Title: VIGILANCE MONITORING TECHNIQUE FOR VEHICLE OPERATORS

Abstract: A vigilance monitoring system to determine the alertness of a driver of a vehicle. The system uses one or multiple sensors located at the driver-vehicle interface (steering wheel, accelerator, brakes). The sensor monitors the magnitude and frequency of the force (or displacement) exerted by a driver at the driver interface. A time derivative of the force or displacement profile is created. The variability of the time derivative of the force/displacement data from the general trend of the data as obtained by an optimized moving average of the data. An intelligent control system measures the variability and compares with an alertness rating scale to determine the alertness score of the driver and issue warning signals and actions as appropriate.
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the “Guidance Notes on Codes and Abbreviations” appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
7 June 2007
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G08B 23/00; B60Q 1/00; B60K 28/00; G05D 1/00

USPC: 340/576, 575, 439; 180/272; 701/1

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S.: 340/576, 575, 439; 425, 5, 426; 15; 180/272; 701/1, 301

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

None

Electronic database consulted during the international search (name of database used, where practicable, search terms used)

None

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,717,606 A (HARA et al) 10 February 1998 (10.02.1998), figures 1-13, column 10, line 1- col. 12, line 45.</td>
<td>1-20</td>
</tr>
<tr>
<td>A</td>
<td>US 6,335,689 B1 (MINE) 01 January 2002 (01.01.2002), figures 1-10.</td>
<td>1-20</td>
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<td>A</td>
<td>US 6,756,903 B2 (OMRY et al) 29 June 2004 (29.06.2004), figures 1A-9.</td>
<td>1-20</td>
</tr>
<tr>
<td>A</td>
<td>US 6,061,610 A (BOER) 09 May 2000 (09.05.2000), figures 1-10.</td>
<td>1-20</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

See patent family annex.

Date of the actual completion of the international search

19 February 2007 (19.02.2007)

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