

**UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE PATENT TRIAL AND APPEAL BOARD**

Inter IKEA Systems B.V.

Petitioner

v.

Pointwise Ventures, LLC

Patent Owner

Patent No. 8,471,812 to Bunch *et al.* IPR Case No.: IPR2025-00798

**PETITION FOR *INTER PARTES* REVIEW OF
CLAIMS 1-12 OF U.S. PATENT 8,471,812
UNDER 35 U.S.C. §§311-319 AND 37 C.F.R. §§42.100 *ET SEQ.***

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1001	U.S. Patent No. 8,471,812
1002	File History of U.S. Patent No. 8,471,812
1003	Declaration of Dr. Oded Gottesman regarding Invalidity of U.S. Patent No. 8,471,812
1004	U.S. Patent Publication No. US 2005/0162523 A1 (“Darrell”)
1005	U.S. Patent Publication No. US 2004/0208372 A1 (“Boncyk”)
1006	U.S. Patent Publication No. US 2004/0125220 A1 (“Fukuda”)
1007	U.S. Patent No. 7,248,301 (“Voss”)
1008	Proof of Service of the Complaint by Pointwise LLC against IKEA North America Services, LLC
1009	<i>IDeixis – Searching the Web with Mobile Images for Location-Based Information</i> , Tollmar et al. (2004) (“Tollmar”)
1010	<i>Understanding the Role of Image Recognition in Mobile Tour Guides</i> , Davies et al. (September 2005) (“Davies”)
1011	Digital Trends, A Complete History of the Camera Phone , May 13, 2022 (https://www.digitaltrends.com/mobile/camera-phone-history)
1012	Docket Control Order, No. 2:24-cv-00188-JRG (E.D. Tex.).
1013	Pointwise Ventures LLC’s Disclosure of Asserted Claims and Infringement Contentions, No. 2:24-cv-00188-JRG (E.D. Tex.).
1014	Curriculum Vitae of Dr. Oded Gottesman
1015	Nokia 3650 Full phone specifications https://www.gsmarena.com/nokia_3650-345.php
1016	Nokia 3650 User Guide 2003
1017	U.S. Patent No. 6,651,053 (“Rothchild”)

I. Introduction

Inter IKEA Systems B.V. (“Petitioner” or “Inter IKEA”) petitions for *inter partes* review of Claims 1-12 (“Challenged Claims”) of U.S. Patent No. 8,471,812 (Ex-1001 (“the ’812 patent”)). The Challenged Claims should be canceled because they are not inventive; they generally relate to providing a pointing and identification device (*e.g.*, cell phone), communicating a digital image (*e.g.*, a digital picture), and identifying a list of likely pointed-to objects in the digital image, and returning that list to the claimed device (*e.g.*, cell phone).

II. 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)

A real-party-in-interest in this petition is Inter IKEA Systems B.V., which has its place of business at Olof Palmestraat 1, 2616 LN Delft, Zuid-Holland, the Netherlands. Inter IKEA is part of the Inter IKEA Group family of companies.

IKEA North America Services, LLC (“IKEA NAS”) and IKEA US Retail, LLC (“IKEA US Retail”) may also have an interest in the outcome of this proceeding because, as described below, Pointwise previously sued IKEA NAS and IKEA US Retail. Pointwise amended the pleadings to name Inter IKEA as the sole defendant in the suit.

IKEA NAS and IKEA US Retail have no corporate relationship with Inter IKEA. IKEA NAS is a limited liability company having specialized functions that

support the IKEA retail business operated in the United States by its affiliate IKEA US Retail. IKEA US Retail is the IKEA franchisee in the United States operating under a franchise agreement with Inter IKEA. IKEA NAS and IKEA US Retail are owned by IKEA Holding US, Inc. and INGKA Holding Overseas B.V. IKEA US Retail and IKEA NAS are part of the Ingka Group. The Ingka Group and the Inter IKEA Group are separate groups of companies.

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

This petition is related to the following case where Pointwise brought suit against Inter IKEA alleging infringement of the '812 patent.

1) *Pointwise Ventures LLC v. Inter IKEA Systems, B.V.* (2:24-cv-00188-JRG) (E.D. Tex.), June 1, 2023.

The following other pending cases would be affected by this proceeding as Pointwise has asserted infringement of the '812 patent in each of the following cases:

Pointwise Ventures LLC v. Alibaba Group Holding Ltd., No. 2:24-cv-00182-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Blippar Ltd., No. 2-24-cv-00183-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Glority Global Group Ltd., No. 2-24-cv-00187-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Roadget Business Pte. Ltd., No. 2-24-cv-00189-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Lowes Companies, Inc., No. 2-24-cv-00808-JRG
(E.D. Tex.).

Pointwise Ventures LLC v. Yoox-net-a-porter Group S.P.A., No. 2-24-cv-
00809-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Wayfair Inc., No. 2-24-cv-00811-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Penney OpCo LLC., No. 2-24-cv-00813-JRG (E.D.
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Pointwise Ventures LLC v. Macy's Inc., No. 2-24-cv-00814-JRG (E.D. Tex.).

Pointwise Ventures LLC v. Google LLC, No. 6:24-cv-00293-RP (W.D. Tex.).

Pointwise Ventures LLC v. boohoo.com UK Ltd., No. 2-25-cv-00219-JRG
(E.D. Tex.).

Pointwise Ventures LLC v. The Home Depot, Inc., No. 2-25-cv-00220-JRG
(E.D. Tex.).

In re MDL No. 3147, *Pointwise Ventures LLC ('812) Patent Litigation* (MDL).

The undersigned is unaware of any other pending judicial or administrative
matters that would affect, or be affected by, a decision in the proceeding.

C. Lead and Backup Counsel Under 37 C.F.R. §42.8(b)(3) and Service Information under 37 C.F.R. §42.8(b)(4)

Petitioner designates the following lead and backup counsel:

Lead Counsel	Backup Counsel
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Service on Petitioner may be made by mail or hand delivery to: Flaster Greenberg P.C., 1717 Arch Street, Suite 3300, Philadelphia, PA 19103. Petitioner also consents to and prefers electronic service by emailing IKEA-Pointwise-IPRs@flastergreenberg.com for counsel of record (shown above).

III. Payment of Fees Under 37 C.F.R. §42.15

Petitioner submits that the fee set forth in 37 C.F.R. §42.15(a) was properly paid using the USPTO Financial Manager.

IV. IPR Requirements Under 37 C.F.R. §42.104

A. Grounds for Standing Under 37 C.F.R. §42.104(a)

Petitioner certifies that the '812 patent is available for *inter partes* review, and that Petitioner is not barred or estopped from requesting an *inter partes* review on the grounds identified in this petition. To the extent that Pointwise alleges privity between Inter IKEA and IKEA NAS, IKEA NAS was served on April 2, 2024 (Ex-1008). This petition is filed within one year of April 2, 2024.

B. Identification of Challenge Under 37 C.F.R. §42.104(b) and Relief Requested

Petitioner respectfully requests that the Challenged Claims of the '812 patent be cancelled based on the following grounds of unpatentability:

Ground of Unpatentability	'812 Patent Claim(s)	Basis for Petition under 35 U.S.C. §§ 102/103
Ground 1	1, 3, & 10-12	Anticipated under 35 U.S.C. § 102 over U.S. Application Publication 2005/0162523 ("Darrell")
Ground 2	1-12	Obvious under 35 U.S.C. § 103 over U.S. Patent App. Pub. No. US 2004/0208372 ("Boncyk") in view of Darrell
Ground 3	5-9	Obvious under 35 U.S.C. § 103 over Boncyk in view of Darrell and the level of ordinary skill in the art

Ground 4	1-12	Obvious under 35 U.S.C. § 103 over Boncyk in view of Darrell and U.S. Patent Publication No. US 2004/0125220 A1 (“Fukuda”)
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V. Overview of the ’812 Patent

A. The Challenged Claims

Claim 1 is the only independent claim. Claims 2-12 depend from claim 1. Claim 1 claims a “method for identifying an object” (Ex-1001, 49:7).

B. Priority and Effective Filing Date

The ’812 patent claims the benefit of the filing date of United States patent application serial no. 11/233,043, filed on September 23, 2005 (Ex-1001, Cover Page (21)). Petitioner applies September 23, 2005 as the effective filing date here, without conceding that the ’812 patent is entitled to that filing date. *See PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303-06 (Fed. Cir. 2008). As the effective filing date of the ’812 patent is before March 16, 2013, 35 U.S.C. §§ 102 & 103 (pre-AIA) apply. *Medtronic, Inc. v. Barry*, 891 F.3d 1368, 1375 (Fed. Cir. 2018).

C. Overview of the ’812 Patent

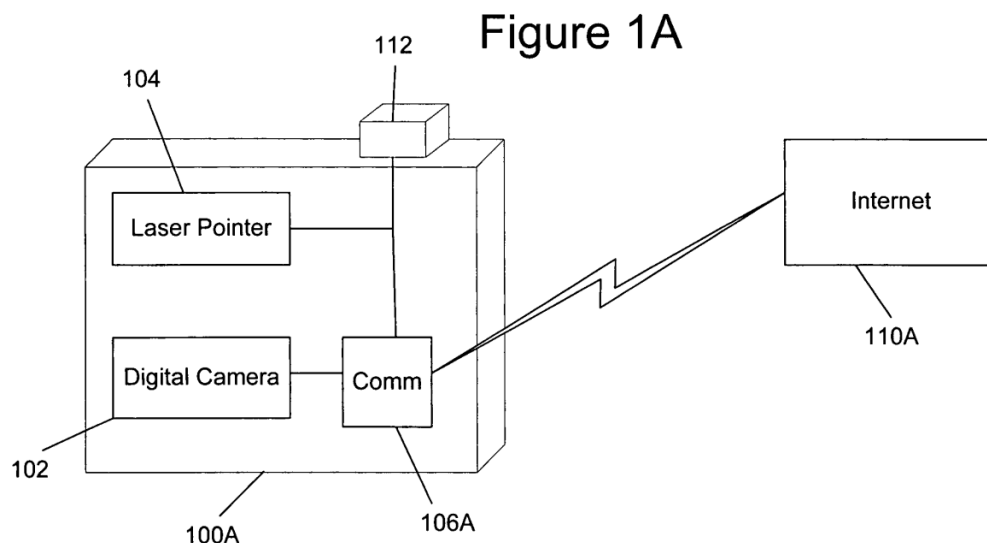
1. The ’812 Patent’s Description

According to the ’812 patent, a “mouse” used with a computer is “well known,” but suffers from many drawbacks (Ex-1001, 1:120-30). Some alleged drawbacks are that a computer mouse detects “relative” motion, not “absolute

motion,” because the mouse does not know its own location (Ex-1001,1:15-24). Another alleged drawback is that the mouse cannot point to a “real-world” object, such as a computer or TV screen (Ex-1001, 1:24-30). The ’812 patent states that the problem to be solved was that there was “no solution in the art to provide a pointer for pointing directly at, clicking-on, and identifying a distant absolute location and for doing so on a TV screen, on a computer screen, or in the real world” (Ex-1001, 2:29-32).

The invention, (Fig. 1A), includes a pointing and identification device (“PID”) 100A (Ex-1001, 5:8-10). The PID 100A “includes a digital camera” (*e.g.*, digital video camera) 102 for taking real-time images, a laser pointer 104, and a wireless communication component 106A (Ex-1001, 5:10-18). The PID has “at least one mouse button 112” (Ex-1001, 5:22-23).

'812 Patent Fig. 1A



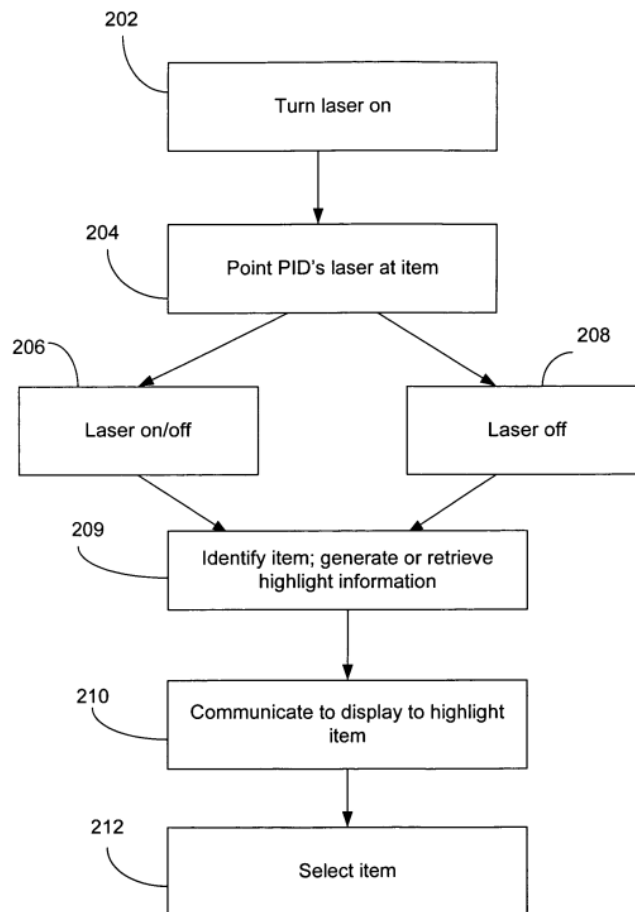
The PID 100A is for pointing to either: (i) “a Frame on a TV screen and a location on that Frame;” or (ii) “a view of” a “real world and a location in” the real world view (Ex-1001, 5:10-13). The digital camera 102 is for “taking real-time images” (Ex-1001, 5:13-14). The laser pointer 104 is for “projecting a dot onto the object to be pointed to,” and the wireless communication component 106A is for “communicating with a computer or Internet 110A” (Ex-1001, 5:16-18). The wireless communication can be “any suitable standard for digital cellular telephony” and the wireless communication component 106A “can implement a complete cellular telephone” (Ex-1001, 5:24-30). The '812 patent does not describe a new laser, camera, or communication device. Rather, the '812 patent describes known

components (*e.g.*, a laser pointer, a digital camera, and a communication device) in one PID 100A.

As the '812 patent describes, the PID 100A can point at a television or a real-world object and take a picture of a television frame or a real-world object (Ex-1001, 5:8-23). The PID 100A can interface with the internet 110A or a remote computer 110B (Ex-1001, 5:10-23). The remote system can run software for recognizing a television frame captured by the PID 100A and an object in the frame (Ex-1001, 5:17-20). The remote system software can also recognize an object in a view of the real world and/or determine the location pointed to on or near the recognized object (Ex-1001, 5:20-23).

