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Collaborative Project of the 7th Framework Programme



WP1

Project Management Coordination

Support document on D.1.3: Project Website online

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www.BrainAble.org

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Abstract (for dissemination)	Description of the BrainAble public portal. This document (which is not a report) provides additional details on the delivery of the public website portal due in PM02.
Keywords	Dissemination, public awareness, portal, website, project information

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1 Precedence and purposes

As mentioned in Annex I to the Decision concerning the Specific Programme “Cooperation”¹, promoting the use, dissemination and public awareness of FP7 projects is a key objective of FP7. Under the mentioned Research Programme, the beneficiaries shall, throughout the duration of the project, take appropriate measures to engage with the public and the media about the project.

The **BrainAble project website**, recently opened to the public consultation, will be an effective mechanism for rapid and straightforward knowledge-sharing, in a disciplined and controlled manner, **to promote its approach and results** (as they become available) **to the widest possible audience** (an additional goal is to raise general awareness of the large potential that ICT have for disabled people).

The project portal is intended to match the general-purpose communicational objectives for BrainAble dissemination:

- To provide **visibility** to the Project and its **scientific and technical** outcomes within research communities working on the key medical and technological areas in BrainAble.
- To raise the **awareness** within different potential BrainAble user groups and to catalyze its participation in the development, validation and exploitation processes.
- To increase the **social visibility** on the disabled patients needs and to ensure the transfer of the Project conclusions to the relevant public entities holding responsibility for inclusion policies.
- To **accelerate the innovation** in the assistive technologies ecosystem by disseminating the Project concept within key European stakeholders.
- To support related and complementary technologies and movements promoting **e-Inclusion, Independent Living and Ageing with quality**.

To make the project results, namely the integrated BrainAble system and the individual, partially exploitable project results (“modules”), known to a wide range of industrial uptakers and other stakeholders with at least partially commercial interests in the project outcomes (technological and commercial partners).

2 Technical specifications

- Optimised for a screen resolution of 1024*768
- Sharepoint portal server 2010
- .NET Framework 3.5.
- SQL-Server 2008 64 bits
- RSS services incorporated
- Language: English

3 User-friendly principles

BrainAble website has been developed under design principles and elements which grab visitor’s attention and encourage them to continue reading:

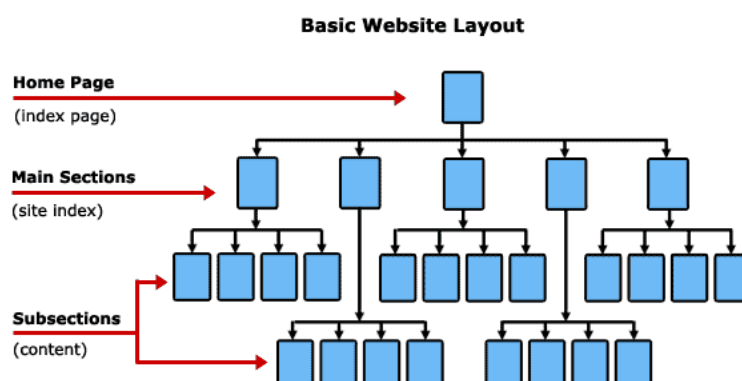
¹ Decision 2006/971/EC: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_40020061230en00860242.pdf

- Calmer graphic design consistent along all the sections
- Easy navigation on site
- Limited use of images and flashes
- Descriptive titles
- Useful contents, avoiding irrelevant information
- Page load speed
- Search engine incorporated
- Print facility

4 Website description

The official project web site **www.BrainAble.org**, available since the **last week of February 2010**, provides exhaustive information on the project features and details. This website is aimed to gather the whole production of digital contents related to the Project, with a special focus on multimedia content.

The website has been designed under basic layout principles, and is structured in 8 main sections divided in subsections which content the information of the project. That structure is the easier with our visitors can navigate the site (a general rule of thumb is no more than three clicks for a visitor to find what they are looking for).



