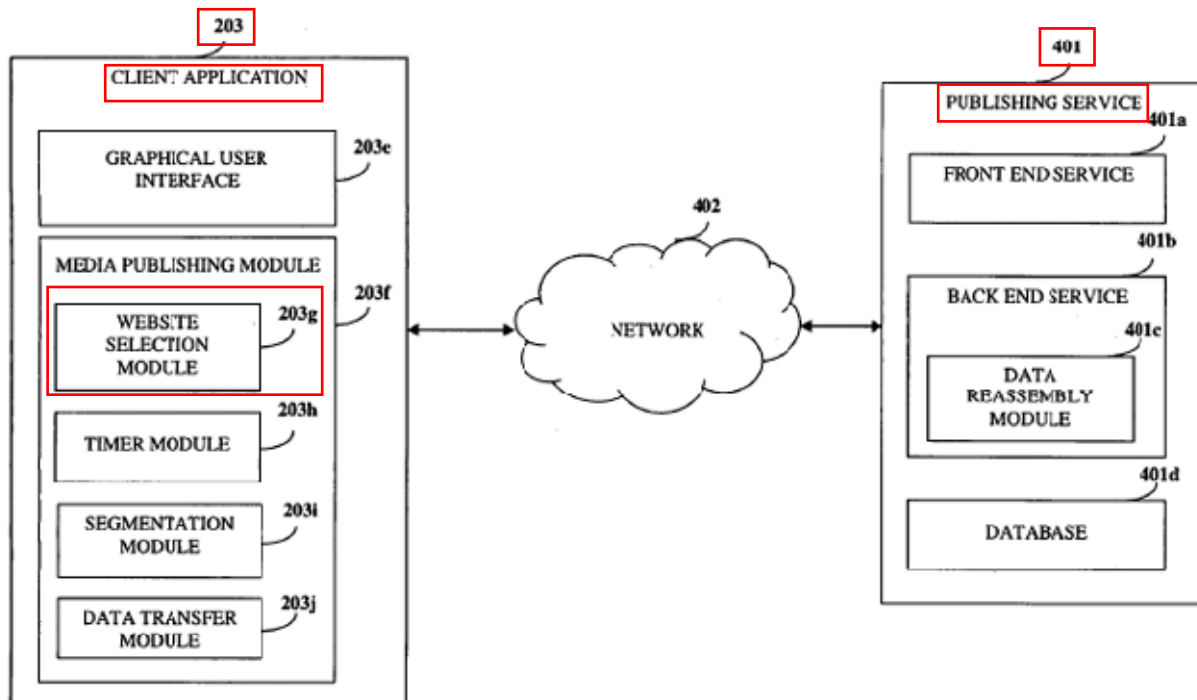
II. THE '766 PATENT

A. Brief Description

The '766 patent discloses "a method and system for utilizing a digital capture device in conjunction with a Bluetooth (BT) enabled mobile device for publishing data and multimedia content on one or more websites automatically or with minimal user intervention." TTI-1003, Abstract. As shown below, the '766 patent's system includes, among other things, digital data capture device 201, BT enabled mobile device 202, and publishing service 401. *Id.*, Figs. 2, 4.



Id., Fig. 2 (annotated).



Id., Fig. 4 (annotated).

As shown above, mobile device 202 includes client application 203, which “detects capture of data and multimedia content on the digital data capture device” and the “digital data capture device transfers the captured data, multimedia content, and the associated files to the client application.” *Id.*, Abstract. Then, the “client application automatically publishes the transferred data and multimedia content on one or more websites.” *Id.*

The '766 patent (at 1:5-50) has a section entitled “Cross Reference to Related Applications,” which provides the priority chain and further attempts to incorporate by reference U.S. Pat. App. 11/901,802, which published as Singh906. That application is not otherwise mentioned or discussed in the '766 patent. Singh906 discloses a different system—one that uses a client application 202 on a mobile device that generates and sends content to publishing service 204. There is no separate data capture device in Singh906’s system. TTI-1010, FIG. 2.

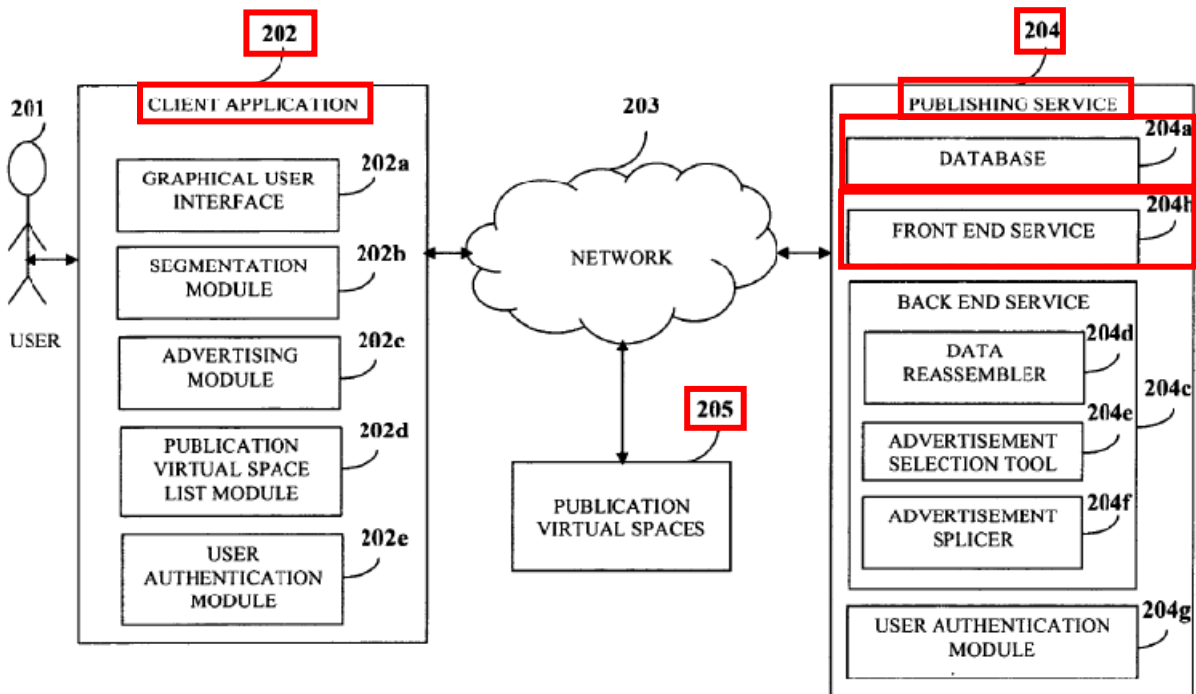


FIGURE 2

U.S. Pat. App. 11/901,802 further discloses sending user authentication credentials and global positioning system information from the mobile phone to the publishing service. TTI-1010, [0023]. There is no disclosure of sending this information from client application 203 in the system disclosed in the '766 patent specification.

B. Summary of the Prosecution History

U.S. Patent Application No. 15/640,594 ("the '594 application") was filed on July 3, 2017. Shortly after filing the patent application, the examiner allowed certain claims and suggested an amendment of other claims. TTI-1004, 13-20. The Applicant responded proposing a similar set of amendments and the patent issued. TTI-1004, 1-8. The examiner did not reject the claims using prior art in any office

action.

III. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art (“POSITA”) at the time of the ’766 patent alleged Critical Date would have had at least a bachelor’s degree in electrical engineering, computer engineering, or computer science, and two years of experience in the field of consumer electronics, with exposure to digital camera technology and wireless communications. TTI-1030, [94]-[95]. Superior education could compensate for a deficiency in work experience, and vice-versa. *Id.*

IV. CLAIM CONSTRUCTION

All claim terms should be construed according to the *Phillips* standard. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005); 37 C.F.R. § 42.100. Based on the well-established principal that “claim terms need only be construed to the extent necessary to resolve the controversy,” no express constructions are required to institute review and find the Challenged Claims unpatentable. *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011).

Nonetheless, Petitioner notes that, for purposes of determining whether to institute IPR2019-00127 regarding related U.S. Pat. No. 9,258,698, the Board “determine[d] that ‘cryptographically authenticating identity of the cellular phone’ encompasses ‘authenticating the identity of the cellular phone using some form of

security or encryption, including by use of a shared passkey on the digital camera device and the cellular phone.” *Canon U.S.A., Inc. v. Cellspin Soft, Inc.*, IPR2019-00127, Paper 7, p. 11 (P.T.A.B. April 29, 2019); *but see id.* at Paper 51, pp. 17-18 (finding that no construction was required to address the patentability issues).

V. THE CHALLENGED CLAIMS ARE NOT ENTITLED TO CLAIM PRIORITY TO ANY EARLIER FILING DATE

The ’766 patent claims priority, through a series of continuation applications, to a provisional application filed on December 28, 2007. However, Patent Owner failed to describe the subject matter as arranged in the claims in any of the priority documents and therefore Patent Owner is not entitled to any date earlier than the filing of the application maturing as the ’766 patent.

A. Legal Standard

Priority

To rely on the filing date of an earlier application, 35 U.S.C. § 120 requires that the earlier application include a disclosure that complies with the written description requirement of 35 U.S.C. § 112. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571-72 (Fed. Cir. 1997) (confirming the written description must provide more than that which “would lead one to speculate as to modifications that

the inventor might have envisioned, but failed to disclose”).¹ The written description requirement is separate and distinct from the enablement requirement. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1340 (Fed. Cir. 2010) (*en banc*); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560 (Fed. Cir. 1991).

The written description requirement has several policy objectives. One objective is to convey to the public what the applicant claims as the invention. *See Regents of the Univ. of Cal. v. Eli Lilly*, 119 F.3d 1559, 1566 (Fed. Cir. 1997), *cert. denied*, 523 U.S. 1089 (1998). “[T]he disclosure as originally filed does not have to provide *in haec verba* support for the claimed subject matter at issue.” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000). However, “one skilled in the art, reading the original disclosure, must immediately discern the limitation at issue in the claims.” *Id.*

“The question is not a question of whether one skilled in the art might be able to construct the patentee’s device from the teachings of the disclosure ... it is a question whether the application necessarily discloses that particular device.” *Lockwood*, 107 F.3d at 1572.

¹ *See SAP Am., Inc. v. Pi-Net Int’l, Inc.*, IPR No. 2014-00414, Paper No. 11, 1114 (P.T.A.B. Aug. 18, 2014) (relying on § 112 case law is proper in an *inter partes* review to establish effective filing date).

Incorporation by Reference

Essential material is material that is needed to fulfill one or more of the requirements for a patent application. 37 C.F.R. § 1.57(d). Incorporated material is deemed essential if it is necessary to fulfill the written description requirement. *Id.* Essential material may only be incorporated by reference to a U.S. patent or a U.S. patent application publication that contains the essential material and does not, itself, incorporate the essential material by reference. *Id.*; *see also SharkNinja Operating LLC, et al. v. iRobot Corp.*, IPR2020-00733, Paper 31, 19 (PTAB Oct. 4, 2021).

**B. No Priority Application Contains Written Description
Support For The Claimed Combination of Elements**

Each of the Challenged Claims requires a “mobile client application” for a “cellular phone” that is “configured to” or “comprises executable instructions that” perform several specific functions. No such system is disclosed in the priority documents. TTI-1030, [102]-[118].

Instead, the Challenged Claims mix and match features from two distinct systems found in two distinct applications. Specifically, the Challenged Claims combine features from (i) client application 203, which interacts with digital data capture device 201 (disclosed in priority application 12/333,303, which published as Singh129 (TTI-1009)), and (ii) a distinct “client application 202” (disclosed in

an unrelated incorporated application 11/901,802, which published as Singh906 (TTI-1010)) that does not interact with a digital data capture device.

Client applications 202 and 203 are different software programs that address different perceived problems in the prior art. *Id.* Singh906's client application 202, for example, addresses the purported "unmet need for a method and system to create and publish multimedia content online using a *single* device." TTI-1010, [0003]. In contrast, Singh129's client application 203 addresses the purported "need for a method and system to utilize a [separate] digital capture device *in conjunction with* a mobile device for automatically detecting capture of data and multimedia content, transferring the captured data and multimedia content to the mobile device, and publishing the data and multimedia content on one or more websites automatically." TTI-1009, [0005]. Moreover, the two applications are clearly directed toward dramatically different users—*i.e.*, those that create content with their phones (client application 202) and those that create content with a separate digital capture device (client application 203), while using a phone to provide an Internet connection. TTI-1030, [103].

The differences between the two applications are myriad. For example, unlike Singh906's client application 202, Singh129's client application 203 does **not**: (i) provide targeted advertising to the user; (ii) provide to a remote server authentication credentials, transaction identifications, a list of publication virtual

spaces, global positioning system geographical codes, area codes for the phone numbers of the mobile device, file formats of the user created multimedia content, or compression rates of multimedia content; (iii) allow the user to identify publication virtual spaces that include meta-destinations; (iv) allow the user to identify other users of any system as publication destinations; (v) allow the user to identify arbitrary emails and phone numbers as a destination; (vi) allow the user capture multimedia using the mobile device itself; (vii) allow the user to change the quality of the multimedia; or (viii) provide buttons in a GUI to control the playback of a recorded message. *Id.* In fact, instead of allowing the user to review and delete recorded media on their phone, as is done with Singh906's client application 202, Singh129's client application 203 automatically publishes images to one or more websites. *Id.* Furthermore, Singh129 expressly teaches that using client application 203 to "shar[e] information [] over electronic mail (emails)" as is done with Singh906's client application 202 "may be inconvenient." TTI-1009, [0045]. TTI-1030, [104].

Moreover, unlike the Singh129's client application 203, Singh906's client application 202 does not detect, receive, store, or transfer data acquired in a Bluetooth enabled data capture device and it does not include a timer module for setting the time to automatically publish multimedia content. TTI-1030, [105]. And there is no indication in Singh906 that the mobile device on which client

application 202 runs is a Bluetooth enabled cellular phone and thus no indication that client application 202 would have even been capable of detecting or receiving data acquired in a Bluetooth enabled data capture device, much less in the specific way claimed in the '766 patent. *Id.* In any event, receiving data from a separate data capture device would have been inconsistent with the stated purpose of Singh906's client application 202 to create and publish multimedia content using a single device. TTI-1010, [0002].

Notwithstanding the differences between these embodiments, each Challenged Claim recites a mobile client application that (a) obtains data from a "short-range wireless enabled data capture device," and (b) "use[s] HTTP" to upload/transfer "new-data along with user information" to a user data publishing website, and wherein "the user information corresponds to a user identifier." There is no disclosure of a such a client application in the priority documents. The specification in the priority chain, as shown by Singh129, discloses the first piece and only the '802 application (published as Singh906) discloses the second.

Moreover, the specification in the priority chain never suggests combining its disclosed embodiments with any portion of the '802 application. TTI-1030, [106]-[107]. The bald incorporation in effect is no more meaningful than taking the old '802 application and stapling it to the back of the priority chain application. Such incorporation provides the reader and the public no signposts or guidance as

to the purpose or significance of the incorporated material or how the applicant intended to combine the materials (assuming the applicant even had such intent).

Patent Owner may argue that providing the claimed “user information” is inherent in the “blog post” example of the priority documents. *See, e.g.*, TTI-1009, [0045]. Such an assertion would be incorrect. TTI-1030, [108]. As described, “Jane’s private blog” is accessible by various individuals, but the criteria and mechanisms for access are not specified. For example, a shared token may be used, which would not uniquely identify an individual. *Id.* The information sent from the client application may, for example, be based on an Internet “session” (or some other state or event), which may entail the sending of a session (or state or event) identifier, but not “user information.” *Id.* In addition, even if user information were sent from the client application, that information may be sent to an authentication server or other backend server instead of or before being routed to the user data publishing website over the backbone (non-cellular) Internet, rather than to the “user data publishing website over the cellular data network.” *Id.* A skilled artisan would not understand the general disclosure of the priority documents to disclose the claimed system.

Thus, although it would have been **obvious to combine** the disclosures of Singh129 and Singh906 as explained in Ground 1, the priority specification (Singh129 is representative) fails to disclose the combination and thus fails to

disclose the subject matter in the manner arranged in the claims.² *See, e.g., Intuitive Surgical, Inc. v. Ethicon LLC*, IPR2019-01110, Paper 30 at 10-15 (P.T.A.B Nov. 20, 2020) (rejecting the mixing and matching of embodiments without a disclosure directing the reader to do so); *see also Research Corp.*, 627 F.3d at 870 (“Entitlement to a filing date extends only to the subject matter that is disclosed; not to that which is obvious.”); *Lockwood*, 107 F.3d at 1571-72 (similar).

The priority applications also fail to disclose the subject matter claimed in the '766 patent because Patent Owner must rely on disclosures from the '802 application as alleged Section 112 support for the challenged claims. *See, e.g., TTI-1006*, 193-203, 270-273 (applicant relying on the '802 application for user authentication credential limitations of related patent). The material is therefore “essential material.” *See* 37 C.F.R. § 1.57(d)(1)–(3). But essential material can only be incorporated “by way of ... a ***U.S. patent or U.S. patent application publication***,” not by incorporation of an unpublished application like the '802 application. *See id.*, § 1.57(d) (emphasis added).

² Likewise, the '802 application is missing most of the limitations of the claims, such as the data capture device, signal to notify, short-range wireless communications, paired wireless connection with cryptographic authentication, and others. *TTI-1030*, [116].

As such, the incorporation of the '802 application is not effective to support the claims of the '766 patent, even assuming the material had supported the claims (it did not). *Id.*, § 1.57(h); *see also SharkNinja*, IPR2020-00733, Paper 31 at p. 19. The '802 application is undeniably not a “U.S. patent or U.S. patent application publication.” And, if Patent Owner desired to rely on the disclosure of Singh906 to support the challenged claims, it was Patent Owner’s obligation to amend the specification of the '766 patent to cite Singh906 during prosecution. It did not do so. The interested public would therefore rely on the incorporation as written and would understand that nothing in the '802 patent application could be or would be used to support the claims of the '766 patent.

Thus, the priority date for the '766 patent is no earlier than the filing date of the '766 patent, which is July 3, 2017. *See Arthrex, Inc. v. Smith & Nephew, Inc.*, 35 F.4th 1328, 1344 (Fed. Cir. 2022) (confirming the Board’s statutory authority to decide priority).

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. GROUND 1: Claims 1-15 are obvious over Singh129 in view of Singh906

Singh129 provides the same disclosure as the '766 patent. *Compare* TTI-1003 with TTI-1009. Singh906 provides the same disclosure as the incorporated '802 application. It would have been obvious to combine Singh129 with teachings

found in Singh906 to arrive at the Challenged Claims. TTI-1030, [454]-[462].

Patent Owner should not be heard to argue that the combination of Singh129 and Singh906 fails to disclose each limitation of the Challenged Claims because such an argument would necessarily be an admission that the '766 patent lacks written description. Rather, the only question is whether it would have been obvious to combine the Singh129 embodiment with the teachings concerning the distinct embodiment of Singh906. The answer to this question is “yes.”

Specifically, it would have been obvious to modify Singh129 in view of Singh906 to provide the final two limitations of the independent claims. In the combination, a client application would “use HTTP to transfer the new-data along with user information to a user data publishing website over the cellular data network, wherein the user information corresponds to a user identifier that uniquely identifies a particular user of the user data publishing website and is used by the user data publishing website to publish the new-data for private consumption.” TTI-1030, [454].

A person of ordinary skill in the art would have been motivated to make these modifications for several reasons. TTI-1030, [455]. First, a skilled artisan starting with Singh129 would naturally look to Singh906 because Singh129 incorporates by reference the '802 application that published as Singh906. *Id.*

Second, adding user information such as authentication credentials to

Singh129's user preferences would have given the user more control over the publishing of their multimedia content. TTI-1030, [456].

Third, there was a known problem in the art of associating multimedia objects with user preferences, as shown in Singh129. TTI-1030, [457]. However, Singh906's user preferences address that issue. *Id.* And modifying Singh129 as described above was not beyond the level of ordinary skill. *Id.* Indeed, Singh129 and Singh906 address the same problem of associating multimedia objects with user preferences. *Id.* And Singh906's user preferences, which included user information such as authentication credentials, were a known way to address that problem. *Id.*

Fourth, modifying Singh129's client application to upload user information such as authentication credentials to websites would allow the client application to publish content on password protected websites without first sending those credentials to a publishing service as taught by Singh906. TTI-1030, [458]. A person of ordinary skill in the art would have understood that this functionality would increase the speed at which content could be uploaded because it would reduce the number of data transmissions. *Id.* For mobile devices with sufficient memory to store the content received from the data capture device, it also would have reduced the need to host a separate publishing service and therefore reduced complexity and cost. *Id.* And even if the publishing service was retained, the

mobile device would still be able to publish content to password protected sites when the publishing service was down (e.g., for maintenance or due to a power outage). *Id.*

Fifth, the publishing service may have its own website, as taught by Singh906, and thus a person of ordinary skill would have been motivated to use that website to provide virtual spaces for its clients in addition to supporting third-party websites. TTI-1010, [0017], [0018], [0027]; TTI-1030, [459].

Finally, using HTTP to upload the authentication credentials to websites would have been an obvious design choice because websites generally use HTTP for user authentication and Singh129's client application is already configured to communicate with the publishing service 401 using HTTP. TTI-1030, [460]; TTI-1009, [0047].

A skilled artisan would have had a reasonable expectation of success when modifying Singh129 as described above. TTI-1030, [461]. Indeed, the proposed combination would have required no more than the application of known techniques (using authentication credentials and HTTP in accordance with Singh906) to a known system (Singh129's system) in the same field of endeavor (media publishing) and from the same assignee (CellSpinSoft) to obtain the benefits described above. *Id.* Furthermore, in the resulting system, each element performs the same predictable function as it does separately, without significantly

hindering the functions performed by Singh129's system. *Id.* Indeed, Singh129's system would have continued to perform all the functions it performed before the proposed modifications, including associating multimedia content with user preferences. *Id.* Similarly, Singh906's user authentication functionality would continue to operate in the same way (*e.g.*, logging on to websites on the user's behalf), but the user information including authentication credentials would be provided by the mobile device rather than the publishing service. *Id.*

Claim 1

[1.P]

To the extent the preamble is limiting, the Singh129/Singh906 combination includes element [1.P]. TTI-1030, [462]-[463]. For example, the Singh129/Singh906 combination includes Singh129's digital data capture device 201 (*e.g.*, a camera), which includes Bluetooth communication device 201a that enables short-range wireless communication with Bluetooth enabled mobile device 202. *Id.*; TTI-1009, Figs. 2, 5.

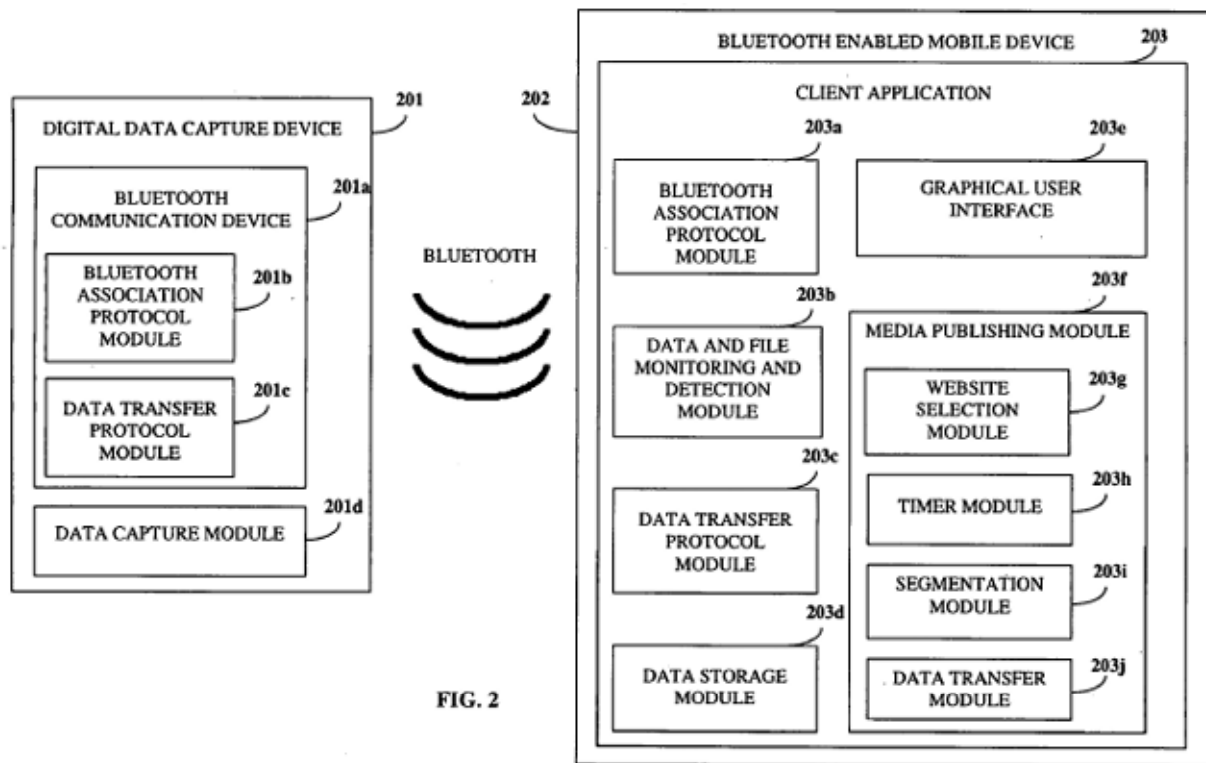


FIG. 2

TTI-1009, Fig. 2.

[1.1]

The Singh129/Singh906 combination includes element [1.1]. TTI-1030, [464]. Singh129's data capture device 201 includes a memory device ("a memory or like device" and/or the memory portion of BT memory card 302). *Id.*; TTI-1009, [0008], [0020], [0032], [0041], Figs. 2, 3B.

[1.2]

The Singh129/Singh906 combination includes element [1.2]. TTI-1030, [465]. Singh129's data capture device 201 includes a processor (BT communication device 201a and/or the processor of data capture device 201)

coupled to the memory device. *Id.*; TTI-1009, [0048].

[1.3]

The Singh129/Singh906 combination includes element [1.3]. TTI-1030, [466]. Singh129's data capture device 201 includes short-range wireless communication device (Bluetooth communication device 201a) configured to establish (via the Bluetooth protocol) a short-range paired wireless connection between the short-range wireless enabled data capture device 201 and a short-range wireless enabled cellular phone (Bluetooth enabled mobile device 202, which can be a cellular phone). *Id.*; TTI-1009, [0021]-[0022], [0046], Figs. 1-2.

[1.4]

The Singh129/Singh906 combination includes element [1.4]. TTI-1030, [467]. Singh129's Bluetooth communication device 201a establishes the short-range paired wireless connection by cryptographically authenticating (via the Bluetooth protocol; specifically exchanging passkeys) the identity the cellular phone. *Id.*; TTI-1009, [0021]-[0022].

[1.5]

The Singh129/Singh906 combination includes element [1.5]. TTI-1030, [468]. Singh129's Bluetooth communication device 201a establishes the short-range paired wireless connection by using an association protocol (Bluetooth association protocol of BT association protocol module 201b). *Id.*; TTI-1009,

[0033], Fig. 2.

[1.6]

The Singh129/Singh906 combination includes element [1.6]. TTI-1030, [469]. Singh129's data capture device 201 includes data capture circuitry (data capture module 201d). *Id.*; TTI-1009, [0031], Fig. 2.

[1.7]

The Singh129/Singh906 combination includes element [1.7]. TTI-1030, [470]. Singh129's processor (*see* element 1[b]) is configured to acquire new-data (e.g., images) in the data capture device 201 using the data capture circuitry. *Id.*; TTI-1009, [0033], [0023], [0041], [0048], Figs. 1, 2, 5.

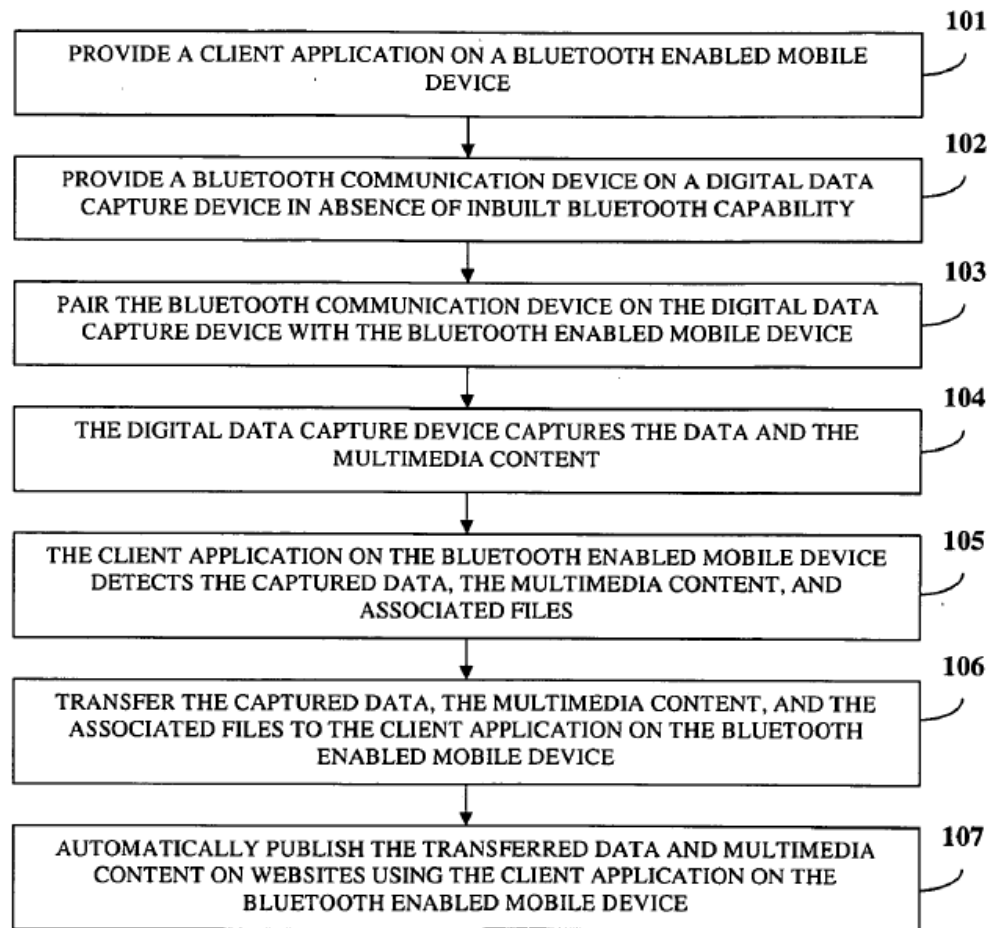
[1.8]

The Singh129/Singh906 combination includes element [1.8]. TTI-1030, [471]. Singh129's new-data is data acquired (in step 104) after establishing the short-range wireless connection (in step 103) between the data capture device (201) and the cellular phone (202). *Id.*; TTI-1009, Fig. 1, [0021]-[0023].