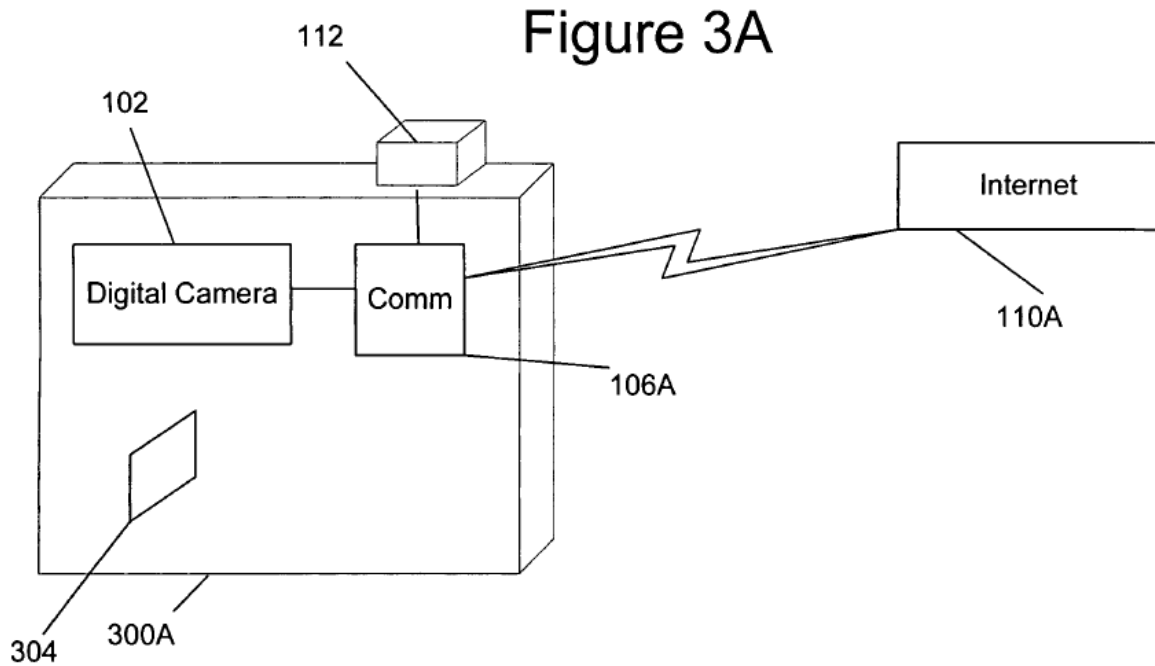
A method of using the PID 100A is described with reference to Figure 2 (Ex-1001, 5:61-63). At 202, the laser is turned on by, for example, holding down on the button (Ex-1001, 5:64-67). The laser is pointed at an item (204) (Ex-1001, 6:1-3). An image is taken (206/208). An item is identified in the image (209) and information for highlighting the item is retrieved (Ex-1001, 6:22-24). At 210, the PID communicates with the display to highlight the item, and at 212, the user can select an item (Ex-1001, 6:22-30).

'812 Patent Fig. 1A



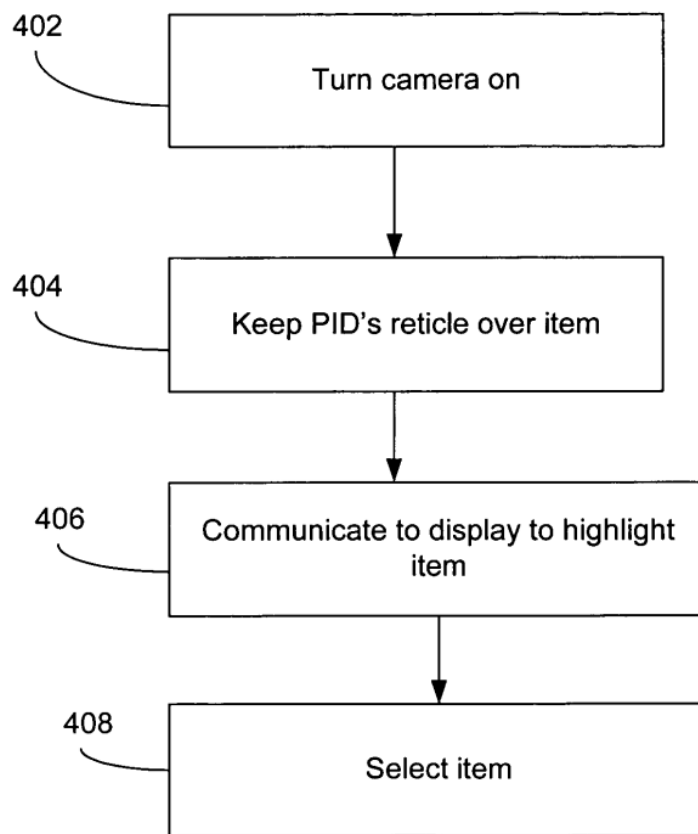
The '812 patent provides a second embodiment shown in Figures 3A-3B. This embodiment uses a camera with a reticle-aimed camera mouse, as shown in Figure 3A below (Ex-1001, 9:1-3). The '812 patent describes that a reticle “refers to any means that the user sees in a viewfinder to designate a spot in the view or a subarea of the view” (Ex-1001, 9:12-15).

'812 Patent Fig. 3A



A method of using the second embodiment is set forth in Figure 4 and is self-explanatory.

'812 Patent Fig. 4



2. The '812 Patent Claims

While the specification describes problems with computer mice in terms of relative and absolute mice location and pointing directly at, clicking-on, and identifying a distant absolute location or object, none of that is set forth in the claim.

Claim 1 is a method claim involving four steps. The first step is “providing” a PID comprising “at least one actuation means,” “a digital camera,” and a “communication device” (Ex-1001, 49:9-21). But the claimed method does not

recite any steps for actually using the PID or any of its claimed components. The second step is “communicating” a digital image to a “different location” (Ex-1001, 49:22-23). The third step is “automatically identifying” a list of likely pointed-to-objects from the digital image and occurs at “the different location” (Ex-1001, 49:24-26). The fourth step is “returning” the list to the user (Ex-1001, 49:27-28). Claim 1’s elements are referred to using the identifiers below.

Claim Identifier	Claim Element
Preamble	A method for identifying an object, the method comprising:
Providing a PID	(a) providing a pointing and identification device for pointing at the object, the pointing and identification device comprising:
Actuation Means	at least one actuation means for actuation by the user when the user points the pointing and identification device at the object;
Digital Camera	digital camera for forming a digital image of the object or of a portion of the object when the user points the pointing and identification device at the object and actuates the at least one actuation means; and
Communication Device	a communication device for communicating the digital image to a different location when the user actuates the at least one actuation means;
Communicating	(b) communicating the digital image to the different location;

Identifying	c) automatically identifying a list of likely pointed-to objects from the digital image at the different location to return the list of likely pointed-to objects; and
Returning	(d) returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects;
Object	wherein the object is at least one of a spot on a displayed image on a display, a subarea of a space on the displayed image on the display, one of a plurality of objects in the displayed image on the display, an object in space, or near an object in space, a subarea of a surface in space, or one of a plurality of objects in space.

3. Prosecution History

The '812 patent was filed as U.S. App. No. 11/233,043 ("’043 application") on September 23, 2005 (Ex-1001, Cover Sheet). The USPTO rejected '043 application claims 100-105 as anticipated by or obvious over U.S. 2004/0208372 ("Boncyk") in view of other art in several rejections (Ex-1002, pp. 59-61, 82-90, 106-107). Applicant argued that the "list of likely pointed-to objects" and "returning the list" limitations were lacking in Boncyk (Ex-1002, pp. 44-45, 70-71, 101-102). After an interview, the applicant amended application claim 100 ('812 patent claim 1) to recite the automatically identifying a "list of likely pointed-to objects" and "returning the list" (Ex-1002, p. 36, 39). Following this amendment, the USPTO allowed the '812 patent claims (Ex-1002, p. 15).

VI. Claim Construction

Petitioner applies plain meaning constructions and asserts that no constructions are necessary to resolve the issues raised by this Petition other than the claimed "actuation means." Given that the prior art is nearly identical to the structures disclosed in the '812 patent, no additional constructions are necessary. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

For purposes of this petition, Inter IKEA construes the claimed "actuation means" under pre-AIA 35 U.S.C. § 112, ¶6. Claim 1 uses the term "means" raising

the rebuttable presumption that 35 U.S.C. § 112, ¶6 applies. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Because “actuation means” does not denote a specific structure and no other structure is recited in the claims for performing the claimed function, the presumption is not rebutted. *Id.*

Function: The claimed function for the “actuation means” is “for actuation by the user when the user points the pointing and identification device at the object,” “forming a digital image of the object or of a portion of the object when the user points the pointing and identification device at the object and actuates the at least one actuation means;” and “communicating the digital image to a different location when the user actuates the at least one actuation means” (Ex-1003, 49:12-21).

Corresponding Structure: The ’812 patent only uses the term “actuation means” one time in its disclosure – stating that the “PID may be equipped with a “Buy button,” an actuation means” (Ex-1001, 47:53-59). However, a “buy button” does not correspond to the recited functions of “forming a digital image” and “communicating the digital image.” But this description indicates that the “actuation means” constitutes at least one button.

The ’812 patent describes that the pointing and identification device can include a camera mouse, a digital camera “for taking real-time images” and a wireless communication component 106A, which can be implemented with a complete

cellular telephone (Ex-1001, 5:10-18; 5:24-30). Each of the disclosed mouse, digital camera, and cellular telephone had a user interface such as buttons or a keyboard for user actuation, for taking a picture, and/or transmitting a digital image (see Ex-1003, ¶¶ [0040]-0058], [0063], [0069]). As the '812 patent describes, the “pointing device 100 has at least one mouse button 112” (Ex-1001, 5:22-23) or “multiple buttons” (Ex-1001, 31:7). In a preferred embodiment, the '812 patent discloses that the button uses “trigger-style clicking ... that can be pressed using the trigger finger” (Ex-1001, 31:3-7; 30:49-60). Thus, the corresponding structure for the claimed “actuation means” constitutes a computer user interface such as a mouse, keyboard, or camera keyboard button(s).

VII. Overview of Prior Art

Petitioner applies three references.

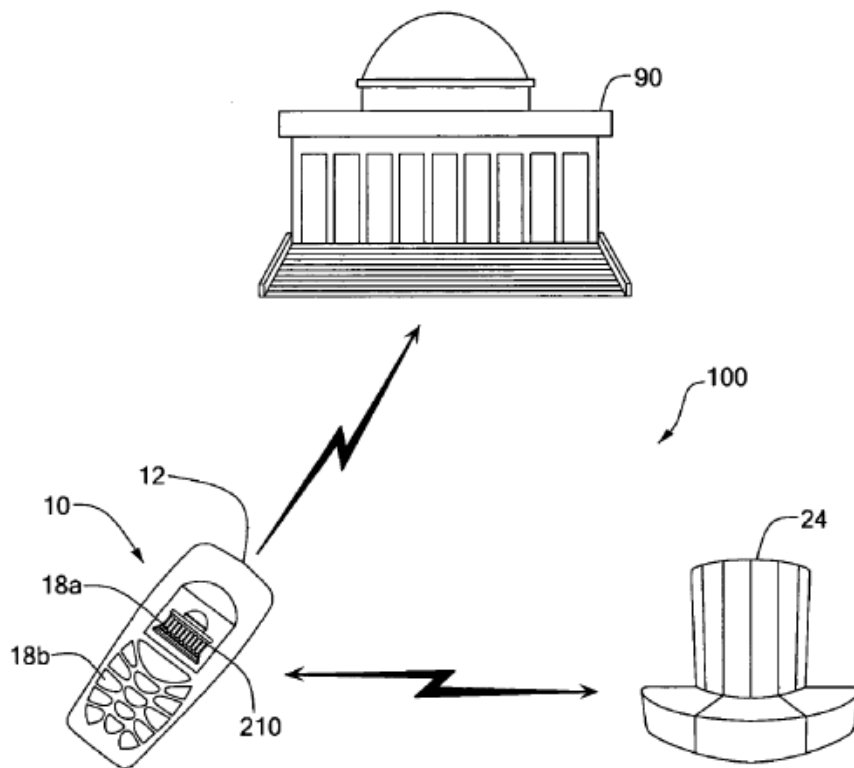
A. U.S. Patent Publication No. US 2005/0162523 A1 (“Darrell”)

Darrell was filed on January 22, 2004, and published as U.S. Patent Pub. No. US 2005/0162523 on July 28, 2005 (Ex-1004, Cover). The ’812 patent issued from U.S. Patent App. No. 11/233,043, which was filed on September 23, 2005 (Ex-1001, Cover). Thus, Darrell is prior art under 35 U.S.C. §§ 102(a) and 102(e) (pre-AIA).

Darrell describes that the “present invention provides ... a novel point-by-photography paradigm” that is possible using, *inter alia*, “a new generation of camera-phones and content based image retrieval (CBIR) techniques applied to mobile imagery and the world wide web” (Ex-1004, ¶ [0020]).

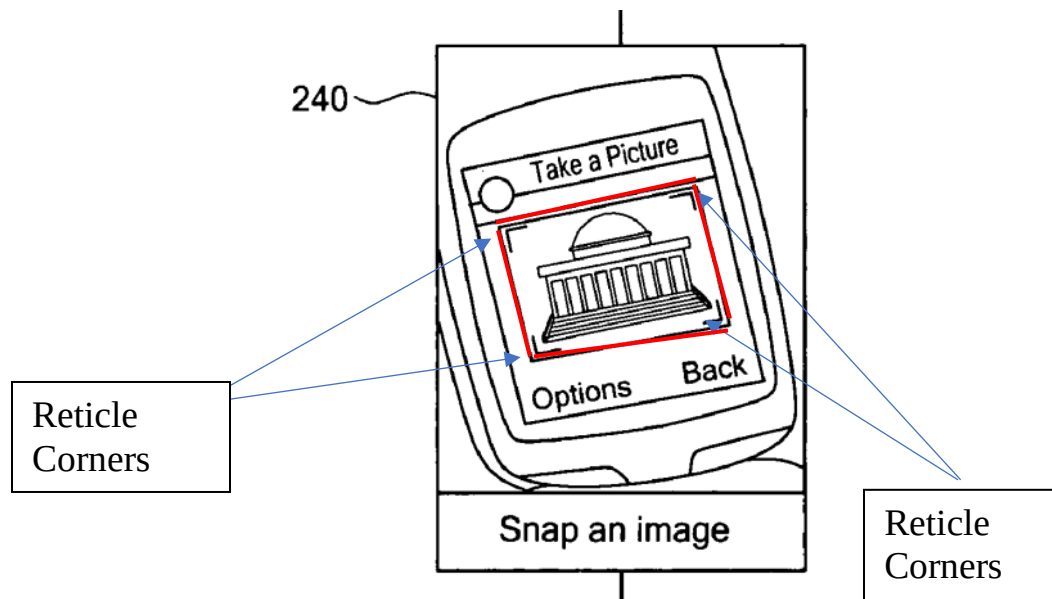
In Fig. 1, Darrell describes a handheld device 10 or mobile device 10 having a “camera 12 to capture an image 210 of an object 90.” Darrell also refers to the handheld device as a “cellular phone” (Ex-1004, ¶ [0006], Abstract) with “keyboard 18 b” having buttons as shown in Fig. 1.

Darrell, Fig. 1



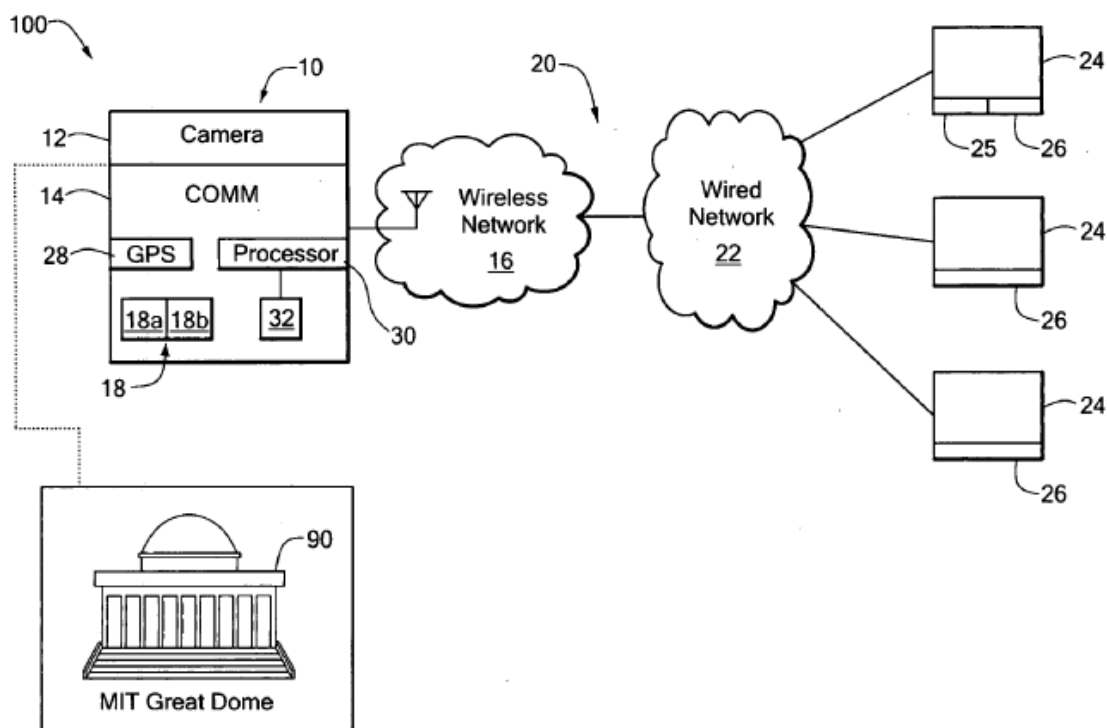
Darrell discloses that the handheld device 10 has a viewfinder, which is outlined in red (Ex-1003, ¶¶ 110, 130). As shown, Darrell discloses reticles donated as four corners inside the viewfinder that focus on the building (Ex-1003, ¶¶ 110, 130).