The navigation bar provides visitor with options to move around within the website without crowding the homepage. Structured as a primarily collection of links, the main sections of BrainAble website form the headings of specific bodies, the gateways or entry points into particular areas one click access of the data on where most of our content resides:

- project presentation (**Home Page**)
- Consortium details
- **Project** work plan
- **Dissemination** notes and materials
- related **Events**
- latest **News** of the project and related
- recommended **Links** and
- **Contact** details

4.1 Home page

Visitor's first impression of our site, the page presents what the project is about: the vision and mission of BrainAble project. The section includes highlights on Events, News and recommended Links, listed in separate boxes.



The screenshot shows the BrainAble website's home page. At the top, there's a navigation bar with links like Home, Consortium, Project, Dissemination, Events, News, Interesting Links, and Contact. Below this, a large banner features the BrainAble logo and a headline: "Autonomy and social inclusion through mixed reality Brain-Computer Interfaces: Connecting the disabled to their physical and social world". The main content area includes a detailed description of the project's goals and a list of upcoming events. On the right, there's a section for links and a small illustration of a person in a wheelchair using a BCI device. The footer contains logos of partner institutions and a copyright notice.

BrainAble

Autonomy and social inclusion through mixed reality Brain-Computer Interfaces: Connecting the disabled to their physical and social world

BrainAble will conceive, research, design, implement and validate an ICT-based human computer interface (HCI) composed of BCNI sensors combined with affective computing and virtual environments. This combination will dramatically improve the quality of life of people with disabilities by overcoming the two main shortcomings they suffer - exclusion from home and social activities - by providing inner functional independence for daily life activities and autonomy (HCI connected to accessible and interoperable home and urban automation) and outer social inclusion (HCI connected to advanced and adapted social networks services).

In terms of HCI, BrainAble will improve both direct and indirect interaction with computers. Direct control will be upgraded by creating tools that allow people to control those inner and outer environments using a "Hybrid" Brain Computer Interface (BCI) system (BCIs, Electro Oculogram (EOG), Electromyography (EMG), and Heart Rate). Furthermore, BCNI information will be used for indirect interaction, such as by changing interface or overall system parameters based on measures of boredom, confusion, frustration, or information overload. These self-adaptive tools will increase effective bandwidth because users will be able to use a plurality of signals to effect control, and also because adaptation will reduce errors and help provide the user with the desired control.

BrainAble's HCI will be complemented by an intelligent Virtual Reality-based user interface with avatars and scenarios that will help disabled people to move around on their wheelchairs, interact with all sort of devices, create self-expression assets using music, pictures and text, communicate online and offline with other people, play games to counteract cognitive decline, and get trained in new functionalities and tasks.

Events

Event	Date
eHealth 2010 Barcelona, Spain High Level eHealth Conference 2010, the 8th edition	15/03/2010
IEEE Virtual Reality 2010 Waltham, Massachusetts (USA) IEEE VR 2010 is the premier international conference and exhibition on virtual reality	20/03/2010
6TH World Congress for Neurorehabilitation Vienna, Austria World Federation for Neurorehabilitation	21/03/2010

Links

- Information space devoted to European Research, Development and Innovation activities
- Brain-computer interfaces with Rapid automated Interfaces for Nonexperts
- The official entry point to europe's Seventh Framework Programme for research and technology development (FP7), its specific programmes, activities, themes and latest developments.
- Future BCNI is a Coordination and Support Action (CSA) that aims to address these two problems by establishing and supporting a thriving, efficient, well-connected BCNI community.

