



US008194924B2

(12) **United States Patent**
Pryor

(10) **Patent No.:** **US 8,194,924 B2**
(45) **Date of Patent:** **Jun. 5, 2012**

(54) **CAMERA BASED SENSING IN HANDHELD, MOBILE, GAMING OR OTHER DEVICES**

(76) Inventor: **Timothy R. Pryor**, Sylvania, OH (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **13/051,698**

(22) Filed: **Mar. 18, 2011**

(65) **Prior Publication Data**

US 2011/0170746 A1 Jul. 14, 2011

Related U.S. Application Data

(63) Continuation of application No. 12/834,281, filed on Jul. 12, 2010, now Pat. No. 7,933,431, which is a continuation of application No. 11/980,710, filed on Oct. 31, 2007, now Pat. No. 7,756,297, which is a continuation of application No. 10/893,534, filed on Jul. 19, 2004, now Pat. No. 7,401,783, which is a continuation of application No. 09/612,225, filed on Jul. 7, 2000, now Pat. No. 6,766,036.

(60) Provisional application No. 60/142,777, filed on Jul. 8, 1999.

(51) **Int. Cl.**
G06K 9/00 (2006.01)

(52) **U.S. Cl.** **382/103; 382/154; 382/312**

(58) **Field of Classification Search** **382/103, 382/154, 312**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,909,002 A 9/1975 Levy
4,219,847 A 8/1980 Pinkney et al.

4,339,798 A	7/1982	Hedges et al.	
4,631,676 A	12/1986	Pugh	
5,008,946 A	4/1991	Ando	
5,088,928 A	2/1992	Chan	
5,227,986 A	7/1993	Yokota et al.	
5,297,061 A	3/1994	Dementhon et al.	
5,388,059 A	2/1995	DeMenthon	
5,491,507 A *	2/1996	Umezawa et al.	348/14.02
5,581,276 A	12/1996	Cipolla et al.	
5,594,469 A	1/1997	Freeman et al.	
5,616,078 A	4/1997	Oh	
5,624,117 A	4/1997	Ohkubo et al.	
5,781,647 A	7/1998	Fishbine et al.	
5,828,770 A *	10/1998	Leis et al.	382/103
5,845,006 A *	12/1998	Sumi et al.	382/154
5,853,327 A	12/1998	Gilboa	
5,878,174 A	3/1999	Stewart et al.	
5,926,168 A	7/1999	Fan	
5,940,126 A *	8/1999	Kimura	348/294
6,204,852 B1 *	3/2001	Kumar et al.	345/419
6,342,917 B1	1/2002	Amenta	
6,373,472 B1	4/2002	Palalau et al.	
6,442,465 B2	8/2002	Breed et al.	
6,508,709 B1	1/2003	Karmarkar	
6,597,817 B1	7/2003	Silverbrook	
6,775,361 B1 *	8/2004	Arai et al.	379/93.17
6,788,336 B1 *	9/2004	Silverbrook	348/207.2
6,911,972 B2 *	6/2005	Brinjes	345/175
7,489,863 B2 *	2/2009	Lee	396/429

* cited by examiner

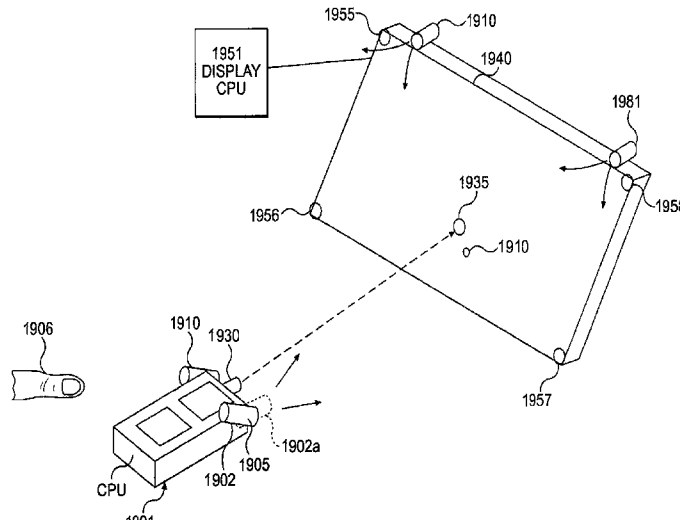
Primary Examiner — Tom Y Lu

(74) *Attorney, Agent, or Firm* — Warner Norcross & Judd LLP

(57) **ABSTRACT**

Method and apparatus are disclosed to enable rapid TV camera and computer based sensing in many practical applications, including, but not limited to, handheld devices, cars, and video games. Several unique forms of social video games are disclosed.