Darrell, Fig. 3 Cropped, Annotated



Darrell describes (Fig. 1A) that the handheld device 10 includes a “wireless communication device 14 coupled to the camera and to a wireless network 16 to communicate the image 210” to a “computer 24 having a database 25 with computer files 26 (Ex-1004, ¶ [0021]). The database 25 includes features of the object in the image and a uniform resource locator (URL) (Ex-1004, ¶ [0022]).

Darrell, Fig. 1A



Darrell describes that a “mobile user can take photos of a place of interest” and that the “photos are sent to the image database 25 via a wireless link” (Ex-1004, ¶ [0021]). Darrell teaches that a “search engine looks for a set of images most similar to the query image” (*e.g.*, the photo sent from cell phone 10) (Ex-1004, ¶ [0025]). Darrell’s search “result” includes “a list of (candidate image, source URL) pairs” (Ex-1004, ¶ [0025]). That is, Darrell describes that “a list of possible matching images” can be provided in response to the image captured by the camera (Ex-1004, claim 26).

Next, Darrell teaches that the “mobile device 10 displays the result by

arranging candidate images into a thumbnail mosaic 220” (Ex-1004, ¶ [0025]). Darrell further describes that the “user, as the final judge, can easily identify what sub-images are ‘really relevant’” (Ex-1004, ¶ [0025]). Darrell also describes that when “a thumbnail is selected, the source URL is retrieved and the content from that URL is shown on the mobile device 10” (Ex-1004, ¶ [0025]).

Darrell provides the example of a mobile user taking a picture of a building (*e.g.*, Killian Court), wireless communicating the image to server 24, the server searching for images of the building, and returning the most relevant web pages to the user (*e.g.*, URL’s) (Ex-1004, ¶ [0027]).

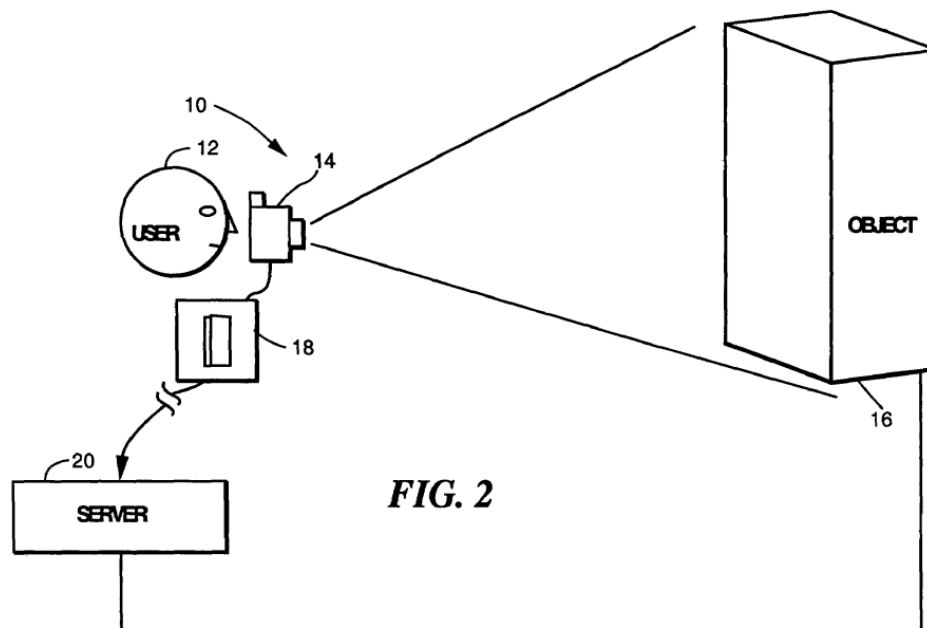
B. U.S. Patent Publication No. 2004/0208372 (“Boncyk”)

Boncyk was filed as U.S. Patent App. No. 10/492,243 on April 9, 2004, and published as U.S. Pub. No. 2004/0208372 on October 21, 2004 (Ex-1005, Cover). The ’812 patent issued from U.S. Patent App. No. 11/233,043, which was filed on September 23, 2005 (Ex-1001, Cover). Thus, Boncyk is prior art under 35 U.S.C. §§ 102(a) and 102(e) (pre-AIA).

Boncyk describes, in its Abstract and Field of the Invention, “a method by which information and communication pertinent to an object is provided based on imagery of the object” where a “digital image of the object is captured and the object is recognized from a plurality of objects in a database” (Ex-1005, Abstract; 1:7-10).

Boncyk discloses (Fig. 2) a system that includes “a computer, mobile telephone, personal digital assistant, or other similar device 14 equipped with an image sensor (such as a CCD or CMOS digital camera)” that “captures a digital image 18 of the scene at which it is pointed” (Ex-1005, ¶ [0045]). Boncyk also describes a “server 20” that may be “physically separate from the device 14” Ex-1005, ¶ [0046]). Boncyk describes that “user acquired images are transmitted from the device 14 to the Image Processor/Server 20 using a conventional digital network or wireless network means” (Ex-1005, ¶ [0046]).

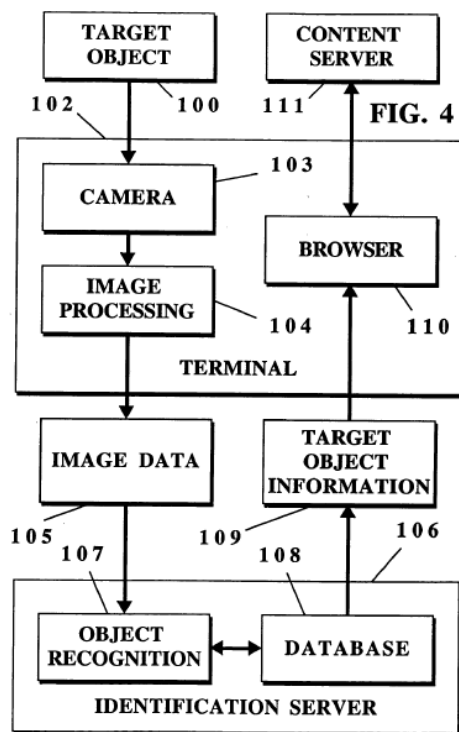
Boncyk Figure 2



Similarly, Boncyk discloses a “terminal 102” that “is a computing device that has an ‘image’ capture device such as digital camera 103, a video camera, or

any other device that [c]an convert a physical object into a digital representation of the object” (Ex-1005, ¶ [0128], Fig. 4).

Boncyk Figure 4



As Boncyk explains, “[a]fter the camera 103 captures the digital imagery of the target object 100, image preprocessing 104 software converts the digital imagery into image data 105 for transmission to and analysis by an identification server 106” (Ex-1005, ¶ [0129]). Server 106’s overall function is “to determine and provide the target object information 109 corresponding to target object 100, based on image 105” (Ex-1005, ¶ [0143]). Boncyk describes that server 106 has object recognition 107, which “detects and recognizes images of the target object 100 or portions

thereof” (Ex-1005, ¶ [0148]). As Boncyk describes, server 20 may perform object recognition by performing multiple “database comparison processes,” such as “Shape Comparison, Grayscale Comparison, Wavelet Comparison, and Color Cube Comparison” to identify matches for the object that is in the digital image (Ex-1005, ¶ [0070]).

Using these techniques, Boncyk determines target object information 109 (Ex-1005, ¶¶ [0143]-[0144], [0171]). The server 106 sends target object information 109 to terminal 102 (Ex-1005, ¶¶ [0147], [0171]). The terminal can use the target object information 109 to identify the target object (Ex-1005, ¶ [0171]). Boncyk discloses that the user can “purchase” the “the target object 100 via on-line transaction, with the purchase amount billed to an account linked to the terminal 102, to the individual user, to a bank account, or to a credit card” (Ex-1005, ¶ [0265]).

Although Boncyk was considered by the Examiner during the prosecution of the '812 patent, it was argued that Boncyk does not teach that “a list of likely pointed-to objects” is identified or returned (Ex-1003, ¶ 202; Ex-1003, pp. 36-39, 45-46, 70-71). However, returning a “list of likely pointed-to objects” was well-known and routine (*see e.g.*, Darrell (Ex-1004) and the Examiner was unaware of Darrell during prosecution (Ex-1001, Cover, References Cited; Ex-1003, ¶ 202). Thus, the prior art discloses the sole feature alleged to not be disclosed by Boncyk during prosecution.

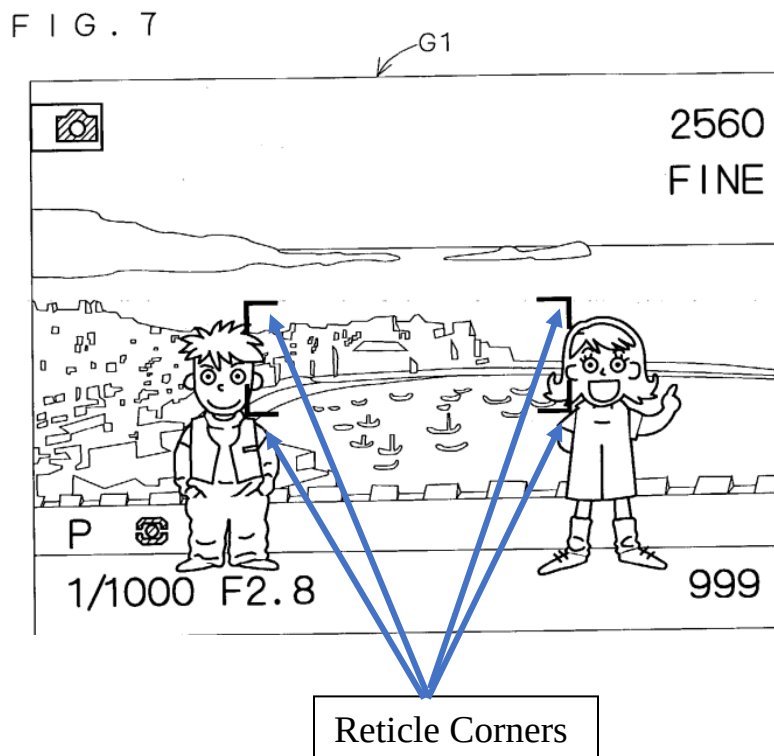
C. U.S. Patent Publication No. US 2004/0125220 A1 (“Fukuda”)

Fukuda was filed as U.S. Patent App. No. 10/421,791 on April 24, 2003, and published as U.S. Pub. No. 2004/0125220 on July 1, 2004 (Ex-1006 at Cover). The ’812 patent issued from U.S. Patent App. No. 11/233,043, which was filed on September 23, 2005 (Ex-1001, Cover). Thus, Fukuda is prior art under 35 U.S.C. §§ 102(b) (pre-AIA).

Fukuda describes a “digital camera” that “has a display such as an LCD” and an “electronic viewfinder” or “EVF” (Ex-1006, Abstract; ¶ [0028]). Fukuda explains that the digital camera may include a “CCD (Charge Coupled Device)” that “functions as an image capturing part for capturing a viewfinder image (preview image) of the subject before photographing” (Ex-1006, ¶ [0024]).

Fukuda teaches that a “viewfinder image,” which is captured by the CCD and as shown in FIG. 7 (reproduced below) “is displayed as a live view on the LCD 10,” but that when a user’s eye approaches a “sensor 19” of the digital camera, “the LCD 10 is turned off, the EVF 20 is turned on, and the viewfinder image G1 is displayed on the EVF 20” (Ex-1006, Abstract; ¶¶ [0024], [0061], FIG. 7). Therefore, Fukuda teaches that the viewfinder image G1 can be presented in either the LCD or the EVF before a picture is taken using the digital camera.

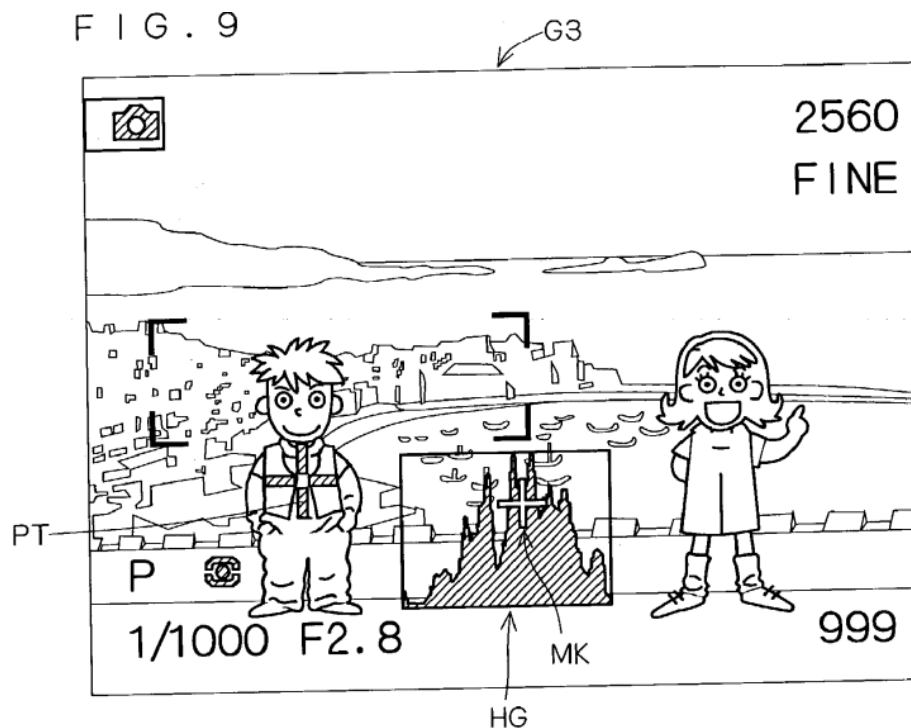
Fukuda Figure 7



Fukuda illustrates a reticle denoted by four corners in the viewfinder image and can be moved to allow the user to move or adjust the point of focus of the camera. Fukuda describes that “a pointer” may be displayed in the viewfinder display and that the user may “move the pointer PT up, down, right and left in the screen” to set a designation position in the screen (Ex-1006, ¶ [0070]). Fukuda illustrates in FIG. 9 (reproduced below) “a focus point may be associated with the pointer PT,” “the in-focus area” is defined by “a rectangular area which is set around the pointer PT,” and the rectangular area can move “interlockingly with the pointer” to allow for “focusing control” by the user (Ex-1006, ¶ [0071], FIG. 9). Therefore, Fukuda

discloses that a user may move a pointer around a viewfinder display in order to move or adjust a reticle, defined by the “rectangular area” to adjust the point of focus of the camera.

Fukuda Figure 9



VIII. Person Of Ordinary Skill In The Art (“POSITA”)

A POSITA in the field of the '812 patent at the effective filing date would have had a bachelor's degree in computing science, electrical engineering, or equivalent degree and at least 2 years of experience with cameras, processing camera images for object detection, laser pointing devices, computer mice, and/or wireless communication (Ex-1003, ¶ 96). More education can compensate for less experience, and more experience can compensate for less education (Ex-1003, ¶ 96).

IX. Specific Grounds for the Petition

The four petition grounds are provided below.

