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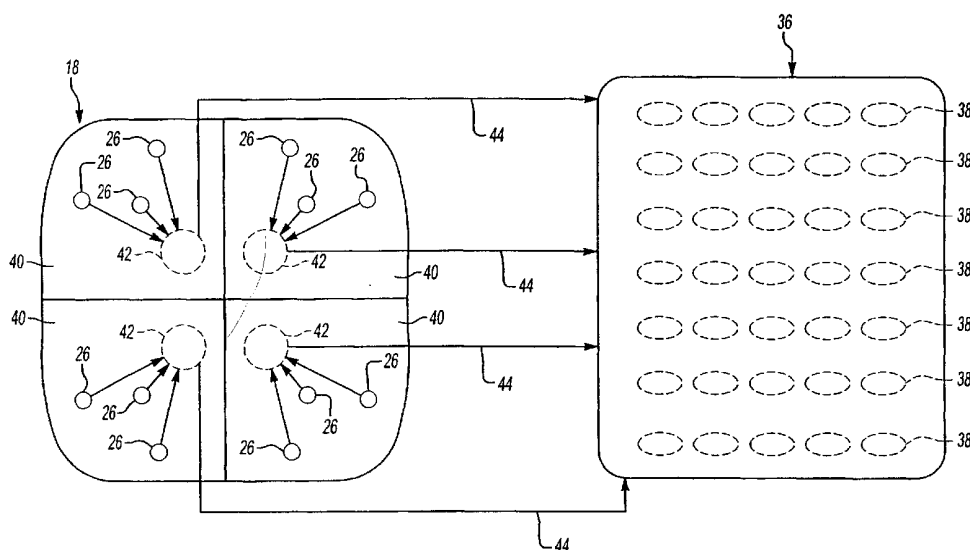
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(54) Title: VEHICLE OCCUPANT WEIGHT CLASSIFICATION SYSTEM



(57) Abstract: A vehicle occupant classification system categorizes vehicle occupants into various classes such as adults, child, infant, etc. to provide variable control for a vehicle restraint system such as an airbag. The classification system utilizes sensors that are installed in various locations in the vehicle. The sensors are used to generate a three-dimensional profile for the vehicle occupant. Various factors can affect the accuracy of this three-dimensional profile. Fuzzy logic is used to reduce some of the inaccuracies by providing multiple decision levels for various stages of the classification. Inaccuracies are also caused by sensors shifting within the system from their original position. This condition creates offset and the system evaluates this offset and generates a correction factor for provide a more accurate three-dimensional profile. Electrically erasable programmable read-only memory is used to reduce complications and inaccuracies associated with seat occupant weight sensors that have mounting configurations that vary depending upon the vehicle.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/21649

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B60R21/01

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 B60R

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, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| Y          | page 6, line 2 -page 18, line 14<br>figures 1A,,11,17,19,20,21,25<br>---                                                                                                                          | 5,18                  |
| Y          | K. BILLEN: "Occupant Classification<br>System for Smart Restraint Systems"<br>SAE 1999-01-0761,<br>January 1999 (1999-01), pages 33-38,<br>XP002184965<br>page 33 -page 38<br>figures 1-14<br>--- | 5,18                  |
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- \*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

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Information on patent family members

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