

Exhibit S



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(12) **United States Patent**
Pryor

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(54) **MORE USEFUL MAN MACHINE INTERFACES AND APPLICATIONS**

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(*) 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.: **13/714,748**

(22) Filed: **Dec. 14, 2012**

(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 12/700,055, filed on Feb. 4, 2010, which is a continuation of application No. 10/866,191, filed on Jun. 14, 2004, now abandoned, which is a continuation of application No. 09/433,297, filed on Nov. 3, 1999, now Pat. No. 6,750,848.

(60) Provisional application No. 60/107,652, filed on Nov. 9, 1998.

(51) **Int. Cl.**
H04N 9/47 (2006.01)
H04N 7/18 (2006.01)

(52) **U.S. Cl.**
USPC **348/77; 348/155**

(58) **Field of Classification Search**
None
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	
4,791,589 A	12/1988	Blazo et al.	
4,843,568 A	6/1989	Krueger et al.	
4,908,704 A	3/1990	Fujioka et al.	
4,988,981 A	1/1991	Zimmerman et al.	
5,008,946 A	4/1991	Ando	
5,088,928 A	2/1992	Chan	
5,227,986 A	7/1993	Yokota et al.	
5,249,053 A	9/1993	Jain	
5,297,061 A	3/1994	Dementhon et al.	
5,365,597 A	11/1994	Holeva	
5,376,796 A	12/1994	Chan et al.	
5,388,059 A	2/1995	DeMenthon	
5,454,043 A	9/1995	Freeman	
5,459,793 A *	10/1995	Naoi et al.	382/165
5,491,507 A	2/1996	Umezawa et al.	
5,528,263 A *	6/1996	Platzker et al.	345/156
5,534,921 A	7/1996	Sawanobori	
5,572,251 A *	11/1996	Ogawa	348/207.99
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	463/8
5,624,117 A	4/1997	Ohkubo et al.	
5,781,647 A	7/1998	Fishbine et al.	
5,781,650 A	7/1998	Lobo et al.	
5,808,672 A *	9/1998	Wakabayashi et al.	348/220.1
5,828,770 A	10/1998	Leis et al.	
5,845,006 A	12/1998	Sumi et al.	
5,853,327 A	12/1998	Gilboa	
5,864,334 A *	1/1999	Sellers	345/168

(Continued)

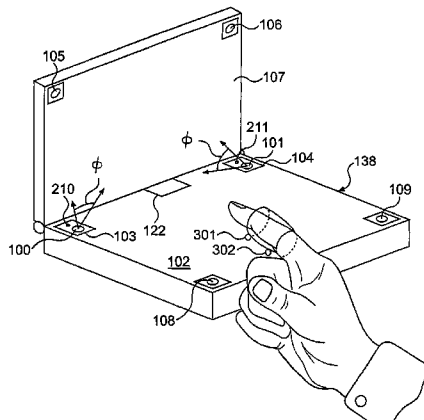
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(57) **ABSTRACT**

A method for determining a gesture illuminated by a light source utilizes the light source to provide illumination through a work volume above the light source. A camera is positioned to observe and determine the gesture performed in the work volume.

30 Claims, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,878,174	A	3/1999	Stewart et al.		6,342,917	B1	1/2002	Amenta	
5,904,484	A	5/1999	Burns		6,346,929	B1 *	2/2002	Fukushima et al.	345/8
5,926,168	A	7/1999	Fan		6,359,647	B1	3/2002	Sengupta et al.	
5,936,610	A *	8/1999	Endo	345/157	6,363,160	B1	3/2002	Bradski et al.	
5,940,126	A	8/1999	Kimura		6,373,472	B1	4/2002	Palalau et al.	
5,982,352	A	11/1999	Pryor		6,442,465	B2	8/2002	Breed et al.	
5,999,840	A	12/1999	Grimson et al.		6,508,709	B1	1/2003	Karmarkar	
6,052,132	A	4/2000	Christian et al.		6,529,617	B1	3/2003	Prokoski	
6,098,458	A	8/2000	French et al.		6,597,817	B1	7/2003	Silverbrook	
6,108,033	A	8/2000	Ito et al.		6,663,491	B2	12/2003	Watabe et al.	
6,148,100	A	11/2000	Anderson et al.		6,750,848	B1	6/2004	Pryor	
6,160,899	A	12/2000	Lee et al.		6,775,361	B1	8/2004	Arai et al.	
6,204,852	B1	3/2001	Kumar et al.		6,788,336	B1	9/2004	Silverbrook	
6,252,598	B1 *	6/2001	Segen	715/863	6,911,972	B2	6/2005	Brinjes	
					7,489,863	B2	2/2009	Lee	