A. Ground 1: Claims 1, 3, & 10-12 are Anticipated by Darrell

For Ground 1, the prior art consists of Darrell (Ex-1004). The challenged claims are claims 1, 3, and 5-12.

1. Darrell Anticipates Claim 1

Darrell anticipates claim 1 (Ex-1003, ¶ 127).

a) Preamble

The preamble is a “method for identifying an object.” Darrell discloses the “preamble” (Ex-1004, Abstract, Field of the Invention, ¶ [0020]; Ex-1003, ¶ 128). For example, Darrell describes that a “mobile device” or “hand held device 10” includes “a camera to capture an image” (Ex-1004, ¶ [0021], Abstract; Ex-1003, ¶ 128). In fact, Darrell’s Field of the Invention section states that “This invention relates generally to location and object awareness systems and more particularly to systems and techniques to identify a location or object in a person's field of view” (Ex-1004, ¶ [0001]; Ex-1003, ¶ 128).

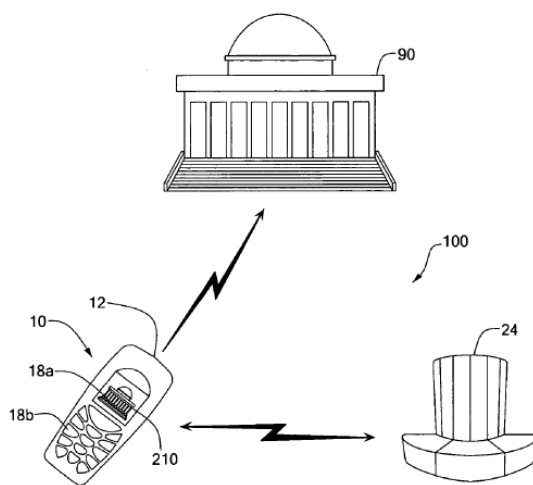
b) Providing a PID

The “Providing a PID” limitation states “providing a pointing and identification device for pointing at an object.” Darrell discloses the “Providing a

PID” limitation as Darrell discloses providing a “mobile device” or a handheld device 10 that includes “a camera to capture an image” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 128).

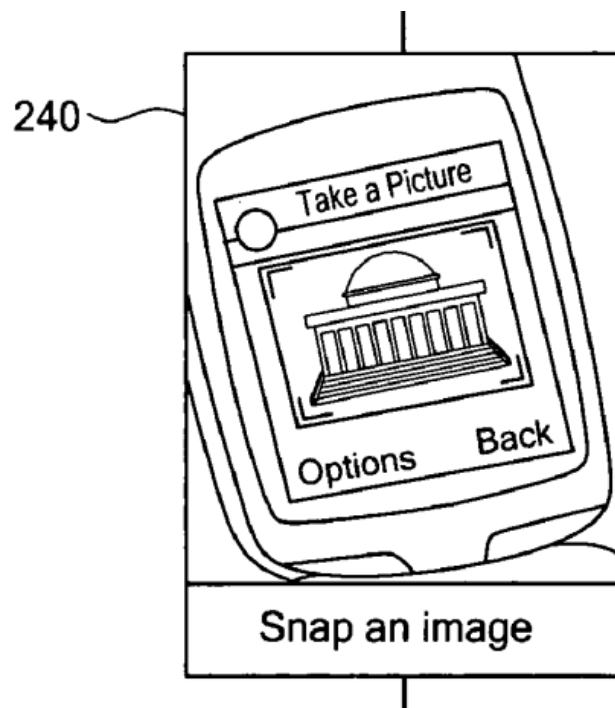
In Darrell, the “mobile device” or “hand held device 10” (Fig. 1) operates as a “pointing and identification device” as recited by claim 1 because the “mobile device” or “hand held device 10” includes a camera that allows a user to specify and identify an object of interest “by simply pointing” the camera-equipped mobile phone or handheld device at the object of interest (Ex-1004, Abstract, ¶¶ [0006], [0023], [0024]; Ex-1003, ¶ 129). Darrell explains that the “present invention provides ... a novel point-by-photography paradigm” that uses “a new pointing interface” that combines “a new generation of camera-phones and content based image retrieval (CBIR) techniques applied to mobile imagery and the world wide web” (Ex-1004, ¶ [0006]; Ex-1003, ¶ 129).

Darrell, Fig. 1



To the extent that Pointwise argues that the claimed “pointing and identification device” should be construed to include a reticle or laser, Darrell shows that the display of the handheld device 10 includes a reticle in Figure 3. The portion of Darrell’s Figure 3 reproduced below illustrates a reticle as four corners in the handheld device’s camera viewfinder. Darrell’s corner reticles identify or designate an area in the camera viewing area. In this instance, the building is within Darrell’s reticle. As the ’812 patent describes a reticle is the “means that the user sees in a viewfinder to designate a spot in the view or a subarea of the view” (Ex-1001, 9:12-15; Ex-1003, ¶ 129). Thus, Darrell’s viewfinder four corners constitute a reticle.

A partial reproduction of FIG. 3 of Darrell

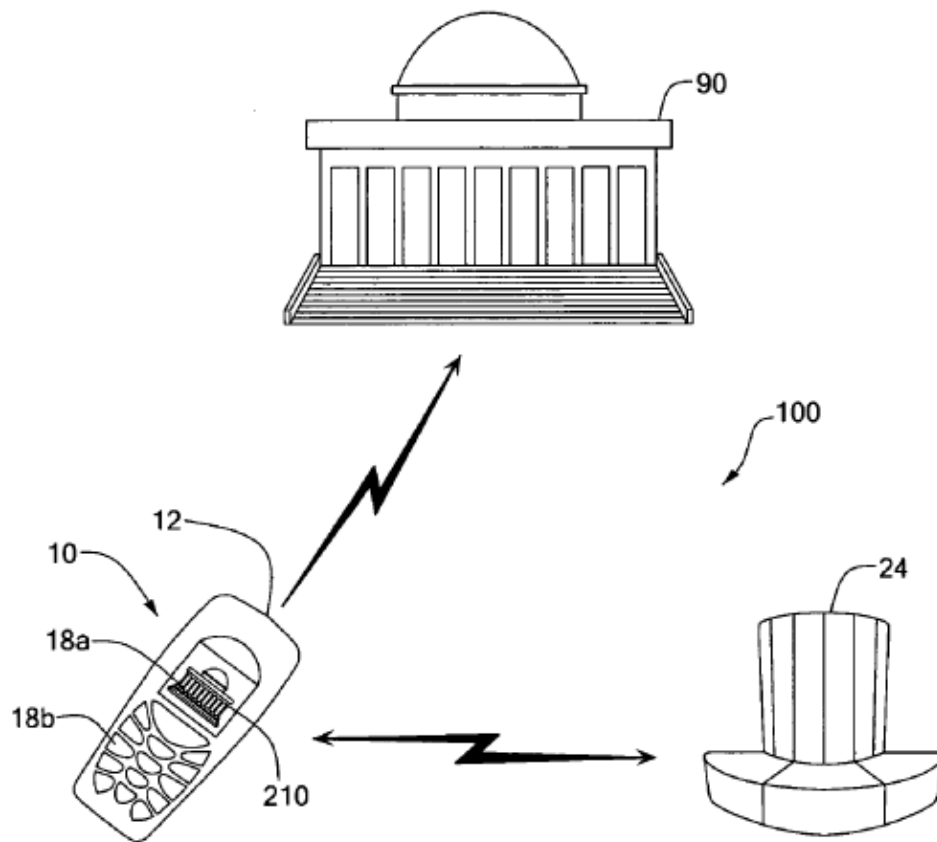


c) Actuation Means

Claim 1 claims that the PID comprises “at least one actuation means for actuation by the user when the points the pointing and identification device at the object” (Ex-1001, 49:12-14). The claimed function for the “actuation means” is “for actuation by the user when the user points the pointing and identification device at the object,” “forming a digital image of the object or of a portion of the object when the user points the pointing and identification device at the object and actuates the at least one actuation means,” and “communicating the digital image to a different location when the user actuates the at least one actuation means” (*see supra* § VI). The corresponding structure for the claimed “actuation means” constitutes a user interface such as a button(s) or a keyboard (*see supra* § VI).

Darrell discloses cell phone buttons, a user interface, and/or a keyboard that constitute the claimed corresponding structure. For example, Darrell discloses in Figure 1 that the “mobile device 10” or PID has buttons, a “user interface,” and a “keyboard 18b” for “actuation by the user when the points the pointing and identification device at the object” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 132). Darrell also shows buttons for operating the cell phone camera in Figure 1.

Darrell Fig. 1



Darrell describes that the handheld device 10 includes “a user interface 18” having “a display 18a and a keyboard 18b,” coupled to the “wireless communication device 14, to communicate to [sic] an user any results of found similar images” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 133). Darrell further shows in Figure 1A that the device 10 has a user interface or “keyboard 18b” for actuation by the user to take a picture and wireless communicate a photo.

Darrell FIG. 1A

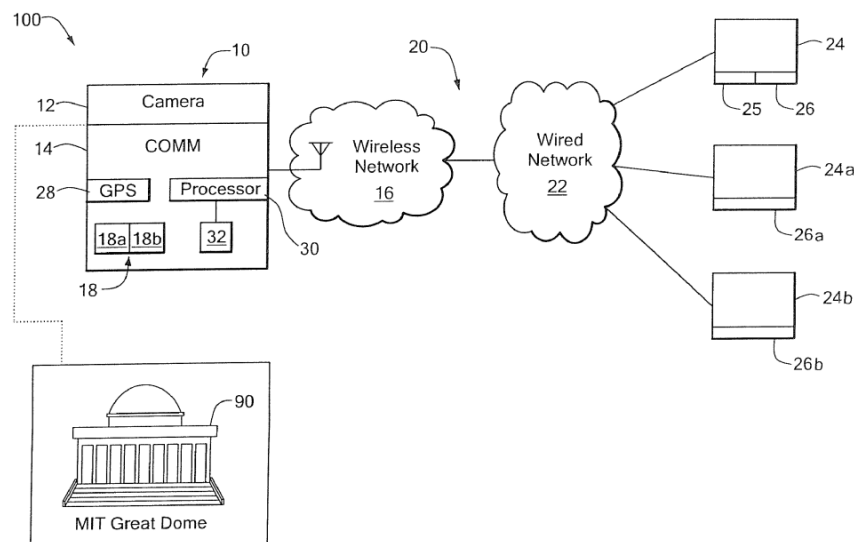


FIG. 1A

Darrell discloses that cell phone buttons, a user interface, and/or a keyboard perform the claimed functions. For example, Darrell discloses that: (i) the handheld device 10 includes a user interface, such as the “keyboard 18b” or the “small hand held computer” “to facilitate user interaction;” (ii) by “[u]sing the hand held device 10 with a camera 12, an image-based query can be formed simply by pointing with the camera 12 and snapping a photo;” (iii) “a user causes the handheld device 10” to “capture an image to send as a query;” and (iv) “wireless capability permits communication with a remote database” (Ex-1004, ¶ [0021], [0024], [0028], [0031], [0033], and [0042]; Ex-1003, ¶ 134). Thus, a POSITA understands from Darrell’s disclosure of a cell phone having buttons and/or a keyboard that the buttons/keyboard are for forming a digital image, communicating the digital image wirelessly, and for

actuation when a user points the cell phone camera at an object (Ex-1003, ¶ 103).

To the extent that Pointwise contends that the claimed “actuation means” should not be construed under 35 U.S.C. § 112(6) and takes its plain meaning, Darrell discloses the claimed “actuation means” under a plain meaning construction for the reasons set forth above as Darrell discloses buttons, a user interface, and a keyboard.

d) Digital Camera

The “Digital Camera” limitation states “a digital camera for forming a digital image of the object or a portion of the object when the user points the pointing and identification device at the object and actuates the at least one actuation means” (Ex-1001, 49:15-18).

Darrell describes the claimed “Digital Camera” because Darrell’s “mobile device” or “hand held device 10” is used to capture, snap, or take an image (Ex-1004, Abstract; ¶¶ [0021], [0024]; Ex-1003, ¶ 139); forms “an image-based query . . . simply by pointing with the camera 12 and snapping a photo” (Ex-1004, ¶ [0024]; Ex-1003, ¶ 139), and wirelessly communicates, or sends to, database 25 of a computer 24 using “a second program” stored on the handheld device to find similar images (Ex-1004, Abstract; ¶¶ [0021], [0026], and [0028]; FIG. 2; and FIG. 3; Ex-1003, ¶ 139). A POSITA understands that Darrell’s cell phone has a “digital camera” because that was the state of the art by September 2005 (Ex-1003, ¶ 139).

Darrell further discloses a digital communication system in Figure 1A for communicating the image, meaning that the image must be digital. As illustrated in Darrell Figure 1A, the camera 12 is part of the handheld device 10 that includes a processor 30, a communication device 14, and a storage medium 32. Darrell describes that the handheld device 10 includes “a first program stored on the storage medium 32 being operative to interact with the processor 30 to capture the image from the camera 12” (Ex-1004, ¶ [0026]; Ex-1003, ¶ 140). If the “first program” interacts with “the processor 30” to capture the image from the camera, then the camera and the image must be digital (Ex-1003, ¶ 140).

Darrell FIG. 1A

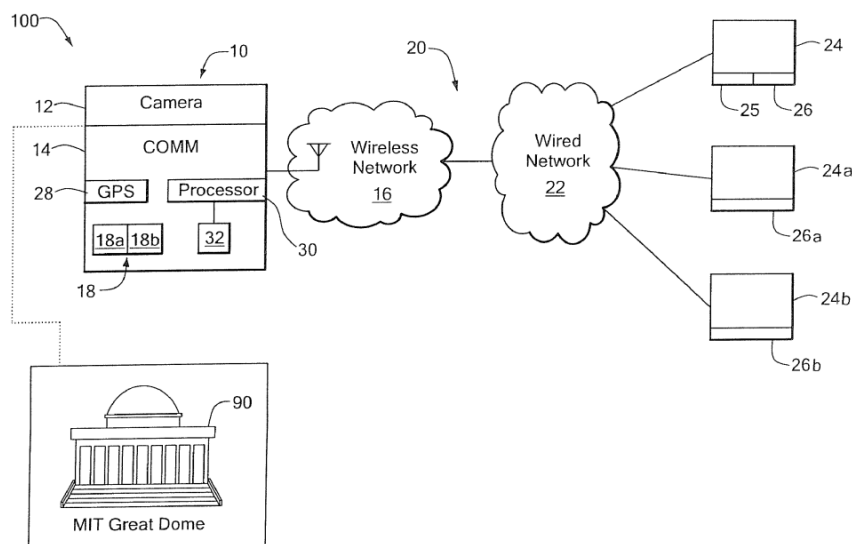


FIG. 1A

In addition, Darrell describes that the camera can be “a Nokia 3650 phone taking advantage of its built-in camera (640×480 resolution) and the support for

Multimedia Messaging Service (MMS)” that uses “C++ on Symbian OS to implement the required programming steps” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 138). The built-in camera of the Nokia 3650 phone is a digital camera (Ex-1003, ¶ 138).

e) Communication Device and Communicating

The “Communication Device and Communicating” limitation provides “a communication device for communicating the digital image to a different location when the user actuates the at least one actuation means’ (Ex-1001, 49:12-21). Darrell discloses this limitation because Darrell discloses (Fig 1A) that the “handheld device 10 further includes a wireless communication device 14 coupled to the camera and to a wireless network 16 to communicate the image 210 with a computer 24 having a database 25 with computer files 26 to find similar images and a user interface 18 ...” (Ex-1004, ¶ [0021]; *see also* step 114 of FIG. 4A, step 204 of FIG. 5A, step 254 of FIG. 5B, step 274 of FIG. 5C; ¶¶ [0021], [0028], [0031], [0033], and [0042]; Ex-1003, ¶ 142).