14 Claims, 23 Drawing Sheets



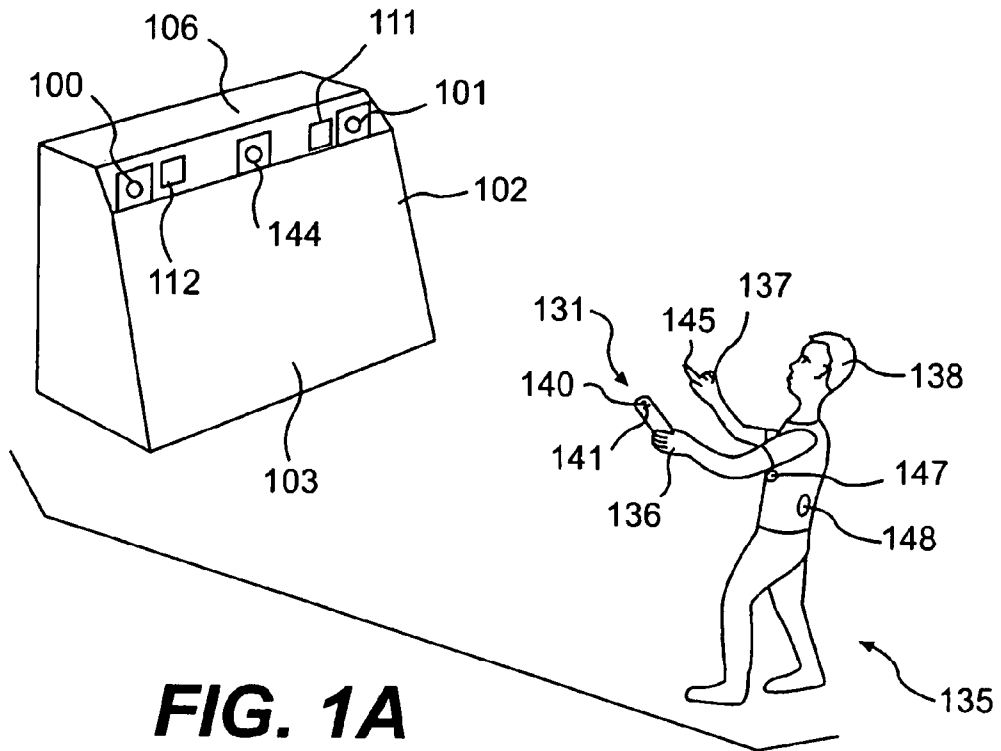


FIG. 1A

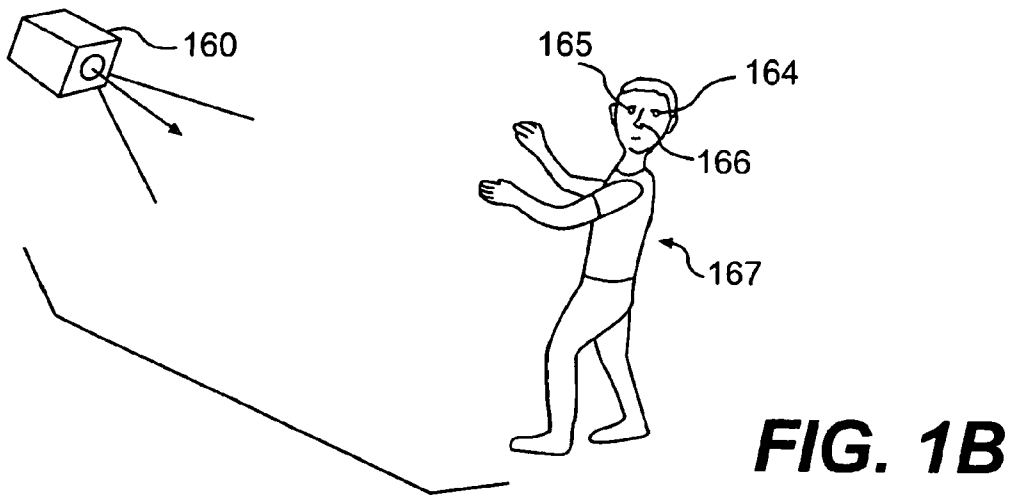


