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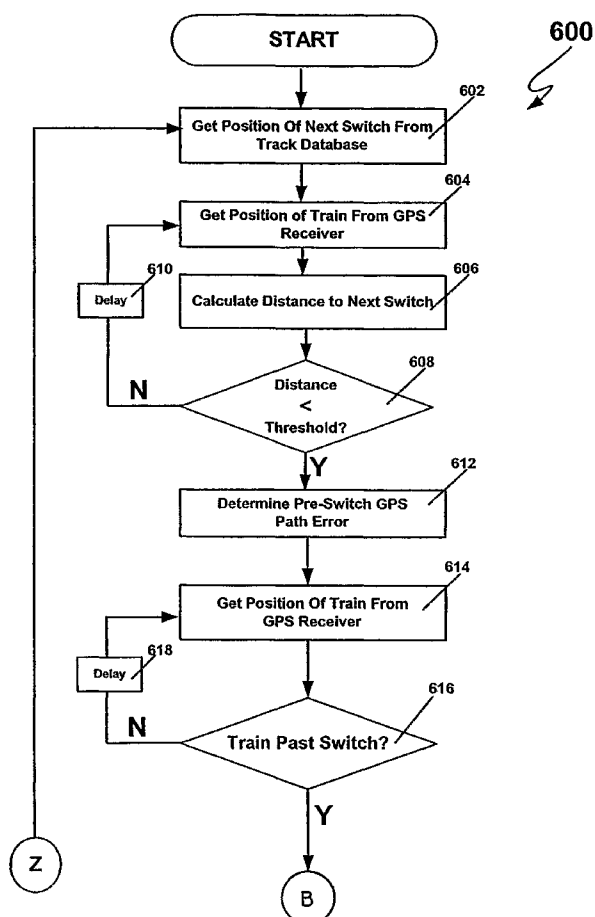
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DETERMINING POSITIONING SOLUTIONS



(57) Abstract: A method and system in which a vehicle carries an on-board positioning system and has access to a database of information pertaining to a plurality of fixed paths. A vector between the position of the fixed path and a position of the vehicle as reported by the positioning system is calculated prior to arriving at a point of divergence (i.e., a point at which a path branches, such as a switch on a railroad track). After passing the path divergence, a second vector is calculated between the position of the vehicle as reported by the positioning system and at least one of the alternate paths, preferably the correct alternate path. The first vector is compared to the second vector, and a determination as to which path the vehicle is on is made based on the comparison.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/31592

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G01C 21/00**( 2006.01)  
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USPC: 701/213,19,209,210,301

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. : Please See Continuation Sheet

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)  
None

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,701,228 A (KANE) 02 March 2004	
A	US, 6,863,246 A (KANE ET AL.) 08 March 2005	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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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	"&" document member of the same patent family

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## Continuation of B. FIELDS SEARCHED Item 1:

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