Darrell discloses the “Communication Device and Communicating” Limitation throughout the specification. For example, Darrell describes that, in “operation, a mobile user can point the camera 12 to the view of interest, take photos, and send them wireless as queries (via multimedia SMS, a.k.a. MMS) to the web database 25” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 143). Further, Darrell teaches that a

“mobile user can take photos of a place of interest,” and that the “photos are sent to the image database 25 via a wireless link” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 143).

Darrell FIG. 1A

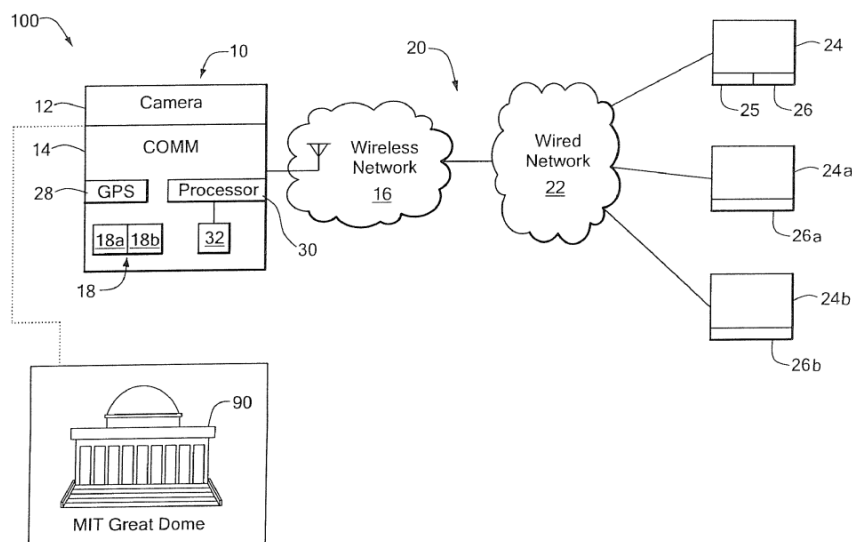


FIG. 1A

Darrell discloses the “different location” limitation. Darrell shows in Fig. 1A that the digital image is communicated from the handheld device 10 via the networks 16, 22a to the computer 24 and database 25, which are illustrated at a “different location.” In addition, Darrell describes the “database 25” as being a “remote database 25,” so the “different location limitations are satisfied (Ex-1004, ¶ [0024]; Ex-1003, ¶ 145).

f) Identifying

The “Identifying” limitation provides “automatically identifying a list of likely pointed-to objects from the digital image at the different location to return the list of

likely pointed-to objects” (Ex-1004, 49:24-26; Ex-1003, ¶ 150). Darrell teaches this limitation with a computer 24 that can return the claimed list.

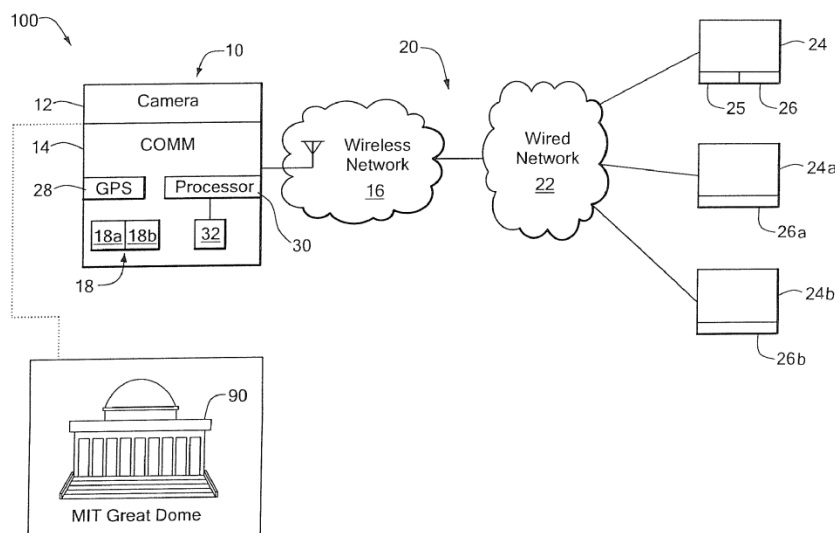
Darrell teaches “identifying a list of likely pointed-to objects from the digital image” because Darrell describes that the wireless communication device of the handheld device can “communicate the image 210 with a computer 24 having a database 25 with computer files 26 to find similar images ... to communicate to [sic] an user any results of found similar images” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 151). Darrell teaches that the computer 24 or server includes a search engine that provides results that “consist of a list of (candidate image, source URL) pairs,” so that the user can “identify what sub-images” are relevant (Ex-1004, ¶¶ [0025], [0028]; Ex-1003, ¶ 151). Darrell also describes that, it “should now be appreciated that a method for identifying a location comprises the steps of: (i) providing a database of images, each image having an associated URL that includes said image and a description of the image; (ii) comparing an image of an unknown location with images from the database of images and providing a list of possible matching images; and (iii) reviewing the images in the list of possible matching images until the correct location is identified” (Ex-1004, claim 26; Ex-1003, ¶ 152).

Darrell describes that the “identifying” is “automatically” performed as Darrell teaches that, using “the handheld device 10 with a camera 12, an image-based query

can be formed simply by pointing with the camera 12 and snapping a photo” (Ex-1004, ¶ [0024]). Darrell also describes that, in “operation, a mobile user can point the camera 12 to the view of interest, take photos, and send them wireless as queries (via multimedia SMS, a.k.a. MMS) to the web database 25” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 153). Darrell explains that the “identifying” is “automatically” performed in response without any further interaction (Ex-1004, ¶¶ [0025]-[0027]; Ex-1003, ¶ 153).

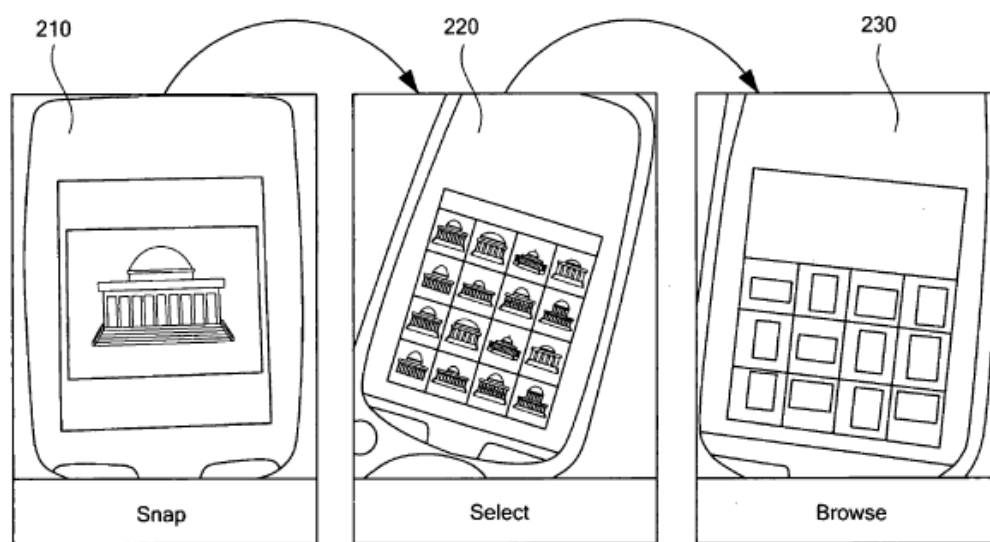
Darrell teaches the “at a different location” limitation because the computer or server that includes the search engine and image database 25 in Darrell is at a “different location” from the handheld device 10 as shown in Fig. 1A. Also, Darrell describes the “database 25” as being a “remote database 25,” so the “different location limitations” are satisfied (Ex-1004, ¶ [0024]; Ex-1003, ¶ 156).

Darrell FIG. 1A



Darrell teaches “to return the list of likely pointed-to objects.” As Darrell explains, a result “will consist of a list of (candidate image, source URL) pairs,” so that the user can “identify what sub-images” are relevant (Ex-1004, ¶¶ [0025], [0028]; Ex-1003, ¶ 159). Figure 2 of Darrell shows the return of thumbnails or a list of likely pointed to objects (Ex-1004, ¶ [0028]; Ex-1003, ¶ 160).

Darrell Figure 2



Darrell provides an example that discloses this limitation. In the example, a mobile user is uncertain whether a building is “Killian Court” (Ex-1004, ¶ [0027]; Ex-1003, ¶ 157). The user takes a picture of the building with the mobile and sends the image to the server 24 (Ex-1004, ¶ [0027]; Ex-1003, ¶ 157). The server automatically returns “the most relevant web pages” that depict the building in the image without any intervention (Ex-1004, ¶ [0027]; Ex-1003, ¶ 157).

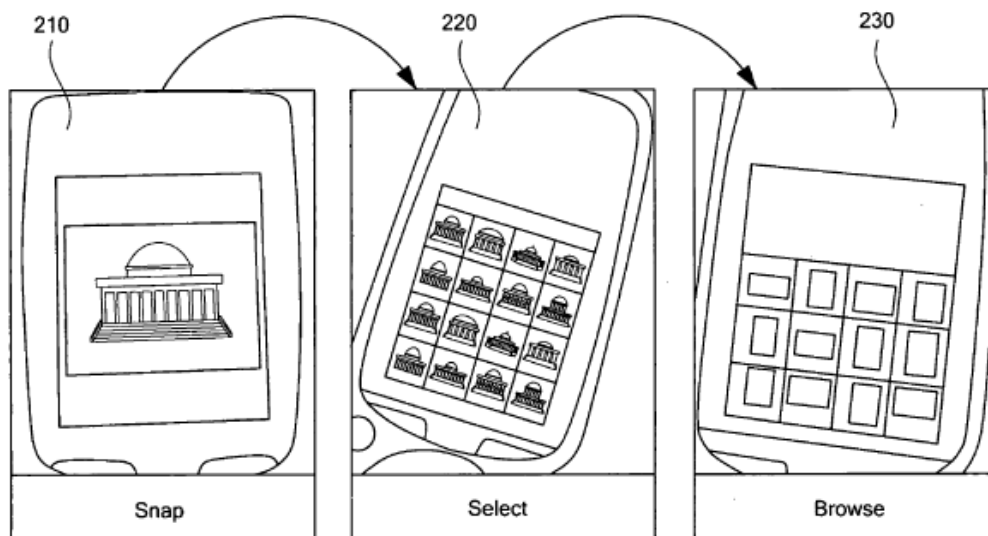
Further evidence that Darrell discloses the “Identifying” limitation can be found throughout Darrell (Ex-1004, step 116 of FIG. 4A, step 206 of FIG. 5A, step 256 of FIG. 5B, and FIG. 6; ¶¶ [0021], [0028], [0031], [0033], [0042]; Ex-1003, ¶ 158).

g) Returning

The “Returning” limitation states “returning the list of likely pointed-to objects to the user to select one of the likely pointed-to objects” (Ex-1001, 49:27-28; Ex-1003, ¶ 159). Darrell describes that the wireless communication device of the handheld device can “communicate the image 210 with a computer 24 having a database 25 with computer files 26 to find similar images ... to communicate to [sic] an user any results of found similar images” (Ex-1004, ¶ [0021]; Ex-1003, ¶ 159). Darrell teaches that the computer or server includes a search engine, which is at a different location, which provide a result that “consist of a list of (candidate image, source URL) pairs,” so that the user can “identify what sub-images” are relevant (Ex-1004, ¶ [0025], *see also* claim 26; Ex-1003, ¶ 160). That is, Darrell describes that “a list of possible matching images” can be provided by the search engine to the handheld device in response to the image captured by the camera, so that the user can identify, or select, what “sub-images” from the provided list are most relevant (Ex-1004, ¶ [0025]; Ex-1003, ¶ 160). Darrell discloses returning a “list of likely pointed

to objects” in Figure 2, where a series of thumbnails (*e.g.*, “list”) were provided to the user (Ex-1004, ¶ [0028]; Ex-1003, ¶ 160).

Darrell Figure 2



h) Object

The “Object” limitation is an alternative clause that provides eight alternatives: wherein the object is: (i) “at least one of a spot on a displayed image on a display;” (ii) “a subarea of a space on the displayed image on the display;” (iii) “one of a plurality of objects in the displayed image on the display;” (iv) “an object in space;” (v) “near an object in space;” (vii) “a subarea of a surface in space;” or (viii) “one of a plurality of objects in space” (Ex-1001, 49:29-34).

Darrell teaches this limitation because Darrell teaches taking photos of “objects” in a camera’s field of view, which are at least “an object in space” and “one

of a plurality of objects in space.” Darrell describes a handheld device 10 having a camera 12 to capture an image 210 of an object 90 (Ex-1004, ¶ [0021]). Darrell also teaches “snapping a photo” and a user can “take photos” (Ex-1004, ¶¶ [0024], [0025]; Ex-1003, ¶ 153). Darrell’s example of taking a picture of a building that may be “Killian Court” discloses “an object in space (Ex-1004, ¶ [0027]); Ex-1003, ¶ 168). Likewise, Darrell describes taking a picture with “people in front of a building” (Ex-1004, ¶ [0037]; Ex-1003, ¶ 168). People and a building are a plurality of objects in space, and the building is one of the plurality of objects.

2. Darrell Anticipates Claim 3

Claim 3 recites the “method of claim 1, further comprising receiving a selection by the user of said one of the likely pointed-to objects as the object and an instruction from the user to obtain information on the object” (Ex-1001, 50:8-12).

Darrell discloses “receiving a selection by the user of said one of the likely pointed-to objects as the object” as Darrell teaches that the “mobile device 10 displays the result by arranging candidate images into a thumbnail mosaic 220,” the “user, as the final judge, can easily identify what sub-images are ‘really relevant’” by selecting an image, and when “a thumbnail is selected, the source URL is retrieved and the content from that URL is shown on the mobile device 10” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 164). Similarly, in FIG. 5C, Darrell discloses that “a user can then select one

of the images and the content from the associated URL is then displayed” (Ex-1004, FIG. 5C; Ex-1003, ¶ 164).

Further, Darrell also teaches that the handheld device receives “an instruction from the user to obtain information on the object” with a URL. Darrell teaches when “a thumbnail is selected, the source URL is retrieved and the content from that URL is shown on the mobile device 10” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 164). Moreover, Darrell describes that the handheld device can receive an instruction in the form of “keywords” from the user to search for “additional web pages that might share conceptual similarity with the query image (Ex-1004, ¶ [0039]; Fig. 6, *see also* ¶ [0034]; Ex-1003, ¶ 165). Darrell also describes that “keywords” can be “linked to each similar image and the server database is capable of initiating a further search using the keywords to find additional similar images” (Ex-1004, ¶ [0007]; Ex-1003, ¶ 165). Darrell describes that “automatically extracted keywords are displayed side-by-side with the thumbnail image,” and that if “further searching is required, as shown by decision block 258, the process continues with process step 262, where selecting a keyword initiates a keyword-based search on Google to find more information” (Ex-1004, ¶ [0031]; Ex-1003, ¶ 165).

3. Darrell Anticipates Claim 10

Claim 10 depends from claim 1 and states “wherein the object is an object in

space, or near an object in space” (Ex-1001, 50:28-29). Darrell teaches taking a picture of an object in space (*see supra* § IX.A.1.h). As previously noted, Darrell’s Field of the Invention section states that this “invention relates generally to location and object awareness systems and more particularly to systems and techniques to identify a location or object in a person’s field of view” (Ex-1004, ¶ [0001]; Ex-1003, ¶ 166). An object “in a person’s field of view” is an “object in space.” Moreover, a picture of an object is an object in space, as shown by the building in Darrell’s camera viewfinder (Fig. 2). The building is surrounded by space in the viewfinder (Fig. 2).

4. Darrell Anticipates Claim 11

Claim 11 depends from claim 1 and states “wherein the object is a subarea of a surface in space” (Ex-1001, 50:30-31). Darrell teaches that the object is a subarea of a surface in space as shown in Figure 2 (*see supra* § IX.A.1.h). Darrell teaches that the “system allows users to stay where they are and point at a remote place in sight simply by taking photographs” (Ex-1004, ¶ [0023]; Ex-1003, ¶ 167). A picture of an object is a subarea of a surface in space, as shown by the building in the Darrell camera viewfinder in Figure 2. The building is an “object” (*e.g.*, building) that is a subarea of a surface in space (area that does not include the building).