1 - 3

RSS News RSS Events

bdigital TECNIO
BARCELONA DIGITAL TECHNOLOGY CENTRE

TU Graz
Graz University of Technology

UNIVERSITAT POMPEU FABRA
SPECB

meticube
ENGINHARIA DE SOFTWARE

gtec
GUGER TECHNOLOGIES

AbilityNet
Reg Charity No. 1067073

INSTITUT GUTTMANN
HOSPITAL DE NEUROREHABILITACIO

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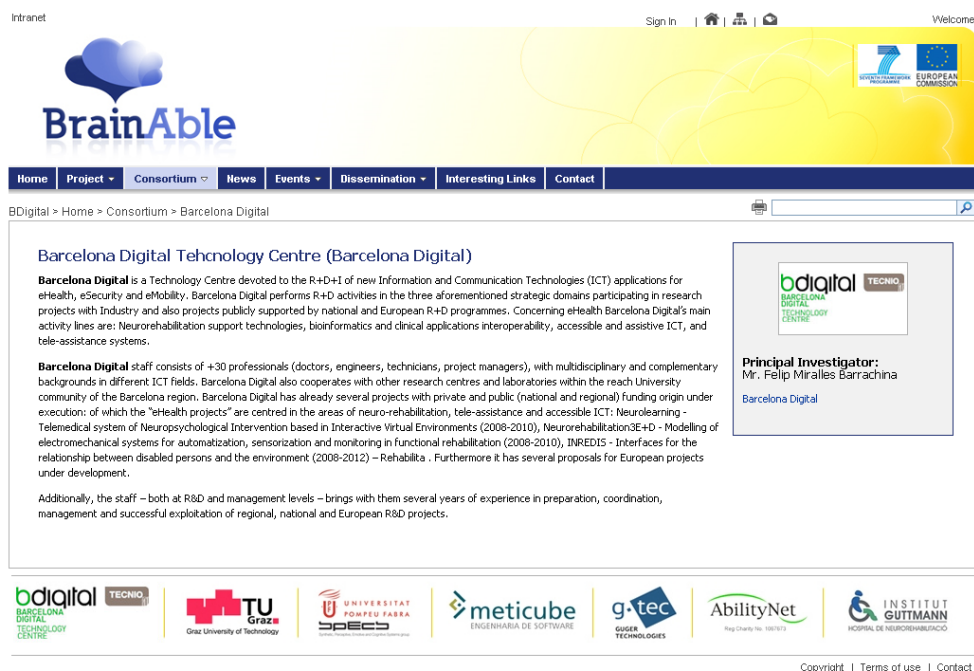
Figure 1: BrainAble website Home page

4.2 Consortium

This page is exactly what it sounds like: a formal presentation of the consortium as a whole is given, accompanied by description (focused on R+D and assistive technologies) of each partner providing the visitor with information about participant organisations background and experience. The partners description highlight their specific expertise for and their role in the project. Each partner's page shows the name and contact data of the principal investigator involved in the project.



The screenshot shows the BrainAble website Consortium page. The header includes the BrainAble logo, navigation links (Home, Project, Consortium, News, Events, Dissemination, Interesting Links, Contact), and a search bar. The main content area is titled "BDigital > Home > Project". It features a section titled "BrainAble's HCI will therefore allow the disabled user to manage two types of applications:" followed by two sub-sections: "Inner virtual environment connected to home automation to augment user's functional capabilities and autonomy:" and "Outer virtual environment connected to social network Services to augment user's social inclusion:". A diagram illustrates the interaction between BCNI, Affective Computing, and a Virtual Reality Environment, which then manages Social Networks and Home Automation. A list of five objectives for the project is provided on the right. The footer contains logos of partner institutions and copyright information.



The screenshot shows the BrainAble website Consortium page for Barcelona Digital. The header includes the BrainAble logo, navigation links (Home, Project, Consortium, News, Events, Dissemination, Interesting Links, Contact), and a search bar. The main content area is titled "BDigital > Home > Consortium > Barcelona Digital". It features a section titled "Barcelona Digital Tehcnology Centre (Barcelona Digital)" followed by a paragraph describing the center's mission and a list of its main activity lines. A box on the right identifies the Principal Investigator as Mr. Felip Miralles Barrachina. The footer contains logos of partner institutions and copyright information.

Figure 2: BrainAble website Consortium and partner's pages

4.3 Project

Vision and mission of overall research philosophy of the project, the section highlights the work plan and the objectives targeted for the project, providing an analysis of specific problems addressed by the project and the proposed services/solutions focusing in research and innovative aspects.

Intranet Sign In | | | Welcome





[Home](#) | [Project](#) | [Consortium](#) | [News](#) | [Events](#) | [Dissemination](#) | [Interesting Links](#) | [Contact](#)

BDigital > Home > Project

BrainAble's HCI will therefore allow the disabled user to manage two types of applications:

Inner virtual environment connected to home automation to augment user's functional capabilities and autonomy:

Apply control and automation techniques for the autonomy, comfort and security of the user in his living environment modifying it as little as possible, by creating a wireless, light and open home and urban automation network empowered by the Universal Remote Console (URC) standard for accessibility and interoperability of devices. Through a "BNCI+ affective computing" interface to an audio-visual virtual environment, the user will be able to interact with and manage his accessible living environment, which will include his wheelchair, assistive robot, Heating, Ventilating, and Air Conditioning (HVAC), lighting, natural lighting, audio, video, security (intrusion, fire, gas, water), intercoms, home robotics and other home devices (garage door, front door, security camera, television, pet and plant feeding and watering) as well as URC-compliant urban devices such as Automatic Teller Machine (ATM), traffic-lights or information displays.