[1.9]

The Singh129/Singh906 combination includes element [1.9]. TTI-1030, [472]. Singh129's processor (*see* element 1[b]) is further configured to store the new-data in the memory device (*see* element 1[a]). *Id.*; TTI-1009, [0023], [0041], Figs. 1, 5. As explained in Singh129, the "user captures 104 data and multimedia

content using the digital data capture device 201.” TTI-1009, [0023]; *see also* [0041]. Accordingly, a POSITA would have understood that the processor stores the data and multimedia in the memory device. TTI-1030, [472].



TTI-1009, Fig. 1.

[1.10]

The Singh129/Singh906 combination includes element [1.10]. TTI-1030, [473]. Singh129’s processor is configured to create a new-data object (*e.g.*, Singh129’s combination of “a signal to the client application 203 on creation of a

new file,” “captured data, [and/or] multimedia content, and the associated files”).

Id.; TTI-1009, [0025]; *see also* TTI-1009, [0023]-[0028].

[1.11]

See Ground 1, [1.10] (“a signal to the client application 203 on creation of a new file”). TTI-1030, [474].

[1.12]

See Ground 1, [1.10] (“captured data, [and/or] multimedia content”). TTI-1030, [475].

[1.13]

See Ground 1, [1.10] (“associated files”). TTI-1030, [476].

[1.14]

The Singh129/Singh906 combination includes element [1.14]. TTI-1030, [477]. Singh129’s processor is configured to transfer automatically the new-data object to the cellular phone over the established Bluetooth connection. *Id.*; TTI-1009, [0025], [0023] (“The digital data capture device 201 then automatically transfers 106 the captured data....”).

[1.15]

The Singh129/Singh906 combination includes element [1.15]. TTI-1030, [478]. Singh129’s cellular phone (202) is configured to listen (using a file event listener in data and file monitoring and detection module 203b) to the signal to

notify and receive (using BT association protocol module 201b and/or data transfer protocol module 201c) the new-data object over the established Bluetooth connection. *Id.*; TTI-1009, [0034], Figs. 1-2, [0025]-[0026], [0032]-[0033].

[1.16.1]-[1.16.2]

The Singh129/Singh906 combination includes element [1.16.1]-[1.16.2]. TTI-1030, [479]. Singh129's mobile client application (203) for the cellular phone (202) is configured to process the signal to notify (using data and file monitoring and detection module 203b and/or Bluetooth association protocol module 203a) and store the received new-data in a memory device (data storage module 203d) of the cellular phone. *Id.*; TTI-1009, [0033]-[0035], [0023]-[0025] (describing the push and pull modes), Fig. 2.

[1.17]

The Singh129/Singh906 combination includes element [1.17]. TTI-1030, [480]. Singh129's mobile client application 203 is configured to use HTTP to upload the received new-data to a user data publishing website over a cellular data network ("cellular network"). *Id.*; TTI-1009, Figs. 1, 4, [0029], [0039], [0045] [0047] (disclosing "HTTP"). As explained in Singh129, "client application 203 on the mobile device 202 ... automatically publishes 107 the transferred data and multimedia content on one or more websites." TTI-1009, [0029], Fig. 1; *see also* [0045] (similar).

In the Singh129/Sing906 combination, Singh129's mobile client application is modified to upload user information including user credentials along with the new-data to a publishing website based on the teachings of Singh906. TTI-1030, [481]; TTI-1010, [0026] (discussing user authentication module 202e on the mobile device), [0028] (discussing transferring user preferences including authentication information to the publishing service 204), [0017] (discussing website of publishing service 204 and virtual spaces 205). In the combination, a person of ordinary skill would have been motivated based on the combined teachings to provide a system in which the client application sends new data with user information corresponding to authentication credentials to the publishing service website so that the new data may be published on virtual spaces on the publishing service website as well as on third-party websites. The credentials would be used to gain access to accounts on various websites. *Id.*, [0027]-[0028], [0037]-[0038]. [0047]. Alternatively, a person of ordinary skill would have been motivated to provide for the mobile device to reach out to a private website requiring authentication directly and bypass the publishing service 401, in which case the credentials would be provided by the client application.

[1.18]

The Singh129/Singh906 combination includes element [1.18] based on the teachings of Singh906. TTI-1030, [482]. The user information corresponds to a

user identifier (*e.g.*, “a username and a password”) that uniquely identifies a particular user of the user data publishing website (*e.g.*, a user that “creates an account on a desired publication virtual space”) and is used by the website (*e.g.*, to log on) to publish the new-data for private consumption. *Id.*; TTI-1010, [0038]. As explained in Singh906, if the website requires an account, the user “provides login information comprising a username and a password to create an account.” TTI-1010, [0038]. “The login information enables the publishing service 204 to access the multiple publication virtual spaces 205 configured by the user 201 on the mobile device.” *Id.* “The publishing service 204 logs on to the publication virtual space of choice on the user’s 201 behalf and publishes the user created multimedia content.” *Id.* Thus, in the Singh129/Singh906 combination, the client application also logs on to the website on the user’s behalf and publishes the content. A person of skill in the art would have been motivated to provide direct access to a website hosting private blogs by, for example, hosting the private blog on the publishing services’ website. Further, if a user were publishing to only one site at a time and did not require the services of the intermediary publishing service, it would have been obvious to provide direct access to the third-party private blog websites. TTI-1009, [0044]-[0045], TTI-1010, [0017]-[0018], TTI-1030, [482]-[483].

Claim 2

The Singh129/Singh906 combination includes the elements in claim 2. TTI-1030, [484]. Singh129's short-range paired wireless connection is a Bluetooth paired wireless connection. *Id.*; TTI-1009, Fig. 1, [0021].

Claim 3

The Singh129/Singh906 combination includes the elements of claim 3. TTI-1030, [485]. Singh129's new-data comprises "audio, video, text, and images" as well as associated data. *Id.*; TTI-1009, [0011], [0023], [0025], [0030].

Claim 4

[4.P]

To the extent the preamble is limiting, the Singh129/Singh906 combination is a system comprising, among other things, Singh129's digital data capture device 201, Bluetooth enabled mobile device 202, and publishing service 401. TTI-1030, [486]; TTI-1009, Figs. 1-5 and related descriptions.

[4.1]

See Ground 1, [1.P].

[4.2]

See Ground 1, [1.1].

[4.3]

See Ground 1, [1.2].

[4.4]

See Ground 1, [1.3].

[4.5]

See Ground 1, [1.4].

[4.6]

See Ground 1, [1.5].

[4.7]

See Ground 1, [1.6].

[4.8]

See Ground 1, [1.7].

[4.9]

See Ground 1, [1.8].

[4.10]

See Ground 1, [1.9].

[4.11]

See Ground 1, [1.10].

[4.12]

See Ground 1, [1.11].

[4.13]

See Ground 1, [1.12].

[4.14]

See Ground 1, [1.13].

[4.15]

See Ground 1, [1.14].

[4.16]

See Ground 1, [1.3]. TTI-1030, [488].

[4.17]

The Singh129/Singh906 combination includes element [4.17]. TTI-1030, [488]. Singh129's cellular phone (202) comprises a memory device (data storage module 203d). *Id.*; TTI-1009, Fig. 2, [0033], [0035].

[4.18]

The Singh129/Singh906 combination includes element [4.18]. TTI-1030, [489]. Singh129's cellular phone (202) comprises a "processor" coupled to the second memory device. *Id.*; TTI-1009, [0026] (disclosing a "mobile device 202 with limited memory and processing capabilities"), [0037] (similar), [0039] (similar), [0043] (similar), [0048].

[4.19]

The Singh129/Singh906 combination includes element [4.19]. TTI-1030, [490]. Singh129's mobile device 202 (such as a cellular phone) includes a cellular network communication (the portion of the phone that enables telephony data capabilities and/or data transfer module 203j) configured to connected to the internet via a cellular data network ("telephony network" or "cellular network").

Id.; TTI-1009, [0039], [0046]-[0047] (“mobile phone”), [0020] (“mobile phone”).

FIG. 4.

[4.20]

The Singh129/Singh906 combination includes element [4.20]. TTI-1030, [491]. Singh129’s cellular phone (202) includes a second short-range wireless communication device (Bluetooth association protocol module 203a) configured to establish the short-range paired wireless (Bluetooth) connection between the cellular phone and the data capture device. *Id.*; TTI-1009, Fig. 2, [0033], FIG. 1.

[4.21]

See Ground 1, [1.16]; *see also* TTI-1009, [0048] (“computer executable instructions”), Claim 17 (same); TTI-1030, [584]-[588] (confirming that the mobile client application includes executable instructions). TTI-1030, [492].

[4.22]

See Ground 1, [1.15].

[4.23]

See Ground 1, [1.15]-[1.16].

[4.24]

See Ground 1, [1.16].

[4.25]

See Ground 1, [1.17].

[4.26]

See Ground 1, [1.18].

Claim 5

The Singh129/Singh906 combination includes the elements in claim 5. TTI-1030, [493]. Singh129's data capture device establishes the short-range paired wireless connection using an association protocol (the Bluetooth association protocol used by BT association protocol modules 201b and 203a). *Id.*; TTI-1009, Fig. 2, [0033].

Claim 6

See Ground 1, Claim 2. TTI-1030, [494].

Claim 7

See Ground 1, Claim 3. TTI-1030, [494].

Claim 8

The Singh129/Singh906 combination includes the elements in claim 8. TTI-1030, [495]. Singh129's cellular phone (202) provides a GUI ("graphical user interface") for the received new-data. *Id.*; TTI-1009, Fig. 2, [0033] ("graphical user interface (GUI) 203e"), [0035], Claim 11 (similar). Singh906 also provides a GUI allowing a user to review the multimedia content before transferring. TTI-1010, [0019], [0029]-[0032], FIG. 3.

Claim 9

[9.P]

To the extent the preamble is limiting, the Singh129/Singh906 combination

includes a short-range wireless enabled cellular phone. *See* Ground 1, Elements [1.3], [4.P]. TTI-1030, [496].

[9.1]

See Ground 1, [4.17]. TTI-1030, [497].

[9.2]

See Ground 1, [4.18]. TTI-1030, [497].

[9.3]

See Ground 1, [4.19]. TTI-1030, [497].

[9.4]

See Ground 1, [4.20]. TTI-1030, [497].

[9.5]

See Ground 1, [4.5], [1.3], [1.4]. TTI-1030, [497].

[9.6]

See Ground 1, [4.6], [1.5]. TTI-1030, [497].

[9.7]

See Ground 1, [4.21], [1.16]. TTI-1030, [498].

[9.8]

See Ground 1, [4.23], [1.15], [1.16]. TTI-1030, [500].

[9.9]

See Ground 1, [4.11], [1.10]. TTI-1030, [500].

[9.10]

See Ground 1, [4.12], [1.11], [1.12]. TTI-1030, [501].

[9.11]

See Ground 1, [4.9], [4.13], [1.8]. TTI-1030, [500].

[9.12]

See Ground 1, [4.12]-[4.13], [1.11]-[1.12]. TTI-1030, [500].

[9.13]

See Ground 1, [4.14], [1.13]. TTI-1030, [501].

[9.14]

See Ground 1, [4.22], [1.15]-[1.16]. TTI-1030, [502].

[9.15]

See Ground 1, [4.24], [1.16]. TTI-1030, [503].

[9.16]

See Ground 1, [4.25], [1.17]. TTI-1030, [504].

[9.17]

See Ground 1, [4.26], [1.18]. TTI-1030, [504].

Claim 10

See Ground 1, Claim 2. TTI-1030, [505].

Claim 11

See Ground 1, Claim 3. TTI-1030, [505].

Claim 12

See Ground 1, Claim 8. TTI-1030, [505].

Claim 13

[13.P]

See Ground 1, [4.P]. TTI-1030, [506].

[13.1]

See Ground 1, [1.P]. TTI-1030, [507].

[13.2]

See Ground 1, [1.1]. TTI-1030, [507].

[13.3]

See Ground 1, [1.2]. TTI-1030, [507].

[13.4]

See Ground 1, [1.3]. TTI-1030, [507].

[13.5]

See Ground 1, [1.4]. TTI-1030, [507].

[13.6]

See Ground 1, [1.5]. TTI-1030, [507].

[13.7]

See Ground 1, [1.6]. TTI-1030, [507].

[13.8]

See Ground 1, [1.7]-[1.8]. TTI-1030, [507].

[13.9]

See Ground 1, [1.9]. TTI-1030, [507].

[13.10]

See Ground 1, [1.10]. TTI-1030, [507].

[13.11]

See Ground 1, [1.11]. TTI-1030, [507].

[13.12]

See Ground 1, [1.12]. TTI-1030, [507].

[13.13]

See Ground 1, [1.13]. TTI-1030, [507].

[13.14]

The Singh129/Singh906 combination includes element [13.14]. TTI-1030, [508]. Singh129's first processor (data capture device processor) is configured to receive a data transfer request (e.g., a poll for new data) from the cellular phone over the established Bluetooth connection. *Id.*; TTI-1009, [0023], [0025], [0031]-[0035], Fig. 2.

[13.15]

See Ground 1, [1.8] (confirming that the new-data was acquired by the short-range wireless enabled data capture device before receiving the data transfer request), [13.14] (confirming that the data transfer request is for the acquired new-data); TTI-1030, [508].

[13.16]

See Ground 1, [1.14], [13.14]; TTI-1030, [509].

[13.17]

See Ground 1, [1.16], [4.21]. TTI-1030, [510].

[13.18]

The Singh129/Singh906 combination includes element [13.18]. TTI-1030, [511]-[512]. Singh129's mobile client application (203) controls the processor to receive a request (e.g., a timer setting) through a GUI of the cellular phone for new data. *Id.*; TTI-1009, [0035]. Singh129's mobile client application (203) also controls the processor to send a data transfer request (e.g., a poll for new data) to the data capture device over the established Bluetooth connection. TTI-1030, [511]-[512]; TTI-1009, [0023]. Further, as taught by Singh906, the combination provides an image capture screen on the mobile phone from which image capture requests may be made, and such request would be sent to the image capture device. TTI-1010, FIG. 3, [0041], [0051]. Thus, the data transfer may be initiated by the mobile phone without a signal to notify as provided in claim 1.

[13.19]

See Ground 1, [13.18]; TTI-1030, [511]-[512]. As explained in Singh129 (at [0023]), "the client application 203 periodically polls the digital data capture device 201 to determine the creation of a new file in the digital data capture device 201." Because the polling step is used to determine whether a new file is created, the poll (i.e., request) is a request for data that was acquired before receiving the

request. TTI-1030, [511]-[512].

[13.20]

See Ground 1, [1.15], [1.16]. TTI-1030, [513].

[13.21]

See Ground 1, [1.16]. TTI-1030, [513].

[13.22]

See Ground 1, [1.17]. TTI-1030, [513].

[13.23]

See Ground 1, [1.18]. TTI-1030, [513].

Claim 14

See Ground 1, Claim 2. TTI-1030, [514].

Claim 15

See Ground 1, Claim 3. TTI-1030, [514].

B. GROUND 2A: Claims 1-15 are obvious over Kahn and Bluetooth

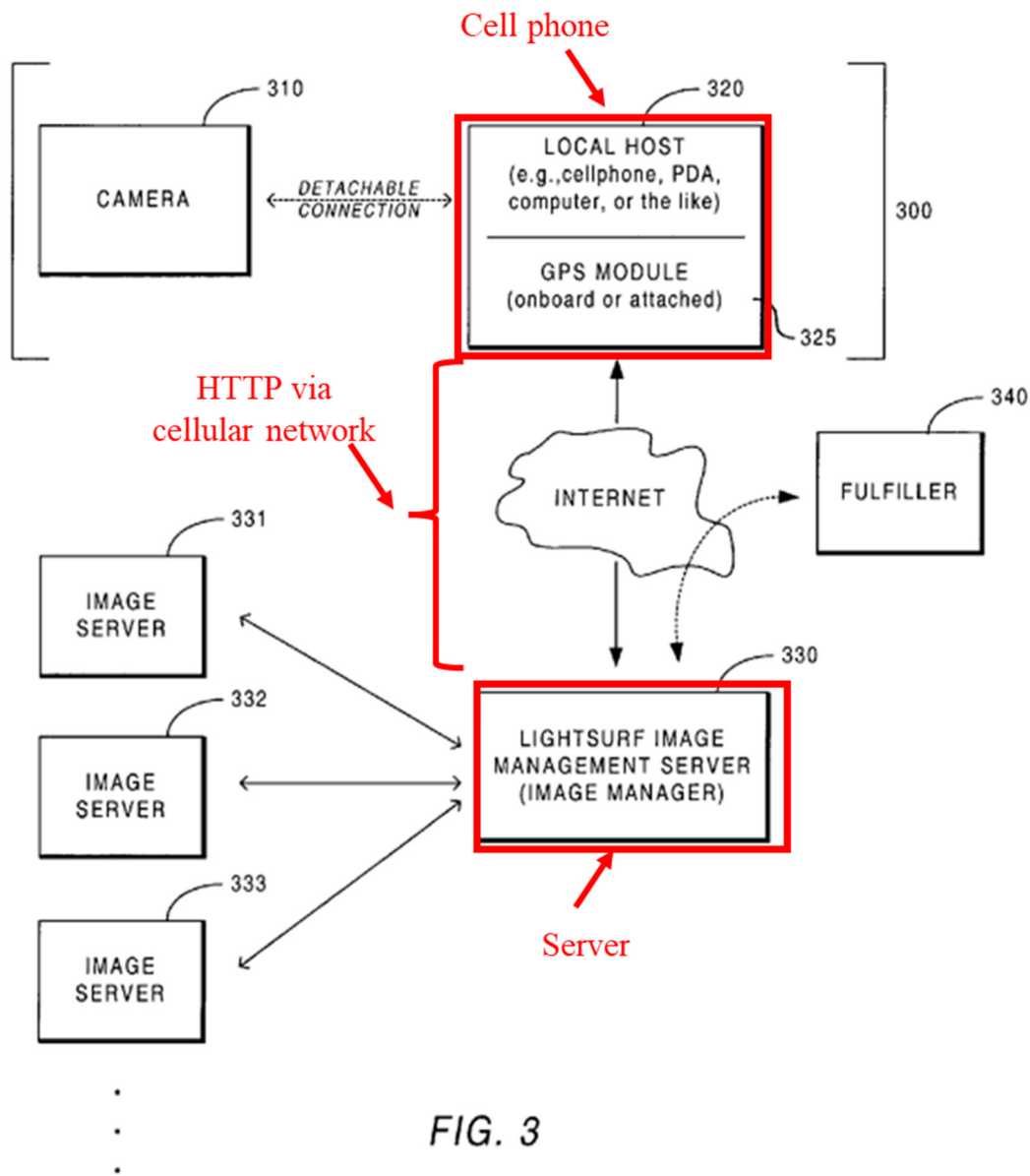
1. Kahn

Kahn teaches an imaging system that includes a camera, which may be a wireless camera, coupled to a cellular phone by a connection that may be a wireless connection. *See, e.g.*, TTI-1017, [0055], FIG. 3. *See also*, TTI-1030, [130]-[132], [515]-[519]. Kahn teaches that the “camera device 310 is preferably a wireless camera device, such as camera device 100 (shown in FIG. 1A).” *Id.* The

cellular phone can be a “host device” for the camera and provide GPS information.

Id., [0058].

Kahn presents a system 300 comprising a camera device 310, a host device 320, and a GPS module 325. *Id.*, [0055]. The host device 320, such as a cellular phone, communicates with an online Web-based image management server 330 via the Internet, utilizing protocols like HTTP. *Id.*, [0056].



Id., FIG. 3 (annotated).

2. Bluetooth

As of the alleged Critical Date, Bluetooth wireless technology (BT), had established its role in replacing cables for personal device interconnectivity and facilitating spontaneous communication between devices within a localized

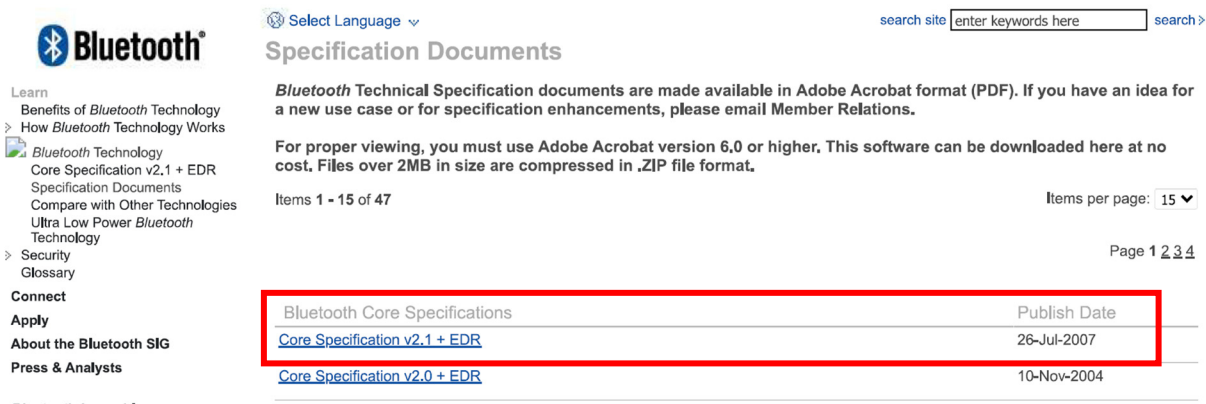
“communications bubble.” TTI-1032, 1-2. See also, TTI-1030, [47]-[60]. The Bluetooth Overview discloses that Bluetooth’s aim was to provide a universal, user-friendly interface for data services, enabling ad hoc connectivity and serving as a personal gateway for accessing remote services while maintaining convenience and privacy. TTI-1032, 1-2; TTI-1019, 1, 46-47. “Connecting to data services through one’s cellular phone gives rise to the concept of a personal gateway. People will carry their personal gateways wherever they go.” TTI-1032, 1. The BT specification details security implementation at both link and application layers, with cryptographic authentication through LMP Pairing and Secure Simple Pairing methods. TTI-1019, 48-50. Cryptographic authentication was routine pre-dating the patent’s Critical Date TTI-1019, 51. Bluetooth’s packet format allows flexible payload transportation, enabling image transfer. TTI-1019, 52. Event listening/notification mechanisms like polling and sniff mode are defined in the Bluetooth specification. TTI-1019, 53-55.

Bluetooth was available before the critical date of the patent, as supported by various pieces of evidence. TTI-1019, 1; TTI-1030, [47]. First, the face of the Bluetooth Core Specification V2.1 provides publication date as July 26, 2007. Second, the same Bluetooth Core Specification V2.1 was provided as an exhibit by the Patent Owner in two IPR proceedings (IPR2019-00127 as Ex. 2018 and IPR2019-00131 as Ex. 2006), both involving U.S. Patent 9,258,698 (a family

member of the '030 patent), and should thus be deemed authentic and trustworthy.

Third, the WayBack Machine contains an archived webpage in October, 2007, confirming the publication of the Bluetooth Core Specification V2.1 on July 26, 2007, and its public accessibility by no later than October, 2007. TTI-1031, 1.

The content of the page is credible as it mentions Bluetooth 2.1 as the latest available release and thus predates the release of Bluetooth 2.2.



The screenshot shows the Bluetooth Specification Documents webpage. The page has a header with the Bluetooth logo, a language selector, and a search bar. The main content area is titled 'Specification Documents' and contains a paragraph about the availability of Bluetooth Technical Specification documents in Adobe Acrobat format. Below this, there is a table of specification documents. A red box highlights the 'Core Specification v2.1 + EDR' document, which has a publish date of 26-Jul-2007. The table also lists 'Core Specification v2.0 + EDR' with a publish date of 10-Nov-2004. The sidebar on the left contains links to 'Learn', 'Connect', and 'Apply' sections.

Bluetooth Core Specifications	Publish Date
Core Specification v2.1 + EDR	26-Jul-2007
Core Specification v2.0 + EDR	10-Nov-2004

TTI-1031, 1 (annotated). Finally, the '766 patent relies on pre-existing Bluetooth technology and thus acknowledges that Bluetooth is prior art. TTI-1003, 2:19.

3. The Predictable Combination of Kahn and Bluetooth

In the proposed combination, Kahn provides a system for image capture and transmission, wherein a digital camera uploads photos and related data to a host device, such as a cell phone, for subsequent publishing via an image management server. TTI-1030, [520]. *See also*, TTI-1030, [520]-[524]. The upload may be either automatic or in response to a transfer request. TTI-1017, [0062]. Kahn discloses a “detachable connection” and “cableless direct connection” and

accordingly a POSITA would have understood that the connection between a camera and a cell phone would be a short-range wireless connection. At the very least, a POSITA would have been motivated to make that connection a short-range wireless connection, and specifically a Bluetooth connection, given the ubiquity and popularity of Bluetooth by the Critical Date. TTI-1017, FIG. 3, [0045]; TTI-1030, [520]. Bluetooth was undoubtedly the obvious choice. TTI-1030, [520]; TTI-1011, (0066) (using Bluetooth for camera-phone connection). In the combination, Bluetooth provides the benefit of wireless connectivity using a well-known and powerful technology to connect Kahn's camera to Kahn's mobile phone. TTI-1030, [520].

The Bluetooth 2.1 Core Specification offers encryption as an option and a POSITA would use Bluetooth's encryption capability in the combination to secure the data transfer between the camera and the phone. TTI-1030, [521].

4. Motivation to Combine Kahn with Bluetooth

A POSITA would have been motivated to use Bluetooth to wirelessly connect the camera with the mobile phone in Kahn. First, Bluetooth was a well-known technique at the time of Kahn for short range communications, and in particular for connecting devices with mobile phones. In particular, it was known to use Bluetooth to connect a camera to a mobile phone. *See, e.g.*, TTI-1011, [0066]-[0067]. TTI-1030, [522].

Second, a POSITA would have recognized that by the critical date, mobile phones typically had Bluetooth technology installed. For example, all iPhone models had Bluetooth. *See, e.g.*, <https://support.apple.com/en-us/112445> (archived Apple support page stating that the original iPhone used Bluetooth 2.0+EDR). A POSITA would have been motivated to use Bluetooth functionality to also form a wireless connection between the camera and the phone, and would have selected the most current Bluetooth version available, which by July, 2007 was Bluetooth 2.1. TTI-1030, [523].

A POSITA would have had a reasonable expectation of success implementing Bluetooth. TTI-1030, [524]. First, Bluetooth was a well-known technology at the time, and a POSITA would have had the requisite skills to implement it. *Id.* Second, the Bluetooth specification provides ample details to perform all of the Bluetooth operations necessary to establish a connection between two devices, pair the two devices, and communicate data between the two devices. *Id.*; TTI-1019.

