

## Electrostatic sensor

### Description

The invention relates to a new extremely sensitive electrostatic detector able to remotely detect very small variations of electrostatic field induced by the vicinity of a conducting body. This conductor can be metallic or not, in movement or at rest.

Variations in the electrostatic field are measured by a very sensible electrometer composed of two metallic electrodes of various size and shape. In order for the detector to detect the movement of uncharged object, the detector is covered with a plastic covers. This allows the detection of moving charged or uncharged objects with a very good sensibility. For example, a non-plastic body moving far away from the detector (up to 3 meter) can be followed with a better precision than the one given by interferometry methods. This precision allows utilising the invention for triangulation 3D detection.

The invention can also be used to follow contactlessly the vibrations of a structure and for the detection of plastic and metallic landmines (Fig 1 and 3). The detector can also be used for the contactless detection of electric signals in a cable or a wire, and to remotely detect brain and heart activity (Fig. 2).

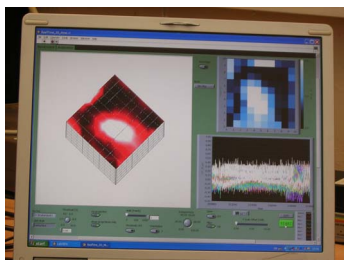


Fig. 1

### Innovative aspects and main advantages

- Very high sensitivity in detecting electrostatic fields
- 3D Detection of charged and uncharged bodies
- Detection of bodies in movement or at rest
- Detection of plastic or metallic landmines

### Areas of application

- Mine clearance
- Remote detection of brain and heart activity
- Robotic
- Structural analysis
- Security

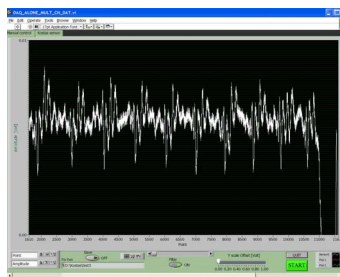


Fig. 2

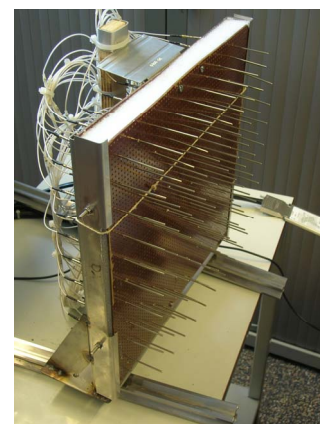


Fig. 3

### Stages of development

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Patent pending PCT/EP06/069787

Pilot tests are running for mine clearance (2007).

### Scientific contact

Marco Sironi, Sector Head  
Constantin Coutsomitros  
SILab – IP&SC - JRC  
European Commission  
I-21020 Ispra - Italy  
Tel: (+39)0332/785754  
marco.sironi@jrc.it, constantin.coutsomitros@jrc.it

### Licensing contact

Intellectual Property and Scientific Collaboration Unit  
DG JRC - European Commission  
B-1049 Brussels, Belgium  
Email: JRC-TechTransfer@ec.europa.eu

Reference: file n°2725