FIG. 1B

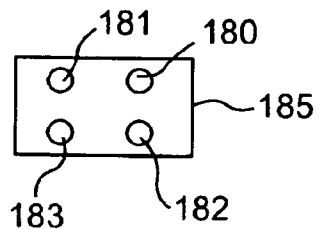


FIG. 1C

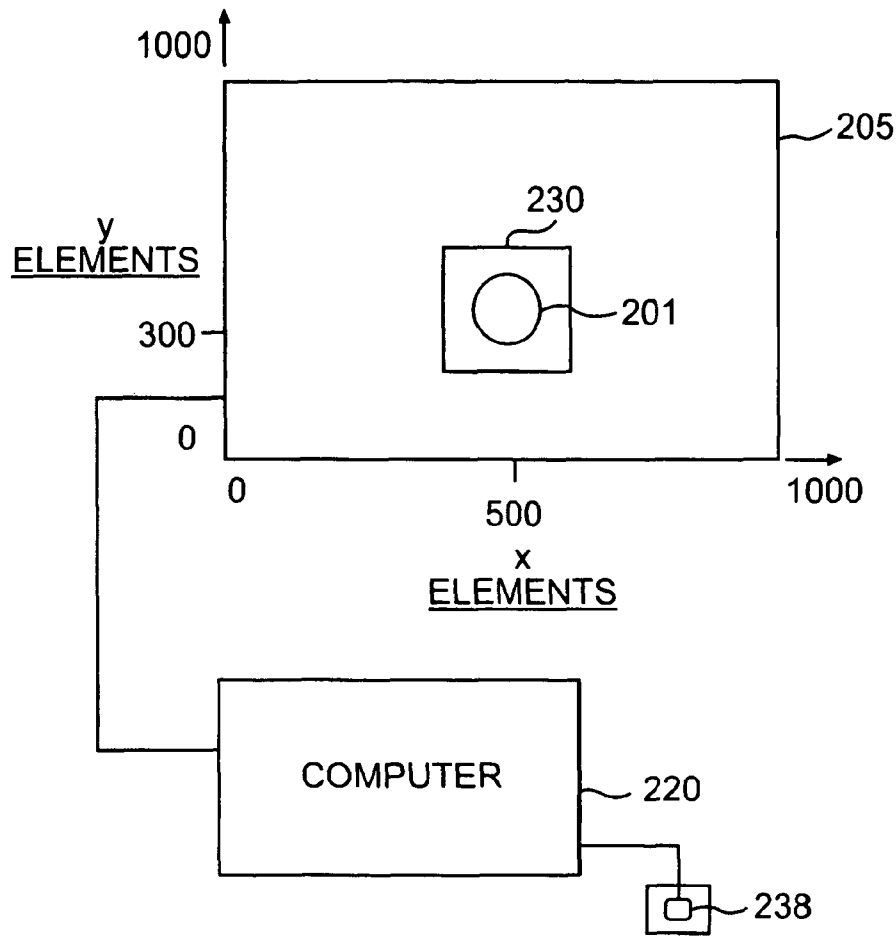


FIG. 2A