5. Analysis

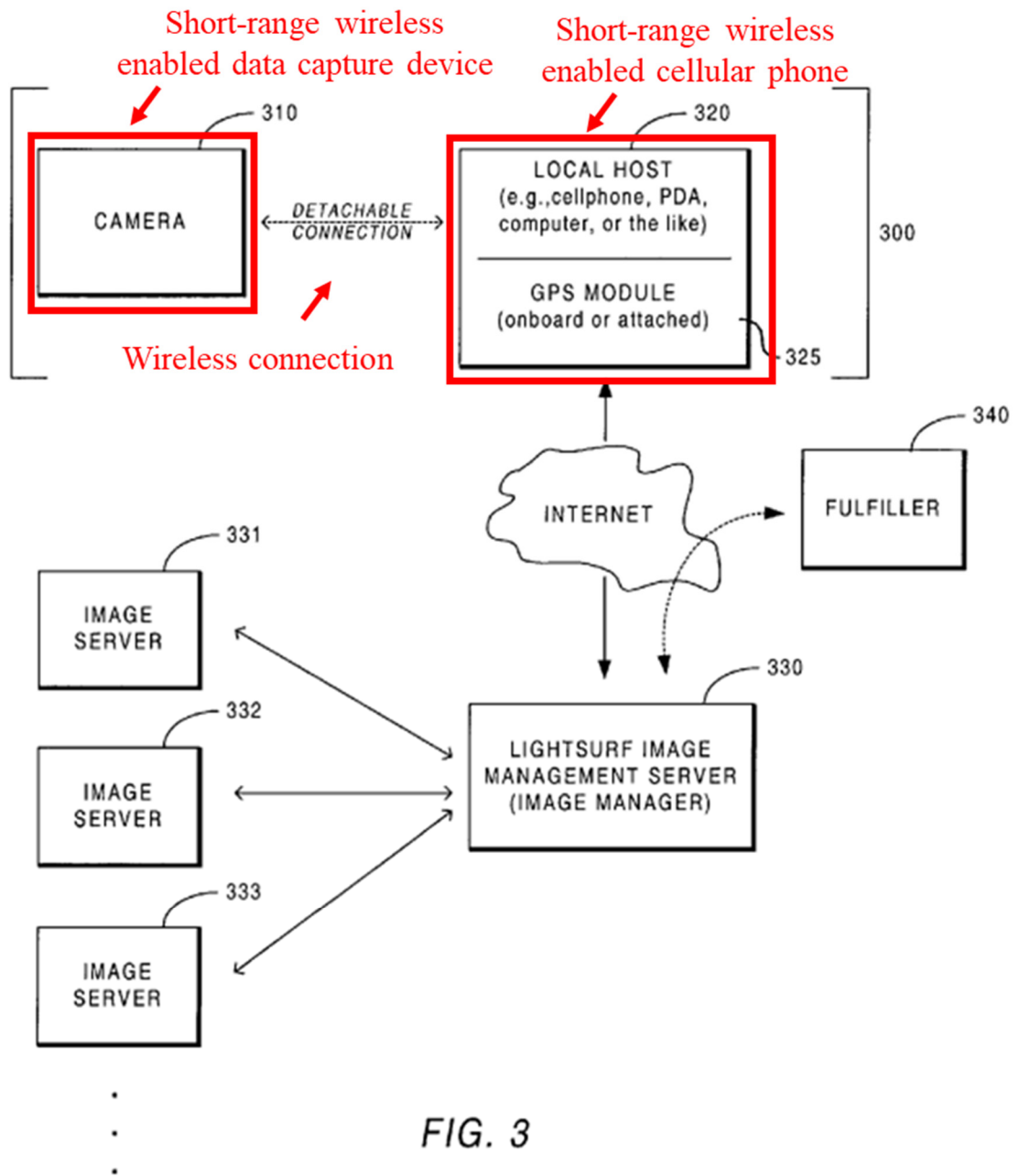
Claim 1

[1.P]

To the extent the preamble is limiting, the Kahn-Bluetooth combination renders obvious [1.P]. TTI-1030, [525]-[528]. For example, Kahn discloses “an

imaging device capable of capturing a plurality of images.” TTI-1017, Abstract, [0018]. Kahn teaches “[a] camera device 310 is a stand-alone unit that is occasionally (or persistently) connected to the host device 320, which may be any device capable of hosting the camera device 310. For example, host device 320 may comprise a cellular phone, a PDA (personal data assistant) with wireless connectivity, or the like.” *Id.*, [0055].

In FIG. 3, Kahn illustrates a system with a wireless camera device 310, a host device 320, and a GPS module 325, capable of wireless connectivity. *Id.*, [0055]. TTI-1030, [526].



Id., FIG. 3 (annotated), [0023].

Kahn refers to a “detachable connection” and “cableless direct connection.”

Id., FIG. 3, [0045]; TTI-1030, [527]-[528]. In the combination, a POSITA would use Bluetooth for the connection from camera to phone, particularly given that

Bluetooth was the short-range wireless technology of choice by 2007. Thus, as discussed in the motivation to combine section, a POSITA would have been motivated, and found it obvious, to use Bluetooth for the “detachable connection” between camera and phone. TTI-1030, [527]-[528]; TTI-1017, FIG. 3, [0045].

[1.1]

The Kahn-Bluetooth combination renders obvious [1.1]. TTI-1030, [529]-[532]. For example, Kahn teaches that “captured image data is transferred over the system bus 130 to the computer 140 which performs various image processing functions on the image data before storing it in its internal memory.” TTI-1017, [0035]; *see also id.*, [0055], FIGs. 1A, 3. TTI-1030, [529]-[530].

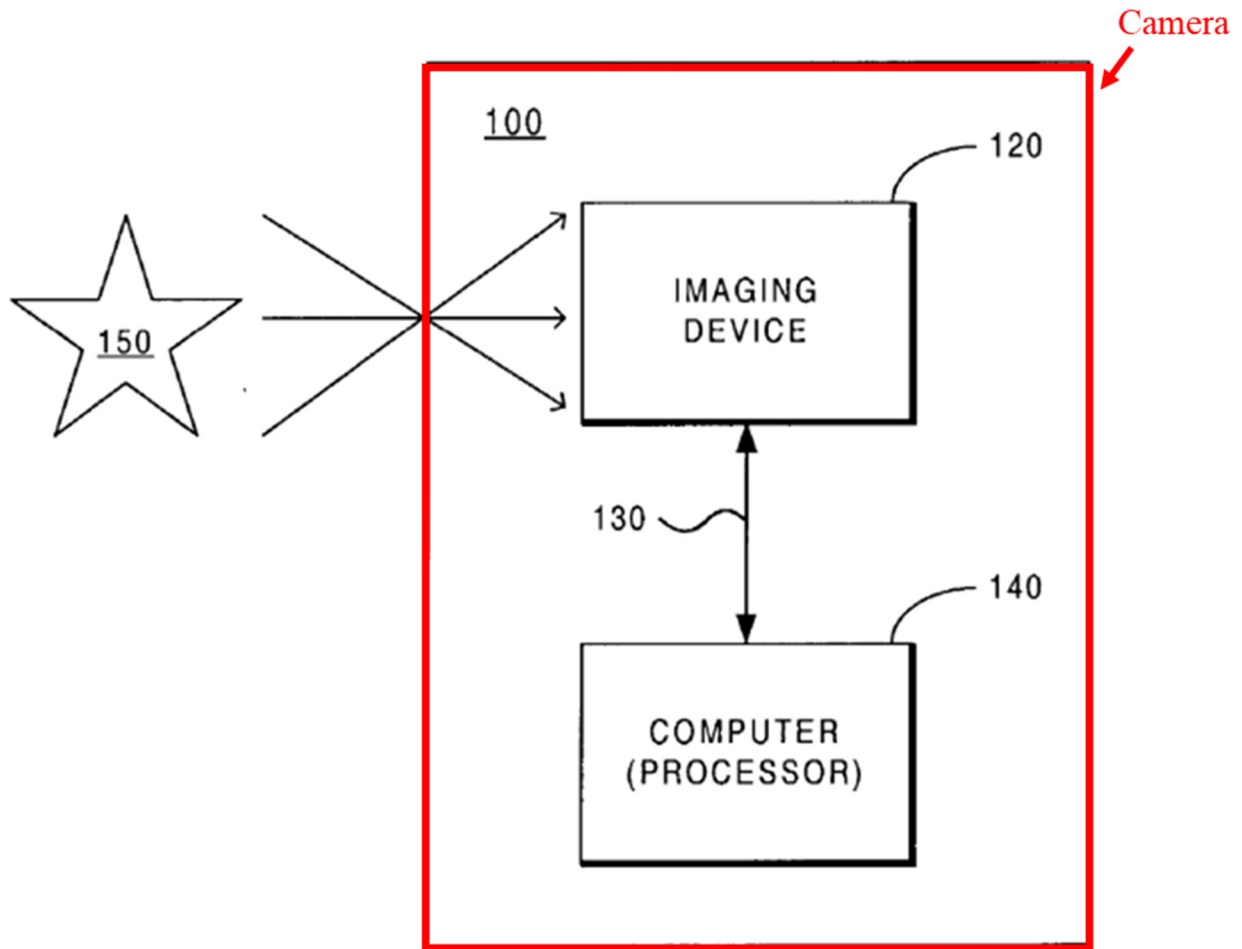


FIG. 1
(PRIOR ART)

Id., FIG. 1 (annotated), [0020].

In FIG 2B, Kahn illustrates processor 264 coupled to memories via bus 130 including memory (RAM) 266, non-volatile memory 262, and removable memory 284 (via interface 283). *Id.*, [0042], [0044]. TTI-1030, [531]-[532].

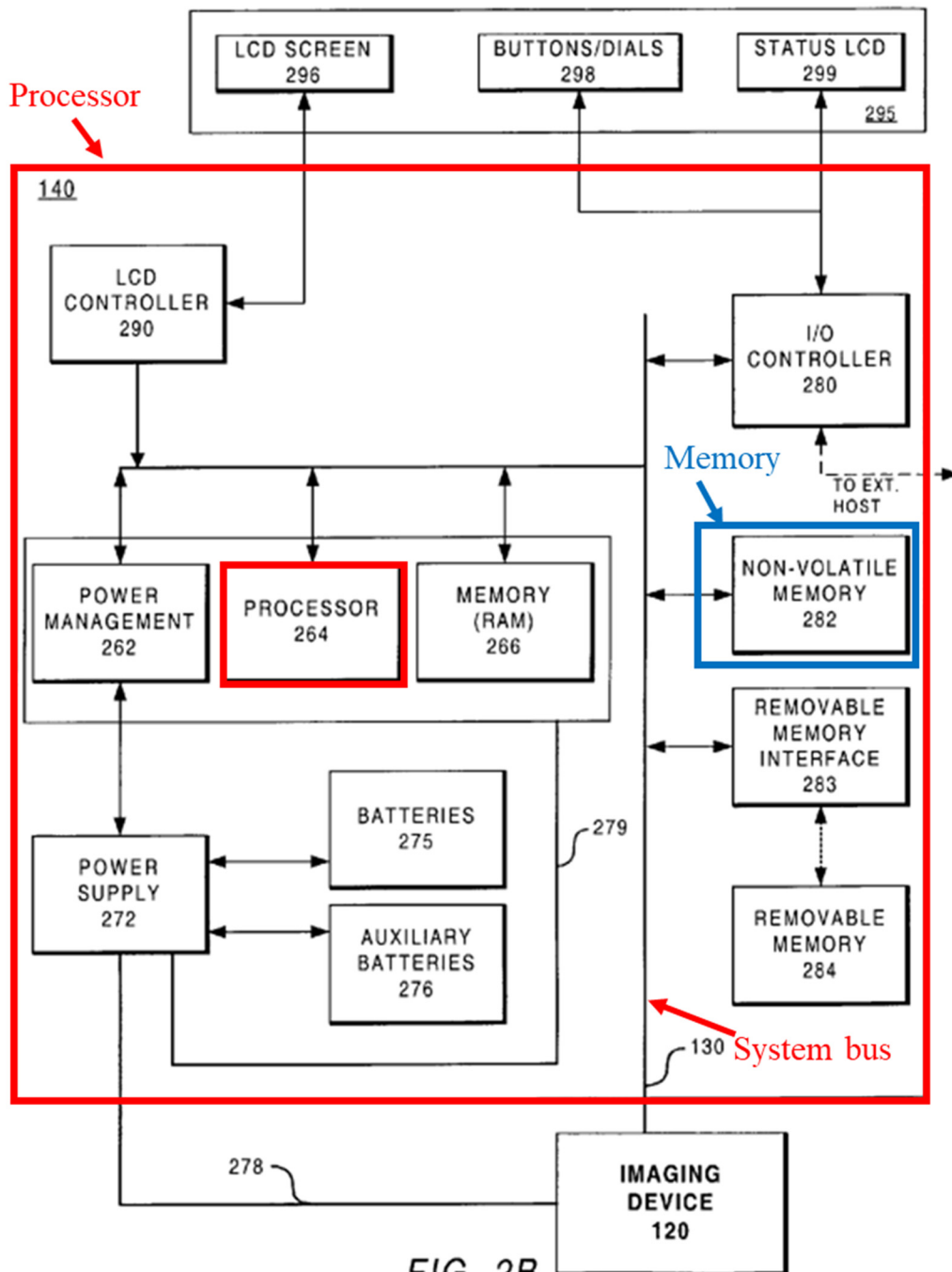


FIG. 2B
(PRIOR ART)

Id., FIG. 2B (annotated); *see also id.*, [0022].

[1.2]

The Kahn-Bluetooth combination renders obvious [1.2]. TTI-1030, [533]-[535]. For example, Kahn discloses “the digital camera 100 comprises an imaging device 120, a system bus 130, and a processor or computer 140 (e.g., microprocessor-based unit).” TTI-1017, [0033]; *see also id.*, [0034]-[0035], [0045].

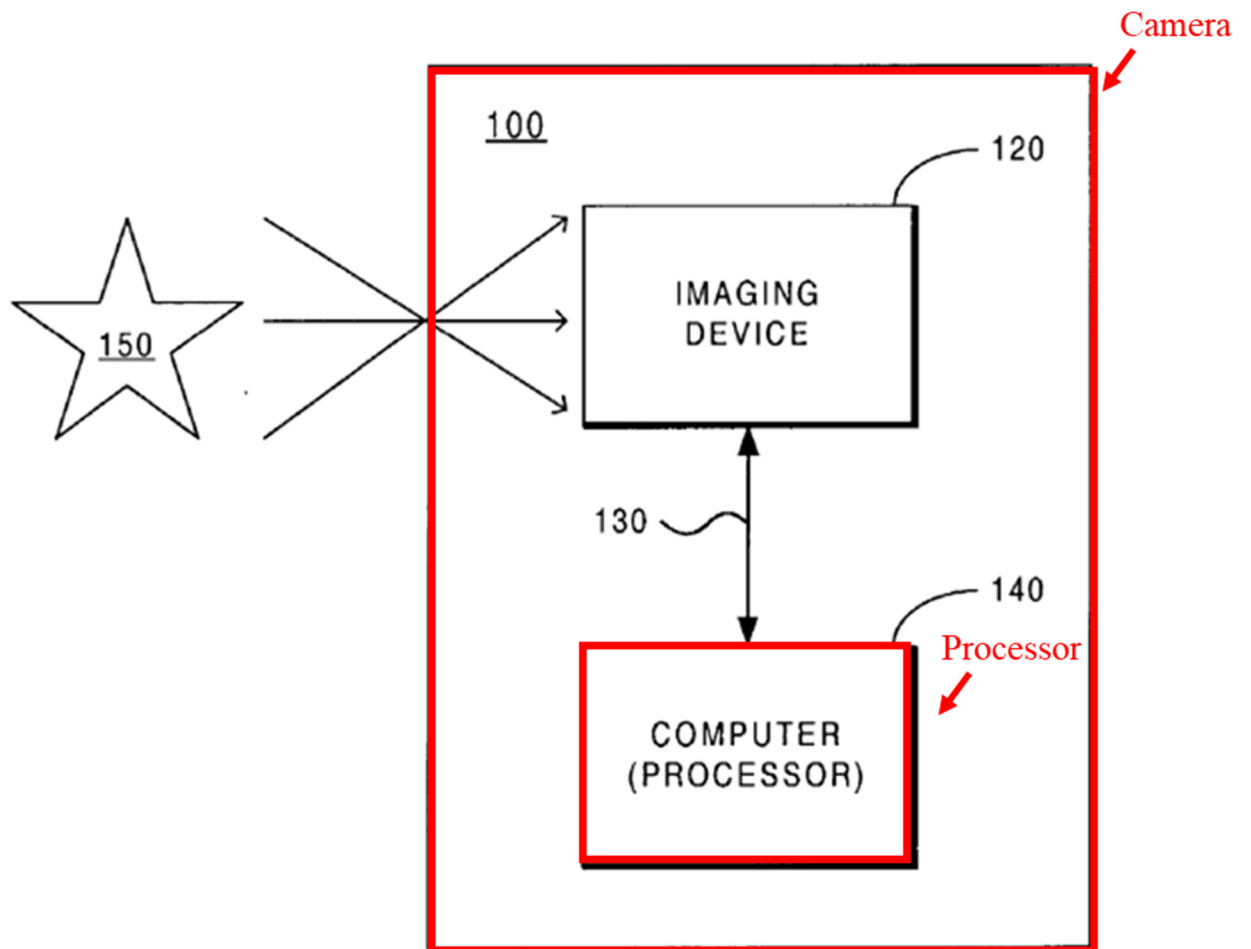


FIG. 1
(PRIOR ART)

Id., FIG. 1 (annotated).

In FIG 2B, Kahn illustrates processor 264 coupled to memories via bus 130 including memory (RAM) 266, non-volatile memory 262, and removable memory 284 (via interface 283). TTI-1017, [0042]-[0043]. TTI-1030, [534]-[535].

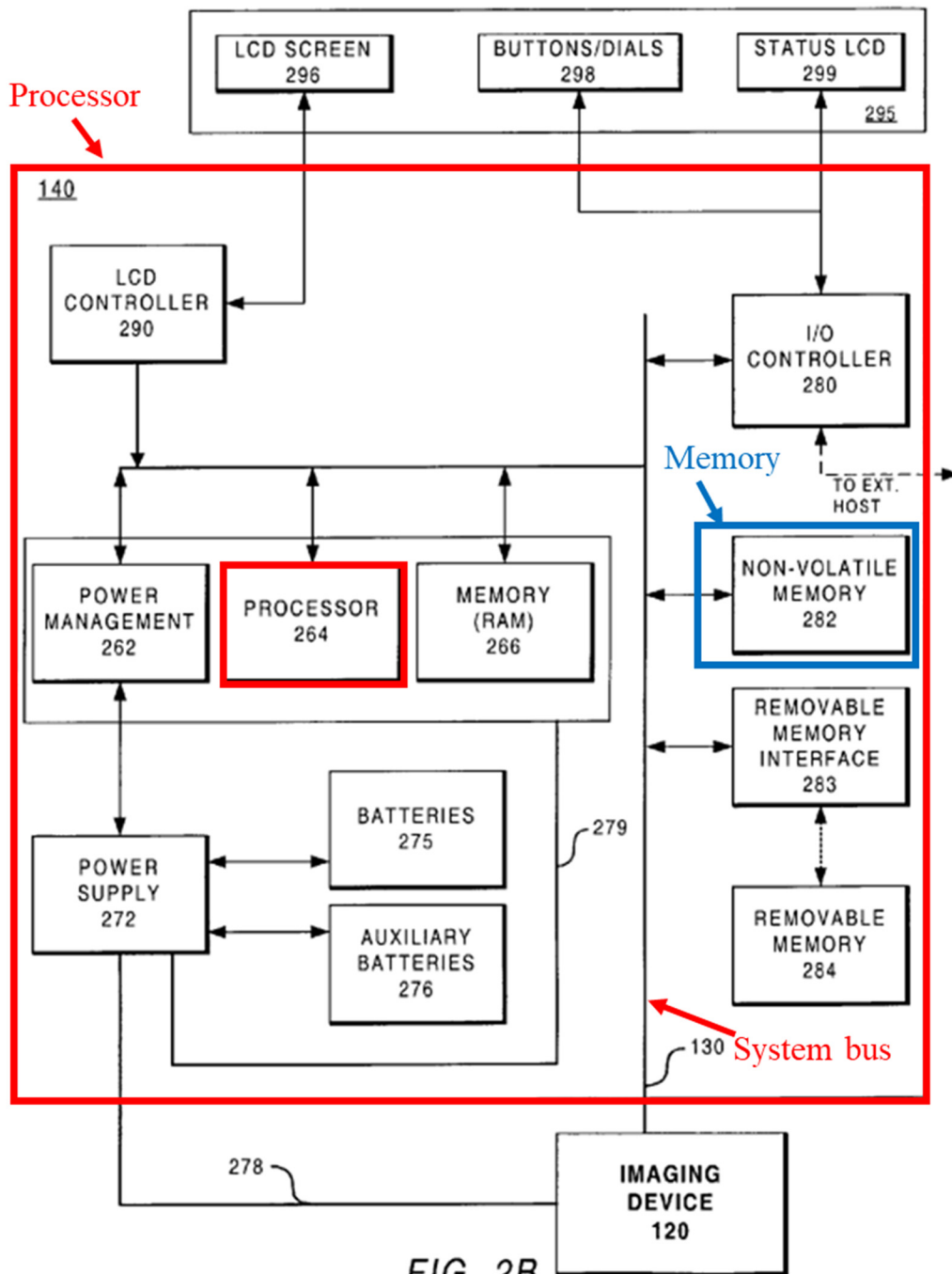


FIG. 2B
(PRIOR ART)

Id., FIG. 2B (annotated).

[1.3]

The Kahn-Bluetooth combination renders obvious [1.3]. TTI-1030, [536]-[538]. For example, Kahn teaches digital camera (100) typically includes an I/O controller (280) facilitating communication with external devices such as cell phones, PDAs, or computers. TTI-1017, [0030]-[0033], [0045]. TTI-1030, [536].

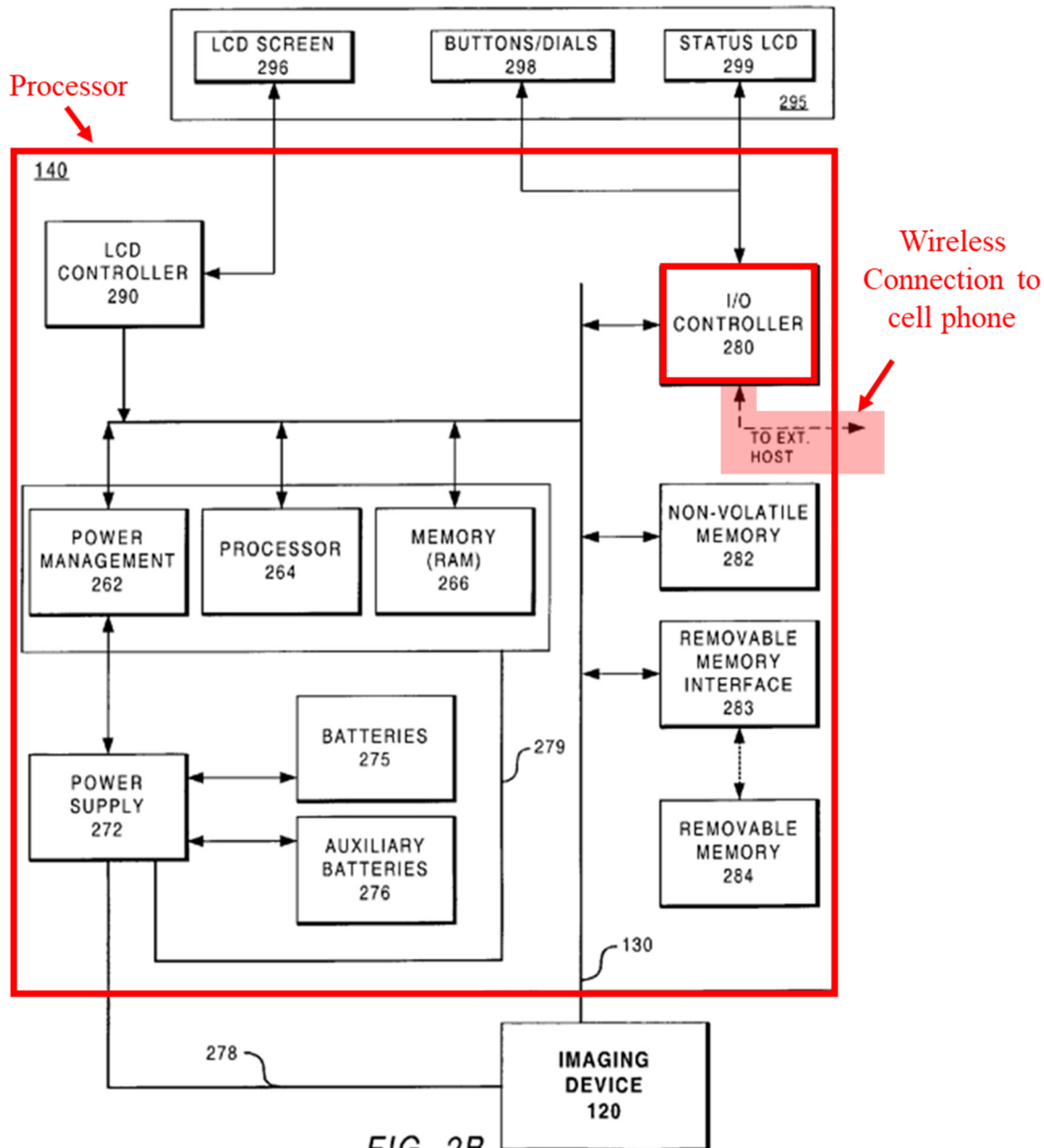


FIG. 2B
(PRIOR ART)

Id., FIG. 2B (annotated).

In FIG. 3, Kahn illustrates a system 300 comprising a wireless camera device 310, a host device 320, and a GPS module 325. The camera device 310 is capable of wireless connectivity and can connect to a host device 320, such as a

cellular phone or a PDA. *Id.*, [0055].

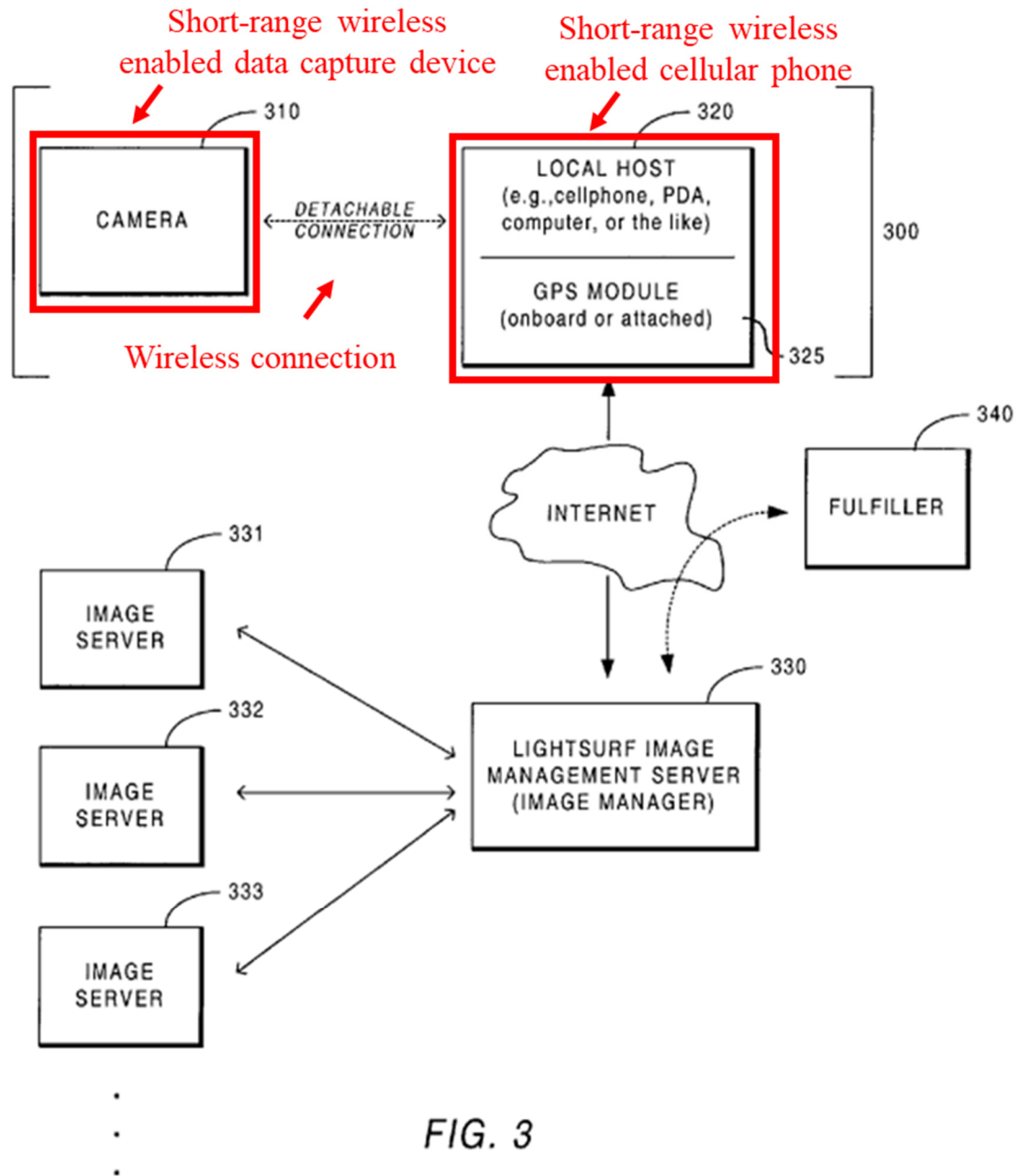


FIG. 3

Id., FIG. 3 (annotated).

“The camera device 310 is preferably a wireless camera device, such as camera device 100 (shown in FIG. 1A), that either includes wireless connectivity

itself or connects to a local host with wireless connectivity.” TTI-1017, [0055]. In the combination, the local wireless connectivity would use Bluetooth. *See* Ground 2A, [1.P]. Moreover, a POSITA would have been motivated to replace the cabled version of Kahn with Bluetooth to gain the benefits of Bluetooth technology, which avoids both the cable and the wear and tear on the cable connector ports. Thus, in the combination the camera-phone connection in Kahn whether wired or wireless is replaced by a Bluetooth connection, as was typical in the art. TTI-1030, [537]-[538].

