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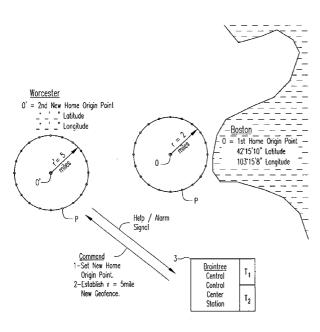
09/962,956 25 September 2001 (25.09.2001) US

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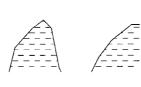
**(54) Title:** METHOD AND APPARATUS FOR DYNAMIC DEFINITION OF ALLOWABLE MOVEMENT AREA OF A VEHI-CLE



<u>Massachusetts</u>

(57) Abstract: A technique and apparatus for dynamically establishing and varying GeoFencing of a GPS-processor equipped vehicle or the like by providing specialized software and firmware at the vehicle processor to enable internal calculation of shape and size of GeoFences about the vehicle upon commands of the control center station, and without the necessity for such calculation or data point information transmission from the station.

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#### INTERNATIONAL SEARCH REPORT

nal Application No PUT/IB 02/03852

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G08G1/123

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

#### B. FIELDS SEARCHED

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, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT					
Category °	Citation of document, with indication, where appropriate, of the	Relevant to claim No.			
X	US 6 204 772 B1 (WOOD DANIEL C 20 March 2001 (2001-03-20) column 2, line 25-61 column 3, line 21-26 column 4, line 1-19 column 5, line 66 -column 6, line column 6, line 61-65 figure 1		1–16		
<b>A</b>	EP 0 736 425 A (KLASCHKA RUEDIG 9 October 1996 (1996-10-09) column 1, line 35-38 column 2, line 44-49 column 4, line 17-24 column 4, line 53-58 column 12, line 26-31	ER) -/	1–16		
χ Furt	her documents are listed in the continuation of box C.	Patent family members are listed	in annex.		
"A" docume consid "E" earlier of filing of "L" docume which citation "O" docume other of the country of the citation of the ci	ent defining the general state of the art which is not dered to be of particular relevance document but published on or after the international date ent which may throw doubts on priority claim(s) or is cited to establish the publication date of another n or other special reason (as specified) ent referring to an oral disclosure, use, exhibition or means ent published prior to the international filing date but than the priority date claimed	<ul> <li>"T" later document published after the inte or priority date and not in conflict with cited to understand the principle or the invention</li> <li>"X" document of particular relevance; the cannot be considered novel or cannot involve an inventive step when the document of particular relevance; the cannot be considered to involve an indocument is combined with one or ments, such combination being obvion the art.</li> <li>"&amp;" document member of the same patent</li> </ul>	eary underlying the claimed invention be considered to cument is taken alone claimed invention ventive step when the pre other such docuus to a person skilled		
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1	3 March 2003	26/03/2003			
Name and r	mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Flores Jiménez, A			

#### INTERNATIONAL SEARCH REPORT

lt al Application No PCT/IB 02/03852

	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 987 379 A (SMITH STEVE) 16 November 1999 (1999-11-16) column 2, line 65 -column 3, line 23 column 3, line 60-62 figures 1,3	1-16
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 15, 6 April 2001 (2001-04-06) & JP 2000 339029 A (KOMATSU LTD), 8 December 2000 (2000-12-08) abstract	1-16

#### INTERNATIONAL SEARCH REPORT

formation on patent family members

I al Application No PCT/IB 02/03852

Patent document cited in search report		Publication date	Patent family member(s)		Publication date	
US 6204772	B1	20-03-2001	DE GB	10059129 2362016		12-07-2001 07-11 <b>-</b> 2001
EP 0736425	Α	09-10-1996	DE EP	19512074 0736425		10-10-1996 09-10-1996
US 5987379	Α	16-11-1999	NONE			
JP 2000339029	Α	08-12-2000	US US	2002165645 2001044697		07-11-2002 22-11-2001