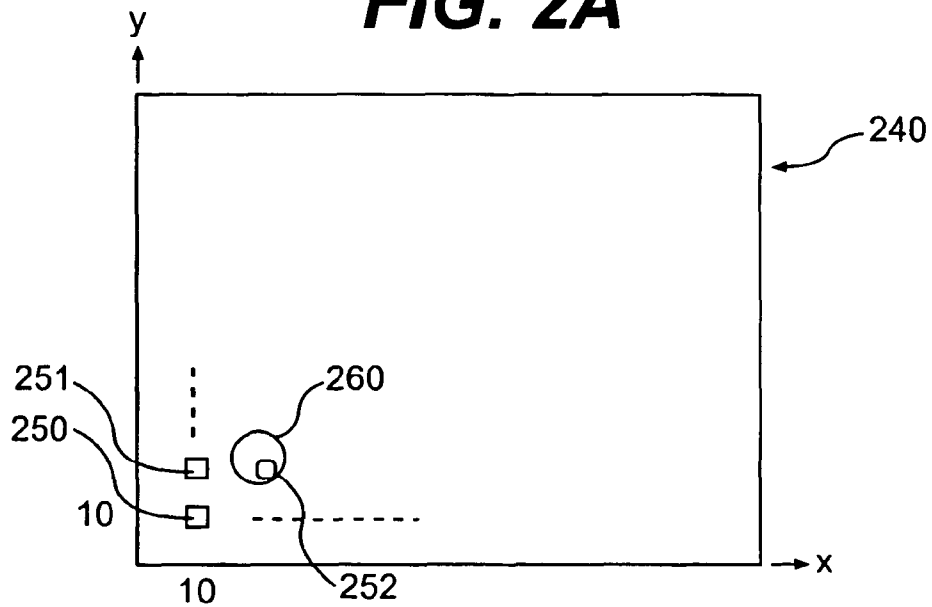


FIG. 2B

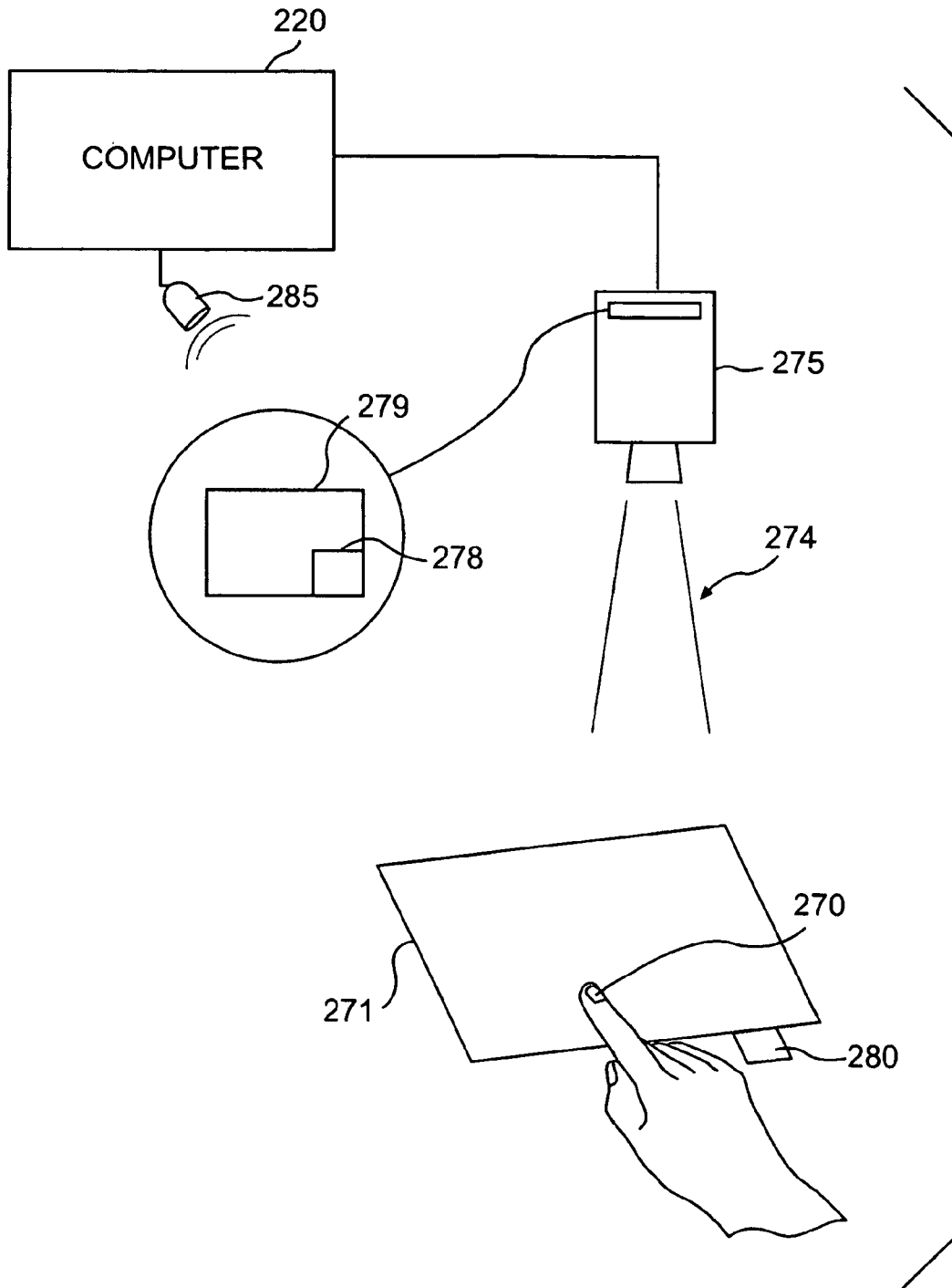


FIG. 2C

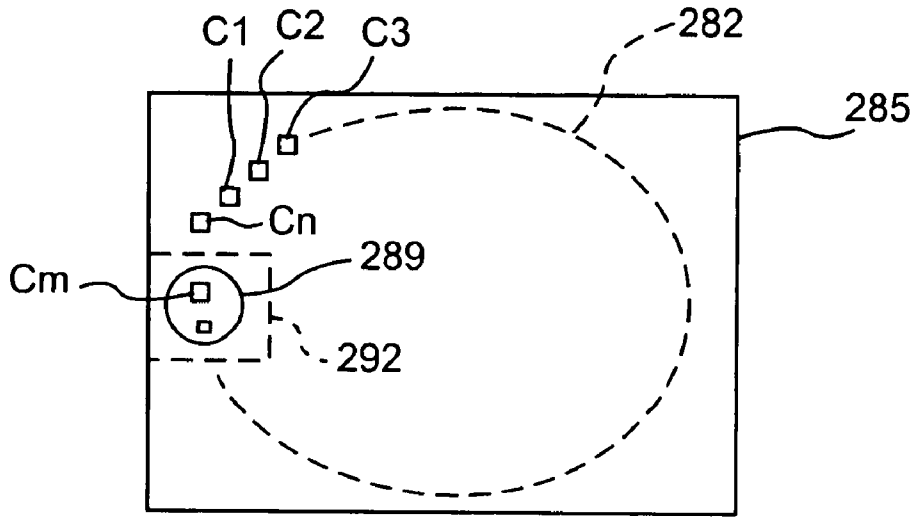


FIG. 2D

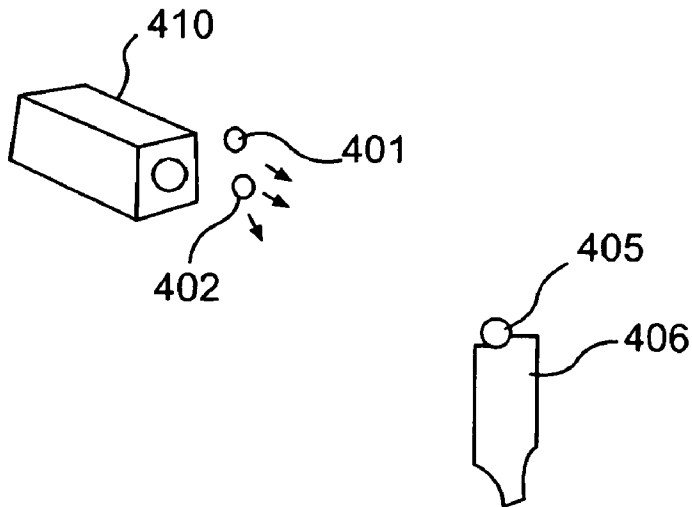


FIG. 4A

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.