5. Darrell Anticipates Claim 12

Claim 11 depends from claim 1 and states “wherein the object is one of a

plurality of objects in space” (Ex-1001, 50:30-31). Darrell describes taking a picture with “people in front of a building” (Ex-1004, ¶ [0037]; Ex-1003, ¶ 168). People and a building are each “objects in space.” The building is “one of the plurality of objects in space.” Thus, Darrell teaches taking a picture of a building (“object”) that is one of a plurality of objects in space (people and building).

B. Ground 2: Claims 1-12 are Obvious over Boncyk in view of Darrell

For Ground 2, the prior art consists of Boncyk (Ex-1005) and Darrell (Ex-1004). The challenged claims are claims 1-12. The USPTO allowed the ’812 patent claims over Boncyk primarily by accepting the argument that Boncyk returned a detected object rather than the claimed “list” of likely objects. Darrell discloses the missing limitation.

1. Boncyk and Darrell Render Claim 1 Obvious

Boncyk in view of Darrell renders claim 1 obvious (Ex-1003, ¶ 169).

a) Preamble

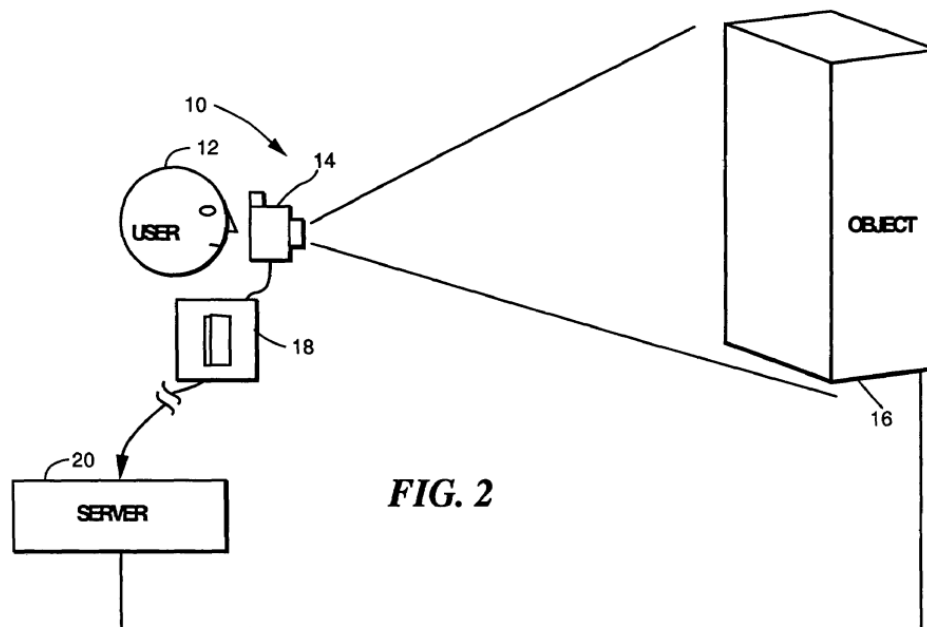
Boncyk discloses a “method for identifying an object” throughout the disclosure, for example, at least in its Abstract and Field of the Invention, where Boncyk discloses “a method by which information and communication pertinent to an object is provided based on imagery of the object” where a “digital image of the object is captured and the object is recognized from a plurality of objects in a database” (Ex-1005, Abstract, *see also* ¶ [0026]; Ex-1003, ¶ 171).

Darrell also discloses the Preamble (*see supra* § IX.A.1.a).

b) Providing a PID

Boncyk discloses an “image capture device 14,” “terminal 102, and “terminal 202” (Ex-1005, ¶¶ [0045], [0128], [0269]; Figs. 2, 4, 5; Ex-1003, ¶ 171) each of which are the claimed “pointing and identification device for pointing at the object.” For example, Boncyk discloses a system that includes “a computer, mobile telephone, personal digital assistant, or other similar device 14 equipped with an image sensor (such as a CCD or CMOS digital camera)” that “captures a digital image 18 of the scene at which it is pointed” (Ex-1005, ¶ [0045]; Ex-1003, ¶ 173).

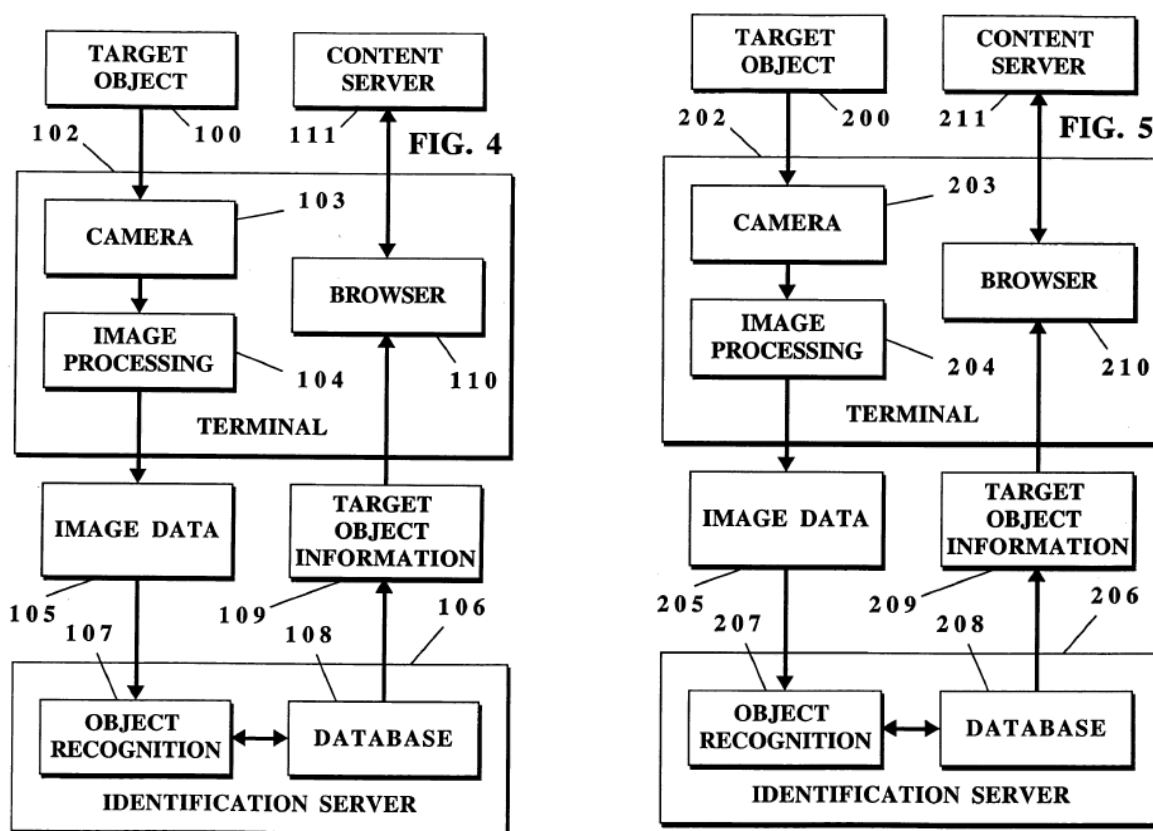
Boncyk Figure 2



Boncyk also discloses that the “terminal 102” has an “image capture device

such as digital camera 103” (Ex-1005, ¶ [0128]; Fig. 4); Ex-1003, ¶ 174) and “terminal 202” can be a “cellular telephone, PDA, or such mobile device equipped with computational capability, a digital camera, and wireless connection (Ex-1005, ¶ [0269]; Ex-1003, ¶ 174).

Boncyk Figures 4-5



Boncyk describes that a “[u]ser 12 aligns the sensor of the image capture device 14 with the object 16 of interest,” and that the “device 14 captures a digital image 18 of the scene at which it is pointed” (Ex-1005, ¶ [0045]; Fig. 5; Ex-1003, ¶ 175). Further, Boncyk discloses that the “user acquired images are transmitted from the

device 14 to the Image Processor/Server 20” and that a “Best Match 38” is determined from image “Database Matching 36” (Ex-1005, ¶¶ [0046], [0049]; Ex-1003, ¶ 176).

Darrell discloses the claimed “Providing a PID” (*see supra* § IX.A.1.b).

c) Actuation Means

Boncyk discloses the claimed “actuation means” for actuation by the user when the user points the pointing and identification device at the object.

The claimed function for the “actuation means” is “for actuation by the user when the user points the pointing and identification device at the object,” “forming a digital image of the object or of a portion of the object when the user points the pointing and identification device at the object and actuates the at least one actuation means,” and “communicating the digital image to a different location when the user actuates the at least one actuation means” (*see supra* § VI). The corresponding structure for the claimed “actuation means” constitutes a user interface such as a button(s) or a keyboard (*see supra* § VI).

Boncyk discloses that the “image capture device 14,” “terminal 102, and “terminal 202” perform the recited functions of “actuation by the user” and “forming a digital image.” For example, Boncyk discloses that the terminal 102 has a “digital camera 103” (Fig. 4), terminal 202 has a “digital camera” (Fig 5), and image capture device 14 “captures a digital image” (Fig. 2) (Ex-1005, ¶¶ [0045], [0128], [0269];

Ex-1003, ¶ 180).

Boncyk further discloses the “communicating” function. Boncyk discloses that the “image capture device 14,” transmits “acquired images” to server 20 using a “wireless network means” (Ex-1005, ¶ [0046]; Fig. 2; Ex-1003, ¶ 190). Likewise, Boncyk describes that the “terminal 102” sends image data 105 to the identification server 106 via networks such as a “cellular telephone network” and “wireless internet” (Ex-1005, ¶¶ [0140], [0141]; Fig. 4; Ex-1003, ¶ 181). Similarly, Boncyk describes that the “terminal 202” transfers “image data 205 to the identification server 206” and can do so via networks such as a cellular telephone network” (Ex-1005, ¶¶ [0269], [0270]; Fig. 5; Ex-1003, ¶ 181).

Boncyk also discloses the corresponding structure for the claimed “actuation means” constitutes a user interface such as a button(s) or a keyboard. For example, Boncyk also discloses that “‘point and click’ refers to the operation of the user capturing imagery of the target object 200 and initiating the transfer of the image data 205 to the identification server 206” (Ex-1005, ¶ [0270]; Ex-1003, ¶ 182), just as the ’812 patents describes “clicking” its buttons (Ex-1001, 2:62-64; 3:30-32; 3:38-41; 3:52-56; 6:30; 9:18-19). As “buttons” are clicked, Boncyk discloses buttons as corresponding structure. Similarly, Boncyk discloses that the image capture device 14 has “any suitable means such as a button on the device 14 or sensor” for image

capture (Ex-1005, ¶ [0045]; Ex-1003, ¶ 182). Moreover, Boncyk discloses that the “image capture device 14,” “terminal 102,” and “terminal 202” all have a “digital camera” and can be “mobile devices” which all have buttons and/or keyboards for actuation, forming a digital image, pointing at an object, and communicating the digital image (Ex-1005, ¶¶ [0045], [0128], [0269]; Figs. 2, 4, 5; Ex-1003, ¶ 182).

Darrell discloses the claimed “Actuation Means” (*see supra* § IX.A.1.c).

d) Digital Camera

Boncyk discloses the claimed “Digital Camera” limitation. Boncyk discloses that terminal 202 has a “digital camera” (Fig 5) for “capturing imagery” (Ex-1005, ¶ [0269]; Ex-1003, ¶ 186). Boncyk likewise describes, in its Abstract and Field of the Invention, “a method by which information and communication pertinent to an object is provided based on imagery of the object” where a “digital image of the object is captured and the object is recognized from a plurality of objects in a database” (Ex-1005, Abstract, ¶ [0001]; Ex-1003, ¶ 184). Boncyk discloses a system that includes “a computer, mobile telephone, personal digital assistant, or other similar device 14 equipped with an image sensor (such as a CCD or CMOS digital camera)” that “captures a digital image 18 of the scene at which it is pointed” (Ex-1005, ¶ [0045]; Ex-1003, ¶ 185). Boncyk also explains that “terminal 102” is a “computing device that has an ‘image’ capture device such as digital camera 103, a video camera, or any

other device that [c]an convert a physical object into a digital representation of the object” (Ex-1005, ¶ [0128]; Ex-1003, ¶ 186).

Boncyk also discloses that the “actuation means” constitutes a user interface such as a button(s) or a keyboard for forming the digital image (*see supra* § IX.B.1.c).

Darrell discloses the Digital Camera limitation (*see supra* § IX.A.1.d).

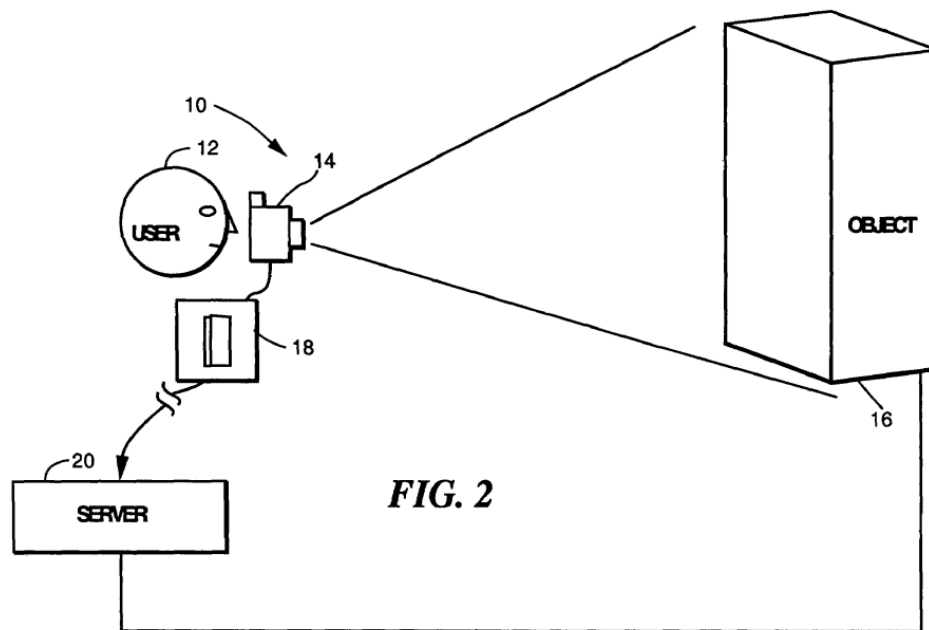
e) Communication Device and Communicating

Boncyk discloses “a communication device for communicating the digital image to a different location when the user actuates the at least one actuation means.”

Boncyk discloses that each of the “image capture device 14,” “terminal 102, and “terminal 202” have the claimed “communication device.” For example, Boncyk (Fig. 2) describes that the system may include “a computer, mobile telephone, personal digital assistant, or other similar device 14 equipped with an image sensor (such as a CCD or CMOS digital camera)” that “captures a digital image 18 of the scene at which it is pointed” (Ex-1005, ¶ [0045]; Ex-1003, ¶ 185). Boncyk also describes that “user acquired images are transmitted from the device 14 to the Image Processor/Server 20 using a conventional digital network or wireless network means,” and notes that the “server 20” may be “physically separate from the device 14” (Ex-1005, ¶ [0046], *see also* ¶ [0030]; Ex-1003, ¶ 191). Since the Boncyk device

14 may be a mobile telephone and Boncyk describes that the images are “transmitted from the device 14” to a “physically separate” “server 20,” the device 14 includes the claimed “a communication device for communicating the digital image to a different location,” as required by the Communication Device limitation of claim 1.