[1.4]

The Kahn-Bluetooth combination renders obvious [1.4]. TTI-1030, [539]-[547]. In the combination, the short-range wireless connection is via Bluetooth and Bluetooth provides for the cryptographic authentication of the devices being paired. Bluetooth further provides the option of encryption to provide secure communications to prevent hacking or eavesdropping. TTI-1030, [539]; TTI-1019, 412-425 (discussing pairing using a link key and discussing encryption of transmitted data), 1031-1038 (generating link keys and encryption keys); TTI-1017, [0045], [0096]. A POSITA would have used the cryptographic authentication and would further have used Bluetooth encryption features when pairing the camera to the host mobile phone. TTI-1030, [539].

For example, as discussed in the Bluetooth Core Specification V2.1, pairing

between Bluetooth devices includes the generation and exchange of initialization keys created from a PIN, a random number, and a Bluetooth Device Address (BD_ADDR). TTI-1019, [540]-[541]. Notably, the pairing processes uses the BD_ADDR to form the initialization key (K_{init}) which relies on a cryptographic function:

4.2.2 Pairing

When two devices do not have a common link key an initialization key (K_{init}) shall be created using either the pairing or Secure Simple Pairing procedures.

When pairing is used, K_{init} shall be created based on a PIN, and a random number and a BD_ADDR. K_{init} shall be created as specified in [Part H] Section 6.3 on page 885. When both devices have calculated K_{init} the link key shall be created, and a mutual authentication is performed. The pairing procedure starts with a device sending an LMP_in_rand PDU; this device is referred to as the "initiating LM" or "initiator" in Section 4.2.2.1 on page 242 - Section 4.2.2.5 on page 245. The other device is referred to as the "responding LM" or "responder". The PDUs used in the pairing procedure are:

M/O	PDU	Contents
M	LMP_in_rand	random number
M	LMP_au_rand	random number
M	LMP_sres	authentication response
M	LMP_comb_key	random number
M	LMP_unit_key	key

Table 4.14: Pairing PDUs

All sequences described in Section 4 on page 223, including the mutual authentication after the link key has been created, shall form a single transaction. The transaction ID from the first LMP_in_rand shall be used for all subsequent sequences.

Id., 412.

In another example, the Bluetooth Core specification describes the process

for establishing a secure pairing as well as the obvious reasons behind secure pairing:

4.2 SECURITY

4.2.1 Authentication

The authentication procedure is based on a challenge-response scheme as described in [Part H] Section 3.2.2 on page 862. The verifier sends an LMP au rand PDU that contains a random number (the challenge) to the claimant. The claimant calculates a response, that is a function of this challenge, the claimant's BD_ADDR and a secret key. The response is sent back to the verifier, that checks if the response was correct or not. The response shall be calculated as described in [Part H] Section 6.1 on page 881. A successful calculation of the authentication response requires that two devices share a secret key. This key is created as described in Section 4.2.2 on page 242. Both the master and the slave can be verifiers.

26 July 2007

Procedure Rules

Id., 410. The Bluetooth Core specification describes using BD_ADDR which represents Bluetooth device address. TTI-1030, [542]. The BD_ADDR is a unique identifier that uses cryptographic authentication to authenticate the identity of the connected device (for example authenticating between camera and cell phone while Bluetooth connection is being established). *Id.*

In another example, the Bluetooth Core specification describes a second process for establishing a secure pairing as well as the reasons behind it (“protection against passive eavesdropping and protection against man-in-the-middle (MITM) attacks”). TTI-1030, [543].

TTI-1019, 131.

The Bluetooth Core Specification also describes implementation of security

at both the link layer and the application layer. *Id.*, 1025, 1058-1071 (describing secure simple pairing).

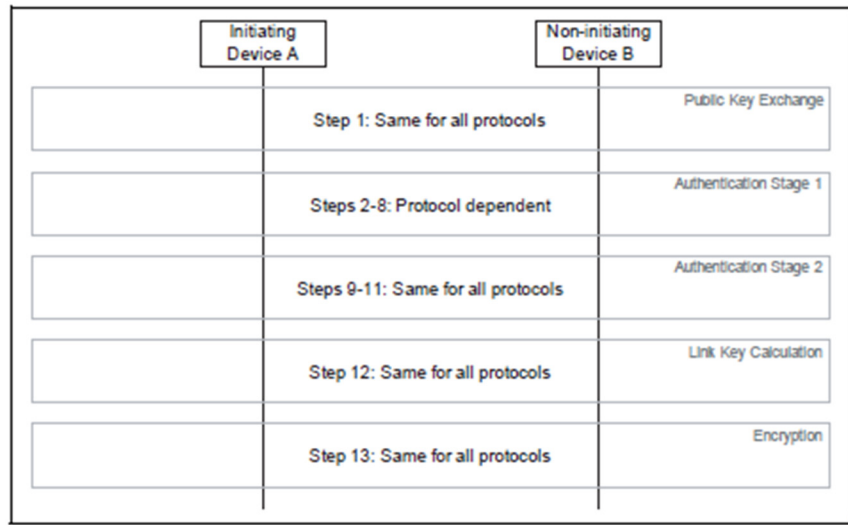


Figure 7.1: Simple Pairing Security Phases

Id., 1058. In phase 4, “a link key is computed from the derived shared key and the publicly exchanged data” and the “final phase [phase 5] in Simple Pairing is generating the encryption keys.” *Id.*, 1067. TTI-1030, [544]-[547].

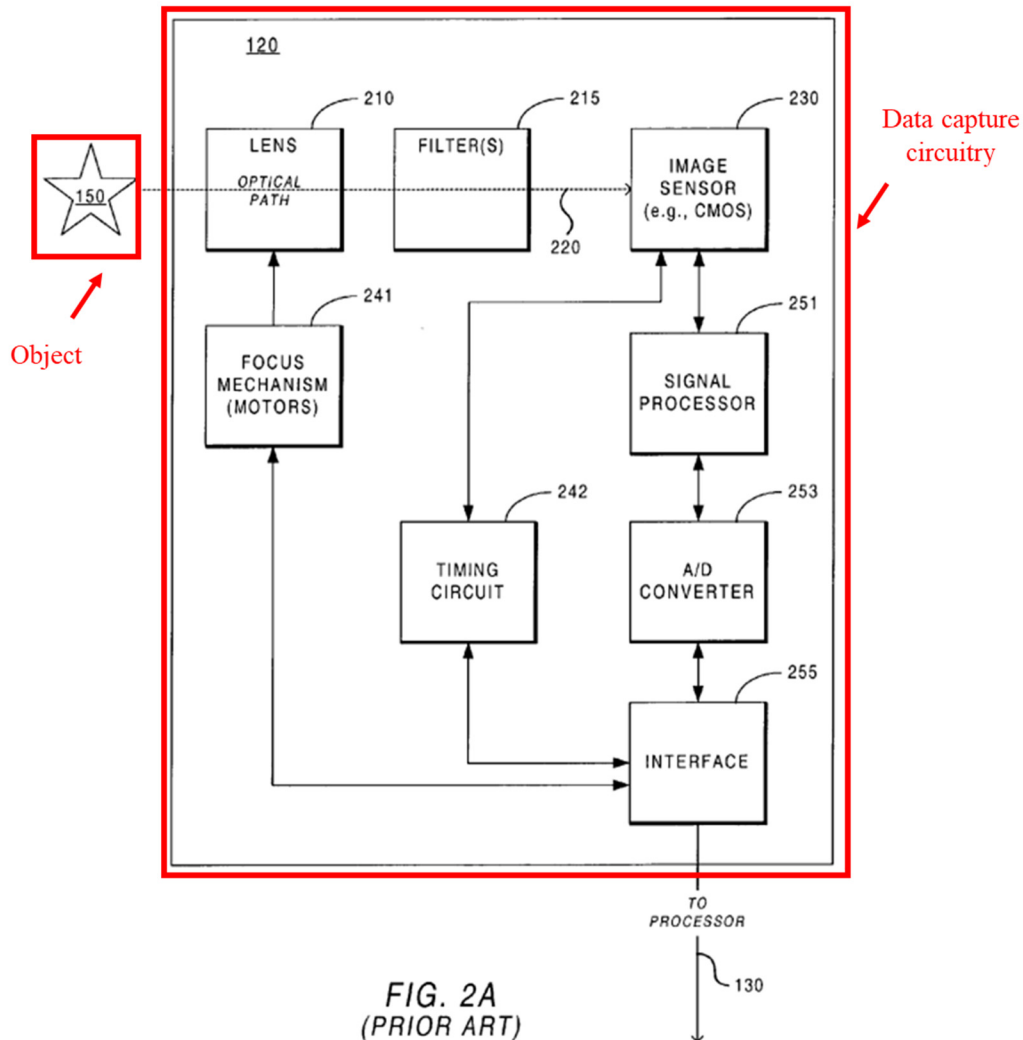
[1.5]

The Kahn-Bluetooth combination renders obvious [1.5]. TTI-1030, [548]. In the combination, the Bluetooth association models would be used, such as the Numeric Comparison model, the Just Works model, the Out of Band model, and the Passkey Entry model. TTI-1019, 133-136.

[1.6]

The Kahn-Bluetooth combination renders obvious [1.6]. *See* Ground 2A, [1.P]; TTI-1030, [549].

For example, Kahn teaches a camera 100, which includes an “imaging device 120” responsible for capturing light reflected from the object 150 and transforming it into image data. TTI-1017, [0033]-[0035]. Specifically, the imaging device 120 captures an image of the object 150 via reflected light impacting the image sensor 230 along the optical path 220. [0038]; *see also id.*, [0021], [0037]; FIGs. 1, 2A. These descriptions provided by Kahn demonstrate the presence of data capture circuitry within the camera device, which functions to capture and process image data. TTI-1017, [0034], [0035]. Therefore, based on Kahn's teachings, a POSITA would have understood that the data capture circuitry is an integral component of the camera. TTI-1030, [549].



Id., FIG. 2A (annotated).

[1.7]

The Kahn-Bluetooth combination renders obvious [1.7]. TTI-1030, [550]. For example, Kahn teaches the computer 140, serving as the central controller for the imaging device 120, directs its actions and timing. TTI-1017, [0034]. Through the system bus 130, the computer 140 commands the imaging device 120 to capture an image representing the object 150. TTI-1017, [0035], [0042]. In Figure

2B, Kahn illustrates a block diagram of the processor or computer 140 comprising a dedicated processor (CPU) 264, which controls the operation of the camera 100.

Id., [0042]-[0043], FIG. 2B. Kahn teaches that the processor (CPU) 264 typically includes a conventional processor device, such as a microprocessor, for controlling the operation of the camera 100. *Id.* This configuration indicates that the processor 140 is indeed configured to acquire the image captured (new-data) by the imaging device 120. TTI-1017, FIGs. 1, 2A, 2B .

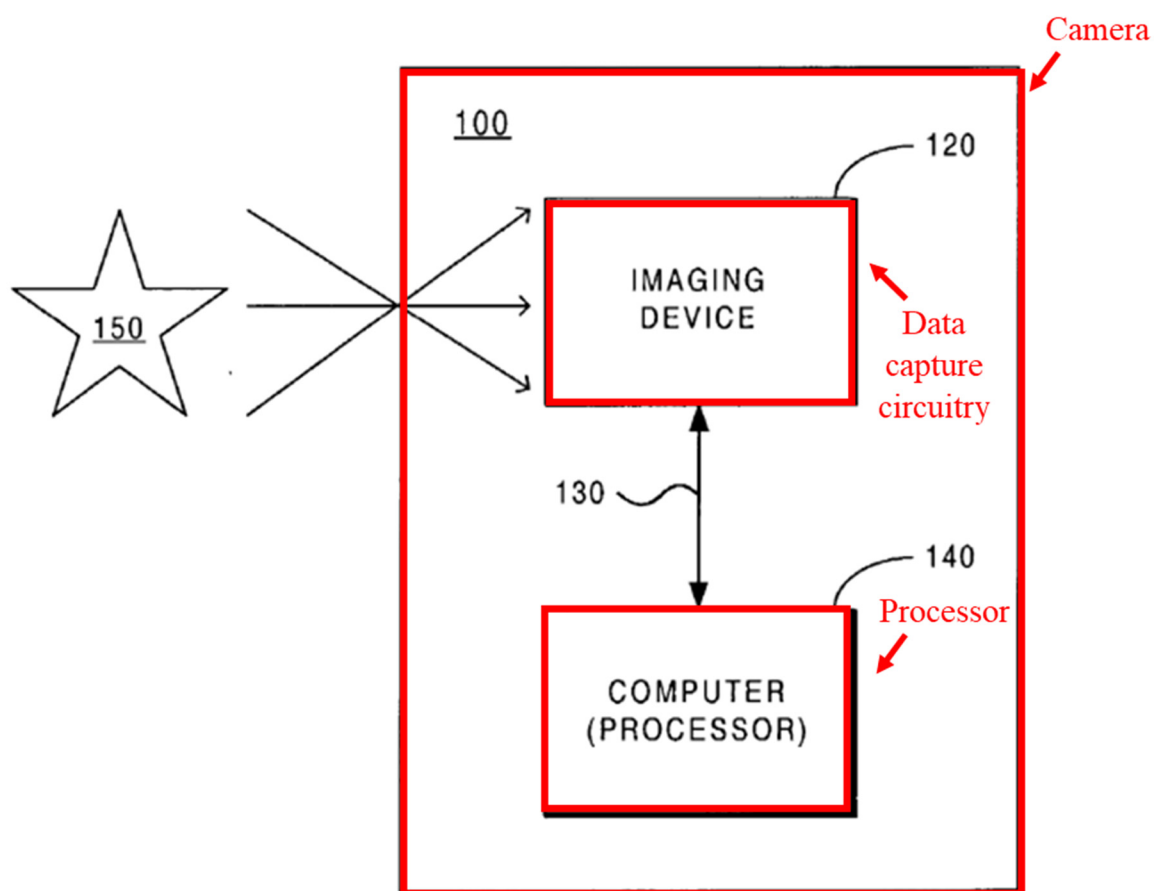
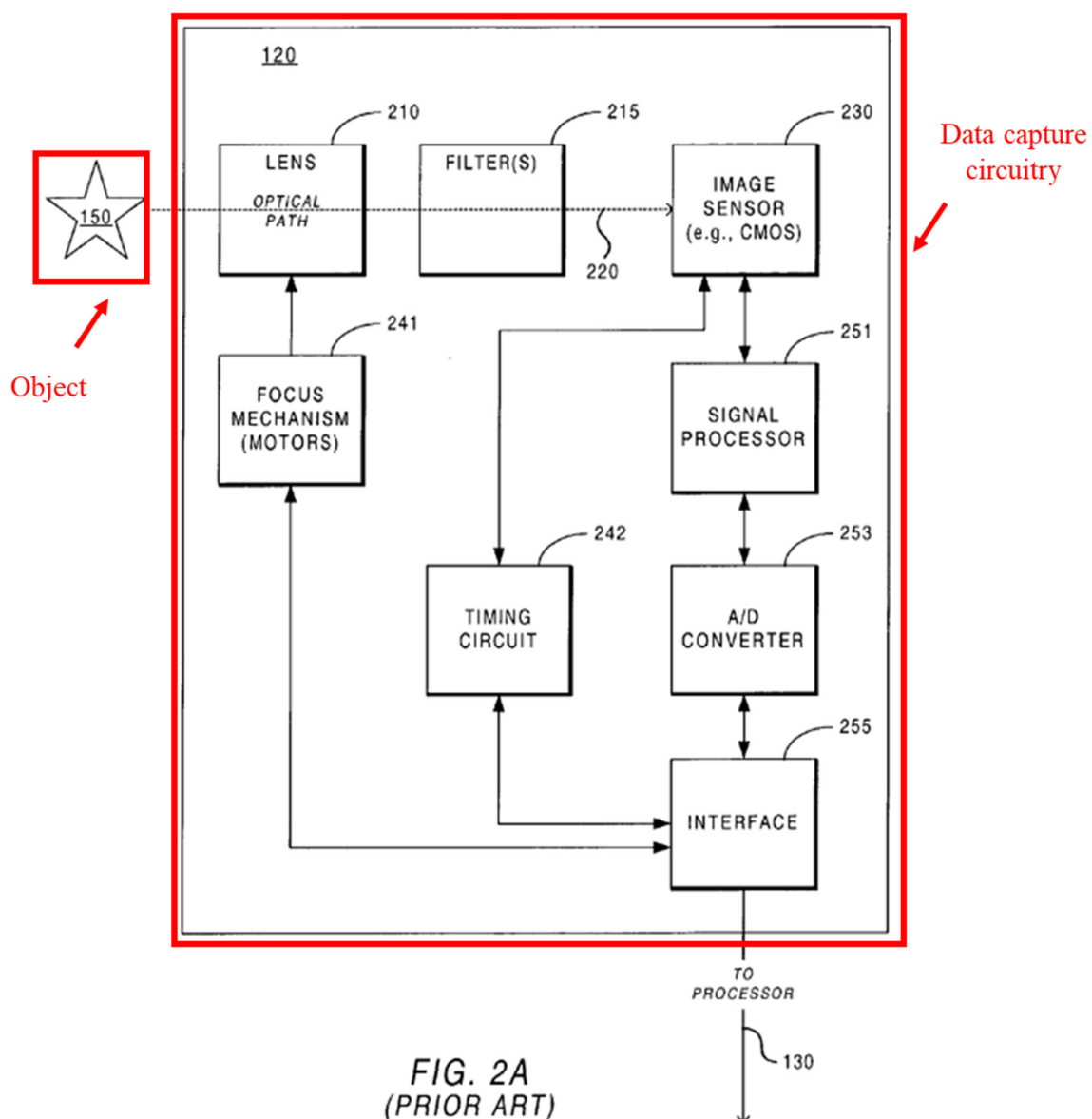


FIG. 1
(PRIOR ART)

TTI-1017, FIG. 1 (annotated).



Id., FIG. 2A (annotated).

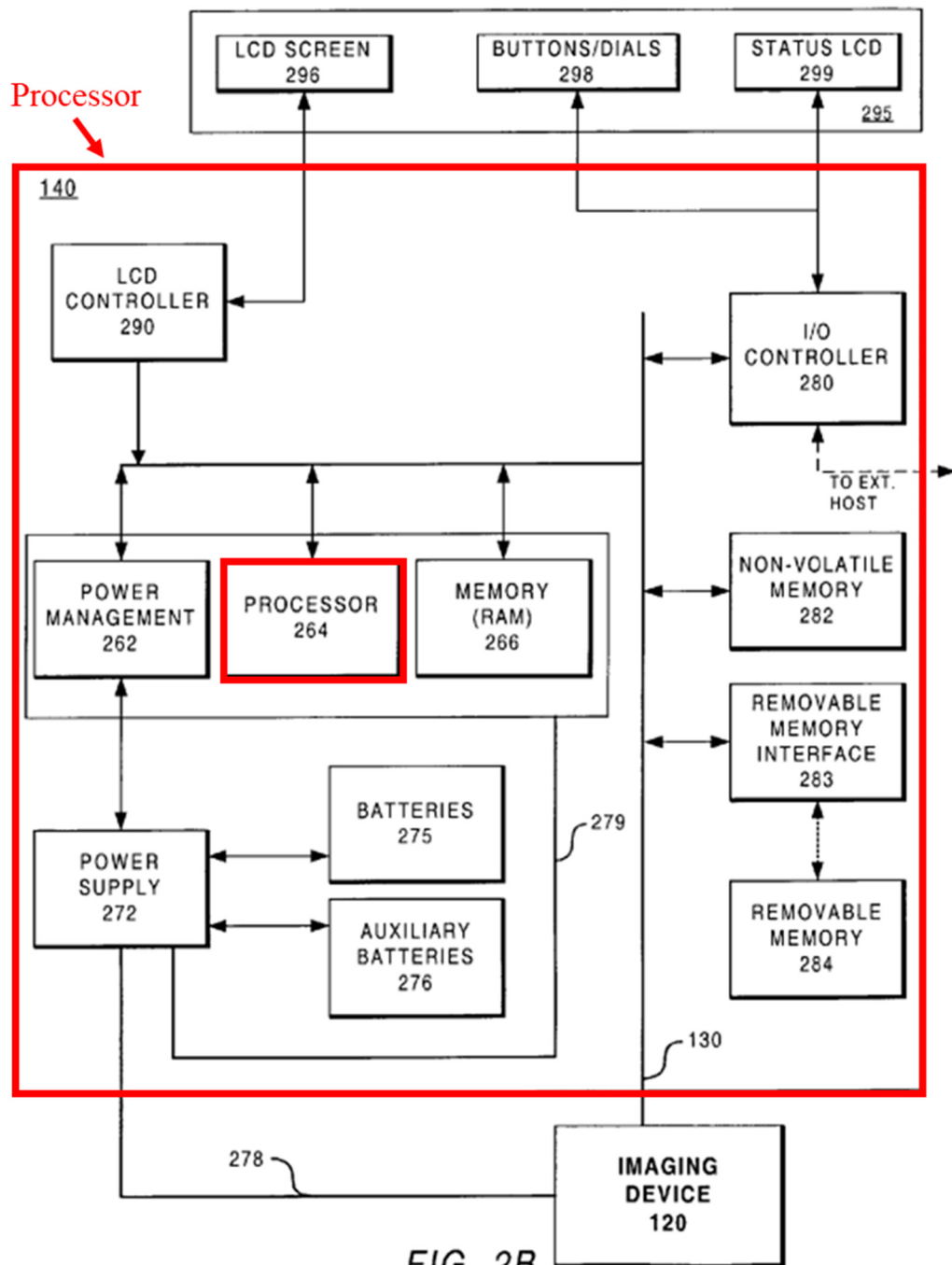


FIG. 2B
(PRIOR ART)

Id., FIG. 2B (annotated).

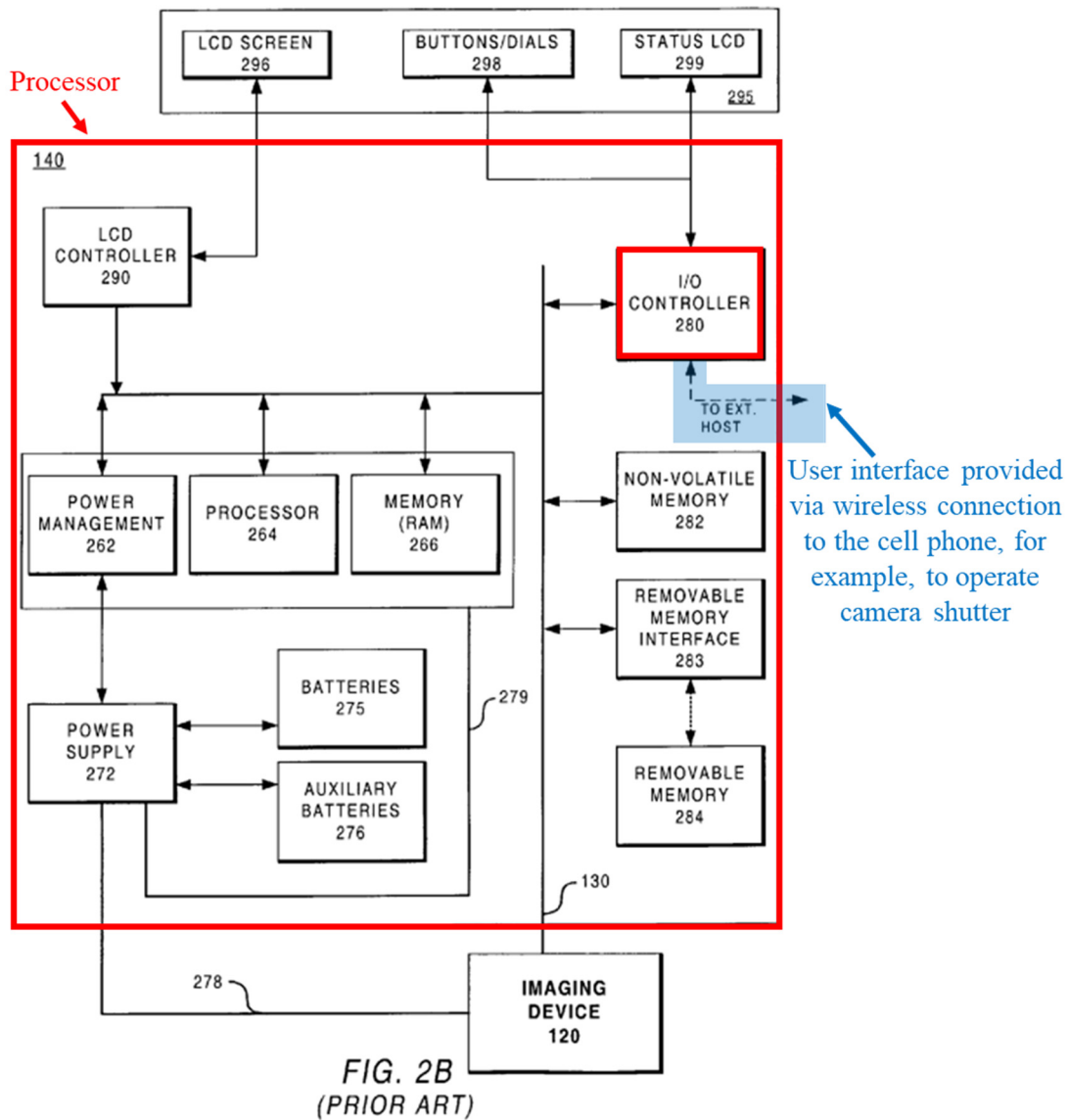
[1.8]

The Kahn-Bluetooth combination renders obvious [1.8]. TTI-1030, [551]-

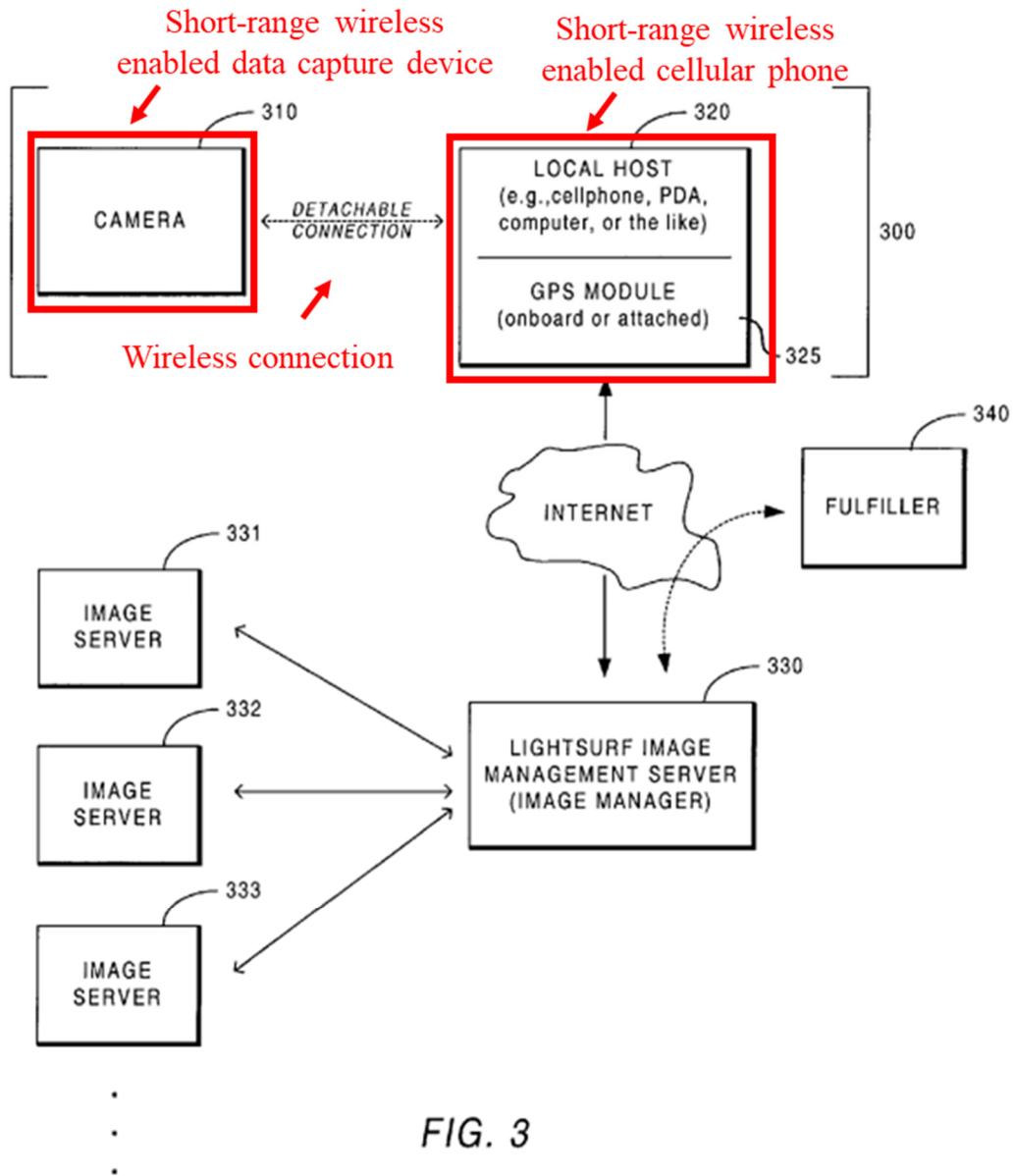
[558]. In the combination, new data, such as new pictures, would be acquired after the Bluetooth connection is established. A POSITA would have been motivated to take pictures after the Bluetooth connection is established so that the pictures could be promptly uploaded to the servers for sharing. TTI-1017, [0086]; TTI-1030, [551]-[552]. Further, there would be no reason to preclude photo capture after the Bluetooth connection is established. On the contrary, it would be expected that photo capture is always available both before and after the connection to the phone is established. Moreover, Kahn's teaches the association of location data with captured images, and the location information (GPS data) is provided by the phone. Thus, in the combination, the Bluetooth connection between the camera and the phone would be established prior to the capture of images so that the "association of location ID information" may "occur immediately (e.g., upon capture)." Kahn, [0057]-[0058]. Further, Kahn discloses remote operation of the camera via a cell phone, which would have necessitated the establishment of connection before image capture. TTI-1017, [0046]; *see also id.*, [0007], [0033], FIG. 1, 2A-B; TTI-1030, [551]-[552]. Further, Kahn illustrates the continuous checking of the connection between the cell phone and camera as part of the disclosed functionality.

