Title: GEOPHONE WITH MASS POSITION SENSING

Abstract: A motion sensing element with position sensing includes a case, a magnet positioned within the case, a spring assembly having an electrically conductive member and a coil assembly coupled to the spring assembly. The coil assembly and magnet are moveable with respect to one another. A capacitor plate is proximate the electrically conductive member with a distance between the capacitor plate and electrically conductive member being variable as the magnet and coil assembly move. Leads connect the capacitor plate and electrically conductive member to a sensing circuit for estimating the relative positions of the magnet and coil assembly.
Declarations under Rule 4.17:
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(H))
— as to the applicant’s entitlement to claim the priority of the earlier application (Rule 4.17(Hi))

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 3 July 2008
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04R 9/00 (2007.01)
USPC - 367/1 82

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(8) - H04R 9/00 (2007.01)
USPC - 367/ 140, 176, 181, 182 (2007.01)

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 practicable, search terms used)

MicroPatent, IP.com, DialogPro

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>Y</td>
<td>Applicant's Admitted Prior Art, see paragraphs 0022 and figure 2.</td>
<td>1-14</td>
</tr>
<tr>
<td>Y</td>
<td>US 20050068851 A1 (SCHLEISIEK et al) 31 March 2005 (31.03.2005), see whole document.</td>
<td>1-14</td>
</tr>
</tbody>
</table>

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

* Special categories of cited documents:
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Date of the actual completion of the international search
31 July 2007

Date of mailing of the international search report
21 MAY 2008

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Form PCT/ISA/210 (second sheet) (April 2007)