Boncyk Figure 2



Similarly, terminal 102 has the claimed “communication device” because terminal 102 can transmit image data 105 wirelessly to a sever 106 that is “usually separate from the terminal 102” (Ex-1005, ¶ [0141]; Ex-1003, ¶ 192). Likewise, terminal 202 has the claimed “communication device” because terminal 202 can be a cellular telephone, PDA, or mobile device, with a “wireless connection” for communicating with sever 211 (Ex-1005, ¶ [0269]; Ex-1003, ¶ 192).

As described above, Boncyk discloses the claimed “actuation means” for communicating as claimed (*see supra* § IX.B.1.c).

Darrell discloses the Communication Device and Communicating limitations (*see supra* § IX.A.1.e).

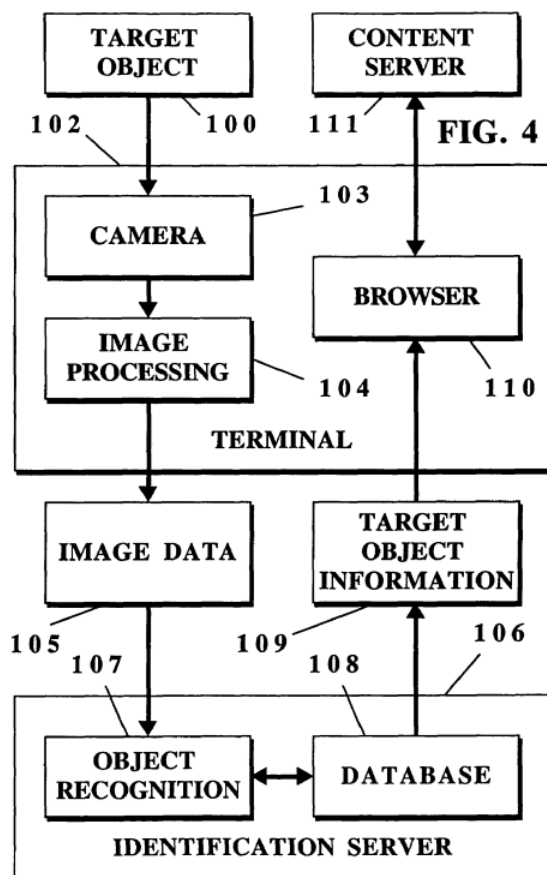
f) Identifying

Boncyk discloses the “Identifying” limitation with the exception of expressly disclosing “to return the list of likely pointed-to-objects.” However, as described above Darrell discloses “to return the list of likely pointed-to-objects.” This limitation is obvious over Boncyk in view of Darrell.

Boncyk discloses the first part of the “Identifying” limitation: “automatically identifying a list of likely pointed-to objects from the digital image at the different location” (Ex-1001, 49:24-25). Boncyk discloses that after “the camera 103 captures the digital imagery of the target object 100, image preprocessing 104 software converts the digital imagery into image data 105 for transmission to and analysis by an identification server 106,” and that the “[i]mage data 105 is data extracted or converted from the original imagery of the target object 100 and has information content appropriate for identification of the target object 100 by the object recognition 107, which may be software or hardware” (Ex-1005, ¶ [0128]; Ex-1003, ¶ 197). Boncyk discloses that the “overall function of the identification server 106” is to

determine “target object information 109” that corresponds to “the target object 100”. (Ex-1005, ¶ [0143]; Ex-1003, ¶ 197). This is illustrated in Figure 4 (*see also* Fig. 5).

Boncyk Figure 4



Boncyk teaches multiple algorithms at the identification sever (*e.g.*, shape comparison, grayscale comparison, wavelet comparison, and color cube comparison) that run in parallel that generate “matches” or “a list of likely pointed-to objects from the digital image” (Ex-1005, ¶¶ [0070], [0118], [0119]; Ex-1003, ¶ 198). Boncyk discloses that the “matches” are weighed and ranked and those above a threshold are assessed in a “Combined Match Score evaluation” (Ex-1005, ¶¶ [0118]-[0121]; Ex-

1003, ¶ 198). Similarly, Boncyk discloses there may be “many such objects that have similar appearance” as the target object (Ex-1005, ¶ [0171]; Ex-1003, ¶ 198). Boncyk discloses returning “target object information” to the image capture device 14, terminal 102, or terminal 202 (Ex-1005, ¶ [0237]; Ex-1003, ¶ 199). The “target object information” 109 is the information “corresponding to the target object” such as “information address,” “identity” and “position” (Ex-1005, ¶¶ [0238]-[0244]; Ex-1003, ¶ 199).

Boncyk also teaches the “automatically” limitation as Boncyk discloses that “the object recognition technique” is “[a]utonomous (no human assistance required in the recognition process)” (Ex-1005, ¶ [0156]; Ex-1003, ¶ 200).

Boncyk discloses the “at a different location” limitation in Figs 2-5. Boncyk discloses that the “server 20” may be “physically separate from the device 14” (Ex-1005, ¶ [0046], *see also* ¶ [0030]; Ex-1003, ¶ 191). Further, Boncyk describes that the identification server 106 can “exist on [a] computing platform separate from the terminal 102” (Ex-1005, ¶ [0141]; Ex-1003, ¶ 192).

Although Boncyk determines a list of potential matches to the target object, Boncyk does not expressly state that the returned target object information 109 can include a list or more than one “target object information” corresponding to the target object. During the ’812 patent’s prosecution, it was argued that Boncyk does not

teach that “a list of likely pointed-to objects” is identified or returned (Ex-1003, ¶ 202; Ex-1002 at pp. 36, 39-40). However, Darrell teaches that identifying the claimed list is returned to the user, and the Examiner was unaware of Darrell.

As noted above, Darrell teaches that a search engine will identify and return a result that “consist of a list of (candidate image, source URL) pairs,” and also describes that “a list of possible matching images” can be identified and provided to the user for review in response to the image captured by the camera (Ex-1004, ¶ [0025], claim 26; Ex-1003, ¶ 203; *see supra* § IX.A.1.f).

It would have been obvious to a POSITA to combine Boncyk and Darrell to form the claimed invention (Ex-1003, ¶ 203). Boncyk and Darrell disclose all of the claim limitations. Thus, there is no difference between the claim and the prior art.

Further, a POSITA would have been motivated to combine Boncyk with Darrell prior to September 2005 to form the claimed invention (Ex-1003, ¶ 205). Boncyk generates a likely list of matches and can have more than one best matches that are above a threshold (Ex-1005, ¶¶ [0070], [0118]-[0121]; Ex-1003, ¶ 205). Darrell teaches the benefit of sending a likely list to the user instead of only one match because the user can examine the list to determine the best match. As Darrell explains, the user can be the “final judge” and can “easily identify what sub-images” are “really relevant” (Ex-1004, ¶ [0025]; Ex-1003, ¶ 205). Thus, Darrell’s likely list

avoids errors because with the Boncyk approach the software determined match may not be correct, and if Boncyk determines an incorrect match, the user will either be using incorrect information or recognize that the match is incorrect and will be without the correct information because Boncyk provides no other options.

For example, Boncyk discloses that the “Calculate Combined Match Score” algorithm may result in “statistically equivalent” matches and resolving close rankings, but Boncyk provides no method of conclusively resolving the equivalency (Ex-1005, ¶ [0118]-[0122]; Ex-1003, ¶ 206). Further, Boncyk discloses that the “target object information 109” “can be used by the terminal 102 or content server 111 to identify the specific target object 100, out of many such objects that have similar appearance and differ only in the identifying marks” (Ex-1005, ¶ [0171]; Ex-1003, ¶ 206). Therefore, Boncyk appreciates that the object will need to be identified “out of many such objects that have similar appearance” and the potential for errors (Ex-1005, ¶ [0171]; Ex-1003, ¶ 206). Thus, it would have been obvious to use Darrell’s teaching of “identifying” to return a likely list to the user to Boncyk, so that the user can resolve statistical equivalent matches or determine which of the similar objects are the detected object. Darrell’s teaching avoids the likelihood of errors.

Moreover, claim 1 is obvious over Boncyk and Darrell because art is in the same technical field (Ex-1003, ¶ 207). Combining the references leads to predictable

results, sending a list of target object information, instead of one target object information (Ex-1003, ¶ 207). A POSITA would have had no technical difficulty in sending more than one target object information to the user (Ex-1003, ¶ 207)

g) Returning

As described, Boncyk discloses returning target object information 109 to the user rather than the claimed list of likely pointed-to objects to the user to select one of the likely pointed to objects. Darrell discloses this limitation (*see* § IX.A.1.g). The “Returning” limitation is obvious over Boncyk in view of Darrell as explained in the “Identifying” limitation analysis (*see supra* § IX.A.1.g).

h) Object

Boncyk discloses the “Object” limitation. For example, Boncyk captures an image of an “object” (Ex-1005, ¶ [0045]). Boncyk’s captured “object” is an “object in space.” Boncyk also describes that the object recognition is capable of “recognizing both 2-dimensional (i.e., flat) and 3-dimensional objects” and of “discriminating the target object 100 from any foreground or background objects or image information, i.e., be robust with respect to changes in background” (Ex-1005, ¶¶ [0152]-[0154]; Ex-1003, ¶ 209). Therefore, Boncyk discloses that the object could be “an object in space” as provided by the Object limitation of claim 1.

Darrell teaches the Object limitation (*see supra* § IX.A.1.h).

2. Boncyk and Darrell Render Claim 2 Obvious

Boncyk discloses a method of (i) receiving a designation of the object as designated by the user; (ii) recording a frame image comprising the designated object; (iii) determining a context type of the frame image from the frame image; and (iv) identifying the object, as recited by claim 2.

Boncyk discloses that the server 26 receives a designation of the object in the form of image data. For example, Boncyk discloses that the “identification server 106” and the “object recognition 107” receive “the image data 105” from the terminal 102 (Ex-1005, ¶ [0140]; Ex-1003, ¶ 212). Alternatively, Boncyk discloses “receiving a designation of the object as designated by the user” as Boncyk discloses that the object received by the server 2 may have “recognizable symbols, such as bar codes, or alphanumeric codes” (Ex-1005, ¶ [0047]; Ex-1003, ¶ 212).

Boncyk records a frame of the image as Boncyk states that the imagery that includes the target object 100 “can be a single image, a series of images, or a continuous video stream” (Ex-1005, ¶ [0128]; Ex-1003, ¶ 213). Therefore, Boncyk “records” or saves a frame image that includes the target object 100 to analyze the frame image for target information.

Boncyk discloses “determining a context type of the frame image from the frame image.” For example, Boncyk discloses an algorithm that can “find an object

or portion thereof in an input image, given a database of multiple objects with multiple views (from different angles) of each object” (Ex-1005, ¶ [0200]; Ex-1003, ¶ 214). Boncyk teaches that this could be done using a “Local Image Descriptor (LID)” process that finds the “best matches for multiple input image LIDs” (Ex-1005, ¶¶ [0201]-[0218]; Ex-1003, ¶ 214). Each of these views of a multiple input image is a different context of the image, and these views are used to find the “best matches” for the target object 100.

3. Boncyk and Darrell Render Claim 3 Obvious

Claim 3 recites “receiving a selection by the user of said one of the likely pointed-to objects as the object and an instruction from the user to obtain information on the object” (Ex-1001, 50:8-12; Ex-1003, ¶ 215). Boncyk discloses that “the target object information 109 may include, but not be limited to, one or more of the following items of information pertaining to the target object 100: Information address (e.g., Internet URL), Identity (e.g., object name, number, classification, etc.); Position; Orientation; Size; Color; Status; Information decoded from and/or referenced by symbols (e.g. information coded in a barcode or a URL referenced by such a barcode); and Other data (e.g. alphanumerical text),” such that “the identification server determines the identity and/or various attributes of the target object 100 from the image data 105” (Ex-1005, ¶¶ [0237]-[0246]; Ex-1003, ¶ 215).

Further, Boncyk describes that, after the target objection information 109 is returned to the terminal 102, the “user can perform ongoing interactions with the content server 111” (Ex-1005, ¶ [0263]; Ex-1003, ¶ 218). For example, Boncyk teaches that the user can “[l]isten to streaming audio samples” or “[p]urchase the target object 100 via on-line transaction” (Ex-1005, ¶¶ [0234]-[0265]; Ex-1003, ¶ 218). These “ongoing interactions” with the content server 111 include “selection by the user” and “an instruction from the user to obtain information on the object.”

Darrell teaches claim 3 (*see supra* § IX.A.3).

4. Boncyk and Darrell Render Claim 4 Obvious

Claim 4 recites “further comprising receiving a selection by the user of said one of the likely pointed-to objects as the object and an instruction from the user to purchase the object” (Ex-1001, 50:12-15). Boncyk describes that, after the target objection information 109 is returned to the terminal 102, the “user can perform ongoing interactions with the content server 111” (Ex-1005, ¶ [0263]; Ex-1003, ¶ 218). For example, Boncyk discloses that the user can “purchase” the “the target object 100 via on-line transaction, with the purchase amount billed to an account linked to the terminal 102, to the individual user, to a bank account, or to a credit card” (Ex-1005, ¶ [0265]; Ex-1003, ¶ 218).

5. Boncyk and Darrell Render Claims 5-9 Obvious

Claim 5 states “wherein the object is at least one of the spot on the displayed image on the display, the sub-area of the space on the displayed image on the display, and one of the plurality of objects in the displayed image on the display” (Ex-1001, 50:16-19).

Claim 6 depends from claim 5 and states “wherein the object is the sub-area of the space on the displayed image on the display” (Ex-1001, 50:20-21).

Claim 7 depends from claim 1 and states “wherein the object is a spot on a displayed image on a display” (Ex-1001, 50:22-23).

Claim 8 contains the same limitations as claim 5 but depends from claim 1 and states wherein the object is a subarea of a space on the displayed image on the display” (Ex-1001, 50:24-25).

Claim 9 depends from claim 1 and states “wherein the object is one of a plurality of objects in the displayed image on the display” (Ex-1001, 50:26-27).

Boncyk describes an embodiment where the user “‘points and clicks’ the terminal 202 at “video or other entertainment” which would be on a “display” and can “point and click” on a “television screen” to interact with television programming in real-time” (Ex-1005, ¶¶ [0271], [0273]; Ex-1003, ¶ 224). Boncyk describes that the term “‘point and click’ refers to the operation of the User capturing imagery of

the target object 200 and initiating the transfer of the image data 205 to the identification server 206” (Ex-1005, 22:48-55; Ex-1003, ¶ 224). By taking a picture of a video on a television screen, Boncyk discloses that the “object” is each of the limitations in claims 5-9 (Ex-1003, ¶¶ 224-229). For example, below is a more modern picture of a television display that is similar to what would have been on a television display prior to 2005. The picture of a television screen shows where a ball was kicked (“spot”), the soccer goal (green) (a subarea of the space on a display image), and a soccer ball and players (plurality of objects in the displayed image) (Ex-1003, ¶¶ 226-229). The object could be the spot, the goal, a player, or the ball.

Example of “Objects” in a Picture of a TV Display



6. Boncyk and Darrell Render Claim 10 Obvious

Boncyk discloses that “the target object 100 could be, for example, beverage can, a music CD box, a DVD video box, a magazine advertisement, a poster, a theatre, a store, a building, a car, or any other object that user is interested in or wishes to

interact with” (Ex-1005, ¶ [0127]; *see also* ¶ [0154], ¶ [0200]). Boncyk discloses that its system is “[c]apable of discriminating the target object 100 from any foreground or background objects or image information” (Ex-1005, ¶ [0154]; Ex-1003, ¶ 230). Therefore, Boncyk discloses that the object is “an object in space, or near an object in space,” as required by claim 10 of the ’812 patent.

Darrell discloses claim 10 (*see supra* § IX.A.3).

