METHOD AND SYSTEM FOR LOCATING AND MONITORING FIRST RESPONDERS

The present invention is directed to methods and systems for locating and monitoring the status of people and moveable assets, such as first responders, including firefighters and other public service personnel, and their equipment both indoors and out. The invention can provide for locating and monitoring the status of people and assets in environments where GPS systems do not operate, or where operation is impaired or otherwise limited. The system and method uses inertial navigation to determine the location, motion and orientation of the personnel or assets and communicates with an external monitoring station to receive requests for location, motion orientation and status information and to transmit the location, motion orientation and status information to the monitoring station.
## INTERNATIONAL SEARCH REPORT

### A. CLASSIFICATION OF SUBJECT MATTER

**IPC(8) - H04Q 7/20 (2008.04)**

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

### B. FIELDS SEARCHED

**USPC: 455/461**

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

**USPC: 455/403, 404.2, 414.1, 456.1, 461; 700/1, 90, 91, 115**

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**USPTO WEST (PGPB), USPT, EPAB, JPAB; Google Scholar**

Search Terms: predefined, location, position, motion, microprocessor, base, master, station, gyroscope, accelerometer, real-time, inertial, navigation, transceiver, compass, track, person, people, individual, object, car, vehicle, phone, data, information, user etc.

### 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>
</table>

* Further documents are listed in the continuation of Box C.

- **A** - document defining the general state of the art which is not considered to be of particular relevance
- **E** - earlier application or patent 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**

03 September 2008 (03.09.2008)

**Date of mailing of the international search report**

10 SEP 2008

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