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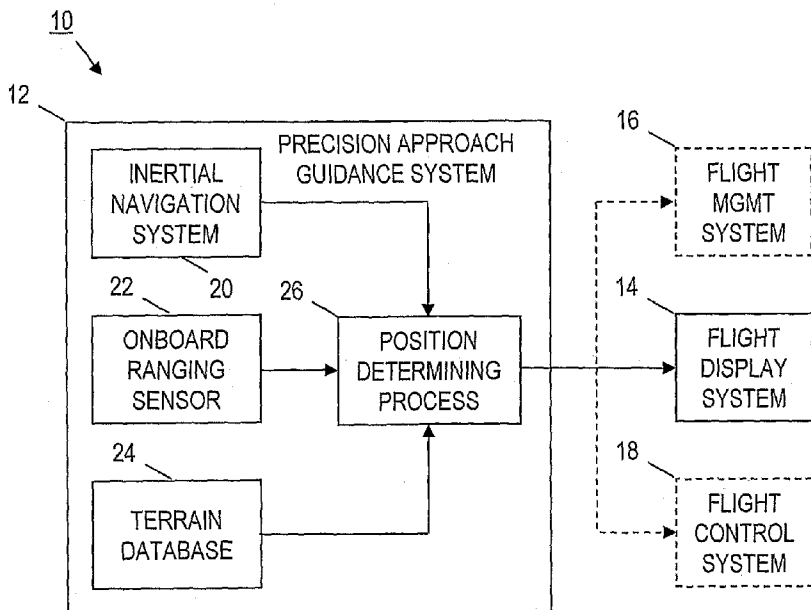
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[Continued on next page]

(54) Title: PRECISION APPROACH GUIDANCE SYSTEM AND ASSOCIATED METHOD



(57) Abstract: A precision approach guidance system that provides flying craft guidance information during a precision approach to a landing site and methods associated therewith are provided. In one embodiment, the system includes: an inertial navigation system, an onboard ranging sensor, a terrain database storing previously identified position-referenced terrain information associated with the landing site, and a position determining process. The position determining process repetitively determines a corrected position of the flying craft during the precision approach based at least in part on attitude and velocity information from an inertial navigation system, current position-referenced terrain information based on measurements from an onboard ranging sensor, and previously identified position-referenced terrain information from the terrain database.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G01S 13/91(2006.01);G06F 19/00(2006.01)**

USPC: 342/33,34;701/16,17

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)

U.S. : 342/33, 34; 701/4, 16, 17

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,484,072 A (ANDERSON et al) 19 November 2002 (19.11.1992), see Fig. 1 and col. 4, lines 16-59	1, 11, 17-21, 27 and 28 ----- 2-10, 12-16 and 22-26
X --- Y	US 2002/0147544 A1 (NICOSIA et al), 10 October 2002 (10.10.2002), see Fig. 1	1, 11, 17-21, 27 and 28 ----- 2-10, 12-16 and 22-26
X --- Y	US 4,825,374 A (KING et al) 25 April 1989 (25.04.1989), see Fig. 1	1, 11, 17-21, 27 and 28 ----- 2-10, 12-16 and 22-26

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 19 September 2007 (19.09.2007)	Date of mailing of the international search report 07 NOV 2007
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International application No.
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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.
<p>X --- Y</p>	<p>US 4,792,904 A (REINAGEL et al) 20 December 1988 (20.12.1988), see Fig. 5</p>	<p>1, 11, 17-21, 27 and 28 ----- 2-10, 12-20 and 22-26</p>

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Continuation of B. FIELDS SEARCHED Item 3:

IEEE

search terms; aircraft guidance, terrain database, inertial navigation system, ranging sensor