7. Boncyk and Darrell Render Claims 11 & 12 Obvious

Boncyk discloses that the object is “a subarea of a surface in space” or “one of a plurality of objects in space” as required by claims 11-12 (Ex-1003, ¶¶ 232-234). For example, Boncyk discloses that “the target object 100 could be, for example, beverage can, a music CD box, a DVD video box, a magazine advertisement, a poster, a theatre, a store, a building, a car, or any other object that user is interested in or wishes to interact with” (Ex-1005, ¶ [0127]; Ex-1003, ¶¶ 232-234). Any of those objects is a “subarea of a surface in space” because the photo area not containing the object is a “subarea of a surface in space.” Moreover, a picture of any of the disclosed objects (*e.g.*, beverage can) with any other object (glass) is “one of a plurality of objects in space” in a photo. In fact, Boncyk discloses that its system is capable of “recognizing both 2-dimensional (i.e., flat) and 3-dimensional objects” and “[c]apable of discriminating the target object 100 from any foreground or background

objects or image information” (Ex-1005, ¶¶ [0152]-[0154]; Ex-1003, ¶¶ 232-234). Boncyk also discloses an algorithm that can “find an object or portion thereof in an input image, given a database of multiple objects with multiple views (from different angles) of each object” (Ex-1005, ¶ [0200]; Ex-1003, ¶¶ 232-234), meaning there are multiple objects and one object is a subarea of a surface in space.

Darrell discloses claims 11-12 (*see supra* § IX.A.4.-5).

C. Ground 3: Claims 5-9 are Obvious over Boncyk and Darrell in view of the Level of Ordinary Skill

Boncyk discloses the limitations of claims 5-9 as described above (*see supra* IX.B.5). Moreover, claim 5-9 are obvious over Boncyk, Darrell, and the level of ordinary skill in the art (Ex-1003, ¶ 236).

Both Boncyk and Darrell teach a cell phone with a digital camera for taking pictures without restricting what pictures to take. Darrell teaches that the “system allows users to stay where they are and point at a remote place in sight simply by taking photographs” (Ex-1004, ¶ [0023]; Ex-1003, ¶ 167). Thus, Darrell’s cell phone can take a picture of a display, such as TV screen, a computer screen, and/or a camera screen (Ex-1003, ¶ 236). Moreover, a picture of a display using Darrell’s camera prior to September 2005 included an object as a spot, a subarea, or one of a plurality of objects in the display (Ex-1003, ¶ 236). Boncyk discloses taking pictures of a display (*see supra* § IX.B.7). It was with the level of the ordinary skill in the art to

take pictures of displays having the limitations of claims 5-9 with the Boncyk and Darrell cameras (Ex-1003, ¶ 236). There were no known difficulties in taking pictures. Accordingly, claims 5-9 were obvious in view of Boncyk, Darrell, and the level of ordinary skill in the art.

D. Ground 4: Claims 1-12 are Obvious over Boncyk in view of Darrell and Fukuda

For Ground 4, the prior art consists of Boncyk, Darrell, and Fukuda. The challenged claims are claims 1-12. As noted in Ground 2, Boncyk in view of Darrell discloses claims 1-12's limitations. However, to the extent that Pointwise contends that the claimed "pointing and identification" device requires a laser or a reticle and that Boncyk and Darrell do not disclose a reticle, the inclusion of a reticle into the combined Boncyk and Darrell system would have been obvious in view of Fukuda.

Fukuda discloses reticles in the form of the "rectangular area" and the "pointer" described in Fukuda (Ex-1006, Abstract; ¶¶ [0024], [0061], [0070], [0071], FIG. 7 and 9). Fukuda describes a "digital camera" that "has a display such as an LCD" and an "electronic viewfinder" or "EVF" that can display "a viewfinder image (preview image) of the subject before photographing" (Ex-1006, ¶¶ [0024], [0028]).

Fukuda illustrates and describes that a rectangular area, or reticle, is presented in the viewfinder image and can be moved to allow the user to move or adjust the point of focus of the camera (Ex-1006, ¶¶ [0070], [0071], FIG. 7, FIG. 9; Ex-1003, ¶

241). Fukuda describes that “a pointer” may be displayed in the viewfinder display and that the user may “move the pointer PT up, down, right and left in the screen” to set a designation position in the screen (Ex-1006, ¶ [0070]; Ex-1003, ¶ 125). Fukuda describes (Figs. 7-9 below) that “a focus point may be associated with the pointer PT” and that “the in-focus area” is defined by “a rectangular area which is set around the pointer PT” and the rectangular area can move “interlockingly with the pointer” to allow for “focusing control” to be performed by the user (Ex-1006, ¶ [0071], FIG. 9; Ex-1003, ¶ 125). Therefore, Fukuda discloses that a user may move a pointer around a viewfinder display in order to move or adjust a reticle, defined by the “rectangular area,” to adjust the point of focus of the camera prior to taking a picture.

Figure 7 of Fukuda

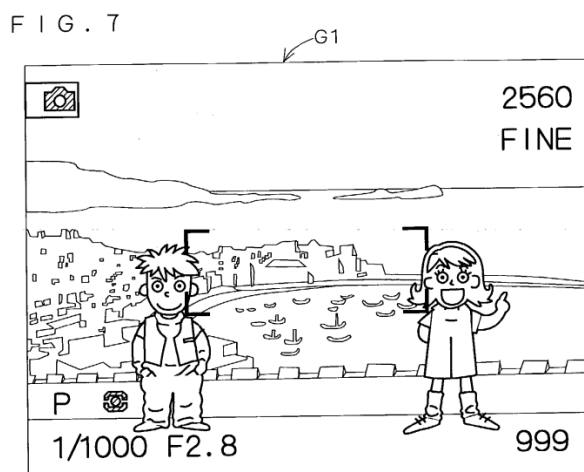
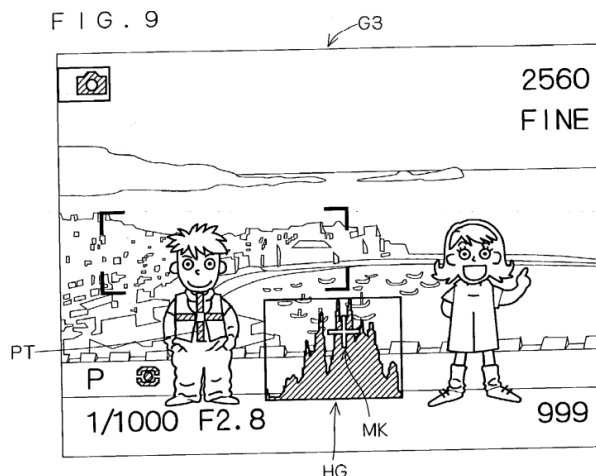


Figure 9 of Fukuda



It would have been obvious to a POSITA to combine Boncyk, Darrell, and Fukuda to form the claimed invention (Ex-1003, ¶ 243). Darrell and Fukada disclose

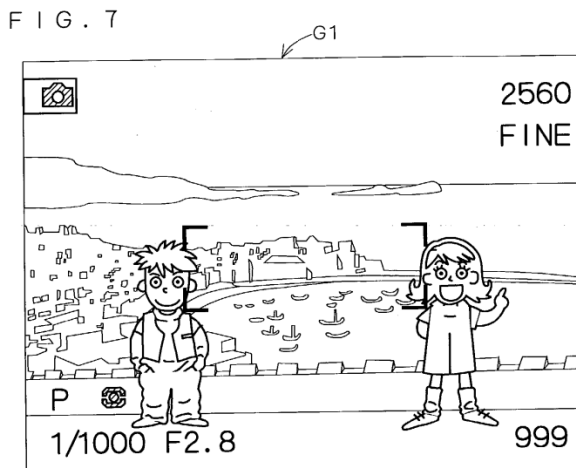
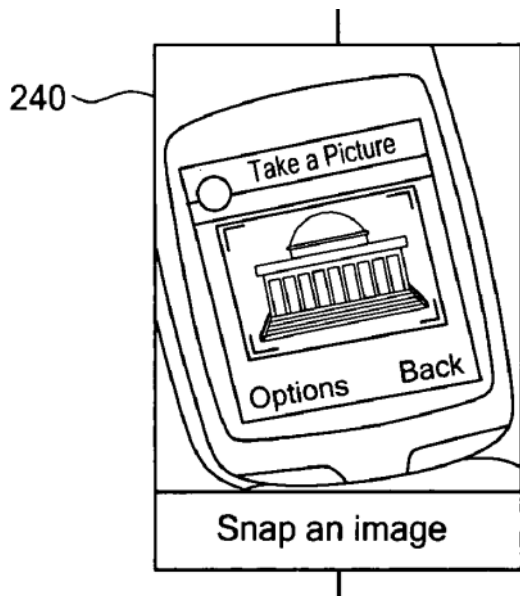
all of the claim limitations. Thus, there is no difference between the claims and the prior art.

Fukuda discloses the benefits of using reticles in digital cameras since it recognizes that the reticle can be used by the user to define and illustrate the area of focus of an image before the user takes a picture (Ex-1003, ¶ 244). Since Darrell and Boncyk describe handheld devices that include a similar display screen and a camera for capturing an object image, it would have been obvious to incorporate the reticle, or “rectangular area,” taught by Fukuda into the Darrell and Boncyk devices, so the users could more accurately focus on an object of interest (Ex-1003, ¶ 244).

It further would have been obvious and routine to combine the pointer and rectangular reticle taught by Fukuda into the Darrell and Boncyk devices because both systems include a display screen and buttons that allow for the operability of the pointer and rectangular reticle by the user.

Figure 3 of Darrell

Figure 7 of Fukuda



Moreover, Darrell, Boncyk, and Fukuda are in the same technical fields (Ex-1003, ¶ 246).

X. Secondary Considerations

Petitioner is not aware of any secondary considerations that would overcome the strong showing of obviousness provided by the Petition. Further, any attempt by Patent Owner to rely on alleged secondary considerations cannot overcome the showing of obviousness detailed above. *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1370 (Fed. Cir. 2011).

XI. No Basis Exists For Discretionary Denial

Each factor regularly considered under § 314(a) weighs in favor of institution or is neutral. *General Plastics* does not apply, as this is the only IPR filed against the '812 patent, so the Board can satisfy the requirements of 35 U.S.C. § 316(a)(11). *General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (precedential: §II.B.4.i).

Factors considered under § 314(a) related to parallel district court litigations weigh in favor of institution. Each of factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (March 20, 2020) (precedential) are addressed below:

1. **District Court Stay:** Neutral. A stay has not yet been requested, granted, or denied in the IKEA-Pointwise Litigation, so this factor is neutral. Additionally, IKEA intends to request a stay should this IPR be instituted.
2. **Proximity of Trial Date:** Favors Institution. Jury selection/trial has been scheduled for March 16, 2026 in the IKEA-Pointwise Litigation (Ex-1013), which is within a few months of the projected statutory deadline for this IPR. It seems unlikely that the Court would hold the trial if this IPR is instituted and a final written decision is imminent. A motion for a stay and/or move the trial date is likely if this IPR is

instituted.

3. **Investment in Parallel Proceedings:** Favors Institution. Although the IKEA-Pointwise Litigation was filed in March 2024, due to proper party and venue disputes, a schedule for the suit was not set until August 7, 2024 (Ex-1013). The only scheduled dates that have passed are initial contention disclosures (Ex-1013). No party has served discovery. Fact discovery is open until October 27, 2025 (Ex-1013). Claim construction briefing does not begin until August 5, 2025 (Ex-1013). Expert discovery is from October to December 2025 (Ex-1013). Dispositive motion briefing is in December 2025 (Ex-1013). Based on the initial nature of the litigation, this factor favors institution.
4. **Overlap in Issues:** Favors Institution. The grounds raised here are only a subset of the grounds being raised in the IKEA-Pointwise litigation. Additionally, claims 2-12 are challenged here but Pointwise did not assert claims 2-12 in the IKEA-Pointwise litigation (Ex-1014).
5. **Same Party:** Neutral.

Other Circumstances: Favors Institution. This Petition is strong on the merits in establishing the unpatentability of the claims. Further, neither the PTAB nor another forum has previously adjudicated the validity or patentability of the

challenged patent claims. Also, Pointwise is a non-practicing entity that has filed many suits on the '812 patent. It is more efficient to address the invalidity of the '812 patent claims in this proceeding than in all the pending district court matters. The factors considered for discretionary denial weigh in favor of institution.

Factors considered under § 325(d) favor of institution. Although Boncyk was used to reject versions of the claims during prosecution (Ex-1003, ¶ 95), the factors outlined in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, (Dec. 15, 2017) (precedential) still favor institution:

1. Similarities and Differences in the Asserted Art: Favors Institution.

Ground 1 relies solely on art that was not considered in prosecution, which favors institution *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 (PTAB. Feb. 13, 2020) (precedential). Grounds 2-4 – which are based, in part, on Boncyk – are also based on art and testimony regarding the level or ordinary skill not and motivation that were not considered during prosecution. Thus, the basis for all Grounds is based at least partly on art that was never considered in prosecution, favoring institution.

2. The Cumulative Nature of the Asserted Art: Favors Institution.

Darrell discloses the “list” claim element, which was the element alleged

to have been lacking in Boncyk. Thus, Darrell is not cumulative of Boncyk for at least the reason that Darrell discloses elements that the USPTO did not realize were in the prior art when conducting examination.

3. Extent to Which the Art was Evaluated During Examination:

Although Boncyk was relied on by the Examiner during prosecution, the Examiner was unaware of Darrell. Thus, the Examiner did not evaluate Boncyk with the knowledge that the “list” claim element was in the prior art as taught by Darrell.

4. Overlap in Arguments: Favors Institution. The grounds raised here

do not rely on Boncyk regarding the “list” claim element, which was the element deemed to be distinguishable over Boncyk during prosecution. Also, Ground 1 was not considered. Thus, the anticipation and obviousness arguments were not considered during examination.

5. Whether the Petition Sufficiently Points Out Examiner Errors: The

Grounds based on Boncyk do not allege that the Examiner erred in evaluating the teachings of Boncyk, only that the Examiner lacked sufficient information to consider the obvious nature of returning a “list” based on the teachings of Darrell. Therefore, the petition sufficiently

addresses that the error during examination related to lack of a complete understanding of the teachings of prior art, not an error in interpreting the prior art of record.

6. The Extent Additional Evidence Presented in the Petition Warrant

Reconsideration of Prior Art: Darrell is new evidence that demonstrates that the alleged patentable feature was known in the prior art. Given this new evidence, Boncyk should be reconsidered since the alleged patentable feature was already known and was used in a predictable way to obtain predictable results. Taken as a whole, this petition explains that – had the Examiner known of Darrell – a different conclusion regarding the patentability of the claims over Boncyk would have been reached. *Oticon Medical AB v. Cochlear Ltd.*, IPR2019-00975, Paper 15 (PTAB Oct. 16, 2019).

XII. Certification of Word Count Under 37 C.F.R. § 42.24(d)

Petitioner certifies that the word count in this Petition is 13,424 words, as counted by the word-processing program (Microsoft Word for Office 365) used to generate this Petition, where such word count excludes the table of contents, table of authorities, mandatory notices, certificate of service, table of exhibits, and this certificate of word count. This Petition is in compliance with the 14,000 word limit set forth in 37 C.F.R. §42.24(a)(1)(i).

XIII. Conclusion

Petitioner respectfully requests that the *inter partes* review of the '812 patent be instituted, as the Petition establishes a reasonable likelihood of prevailing with respect to the Challenged Claims. Petitioner respectfully requests cancellation of the Challenged Claims.

Respectfully submitted,

FLASTER GREENBERG P.C.

Date: April 1, 2025

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Counsel for Petitioner

XIV. Certificate Of Service

Pursuant to 37 C.F.R. §§ 42.6 and 42.106, the undersigned certifies that a true and correct copy of the foregoing Petition for *Inter Partes Review* of U.S. Patent No. 8,471,812, together with Petitioner's exhibits identified in the above Table of Exhibits, and Petitioner's Powers of Attorney, have been served on the Patent Owner via UPS, a means at least as fast and reliable as Priority Mail Express, on the below date, at the following correspondence address of record for the '812 patent: Michael Greenbaum, Blank Rome LLP, 1825 Eye Street NW, Washington, DC 20006-5403.

FLASTER GREENBERG P.C.

Date: April 1, 2025

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