Moreover, Kahn's description of the processor within the camera, serving as the central controller for capturing images, aligns with the concept of acquiring

new data using data capture circuitry. TTI-1017, FIGs. 2B, 3, 4.



TTI-1017, FIG. 2B (annotated).



Id., FIG. 3 (annotated), [0055].

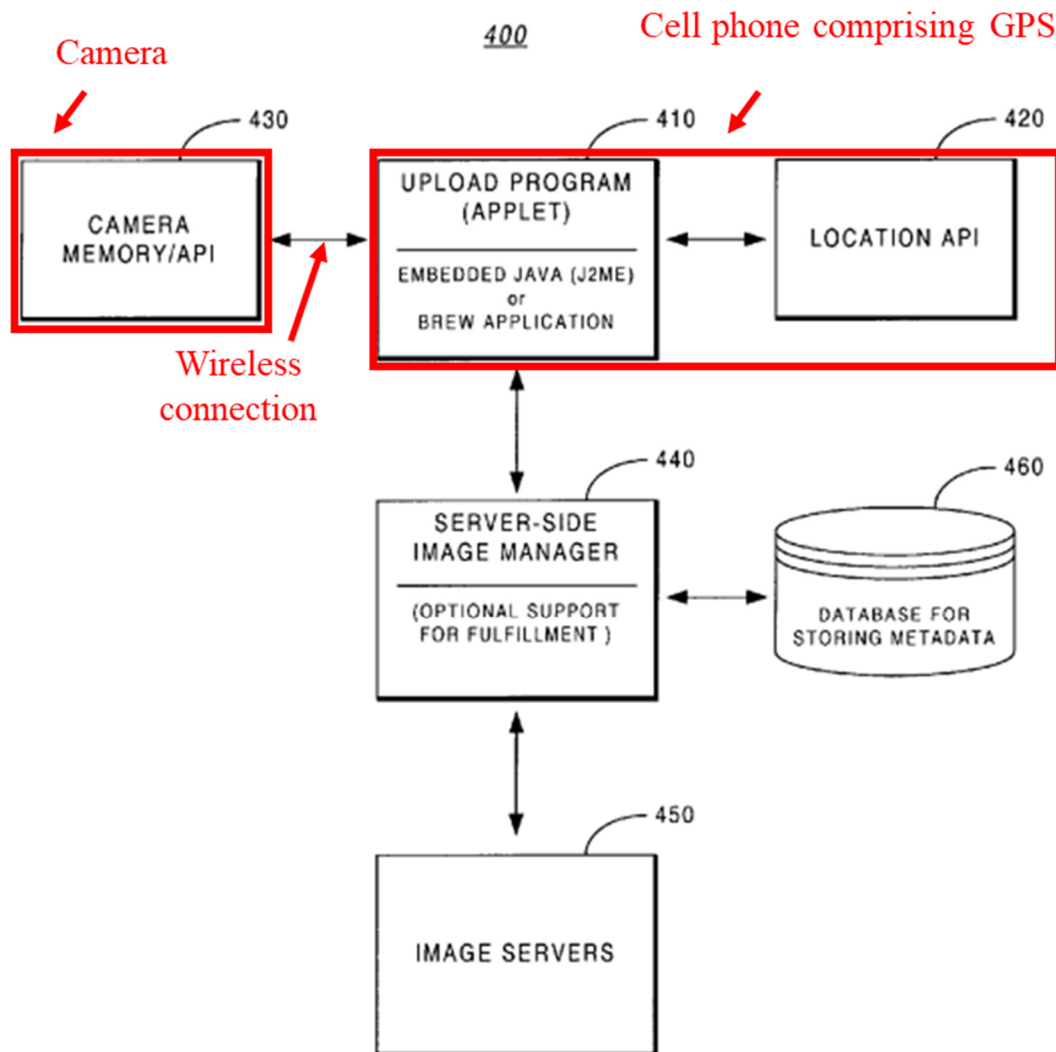
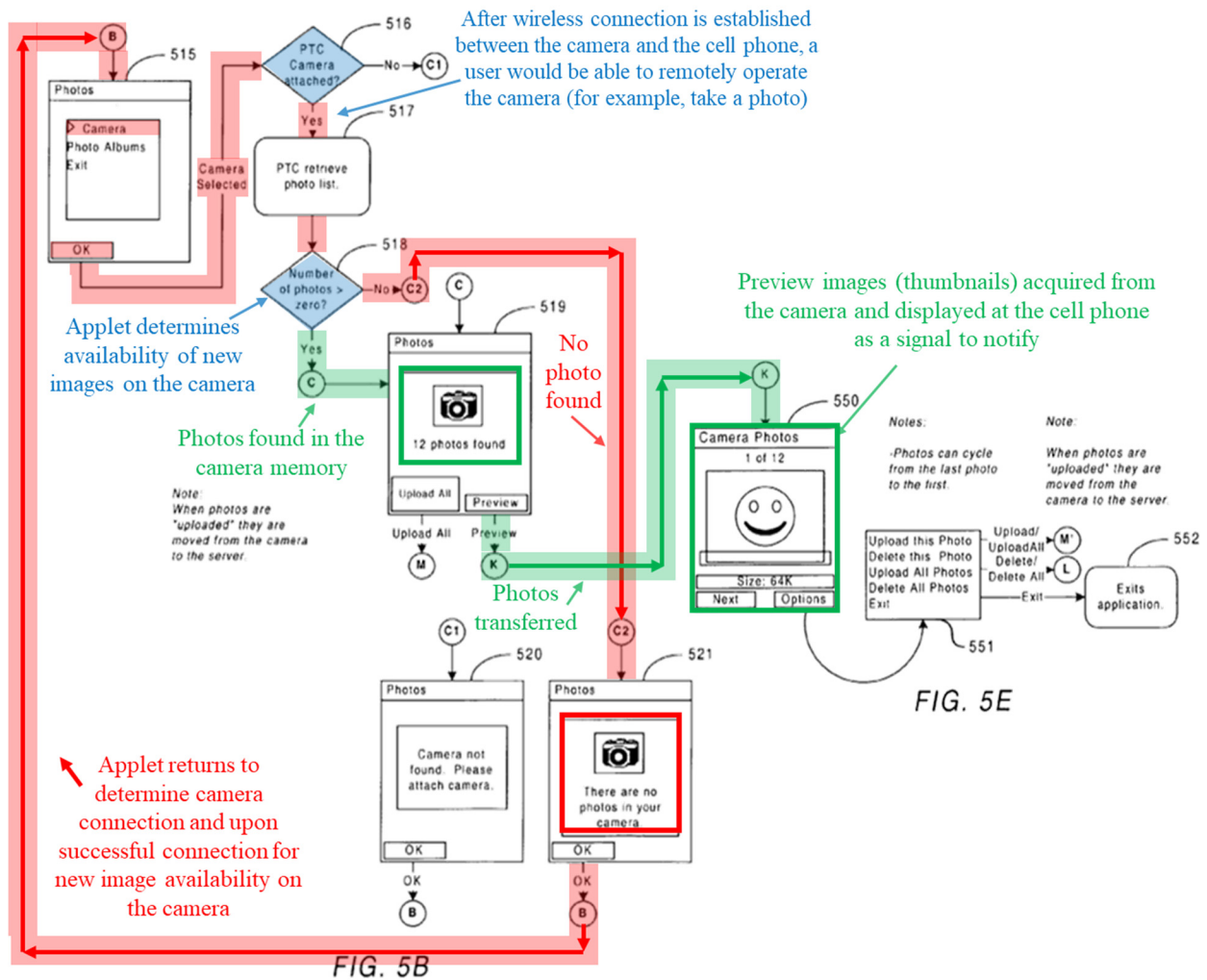


FIG. 4

TTI-1017, FIG. 4 (annotated); *see also id.*, [0024]. In addition, Figure 5B of Kahn contemplates a control loop where new pictures are acquired after a connection has been established:



TTI-1017, FIG. 5B. See also FIGs 5A-5D, [0074]-[0075], [0079]. TTI-1030, [554]-[557].

[1.9]

The Kahn-Bluetooth combination renders obvious [1.9]. See Ground 2A, [1.2]; TTI-1017, [0042], [0044], FIG. 1; TTI-1030, [558]-[562]. For example, in FIG. 2B, Kahn illustrates a processor (264) coupled to various memory components (RAM 266, non-volatile memory 262, and removable memory 284 via

interface 283). TTI-1017, [0042]; *see also id.*, [0044], [0055], FIGs. 1A, 2B, 3. A POSITA would have understood that the processor in the camera device (310 or 100) would be designed to store captured image data (new-data) in its internal memory, which could include non-volatile memory (282), a removable memory interface (283), and/or removable memory (284). TTI-1017, [0035], [0042]; TTI-1030, [558]-[562].

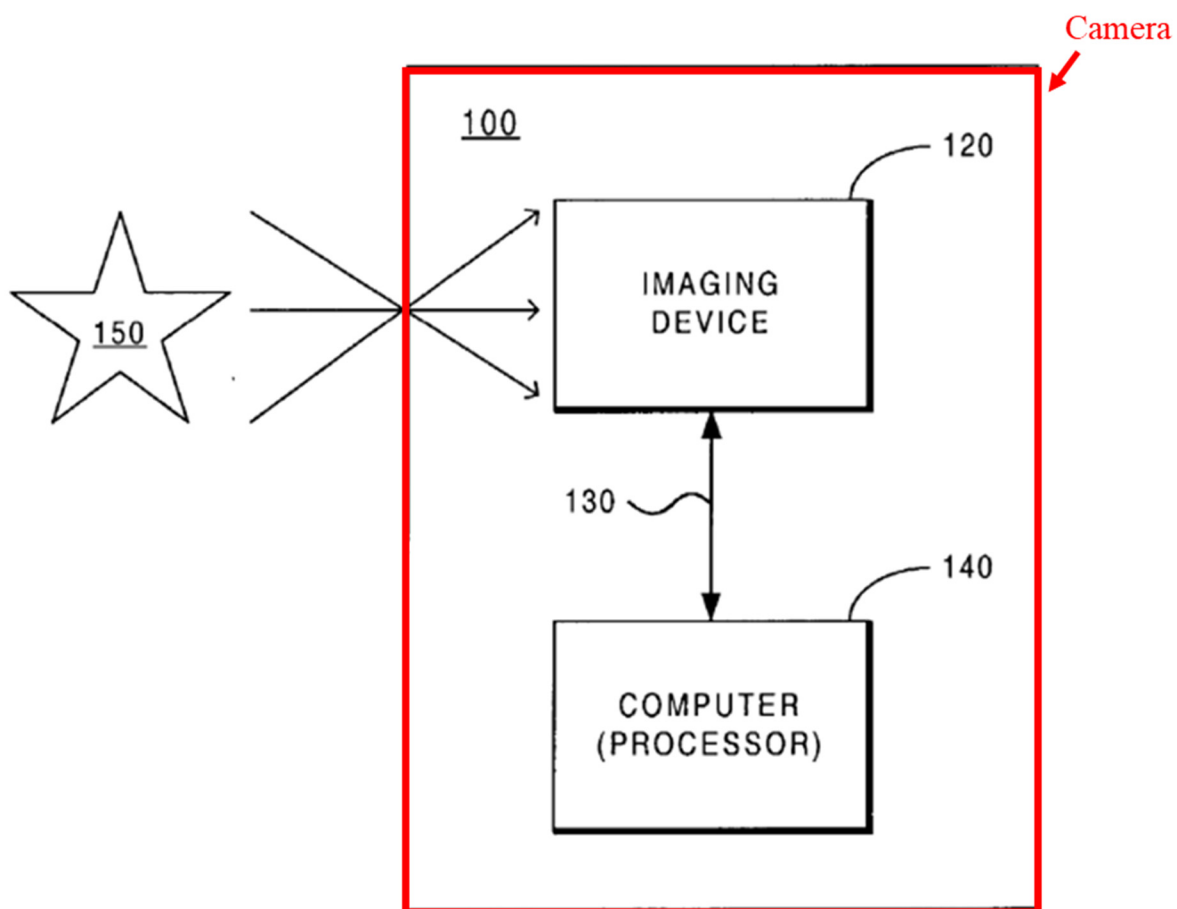


FIG. 1
(PRIOR ART)

TTI-1017, FIG. 1 (annotated).

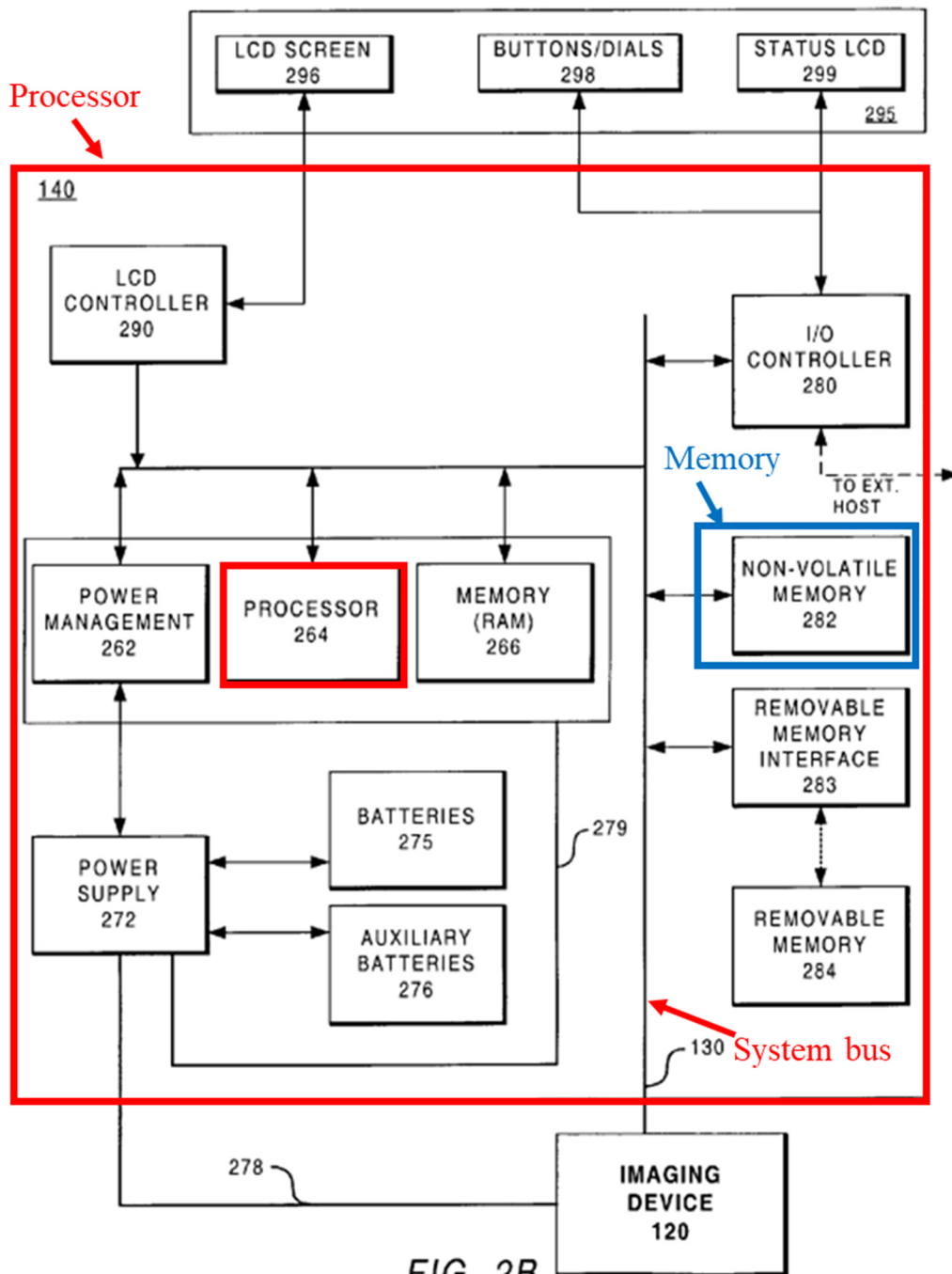


FIG. 2B
(PRIOR ART)

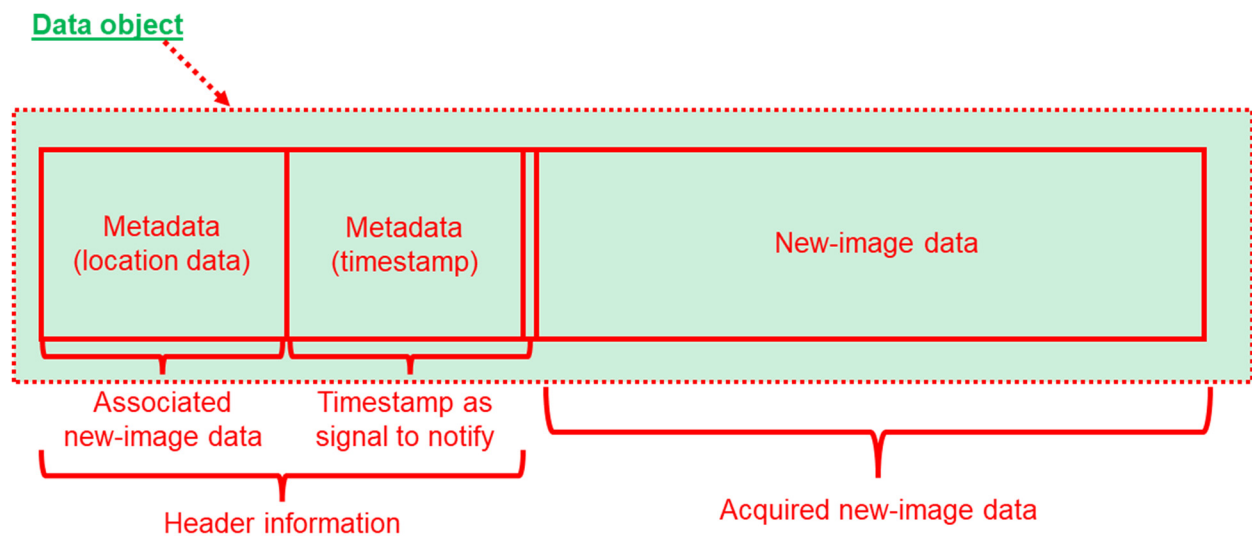
Id., FIG. 2B (annotated).

[1.10]

The Kahn-Bluetooth combination renders obvious [1.10]. TTI-1030, [563]-

[569]. As discussed above, Kahn teaches capturing photos (acquiring new-data).
See Ground 2A, [1.8]. For example, Kahn teaches that when an image is captured by the digital camera, the digital camera includes metadata, such as a timestamp in the image file and location ID from a GPS module. TTI-1017, [0057], [0058] (discussing header information), [0060]. TTI-1030, [563]-[565].

Below is an illustration of a new-data object prepared in the combination based on the teachings of the Kahn-Bluetooth combination.



TTI-1030, [566].

A POSITA would have recognized that the said processor, as described by Kahn, is further configured to create a new-data object based on the captured images and associated location ID information. TTI-1030, [566]-[568]; TTI-1017, [0051], [0058], [0064]-[0065], [0098]. Since the metadata association occurs as part of the image capturing process facilitated by the processor, a POSITA would

have readily configured the processor to create a new-data object comprising images (new-data) associated with location information (associated new-data), as taught by Kahn. TTI-1030, [566]-[568]. Further, when sending data from the camera to the mobile phone, a POSITA would have designed the communication protocol to provide an indication that new photos are available and this indication, whether a time-stamp or otherwise, would be a signal to notify. For example, FIG. 5B notes that “[w]hen photos are ‘uploaded’ they are moved from the camera to the server.” TTI-1017, FIG. 5B. A POSITA would have been motivated to provide, and it would have been obvious to provide, a signal to notify to alert the mobile phone when new images are being received from the camera so that the processor within the camera is notified and can take appropriate action, such as temporarily storing the photos before uploading to a server. TTI-1030, [569].

[1.11]

The Kahn-Bluetooth combination renders obvious [1.11]. TTI-1030, [570]-[574]. Within digital imaging and communication systems, any accompanying data serves as a carrier, conveying essential details about image content and status. TTI-1030, [570]. A POSITA would have recognized that leveraging such data as a notification signal for new image availability aligns with established practices in digital communication systems. TTI-1030, [570]. For instance, Kahn illustrates the inclusion of a timestamp in the image data sent from the camera to the mobile

phone. TTI-1017, [0008], [0060], [0098]. In the combination a timestamp would operate as a signal to notify such that when the timestamped data arrives, the processor would read the timestamp and thus be notified that the accompanying data is new data from the camera. TTI-1030, [570]; TTI-1001, 13:13-21. A POSITA would have observed that the related 8,904,030 patent claims an embodiment in which a “data signal notification is a time-stamp attribute inside the data object.” TTI-1001, Claim 6. The same would apply here. TTI-1030, [570]; TTI-1001, 13:13-21; TTI-1003, 5:14-21.

As discussed above, Kahn teaches capturing photos (acquiring new-data). *See* Ground 2A, [1.8]. A POSITA would have found it obvious that in Kahn’s instruction to capture photos and acquire timestamps during the image capturing process, the timestamps would naturally serve as a signal to notify the cell phone regarding new-image data on the camera. TTI-1017, [0008], [0060], [0098]. TTI-1030, [571]-[574].

[1.12]

The Kahn-Bluetooth combination renders [1.12] obvious. TTI-1030, [575]. In the combination, Kahn teaches creating a new data object (image data) that includes the image captured by the camera. *Id.*; TTI-1017, [0007]-[0008], [0058], [0060].

[1.13]

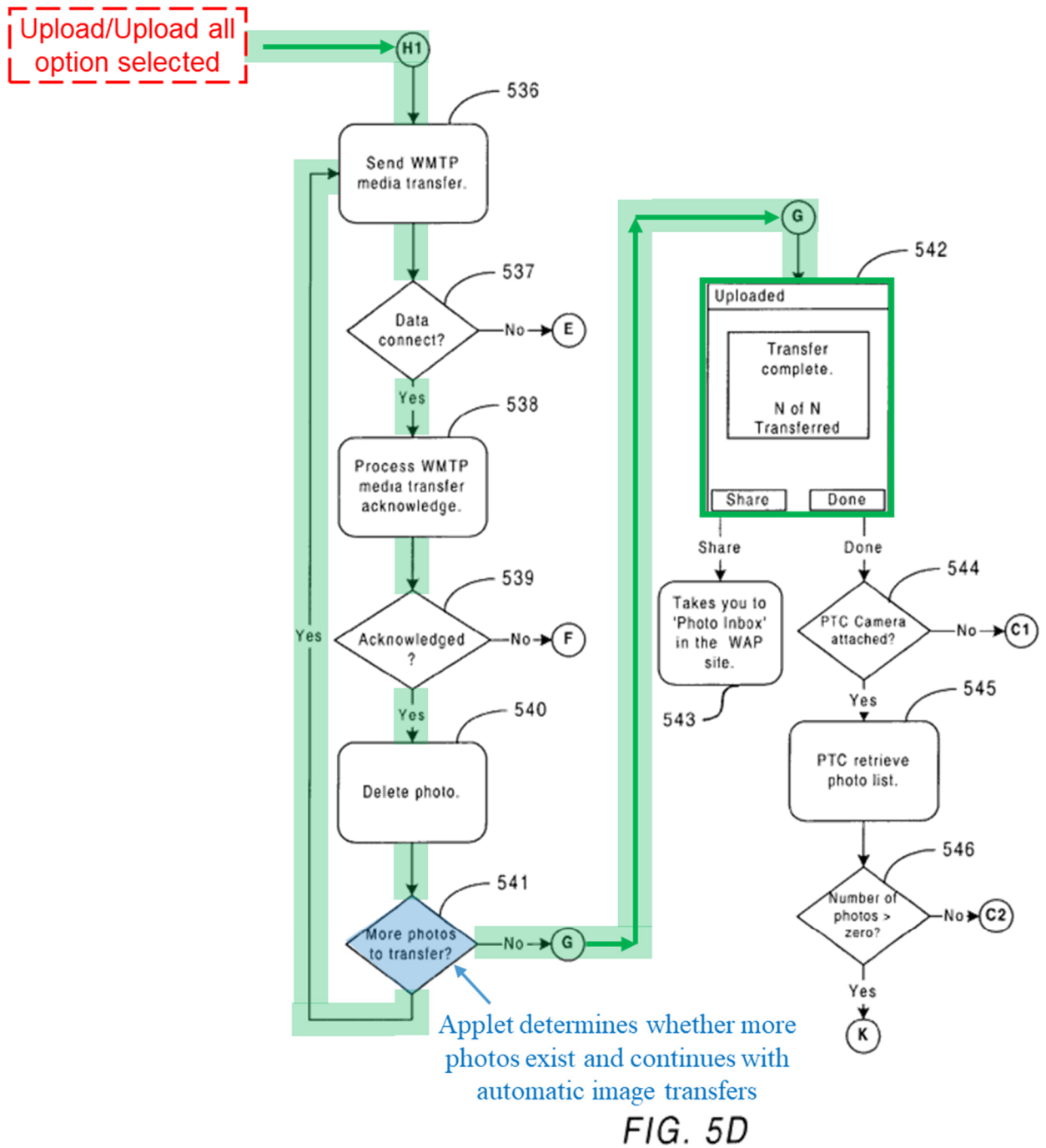
The Kahn-Bluetooth combination renders obvious [1.13]. TTI-1030, [576]-[577]. For example, Kahn teaches inclusion of location ID information as associated new-data with the image data. TTI-1017, [0058]. Specifically, Kahn describes the automatic formation of metadata associated with each captured image data. TTI-1017, [0051], [0057]-[0059], [0062], [0065], [0008]. During the uploading process, Kahn's upload program assembles the image data along with corresponding metadata, including location information, user identity, timestamp, and location ID. TTI-1017, [0064], [0098]. A POSITA would have understood that this comprehensive metadata constitutes associated new-data that is linked with the new-image captured by the camera. TTI-1030, [576]-[577].

[1.14]

The Kahn-Bluetooth combination renders obvious [1.14]. TTI-1030, [578]-[582]. For example, Kahn teaches the implementation of an upload program, which is invoked automatically to upload images to the user's account on an image server. TTI-1017, [0062]. The upload program communicates with the camera memory/API to retrieve images from the camera and initiate the automatic transfer of images from the camera to the host, such as a cell phone, for uploading to the destination image server. TTI-1017, [0063]-[0064], [0069], [0097]. Furthermore, Kahn outlines a method for automated uploading and organizing photographic images, where images are captured, associated with location information, and

subsequently uploaded either automatically or upon user request. TTI-1017, [0097].

