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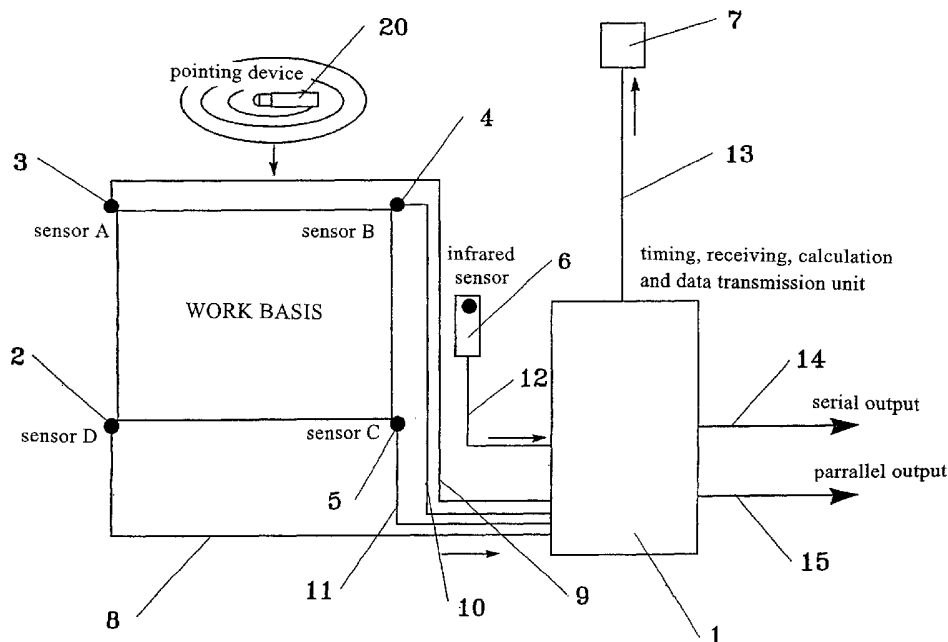
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(54) Title: METHOD AND DEVICE FOR DETERMINING THE POSITION IN THREE-DIMENSIONAL SPACE OF ONE OR MORE COMPUTER POINTING DEVICES



(57) Abstract: Disclosed is a method designed to determine the position in three-dimensional space of one or more computer pointing devices, for example pen-shaped pointing devices, and to send information relating to the spatial coordinates thereof to a user apparatus such as a computer, and a device for implementing the said method.



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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 02/08622

A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 21025 A (ELECTRONICS FOR IMAGING INC) 13 April 2000 (2000-04-13) claim 1; figure 4 ---	1-13
A	US 5 717 168 A (DEBUISSER THOMAS ET AL) 10 February 1998 (1998-02-10) claim 1; figure 1 ---	1-13
A	WO 00 16252 A (GOON EVGENY; KIM CHONG; CEDENO RAFHAEL; MCCOLLUM ROBIN; BARON EHUD) 23 March 2000 (2000-03-23) claim 53 ---	1-13
A	US 4 777 329 A (MALLICOAT SAMUEL W) 11 October 1988 (1988-10-11) claim 1; figure 1 --- -/--	1-13

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 862 152 A (MILNER RONALD E) 29 August 1989 (1989-08-29) claim 1; figure 8 ---	1-13
A	US 4 758 691 A (DE BRUYNE PIETER) 19 July 1988 (1988-07-19) claim 1; figure 1 -----	1-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 02/08622

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0021025	A	13-04-2000	US 6335723 B1	01-01-2002
			AU 756022 B2	02-01-2003
			AU 6278999 A	26-04-2000
			EP 1116171 A1	18-07-2001
			WO 0021025 A1	13-04-2000
			US 2001000666 A1	03-05-2001
US 5717168	A	10-02-1998	FR 2698191 A1	20-05-1994
			FR 2698193 A1	20-05-1994
			AT 147874 T	15-02-1997
			CA 2149213 A1	26-05-1994
			DE 69307544 D1	27-02-1997
			DE 69307544 T2	07-08-1997
			EP 0670070 A1	06-09-1995
			ES 2097630 T3	01-04-1997
			WO 9411844 A1	26-05-1994
			JP 9501247 T	04-02-1997
WO 0016252	A	23-03-2000	AU 5921399 A	03-04-2000
			WO 0016252 A1	23-03-2000
			WO 9926191 A1	27-05-1999
US 4777329	A	11-10-1988	NONE	
US 4862152	A	29-08-1989	NONE	
US 4758691	A	19-07-1988	CH 669676 A5	31-03-1989
			WO 8704549 A1	30-07-1987
			EP 0233472 A1	26-08-1987