Outer virtual environment connected to social network Services to augment user's social inclusion:

Enable access to online communities of people who share interests and activities. A new trend is emerging with social networks created to help its members with various physical and mental ailments in order to share self-expression assets, experiences and knowledge, as well as provide tools to carry out a responsible health tracking. Social interaction between users will be synchronous/online like in a conversation and asynchronous/offline like in a mail relationship. It is crucial to have the scientific and industrial communities involved to avoid false or unproven expectations.



```

graph LR
    BCNI[BCNI] -- interact --> VRE[VIRTUAL REALITY ENVIRONMENT]
    AC[AFFECTIVE COMPUTING] -- interact --> VRE
    VRE -- manage --> SN((SOCIAL NETWORKS))
    VRE -- manage --> HA((HOME AUTOMATION))

```

Objectives of the project

1. To conduct a truly **user-centric** design of a platform which improves the quality of life of people with motor disabilities and investigate its **effectiveness** to compensate deficit after the rehabilitation process, increase autonomy in daily life activities, decrease barriers and increase participation favouring social inclusion and quality of life.
2. To create a specifically designed **HCI**, which integrates BNCI with other specific sensor technologies.
3. To create a user-centric **virtual environment** for home and urban automation control, social networking and training.
4. To create **Ambient Intelligent (AmI)** and **ubiquitous computing** services for **accessible device integration**.
5. To create **self-expression tools** and **social networking** services.











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Figure 3: BrainAble website Project page

The description includes target users of the proposed service/solution, their unmet needs and the way the project intends to contribute to fulfil these needs.

4.4 Dissemination

The website shows in a separate page four subsections of data: **Publications**, **Dissemination public materials**, **Press Releases** and **Public deliverables**. The section allows the posting of our own materials (i.e: BrainAble publications) or those from others -used with their permission, of course-. These pages will be a useful resource for visitors.



Figure 4: BrainAble website Dissemination page

4.5 Events

BrainAble website includes detailed information on related meeting and events descriptions, goals, dates, times, locations, etc. which can be directly linked.



Figure 5: BrainAble website Events page

4.6 News

Section providing information and news relating all the stakeholders of the project and associated interacting environments.

4.7 Links

Recommended links to other projects and institutions, EC portals, links to interesting informational websites. This page can also be used to post interesting articles that others have written, thereby reserving the formal "Publications" webpage for our own articles.

4.8 Contact

This section includes every possible way to contact the Coordination of the BrainAble project: name, address, telephone number, fax number, and all the various email addresses through which people might contact the Coordinator and the PMO.



Figure 6: BrainAble website Contact page


5 Responsibilities

The official project web site is managed by the PMO which is responsible for the final contents and the regular updating and only need PB approval when major components of the project may be affected in a critical way or GA approval, when eventual knowledge protection possibilities (patents, utility models) are at stake.

It shall be the most up-to-date and complete reference for the project related public information. That means that **partners need to contribute** latest material as soon as possible, should make reference to it

on their public communications and should provide the PMO with news and latest facts such as complete information (date, place, media, source or reference, purpose, contents etc.) on publications, press releases, public communication and presentations and similar.

The PMO facilitates the information submission with easy-to-use mechanisms such as, for example, simple standardised email notice forms:

		BrainAble website update request [NEW CONTENT / MODIFICATION] *		[Date]
				[PARTNER]
Section	Contents			Responsible / source
	Title	Main body		
Any other material: [Include any other additional support material that cannot be encompassed by the above headings: pictures, links...]				
<i>* Indicate if the request relates a new content or a modification from a existent one (in the last case please identify by chromatic criteria the variations to be implemented)</i>				

6 List of Key Words/Abbreviations

EC	European Community
GA	General Assembly
PB	Project Board
PMO	Project Management Office