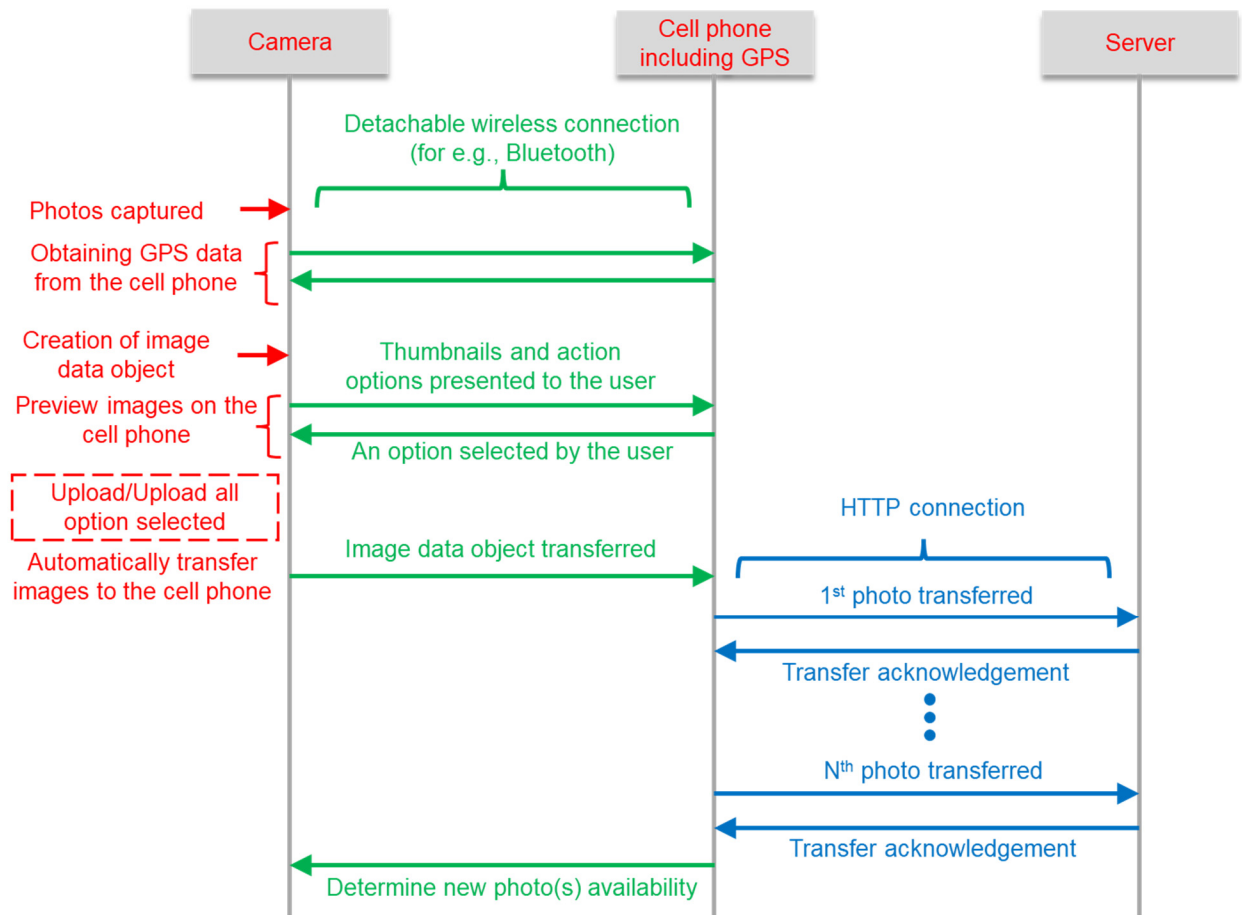
In Figure 7, Kahn illustrates the automatic transfer of images from the camera to the cell phone and then to the server, detailing the sequential actions involved in this process. TTI-1017, [0063], [0085], FIG. 7. The depicted execution paths in FIG. 5D further clarify the automatic transfer process, indicating the initiation of media transfer, verification of data connection, processing of acknowledgment messages, and deletion of photos from local storage upon successful transfer. TTI-1017, [0085], FIG. 5D. Thus, based on Kahn's teachings, it is evident that the camera's processor is configured to transfer automatically the new-data object to the cellular phone over the established short-range paired wireless connection. TTI-1030, [578]-[579].



Id., FIG. 5D (annotated)

In the combination, one dataflow that would be implemented between a camera, a local host (e.g., cell phone) and an online Web-based image management

server 330 based on the teachings of Kahn is depicted here:



TTI-1030, [580]-[582].

[1.15]

The Kahn-Bluetooth combination renders obvious [1.15]. *See* Ground 2A, [1.10]; TTI-1030, [583]. For example, Kahn teaches the uploading process occurring via wireless communication, with the local host (cell phone), is responsible for establishing the wireless data connection. TTI-1017, [0057]. Further, Kahn specifies that the cell phone's applet proceeds to determine the number of photos available on the camera, both before and after uploading photos

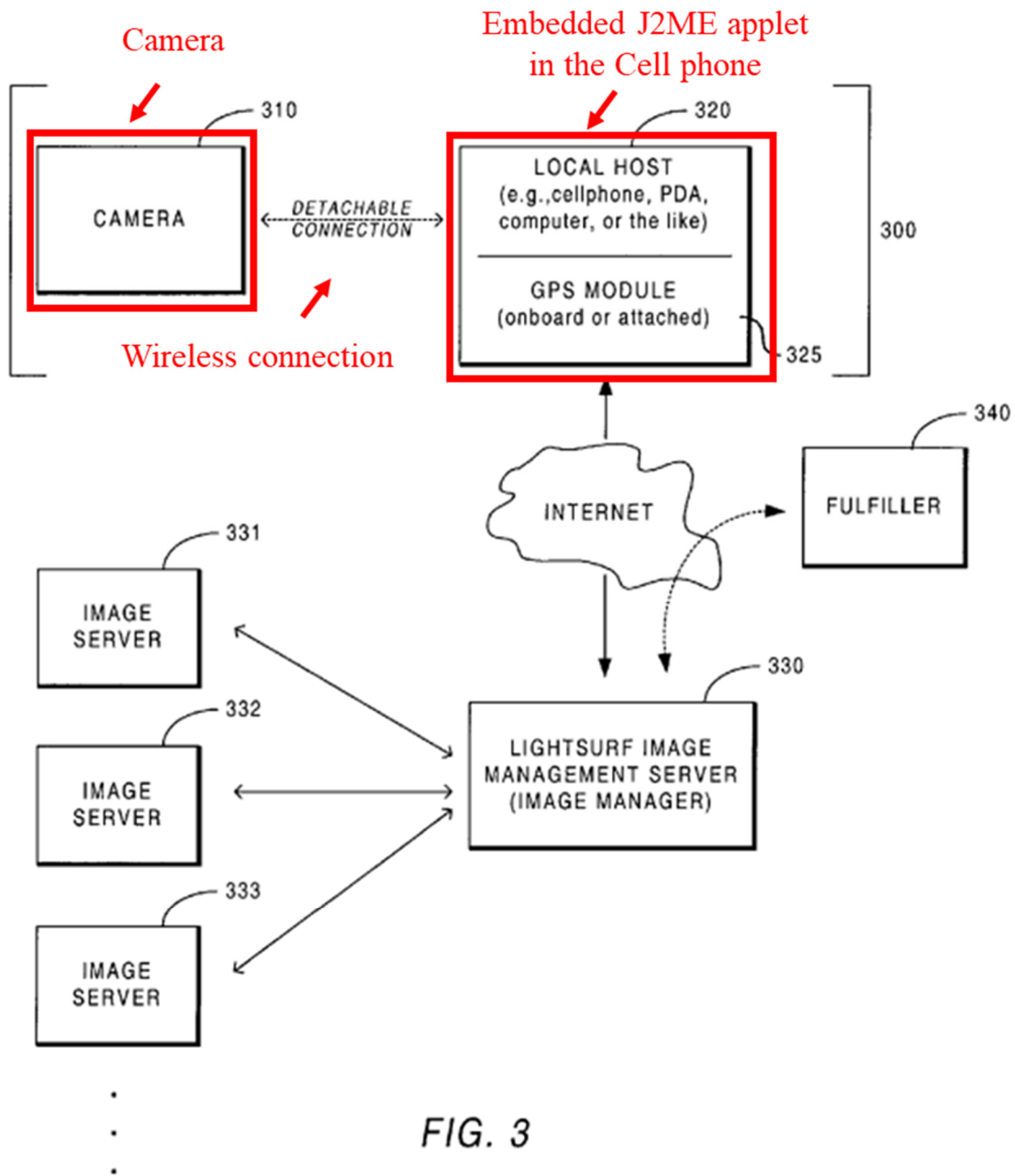
to the server, which constitutes as listening to the signal to notify. TTI-1017, [0057]; *see also id.*, [0074], [0076], FIG. 5B. A POSITA would have understood that this functionality of consistently monitoring availability of new images on the camera would constitute as listening to the notification signal about new images acquired by the camera. Furthermore, as discussed previously (see Ground 2A, [1.4], [1.7], [1.14]), the Kahn-Bluetooth combination discloses the cell phone being configured to receive the new-data object. TTI-1030, [583]. Therefore, based on Kahn's teachings, in the combination, the cell phone would use something in the data object, such as a timestamp or a portion of the header, and would read such information to detect when a signal to notify has arrived. As such, the cellular phone is configured to listen to the signal to notify and received the new-data object, such as new photos from the camera. TTI-1030, [583].

[1.16.1]

The Kahn-Bluetooth combination renders obvious [1.16.1]. TTI-1030, [584]-[587]. See Ground 2A, [1.4]. As discussed above (*see* Ground 2A, [1.3]), Kahn teaches functionality of the client-side applet program, which is embedded within the local host device, such as a cell phone, and executes various method steps while displaying user interface dialogs and menus. TTI-1017, [0071]; *see also id.*, [0055], FIGs. 3, 4, 5A-5F. Specifically, the applet performs functions such as determining the camera's connection status to the local host (cell phone),

displaying UI menus, and establishing connections to the image management server for uploading photos. TTI-1017, [0070]-[0086], FIGs. 5A-5F.

Additionally, Kahn teaches that the upload program, which communicates with the camera memory/API, retrieves images and associated image data, including metadata and thumbnails. TTI-1017, [0063]-[0064]. Subsequently, the upload program assembles this information and establishes an internet connection using HTTP protocol for transmission to the image management server. TTI-1017, [0056], [0064]. Therefore, in the combination, in response to the signal to notify, the applet will take the foregoing actions in response to the signal to notify, and the act of responding to the signal to notify constitutes “processing” of the signal to notify. TTI-1030, [584]-[587].



TTI-1017, FIG. 3 (annotated).

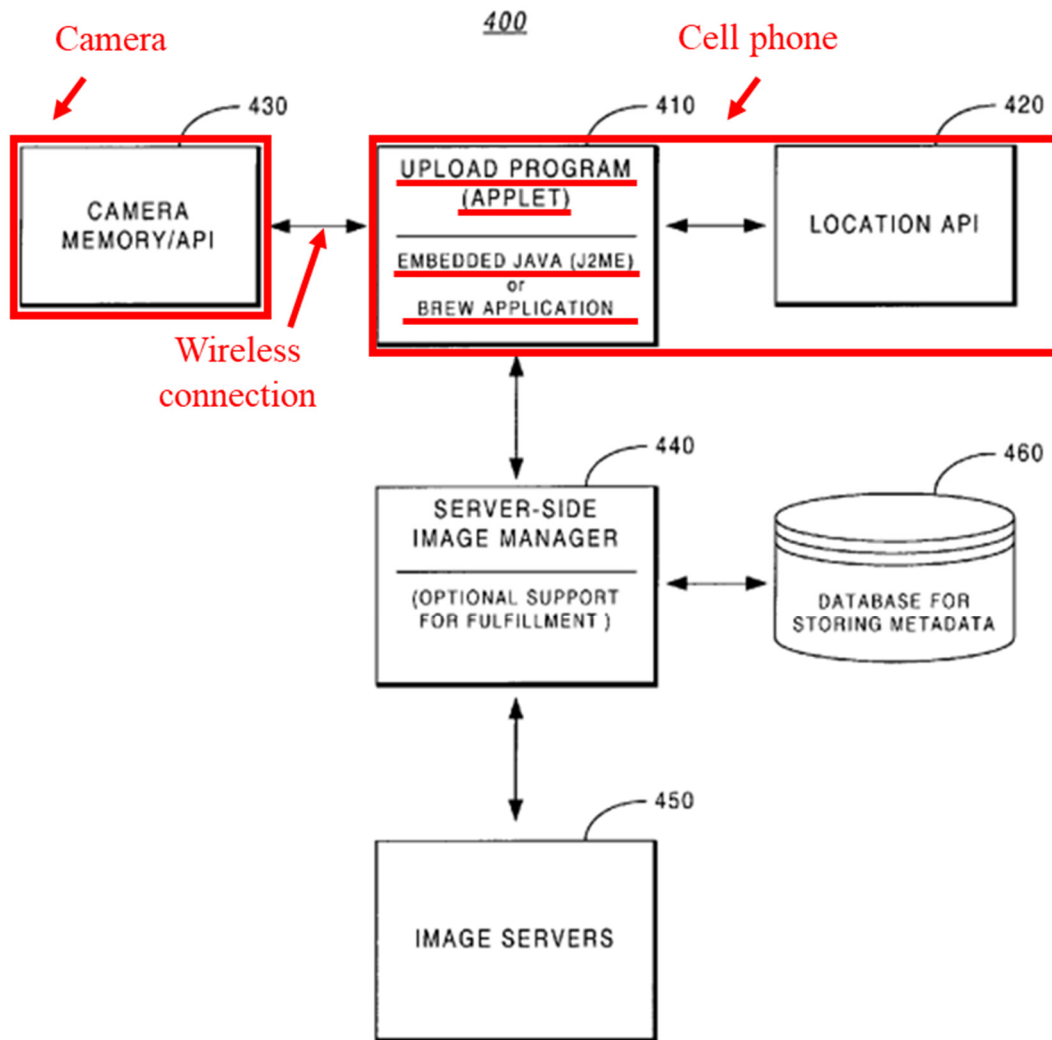


FIG. 4

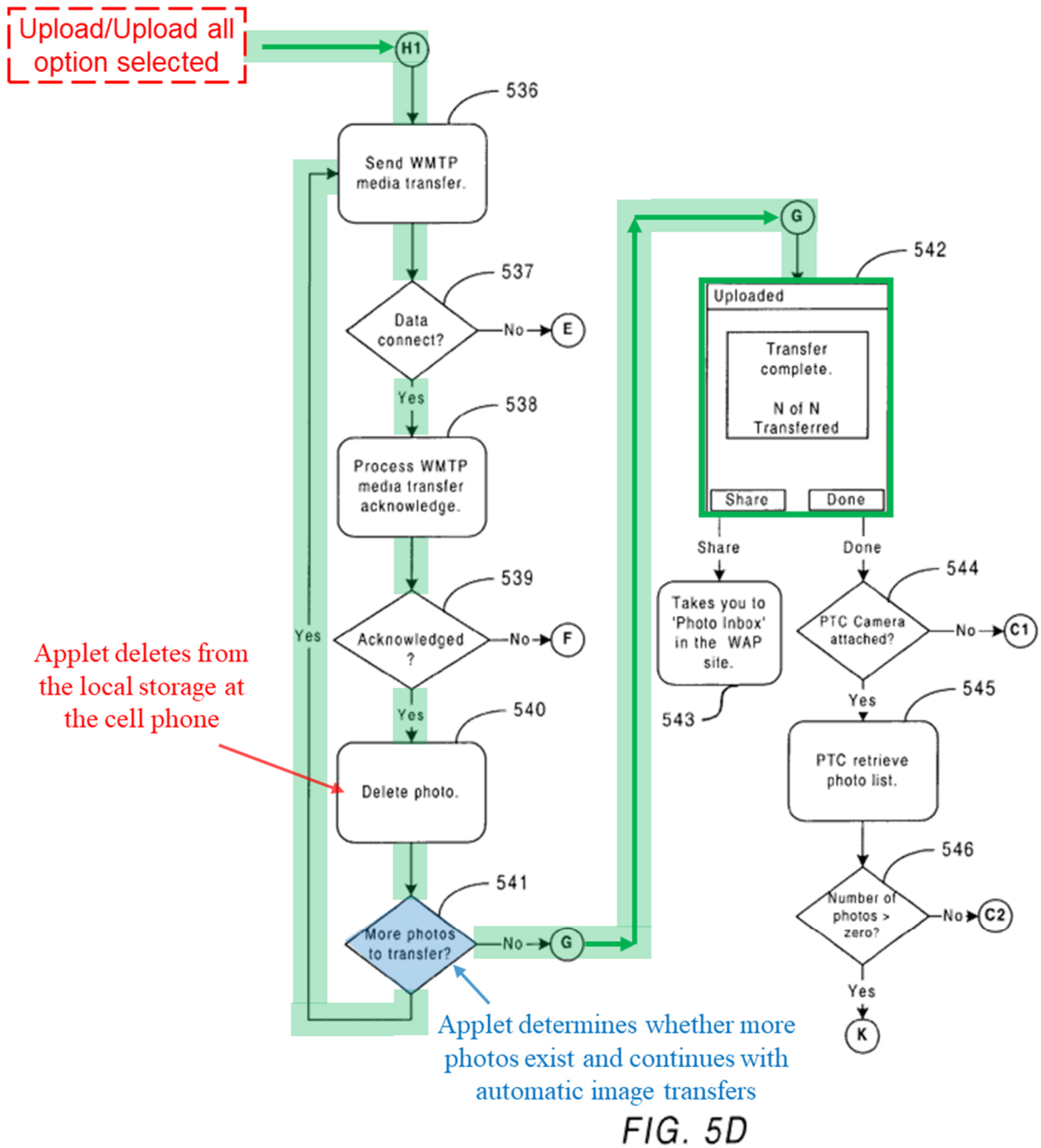
Id., FIG. 4 (annotated).

[1.16.2]

The Kahn-Bluetooth combination renders obvious [1.16.2]. TTI-1030, [588]. During uploading process, Kahn teaches “transfer[ing] of the images from the camera to the host (e.g., cell phone), for uploading to a destination image

server.” TTI-1017, [0063]. Kahn also teaches that once a photo is uploaded to the server, the applet deletes the photo from the cell phone’s memory (local storage).

Id., [0085], FIG. 5D (figure element 540). The photos are thus stored at least temporarily in the cell phone's memory before deletion. TTI-1030, [588].

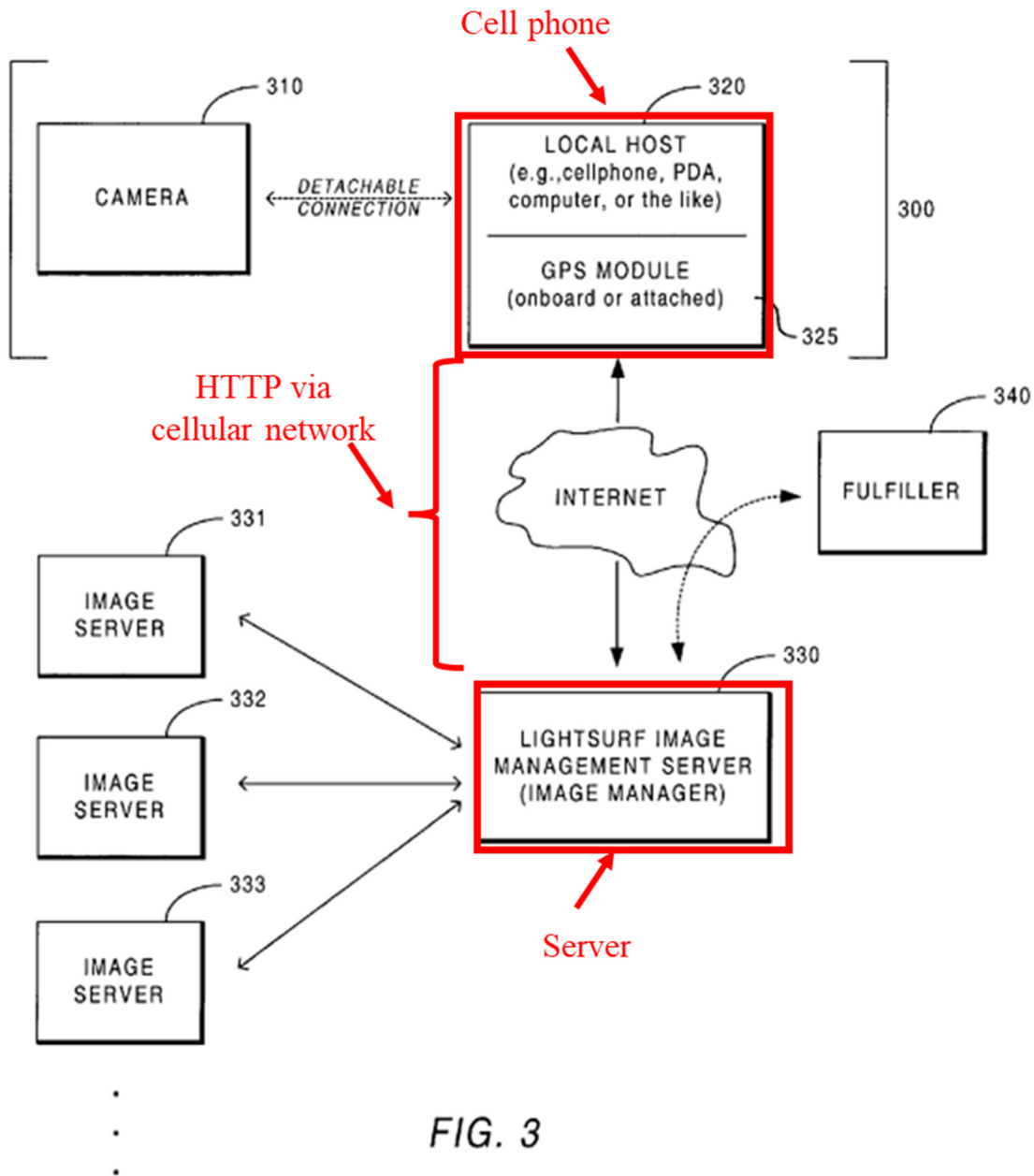


TTI-1017, FIG. 5D (annotated).

[1.17]

The Kahn-Bluetooth combination renders obvious [1.17]. TTI-1030, [589].

For example, Kahn teaches utilization of HTTP protocol by the host device to establish an internet connection with the image management server, facilitating the uploading of data to the website. TTI-1017, [0056]. Kahn outlines the functionality of the image management server, allowing the system to organize images into online albums accessible to users through web browser software. TTI-1017, [0063]-[0065]. “Upon receipt of the transmission from the applet, the image manager proceeds to store the images (in an image server) and stores the location ID information in the metadata database.” TTI-1017, [0098]. The database stores a “user ID,” “timestamp,” and “location ID.” *Id.* In the combination, a POSITA would have provided the user ID information along with the photo and metadata so that the web-based server would know who the photo is associated with. Even though a user may have logged into the web-based server with the user ID and password, and thus the server is aware of the user ID, a POSITA would have understood that for privacy and security, it would have been advantageous to further send the user ID along with the new data as a redundant safeguard. TTI-1030, [589]; TTI-1017, [0071]-[0073], [0082].



Id., FIG. 3 (annotated).

[1.18]

The Kahn-Bluetooth combination renders obvious [1.18]. TTI-1030, [590]-[592]. For example, the combination would, like Khan, provide an applet on a

cellular phone for uploading photos to a user data publishing website. TTI-1017, [0063]-[0064]. The applet provides the photos and metadata, and further provides user information. For example, “the applet retrieves the NAI [network access identifier] and password” and then “the applet establishes a connection to the photo site (Web-based server providing image management)”. TTI-1017, [0082], 5A, 5C. The NAI acts as a user ID and may be, for example, a cell phone number. *Id.*, [0071]. To serve as a network access identifier, the NAI would uniquely identify a user of the data publishing website for which access is sought. TTI-1030, [590].

Kahn provides the option for users to make their albums private, and also provides the option of sharing photo albums, and thus in the combination, photos may be published to the photo website for private consumption. TTI-1017, [0065], [0074], [0082]-[0086], [0098], FIGs. 5D (element 542), 6. TTI-1030, [591]-[592].

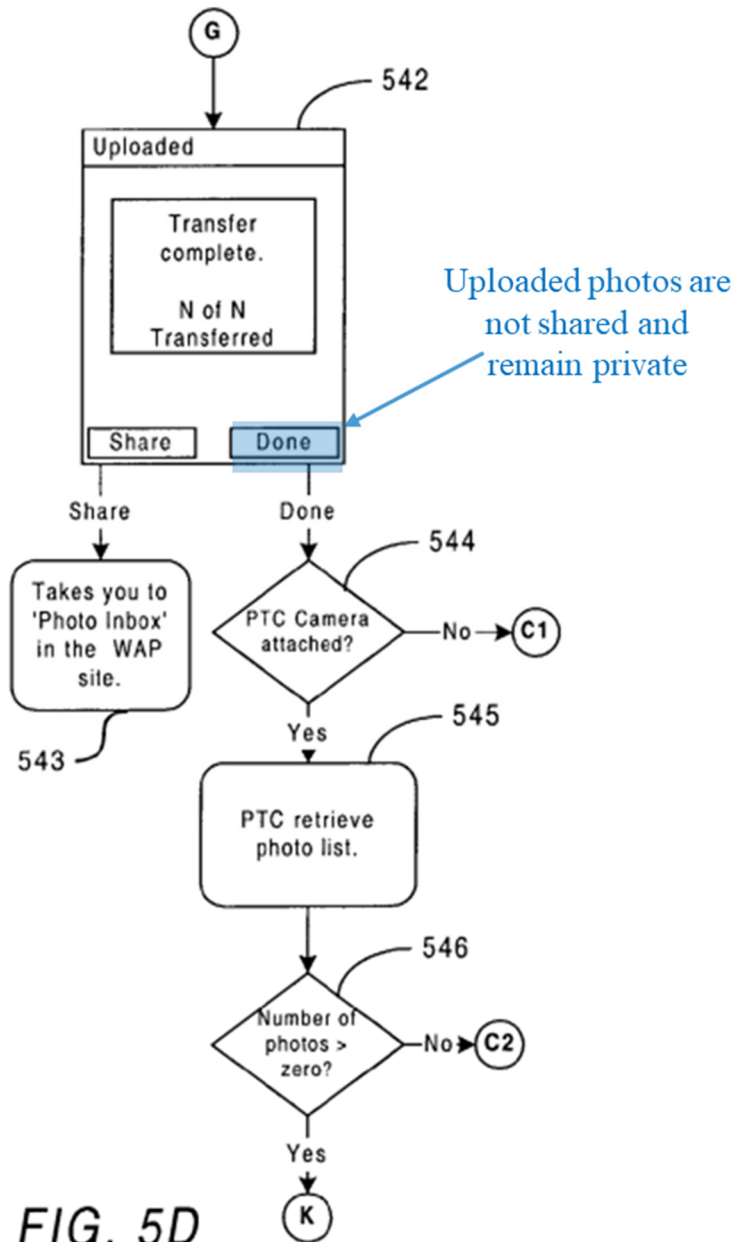


FIG. 5D

Id., FIG. 5D (annotated).

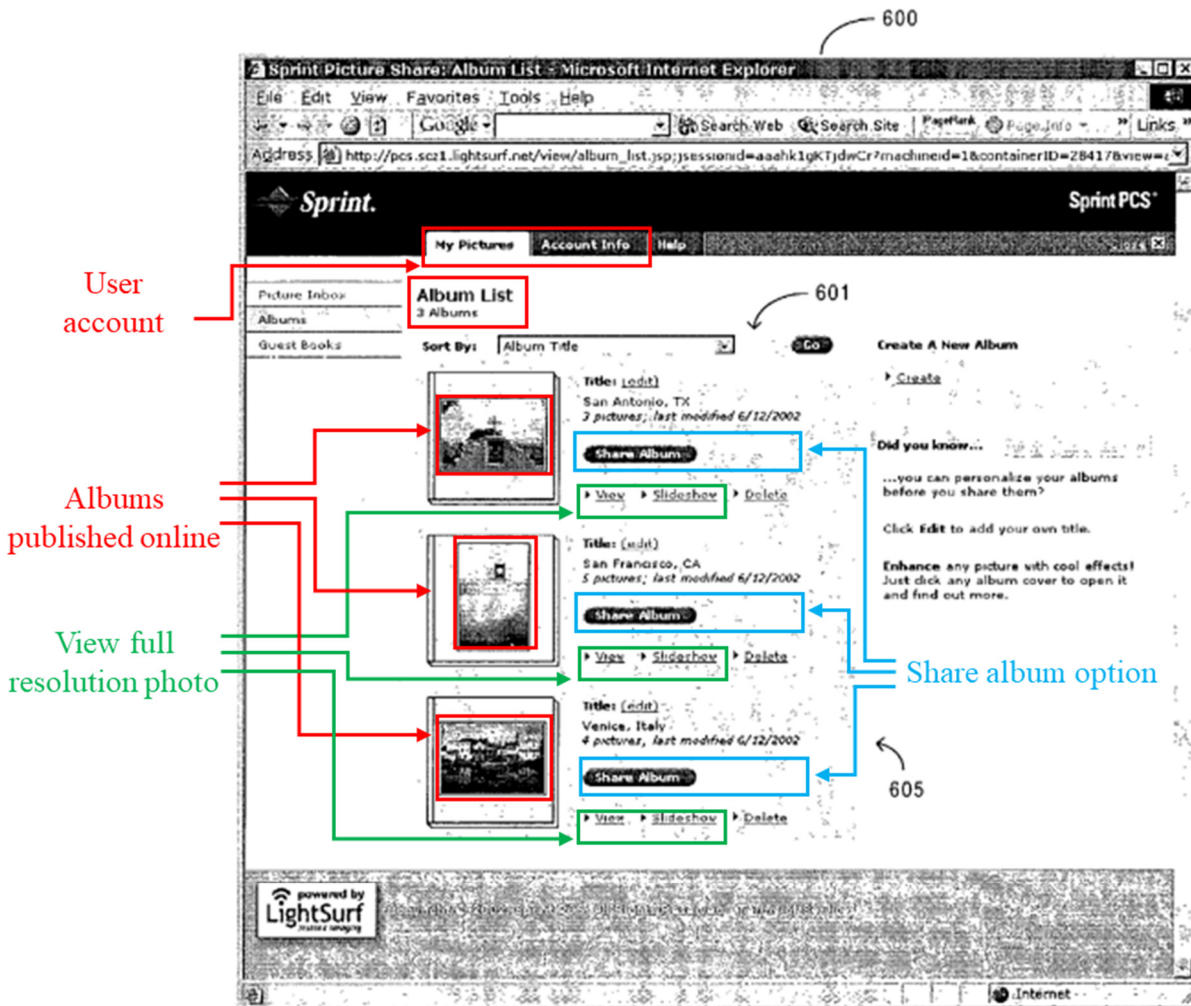


FIG. 6

Id., Fig. 6 (annotated).

Claim 2

See Ground 2A, [1.P], [1.3]. TTI-1030, [593]-[594].

