brain

## consortium

University of Bremen
Philips Research Europe
University of Ulster
The Cedar Foundation
University of Warsaw
Telefonica I+D
Twente Medical Systems Intl.

Universität Bremen

PHILIPS
sense and simplicity

University of ULSTER

Cedar

UNIVERSITAS VARSOVIENSIS

Telefonica
Telefónica Investigación y Desarrollo

TMSi

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brain

Brain-Computer-Interface with
Rapid Automated Interface
for Nonexperts

ICT-2007-224156

SEVENTH FRAMEWORK PROGRAMME

## objectives

BRAIN aims at developing Brain-Computer Interfaces (BCIs) into practical assistive tools to enhance inclusion for a range of different disabled users.

Many of these people would otherwise have little or no opportunity to interact with loved ones, carers, home appliances and assistive devices, or personal computer and internet technologies.

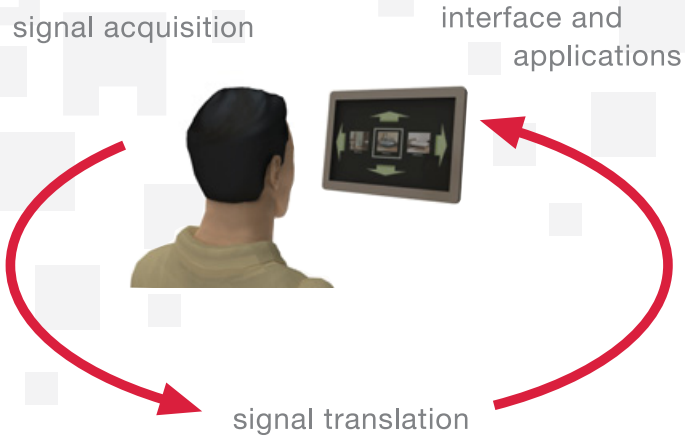
BRAIN will improve:

- BCI reliability
- flexibility
- usability, and
- accessibility

while minimizing dependence on outside help.

BRAIN is a 36 month research project, funded under the EU 7th Framework Programme: ICT-2007-224156

## expectations




The improvements will entail upgrades to all main components of a BCI system:

- signal acquisition
- signal translation, and
- application

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## overview

Lightweight, inexpensive, non-invasive sensors and amplifiers for signal acquisition will be developed that do not require: significant preparation or cleanup times, uncomfortable electrode gel, skin abrasion, exposed wires or cables, expert assistance, or stringent laboratory conditions.

Software will identify the best BCI parameters for each user and customize the operating protocol accordingly.
Automated signal processing software will improve signal translation.

An intuitive universal interface will enable control of a range of existing applications, including home assistive technologies, a BCI training system to enhance performance, and a communications and entertainment package.

Knowledge will be disseminated through conferences, workshops, and academic papers.
A website with open source software and support tools will promote both commercial and academic development within and beyond the consortium (www.brain-project.org).

Such scientific and technical advances will advance wide scale deployment of BCI, establishing it as an assistive technology of choice for existing and new user groups.