

Vehicular Obstruction Location Identification System

The invention relates to a vehicular obstruction location identification system made up of an obstruction identifier module, a central control unit and a remote control unit.

Systems such as this one exist currently but require more human input to operate effectively, which can lead to errors, and are more basic having less communication between components.

An object of this invention is to provide a system that resolves the situation arising when a vehicle obstructs anywhere locally, nationally or globally, where an obstruction identifier module has been placed, information regarding the obstructing vehicle and its location can be communicated to the central control unit which, after analyzing and identifying that it is truly an obstruction, passes the information on to a relevant remote control unit, which makes it possible for a remote control unit user to go to the location, identify and deal with the obstructing vehicle.

Accordingly this invention provides an obstruction identifier module, a central control unit and a remote control unit.

Preferably the invention will make use of more than one obstruction identifier module in any place that is deemed necessary to allow for the possibility of failure of a collocated obstruction identifier module.

A preferred embodiment of the invention will now be described with reference to the accompanying drawing in which Figure 1 shows the whole system.

Preferably the obstruction identifier module 1 provides a unique identifier 4, a sensor 5, a timing device 6, a status generator 7 and a communications device 8.

Preferably the central control unit 2 provides a lookup device 9, a database 10 containing at least location information, a communications device 11 and a memory device 12.

Preferably the remote control unit 3 provides a communications device 13, a memory device 14 and a human interaction device 15.

As shown in figure 1, the system uses a communications system that allows communications between all main components of the invention, an obstruction identifier module 1, a central control unit 2 and a remote control unit 3.

A preferred installation of the invention includes many obstruction identifier modules 1, located at regular intervals where it is deemed necessary in a defined area. One or many remote control units 3 and the users of said remote controlled units 3 are capable of getting to the defined area. A central control unit 2 is located anywhere locally, nationally or globally. When an obstructing vehicle is sensed, a status generator 7 generates a code within an obstruction identifier module 1, which sends a signal containing a unique identifier via a communications device 8 and a communications device 11 to a lookup device 9 within a central control unit 2. A lookup device 9 obtains the location from a database 10 and, on determining that a genuine obstruction is occurring, sends the location information via a communications device 11 and a communications device 13 to a remote control unit 3.

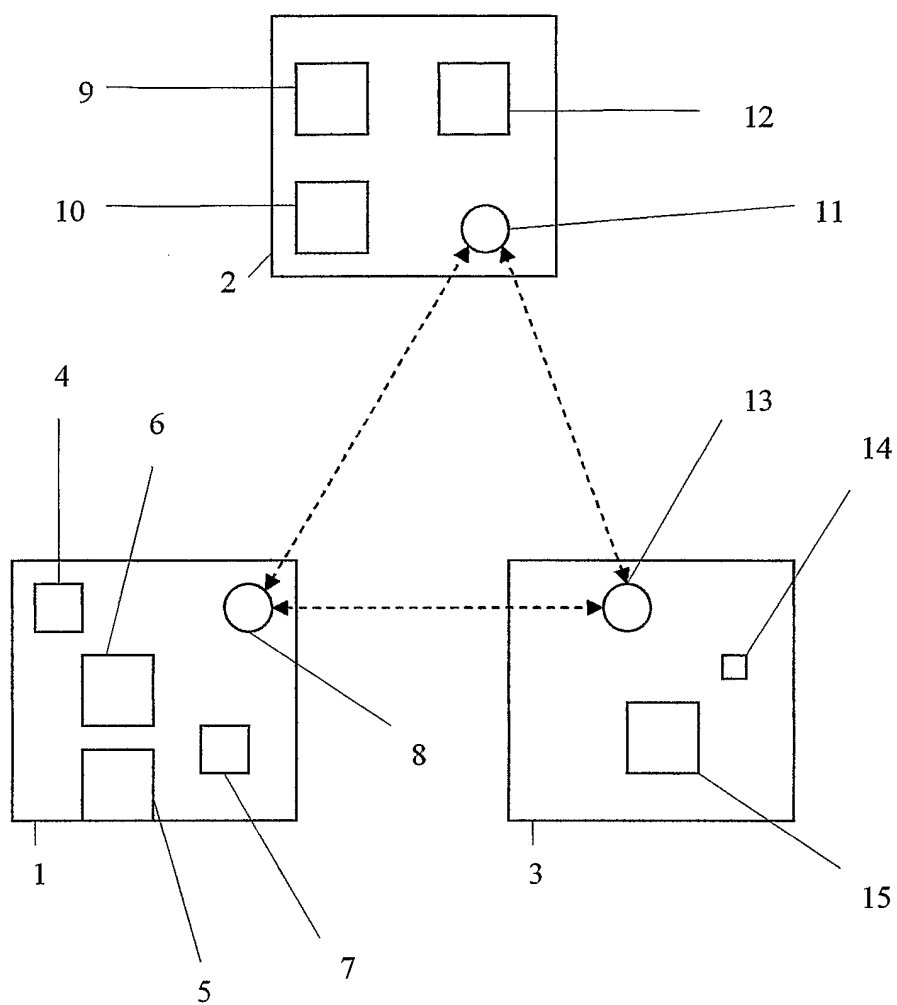
The location information is communicated to a remote control unit 3 user via a human interaction device 15 enabling the user to go to the location and deal with the obstructing vehicle as appropriate.