Kahn teaches a “detachable connection” and in some instances, “cableless direct connection.” TTI-1017, FIG. 3, [0045]. In the combination, Bluetooth

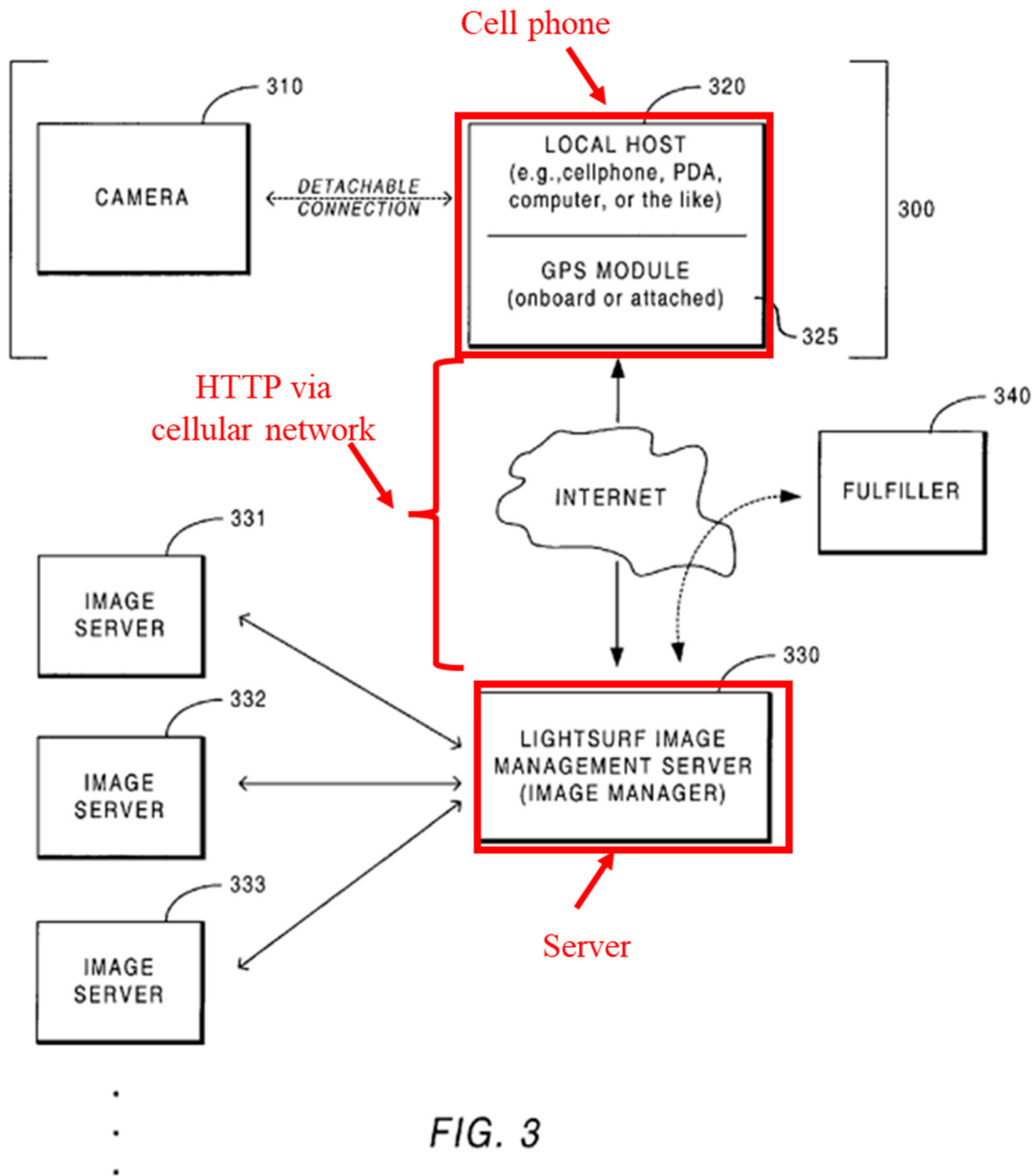
would be used as taught by the Bluetooth specification, and for the reasons provided in the Motivation to Combine section above.

Claim 3

The Kahn-Bluetooth combination renders obvious [3]. TTI-1030, [595]. For example, as discussed above (*see* Ground 2A, [1.8]), Kahn teaches capturing images (acquiring new-data), for example in step 701 of FIG. 7. During the image capturing process, Kahn also teaches acquiring associated new data that is also digital data such as GPS location information and time stamp information. TTI-1017, [0058], [0008], [0098]. Moreover, a POSITA would have been motivated to, and it would have been obvious to, use the system for uploading text and video in addition to photographs, given that video cameras are, like Kahn's device, a camera, and video is a collection of images with one or more audio tracks. Because uploading need not be in real-time, the increased size of video files would not be prohibitive.

Claim 13

To the extent the preamble is limiting, the Kahn-Bluetooth combination renders obvious [13.P]. *See* Ground 2A, [1.P]. TTI-1030, [596]-[597].



TTI-1017, FIG. 3 (annotated), [0055], [0056].

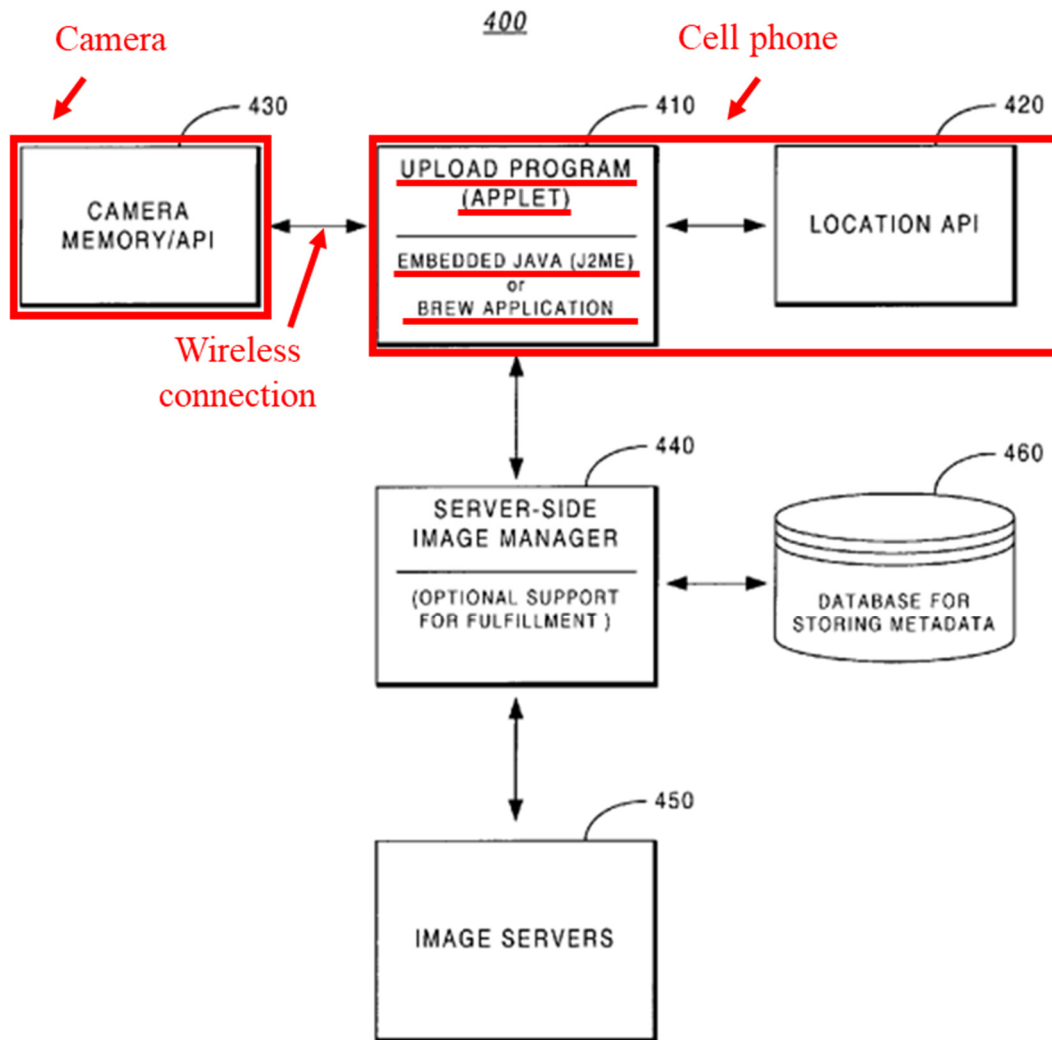


FIG. 4

Id., FIG. 4 (annotated), [0062].

[13.1]

See Ground 2A, [1.P]. TTI-1030, [598].

[13.2]

See Ground 2A, [1.1]. TTI-1030, [599].

[13.3]

See Ground 2A, [1.2]. TTI-1030, [600].

[13.4]-[13.6]

See Ground 2A, [1.3]-[1.5]. TTI-1030, [601].

[13.7]

See Ground 2A, [1.6]. TTI-1030, [602].

[13.8]

See Ground 2A, [1.7]-[1.8]. TTI-1030, [603].

[13.9]

See Ground 2A, [1.9]. TTI-1030, [604].

[13.10]

See Ground 2A, [1.10]. TTI-1030, [605].

[13.11]

See Ground 2A, [1.11]. TTI-1030, [606].

[13.12]

See Ground 2A, [1.12]. TTI-1030, [607].

[13.13]

See Ground 2A, [1.13]. TTI-1030, [608].

[13.14]-[13.15]

The Kahn-Bluetooth combination renders obvious [13.14]-[13.15]. *See* Ground 2A, [1.14], [1.7]-[1.8]. TTI-1030, [609]. Kahn teaches a camera (first

processor) configured to receive a data transfer request from a cell phone. For example, Kahn teaches “the applet displays UI dialog 550 (FIG. 5E), which allows access to individual images on the camera. Here, the user is given a variety of options, as indicated by dialog 551: upload this photo, delete this photo, upload all photos, delete all photos, or exit.” TTI-1017, [0079]. Upon selecting the “upload images” options, a POSITA would have understood that the applet is sending a transfer request to the camera to upload photos to the server via cell phone.

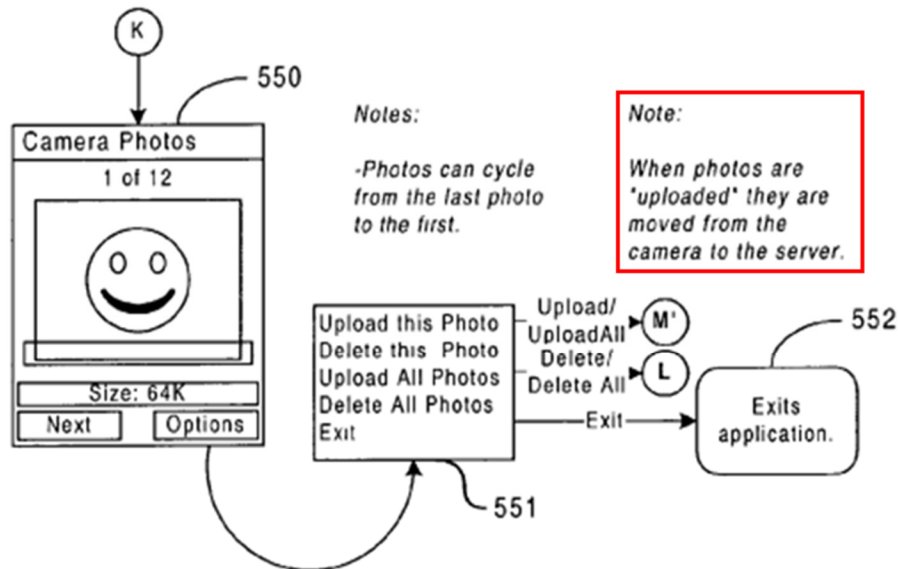


FIG. 5E

TTI-1017, FIG. 5E (partial) (annotated).

[13.16]

See Ground 2A, [1.14]. TTI-1030, [610]. Kahn teaches “providing the user with an image preview.” TTI-1017, [0079]. As discussed above, Kahn’s

applet sends the upload transfer request for the acquired new-image by the camera.

See Ground 2A, [13.14]-[13.15]; TTI-1017, [0079]. A POSITA would have understood that that an image preview is provided to the user before the camera applet requests data transfer from the camera to the cell phone.

[13.17]

The Kahn-Bluetooth combination renders obvious [13.17]. *See* Ground 2A, [1.16]; TTI-1030, [611]-[612]. For example, Kahn has a mobile client application. TTI-1017, [0071], [0055], FIGs. 5A-5F.

A POSITA would have recognized that the cell phone would have included a processor for processing executable instruction of the applet. TTI-1030, [612]. A POSITA would have recognized that a cell phone would have implemented at least one processor to execute “computer-executable instructions, for directing operation of a device under processor control.” *Id.*; TTI-1017, [0052].

[13.18]/[13.19]

The Kahn-Bluetooth combination renders obvious [13.18]-[13.19]. TTI-1030, [613]. Kahn discloses “a client-side embedded applet (i.e., a small footprint application) that executes method steps and displays exemplary user interface (UI) dialogs/menus for supporting fulfillment.” TTI-1017, [0071]. Further, the applet performs functions such as determining the camera’s connection status to the local host (cell phone), displaying UI menus, and establishing connections to the image

management server for uploading photos. TTI-1017, [0070]-[0086], FIGs. 5A-5F.

See also, Ground 2A, [1.16.1]

[13.20]

See Ground 2A, [1.10], [1.14]. TTI-1030, [614].

[13.21]

See Ground 2A, [1.16.1], [1.16.2]. TTI-1030, [615].

[13.22]-[13.23]

See Ground 2A, [1.17]- [1.18]. TTI-1030, [616].

Claim 14

See Ground 2A, [2]. TTI-1030, [617].

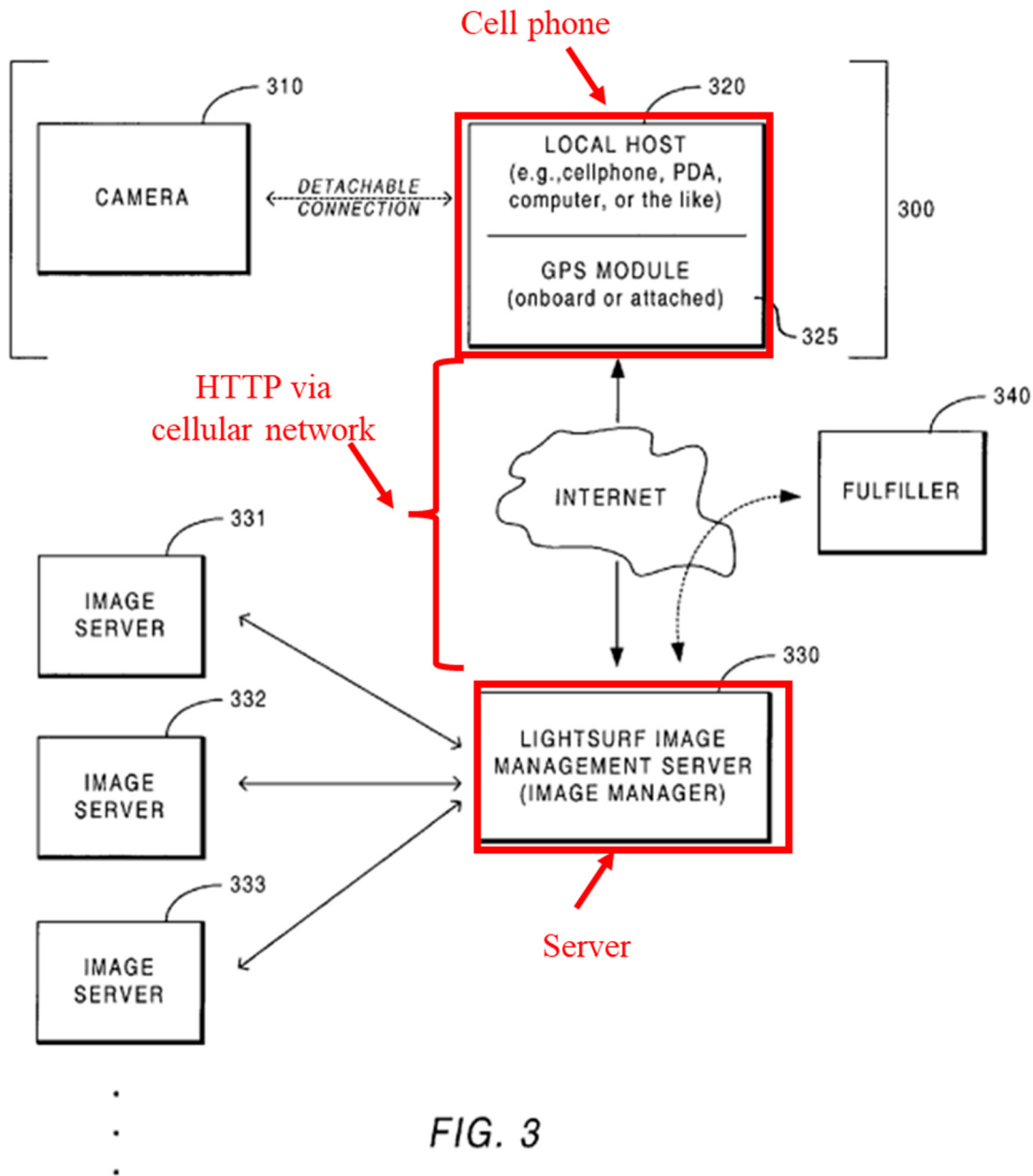
Claim 15

See Ground 2A, [3]. TTI-1030, [618].

Claim 9

[9.P]

To the extent the preamble is limiting, The Kahn-Bluetooth combination renders obvious [9.P]. See Ground 1A, [1.P]; TTI-1030, [619]-[620].



TTI-1017, FIG. 3 (annotated); *see also id.*, [0045], [0055]-[0056].

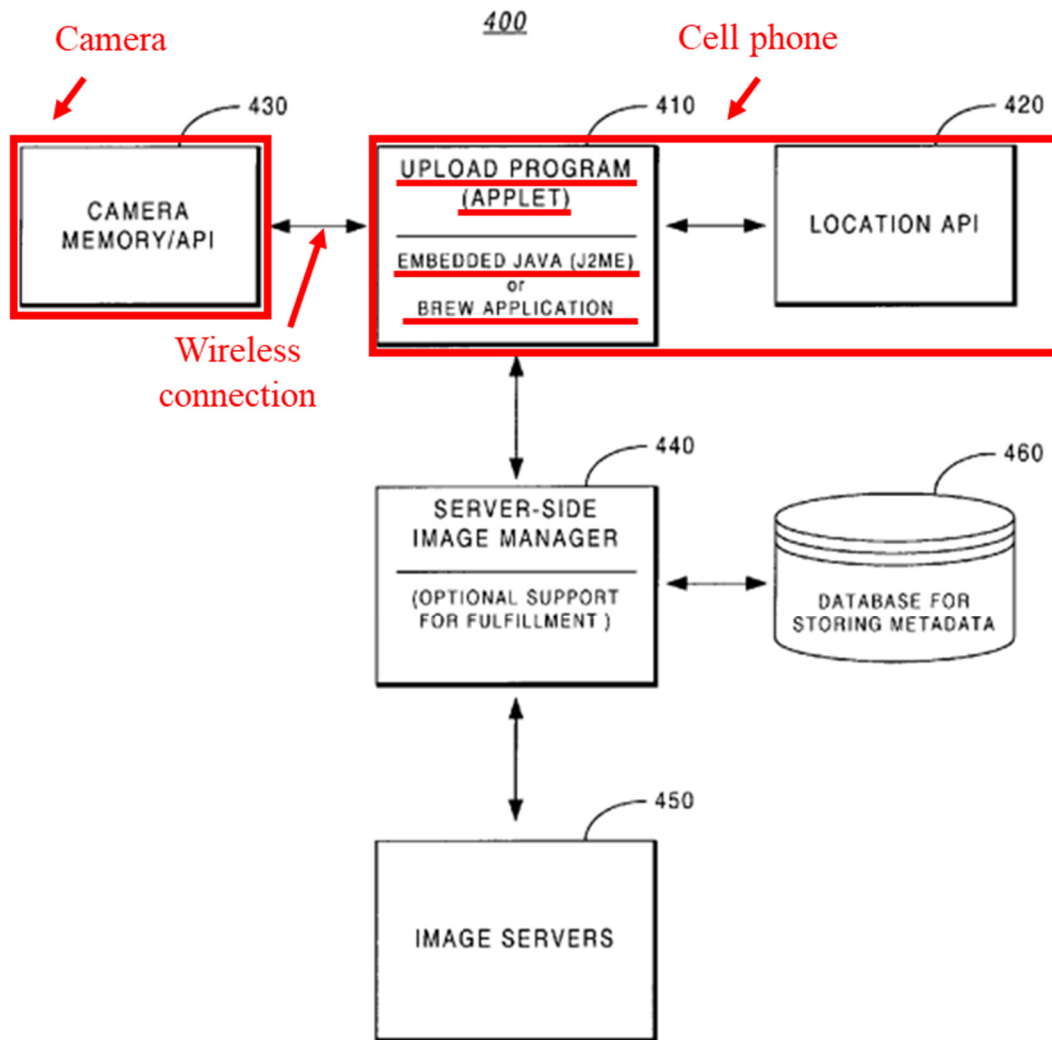


FIG. 4

Id., FIG. 4 (annotated); *see also id.*, [0062].

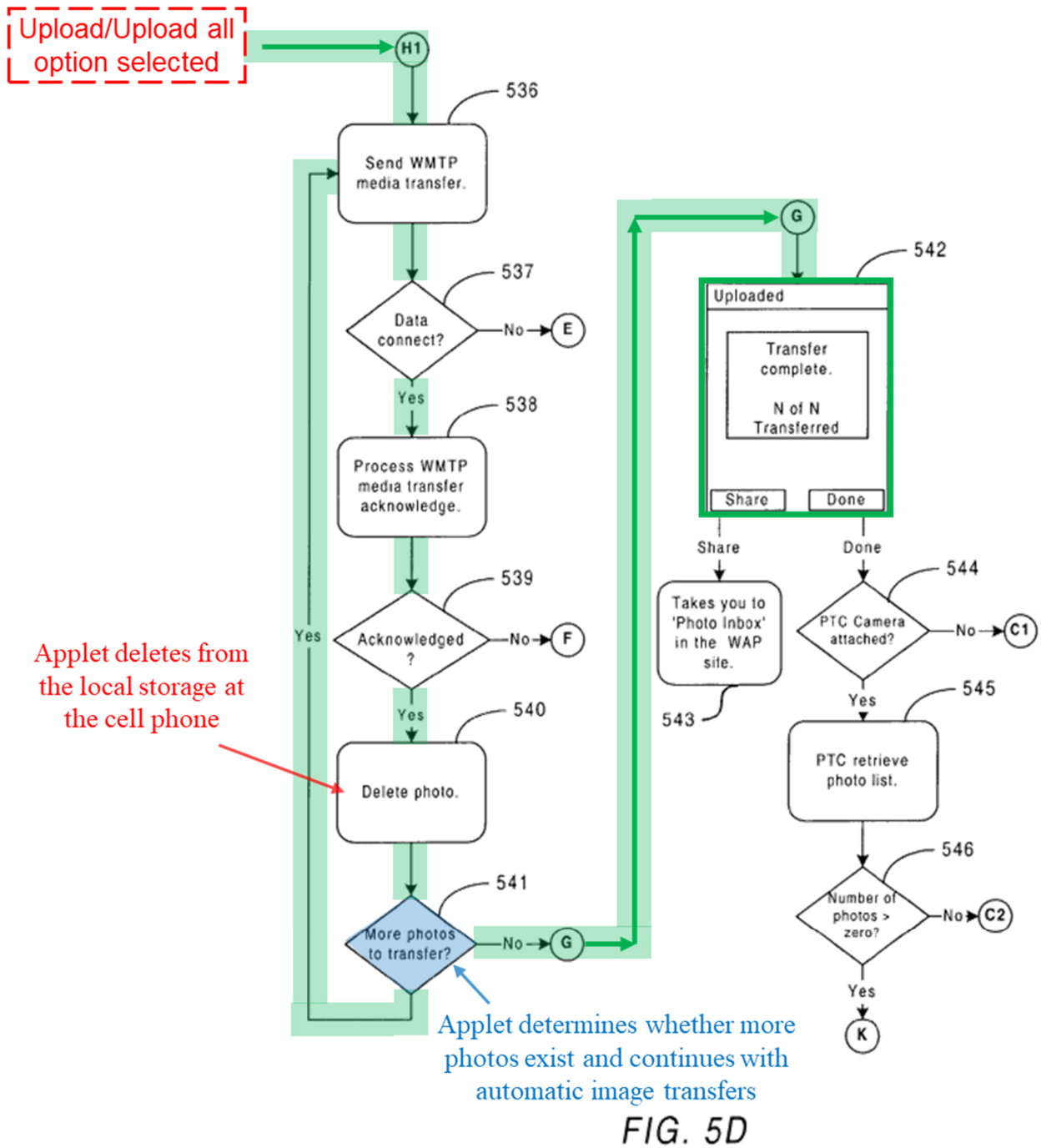
[9.1]

See Ground 2A, [1.16.2], [13.21]. TTI-1030, [621].

[9.2]

The Kahn-Bluetooth combination renders obvious [9.2]. *See* Ground 2A,

[1.16.1], [1.16.2], [13.2.1]; TTI-1030, [622]-[624]. For example, Kahn had a mobile client application running on a processor that is coupled to a memory device that stores programs and data. TTI-1017, [0015], [0071], [0055]. Kahn discloses an exemplary Motorola StarTAC mobile phone, which has a processor and memory. TTI-1030, [622]-[624].. Kahn discloses that after uploading, the applet deletes the photo from the cell phone's memory. *Id.*, [0085], FIG. 5D (figure element 540). Consequently, a POSITA would have understood that for the photo to be deleted from the cell phone's memory, it must have been initially stored by the processor, indicating that the cell phone's processor is linked to a memory device. TTI-1030, [622]-[624].



TTI-1017, FIG. 5D (annotated).

[9.3]

See Ground 2A, [1.P]; TTI-1030, [625]. Kahn teaches that the cell phone is

connected to the internet using cellular network. TTI-1017, [0008], [0010], [0056].

[9.4]-[9.6]

See Ground 2A, [1.3]-[1.5]. TTI-1030, [626].

[9.7]

See Ground 2A, [1.16]; Ground 2A, [9.2]. TTI-1030, [627]-[628].

[9.8]

See Ground 2A, [1.16.2]. TTI-1030, [629].

[9.9]

See Ground 2A, [1.10]. TTI-1030, [630].

[9.10]-[9.12]

See Ground 2A, [1.8], [1.10]-[1.13]. TTI-1030, [630].

[9.13]

See Ground 2A, [1.13]. TTI-1030, [631].

[9.14]

See Ground 2A, [1.15] and [1.16.1]. TTI-1030, [632].

[9.15]

See Ground 2A, [1.16.2]. TTI-1030, [633].

[9.16]-[9.17]

See Ground 2A, [1.17] and [1.18]. TTI-1030, [634].

Claim 10

See Ground 2A, [2]. TTI-1030, [635].

Claim 11

See Ground 2A, [3]. TTI-1030, [636].

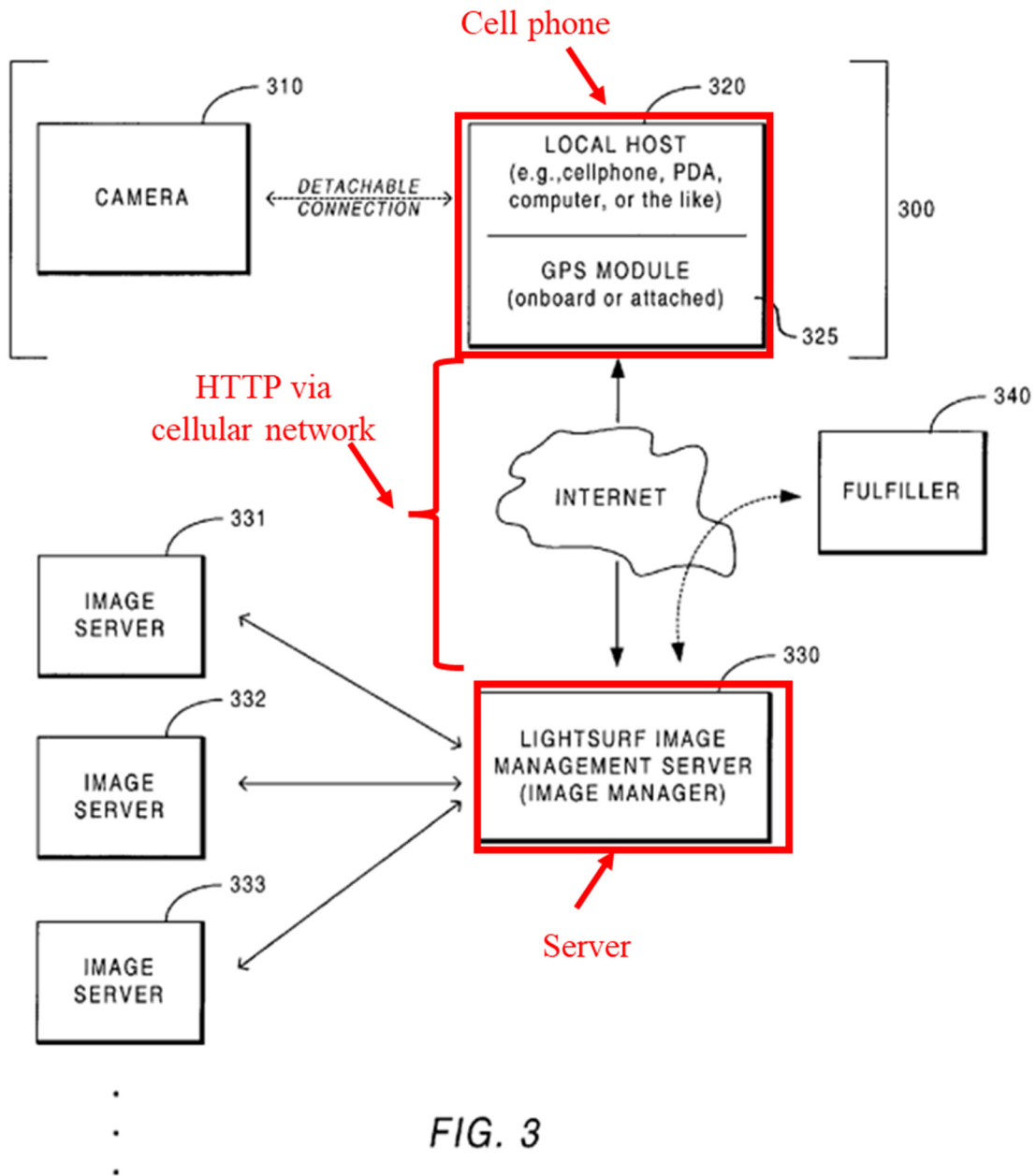
Claim 12

See Ground 2A, [13.18]-[13.19]. TTI-1030, [637].