* cited by examiner

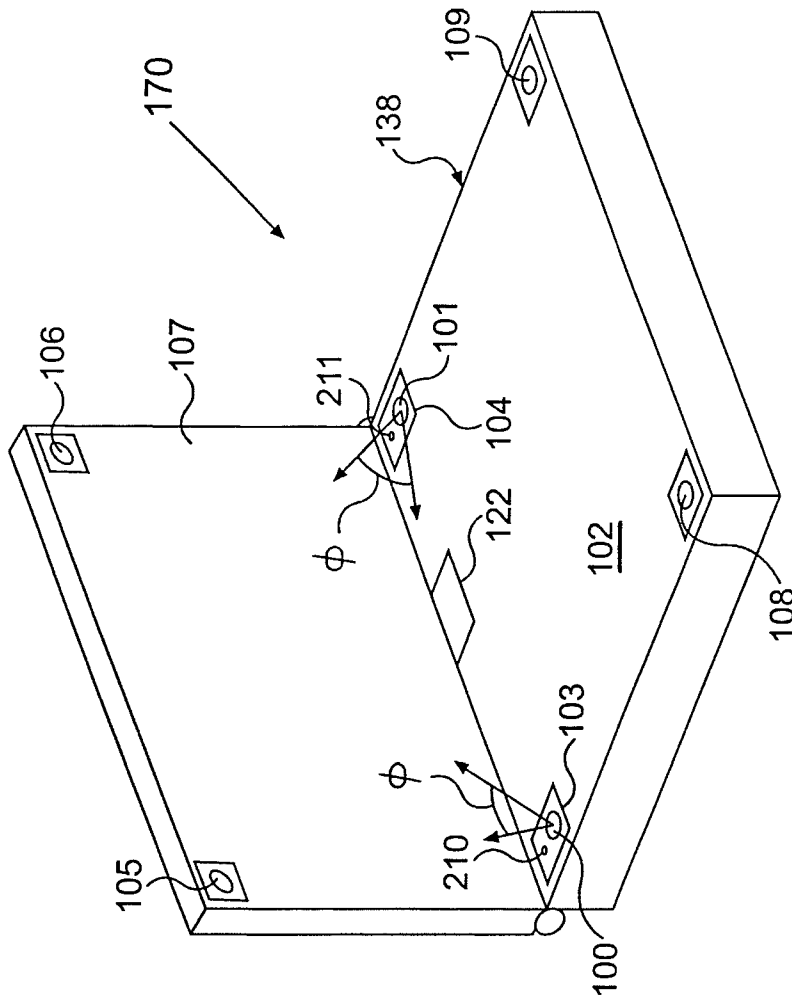


FIG. 1

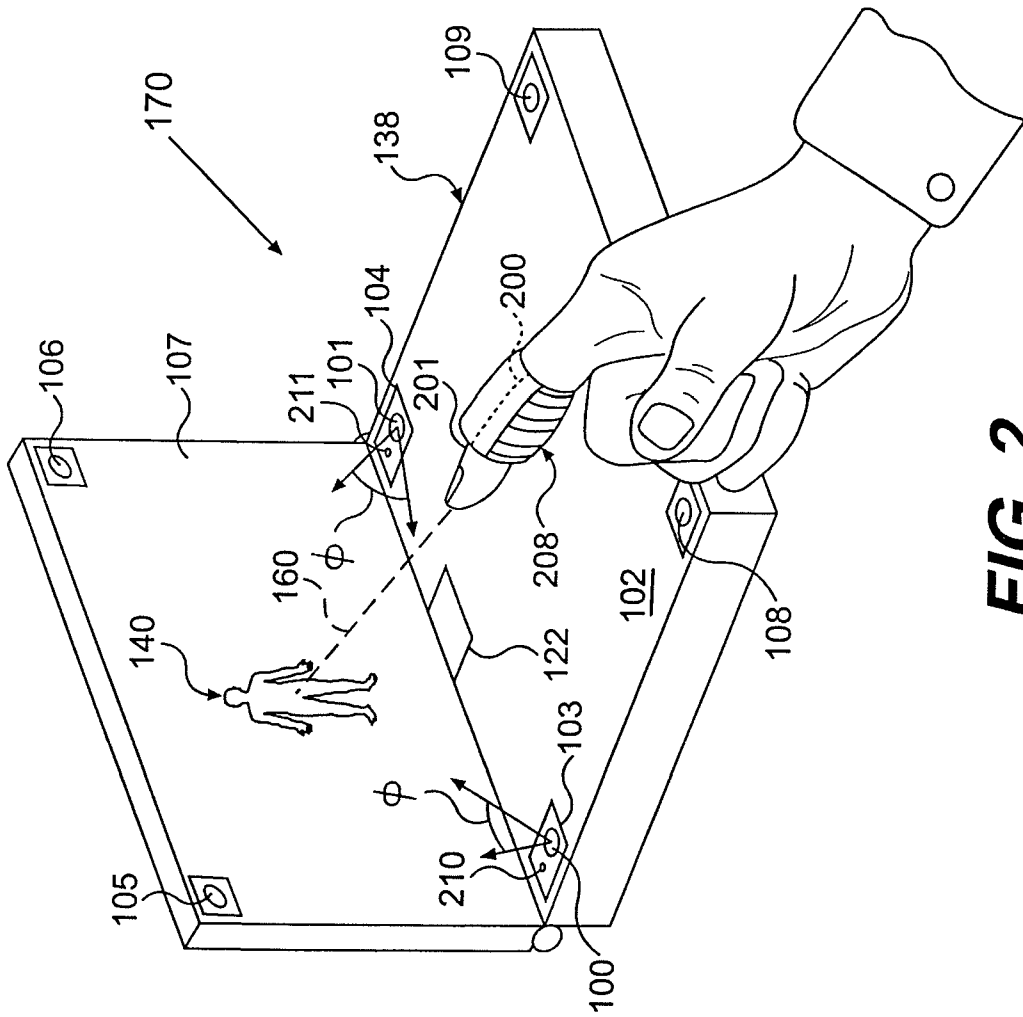


FIG. 2

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