Claims

1. A vehicular obstruction location identification system including one or more obstruction identifier module, a central control unit and a remote control unit all of which are in communication via communications devices.
2. A vehicular obstruction location identification system as claimed in claim 1 where one or more obstruction identifier module is placed anywhere locally, nationally, or globally.
3. A vehicular obstruction location identification system as claimed in any preceding claim where one or more obstruction identifier module communicates with the central control unit.
4. A vehicular obstruction location identification system as claimed in any preceding claim where each obstruction identifier module comprises of at least a unique identifier, a sensor, a timing device, a status generator and a communications device.
5. A vehicular obstruction location identification system as claimed in any preceding claim where the central control unit provides at least a look up device, a database, a communications device and a memory device.
6. A vehicular obstruction location identification system as claimed in any preceding claim where the remote control unit provides at least a communications device, a memory device and a human interaction device.
7. A vehicular obstruction location identification system as claimed in any preceding claim where one or more obstruction identifier module senses an obstructing vehicle.
8. A vehicular obstruction location identification system as claimed in any preceding claim where on sensing an obstructing vehicle, an obstruction identifier module generates a code containing at least a unique identifier.
9. A vehicular obstruction location identification system as claimed in any preceding claim where each obstruction identifier module identifies an obstructing vehicle to the central control unit by communicating a code to the central control unit.
10. A vehicular obstruction location identification system as claimed in any preceding claim where the central control unit looks up the code in a database to determine the location of the obstructing vehicle.
11. A vehicular obstruction location identification system as claimed in any preceding claim where the central control unit determines that a vehicle is genuinely obstructing.
12. A vehicular obstruction location identification system as claimed in any preceding claim where the central control unit communicates the location of the obstructing vehicle to one or more remote control unit.

13. A vehicular obstruction location identification system as claimed in any preceding claim where each remote control unit communicates the location of an obstructing vehicle via a human interaction device.
14. A vehicular obstruction location identification system substantially as herein described above and illustrated in the accompanying drawings.

1/1

**Figure 1**

INTERNATIONAL SEARCH REPORT

In International Application No

PCT/GB 03/04863

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01G1/14

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 G01G

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 passages	Relevant to claim No.
X	WO 02 063570 A (VEHICLESENSE INC) 15 August 2002 (2002-08-15) the whole document ---	1-13
X	US 2003/132840 A1 (BAHAR REUBEN) 17 July 2003 (2003-07-17) the whole document ---	1-13
X	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11, 28 November 1997 (1997-11-28) & JP 09 198587 A (NEC CORP), 31 July 1997 (1997-07-31) abstract -----	1-13

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

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

"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

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

5 March 2004

Date of mailing of the international search report

23/04/2004

Name and 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

Johansson, R

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/04863

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 14
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 14

Claim 14 contains a reference to the description and/or the drawings. According to Rule 6.2(a) PCT, such claims are not allowable in this case.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Int nal Application No

PCT/GB 03/04863

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02063570	A	15-08-2002	CA 2437722 A1	15-08-2002
			EP 1360676 A2	12-11-2003
			WO 02063570 A2	15-08-2002
			US 2002109611 A1	15-08-2002
US 2003132840	A1	17-07-2003	WO 03058562 A2	17-07-2003
JP 09198587	A	31-07-1997	JP 2751955 B2	18-05-1998