Claim 4

[4.P]

To the extent the preamble is limiting, The Kahn-Bluetooth combination renders obvious [4.P]. *See* Ground 2A, [13.P], [1.P]; TTI-1030, [638]-[639].



TTI-1017, FIG. 3 (annotated); *see also id.*, [0055]-[0056].

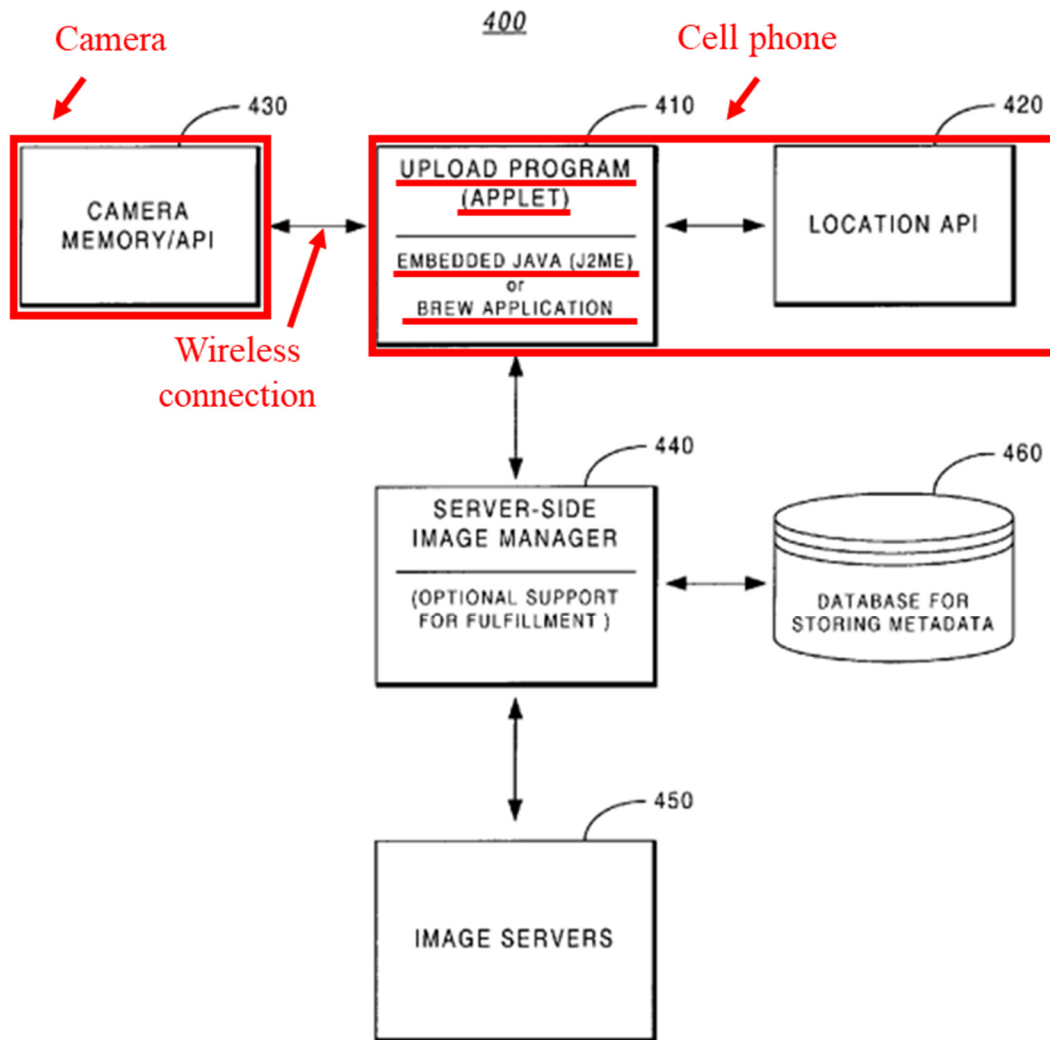


FIG. 4

Id., FIG. 4 (annotated), [0062].

[4.1]

See Ground 2A, [13.1], [1pre]. TTI-1030, [640].

[4.2]

See Ground 2A, [13.2], [1.1]. TTI-1030, [641].

[4.3]

See Ground 2A, [13.3], [1.2]. TTI-1030, [642].

[4.4]-[4.6]

See Ground 2A, [13.4]-[13.6], [1.3]-[1.5]. TTI-1030, [643].

[4.7]

See Ground 2A, [13.7], [1.6]. TTI-1030, [644].

[4.8]-[4.9]

See Ground 2A, [13.8], [1.7]-[1.8]. TTI-1030, [645].

[4.10]

See Ground 2A, [13.9], [1.9]. TTI-1030, [646].

[4.11]

See Ground 2A, [13.10], [1.10]. TTI-1030, [647].

[4.12]

See Ground 2A, [13.11], [1.11]. TTI-1030, [648].

[4.13]

See Ground 2A, [13.12], [1.12]. TTI-1030, [649].

[4.14]

See Ground 2A, [13.13]. [1.13]. TTI-1030, [650].

[4.15]

See Ground 2A, [13.14]-[13.15], [1.14]. TTI-1030, [651].

[4.16]

See Ground 2A, [9.P]. TTI-1030, [652].

[4.17]

See Ground 2A, [9.1]. TTI-1030, [653].

[4.18]

See Ground 2A, [9.2]. TTI-1030, [654].

[4.19]

See Ground 2A, [9.3]. TTI-1030, [655].

[4.20]

The Kahn-Bluetooth combination renders obvious [4.20]. *See* Ground 2A [4.4]-[4.6], [9.4]-[9.6]; TTI-1030, [656]. In the combination, a Bluetooth compliant device is present in both the camera and the phone so that they may communicate via Bluetooth and establish a paired connection. TTI-1030, [656].

[4.21]

See Ground 2A, [9.7]. TTI-1030, [657].

[4.22]

See Ground 2A, [9.14]. TTI-1030, [658].

[4.23]

See Ground 2A, [9.8]-[9.9]. TTI-1030, [659].

[4.24]

See Ground 2A, [9.15]. TTI-1030, [660].

[4.25]-[4.26]

See Ground 2A, [9.16]-[9.17]. TTI-1030, [661].

Claim 5

See Ground 2A, [1.3]. TTI-1030, [662].

Claim 6

See Ground 2A, [2]. TTI-1030, [663].

Claim 7

See Ground 2A, [3]. TTI-1030, [664].

Claim 8

See Ground 2A, [13.18]-[13.19]. TTI-1030, [665].

**C. GROUND 2B: Claims 1-15 are obvious over Kahn,
Feinberg, and BT**

1. Feinberg

Feinberg teaches storage media for digital devices such as cameras and audio/video recorders, focusing on wireless communication for data transfer. TTI-1025, [0002]. TTI-1030, [135]-[136]. Specifically, it discusses digital cameras with wireless network connectivity, compatible with IEEE 802.11 standards, enabling image data transfer to computers or printers. TTI-1025, [0002], [0005]. Furthermore, Feinberg discloses uploading images to internet-based storage via mobile phones. *Id.*, [0049]. Feinberg also details metadata associated with digital images, including capture date, camera settings, and user comments, along with the creation of thumbnails embedded in image file headers for easier browsing. *Id.*,

[0076], [0091]. For example, thumbnail images (e.g., having 160x120 pixel resolution) are typically embedded into the full resolution image file header.” *Id.*, [0091].

2. The Predictable Combination of Kahn, Feinberg, and Bluetooth

In the proposed combination, as described by Kahn, the system automatically transmits a new data object that includes a new data and associated new data. TTI-1030, [666]-[676]. Thumbnails are created by the camera and transmitted to the mobile phone for previewing new images captured by the camera. TTI-1030, [666]. In the combination, based on Feinberg, thumbnails of the new images are embedded into the full resolution image file header as a signal to notify, in a manner suggested by Feinberg, so that the new data object automatically transmitted from the camera to the mobile phone also includes the thumbnails. *Id.*

3. Motivation to Combine Kahn and Feinberg

A POSITA at the time of the invention would have been motivated to combine the teachings of Kahn and Feinberg. TTI-1030, [666].

First, both Kahn and Feinberg belong to the same field of wireless image transfer, making them analogous art to the claimed invention. TTI-1030, [667]. Kahn teaches on wireless image transfer from mobile devices to websites using

HTTP action setting. *See, e.g.*, TTI-1017, [0056], [0077] (describing the action setting of creating a new album on the server for uploading the images). Similarly, Feinberg teaches wireless network connectivity in digital cameras, enabling image data transfer to server using a cell phone. TTI-1025, [0005], [0049]. Both Kahn and Feinberg disclose the wireless transmission of images between a camera, a mobile phone, and a remote server. TTI-1030, [667]-[668].

Second, Kahn teaches offering users the option to “preview” photos, which essentially means displaying thumbnails. TTI-1017, [0075]. Furthermore, Kahn discloses providing users with an image preview feature, enabling individual image processing. *Id.*, [0079], FIG. 5E (element 550). Similarly, Feinberg discloses that every full-resolution image captured by the Digital Still Camera (DSC) and stored on the storage device is accompanied by a thumbnail, which is an identical image at a lower resolution. TTI-1025, [0133]. These reduced-resolution images are directly accessible by the DSC, allowing users to review and display them, and make decisions about keeping or deleting images. *Id.*, [0133]. Additionally, Feinberg teaches transferring lower resolution versions of all captured images quickly, before performing uploads of the full resolution counterparts. *Id.*, [0091]. Furthermore, in FIG. 4B, Feinberg illustrates that the lower resolution images may include a thumbnail of the digital image being transferred, along with an updated status display showing progress to date. *Id.*, [0107], [0112], [0140], FIG. 4B

(element 50). TTI-1030, [669]-[670].

Moreover, integrating Feinberg's technique into Kahn's system would reduce computational burden and enhance efficiency. ; TTI-1030, [670]-[673]. Kahn's camera-generated thumbnails can be directly sent to servers, eliminating the need for server-side thumbnail generation. TTI-1030, [670]-[673]. The server, upon receiving the full resolution images from the phone, could simply extract ("no additional image processing required") the thumbnail information from the image file header for use in creating the album cover. TTI-1005, [0091]. Feinberg's approach provides the necessary details for creating scaled versions of full-resolution images, complementing Kahn's system. TTI-1030, [670]-[673].

The teachings of Feinberg would have provided the required techniques/details to the users of the mobile phone device in Kahn. TTI-1030, [670]-[673]. Feinberg teaches users to create scaled versions, such as thumbnails of full-resolution images, suitable for use as preview images with lower resolution. TTI-1025, [0091], [0137]-[0139]. TTI-1030, [670]-[673].

4. Motivation to Combine Kahn-Feinberg with Bluetooth

As discussed above, a POSITA would have had a reasonable expectation of success implementing Bluetooth in the Kahn-Feinberg combination. Supra §VI.B.2-4. TTI-1030, [674]-[676].

5. Analysis

In Ground 2A, it was established that the combination of Kahn and Bluetooth render each Challenged Claim unpatentable. In that analysis, the “signal to notify” of the claims was mapped onto Kahn’s timestamp and related metadata. In this Ground, Feinberg teaches that thumbnails may be included in the header of an object containing photos and thus in this combination, the thumbnails are sent twice. First, they are sent as a preview of the available photos. Second, they are included in the header of the object containing the uploaded photos. In the combination, the thumbnails in the header act as a signal to notify similar to how the timestamp operates as a signal to notify. TTI-1030, [677]-[825].

A POSITA would have been motivated to implement the teaching of Feinberg so that the thumbnail images are “typically embedded into the full resolution image file header.” TTI-1025, [0091]; TTI-1030, [678]. The inclusion of thumbnails in the header would not require any additional image processing as Feinberg teaches that “thumbnails are extracted from the image files and transmitted, with no additional image processing.” Id.

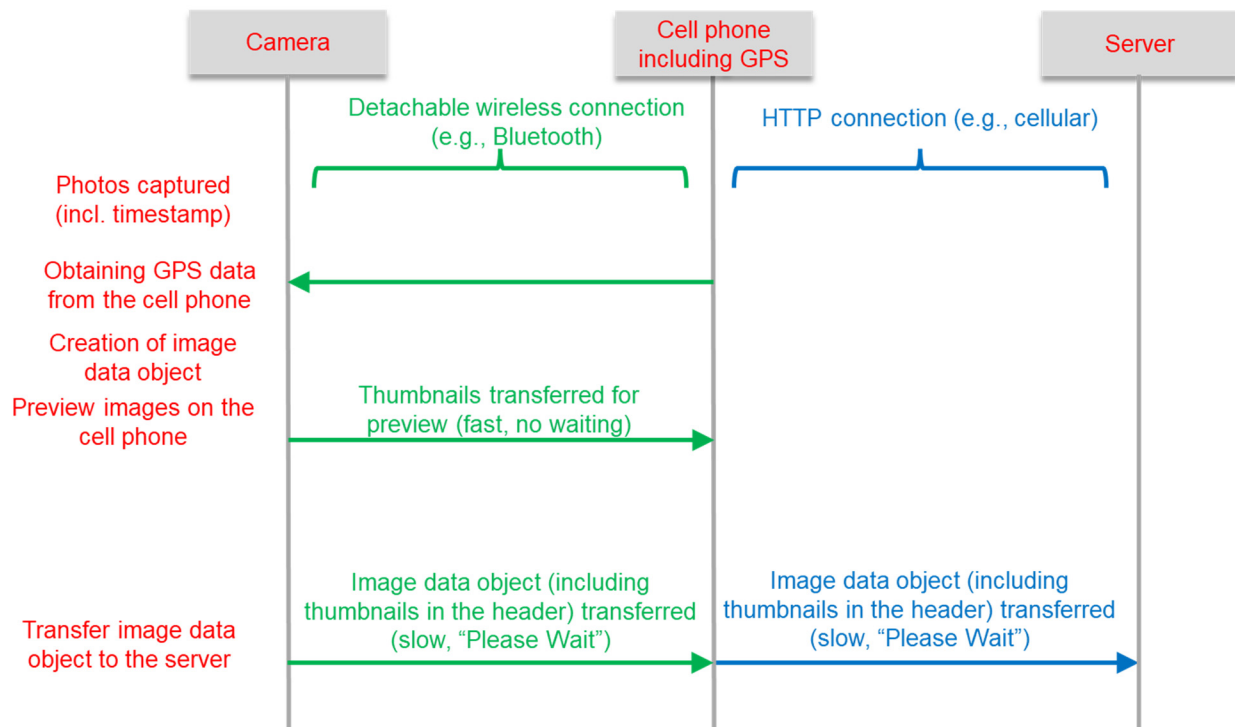
A POSITA would have been motivated to use the thumbnails in the header of the object (or metadata related to the thumbnails) as a signal to the mobile phone software that photos have been retrieved from the camera. For example, the software can count the number of thumbnails included in the header or read a

count value that accompanies the thumbnails in the header and use that information as a signal to notify the software that some number of photos have been retrieved.

TTI-1030, [679].

Accordingly, the entirety of the analysis in Ground 2A applies to Ground 2B, with the exception that the signal to notify in this Ground is provided by the thumbnails in the header of the data object. TTI-1030, [680].

Below is an illustration that shows the high-level flow of the data object in the Kahn-Feinberg combination including the timestamp, full resolution image, and thumbnails.



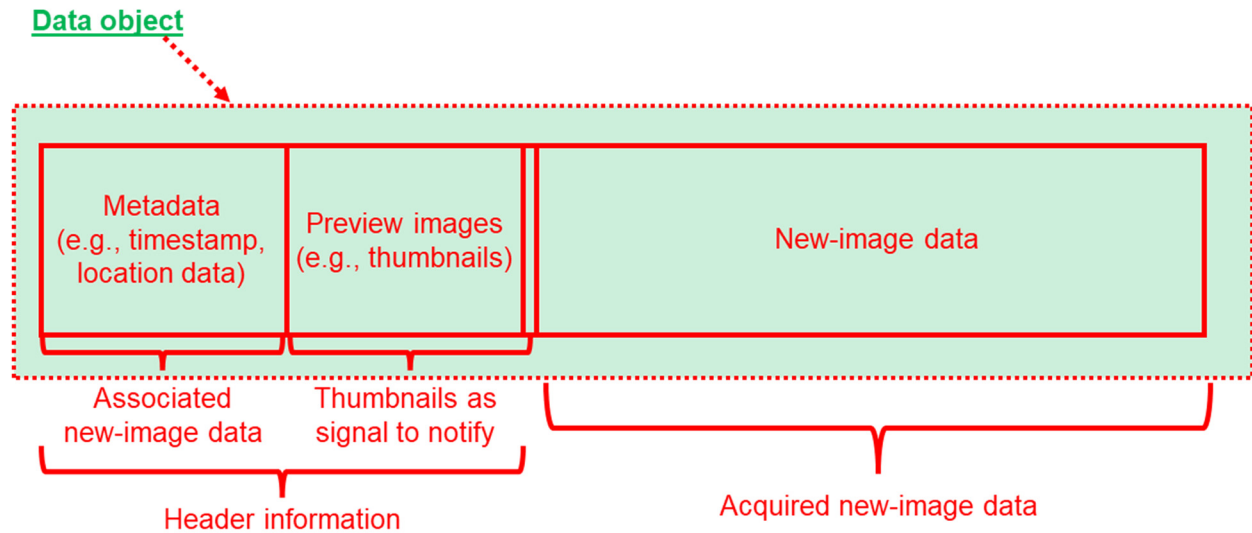
TTI-1030, [681].

Kahn discloses that the thumbnails can be previewed in screen 550 and there

is no wait time shown after selecting preview. TTI-1017, FIG. 5E. Kahn teaches that “[w]hen photos are ‘uploaded’, they are moved from the camera to the server.” *Id.*, FIGs. 5B, 5E, [0063]. In the combination, after the preview thumbnails are provided, either the data objects are transmitted without further prompting from the cellular phone or the camera can wait for a request to transfer the photos. A POSITA would be motivated to provide both options. For example, some users may want the full images as quickly as possible without having to intervene and make a request whereas others would desire to inspect and select only certain pictures. TTI-1030, [682].

A POSITA would understand that because there is no wait time for previewing thumbnails on the phone as compared to wait time for uploading images to mean that the only thumbnails are transferred from the camera to the phone during preview. TTI-1030, [683]. Feinberg teaches that the uploaded “thumbnail images (e.g., having 160×120 pixel resolution) are typically embedded into the full resolution image file header.” TTI-1025, [0091].

A POSITA would thus understand that the thumbnails, full resolution images, and metadata (timestamp, location information) are stored on the camera and uploaded to the server through the phone as a data object. TTI-1030, [684]; TTI-1017, [0064]. The illustration below shows a new-data object prepared based on the teachings of Kahn-Feinberg combination.



TTI-1030, [684]; TTI-1017, [0051], [0058], [0062]-[0065], [0098].

A POSITA would have understood that creating a new-data object would include creating preview images (*i.e.*, thumbnails) as disclosed in Kahn. *Id.*, [0075] (“simply “preview” photos”), [0079], FIG. 5E (figure element 550), FIG. 6; TTI-1030, [685].

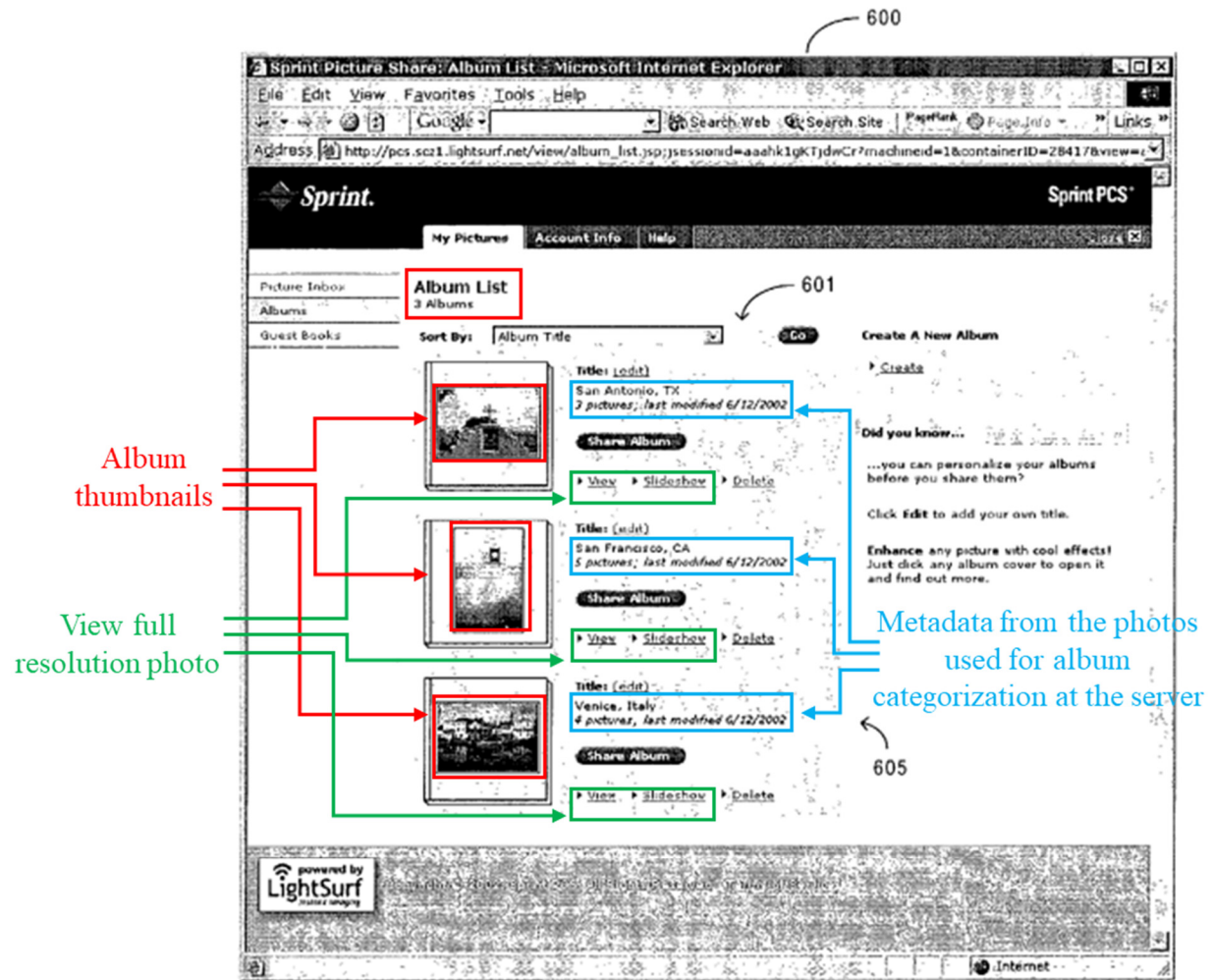


FIG. 6

Id., FIG. 6 (annotated). In FIG. 6, Kahn illustrates, thumbnails being displayed on a “a browser-based interface for accessing one’s photos on-line.” *Id.*, [0027], [0089]. TTI-1030, [686].

In light of the disclosure presented in Kahn, a POSITA would have understood that creating a new-data object shares conceptual similarities with the

creation of preview images (i.e., thumbnails) and the metadata stored together with the image data serving as mechanisms for transmitting data between devices and signaling events or the availability of new data. *Id.*; TTI-1017, [0058]-[0059], [0062], [0064]-[0065], [0098]; TTI-1025, [0091]. TTI-1030, [677]-[825].

VII. DISCRETIONARY CONSIDERATIONS

A. The *Advanced Bionics* Test Favors Institution—§325(d)

Advanced Bionics and the *Becton* factors strongly favor institution.

Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential); *Becton, Dickinson and Co. v.*

B. Braun Melsungen AG, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017)

(precedential). Under Part I of the two-part framework, the board considers

“whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office.” *Advanced Bionics*, IPR2019-01469, Paper 6 at 7-9.

Here, neither the same art, nor substantially the same art was previously presented to the office.

If the Board finds that Part 1 of the test is satisfied (it is not), the board must consider “whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims,” based on the considerations under the *Becton Dickinson* factors C, E and F. *Advanced Bionics*, IPR2019-

01469, Paper 6 at 7-9. Here, the examiner clearly erred. As discussed above in Section V, the examiner did not analyze whether the applicants were in possession of the claimed combinations of elements that mix and match features from unrelated patent applications and the examiner failed to recognize that the '766 patent improperly incorporates by reference essential material disclosed in the '802 application. As a result, the examiner incorrectly assumed that the challenged claims are entitled to a priority date earlier than July 3, 2017, and thus did not analyze whether the challenged claims were obvious over Singh129 in view of Singh906.

Moreover, the examiner did not consider the art presented in Grounds 2A or 2B.

Accordingly, the Board should not exercise its discretion under Section 325(d).

B. The *Fintiv* Factors Favor Institution—§314(a)

The PTAB considers a set of non-exclusive factors (the *Fintiv* factors) in determining whether to institute an IPR proceeding where there is parallel district court litigation. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential). On June 21, 2022, Director Vidal issued “binding agency guidance” entitled “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation.” TTI-1034

(hereinafter the “Interim Guidance”). This Interim Guidance presents “several clarifications... to the PTAB’s... application of *Fintiv* to discretionary institution where there is parallel litigation.” *Id.*, 2.

One clarification provided by the Interim Guidance specifies the effect of particular types of stipulations presented by petitioners on the Board’s application of the *Fintiv* framework. *Id.*, 3, 7-8. In particular, the Interim Guidance unequivocally states that “***the PTAB will not discretionarily deny institution*** of an IPR or PGR in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.” *Id.*, 7 (emphasis added) (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020)). In the present case, Petitioner presents a stipulation, should institution be granted, not to pursue in the parallel district court proceeding the same grounds as in the Petition or any grounds that could have reasonably been raised in the Petition if this IPR is instituted. *See* TTI-1035. Accordingly, based on the Interim Guidance, institution of the Petition ***should not*** be discretionarily denied in view of the parallel district court proceeding. *See* TTI-1034, 7.

VIII. PAYMENT OF FEES – 37 C.F.R. §42.103

Petitioner authorizes the Patent and Trademark Office to charge Deposit

Account No. 06-1050.

IX. MANDATORY NOTICES UNDER 37 C.F.R § 42.8(a)(1)

A. Real Party-In-Interest Under 37 C.F.R. § 42.8(b)(1)

TikTok Inc., Bytedance Inc., Bytedance Ltd., Bytedance Pte Ltd., and TikTok Pte Ltd. are the real parties-in-interest.

B. Related Matters Under 37 C.F.R. § 42.8(b)(2)

Petitioner is not aware of any disclaimers, reexamination certificates, or petitions for *inter partes* review for the '766 patent. The '766 patent is the subject of a civil action *CellSpin Soft, Inc. v. ByteDance, Ltd. et al.*, Case No. 2:23-cv-496 (E.D. Tex.).

The '766 patent is in the same family as U.S. Patent Nos. 11,659,381 (the '381 patent), 11,234,121 ("the '121 patent"), 8,756,336 ("the '336 patent"), 8,862,757 ("the '757 patent"), 8,898,260 ("the '260 patent"), and 8,904,030 ("the '030 patent"). Petitioner is concurrently petitioning for *Inter Partes* Review of the '381, '121, '766, '336, '757, '260, and '030 patents.

The '766 patent is also in the same family as U.S. Pat. No. 9,258,698, which was the subject of IPR2019-00127, IPR2019-00131, IPR2019-01107, and IPR2019-01108.

U.S. Patent Application No. 18/193,686 is in the same patent family as the '381, '121, '766, '336, '757, '260, and '030 patents and is currently pending before

the Patent Office.

C. Lead And Back-Up Counsel Under 37 C.F.R. § 42.8(b)(3)

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D. Service Information

Please address correspondence/service to the above-listed address.

Petitioner consents to email service at IPR50048-0056IP1@fr.com.

Respectfully submitted,

Dated: April 5, 2024

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 13,685 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated: April 5, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4)(i) *et seq.* and 42.105(b), the undersigned certifies that on April 5, 2024, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided via Federal Express, to the Patent Owner, by serving the correspondence address of record as follows:

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