WP7
Service design, Exploitation, and Dissemination

D7.8: Project Cluster with sibling projects

Meticube
v.1.1

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www.BrainAble.org

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Abstract (for dissemination)	The document describes the plan for establishment of a Project Cluster with sibling projects from FP6 and FP7 projects with similar technological innovations and developments, to exploit it in terms of dissemination and exploitation
Keywords	Clustering, BCI, BNCI, AAL, e-Inclusion, VR, AmI, FP6, FP7

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Issue Date	**Version**	**Author**	**Change**
29.11.2010	0.1	METI	Initial document.
23.12.2010	0.2… 0.6	METI	Revisions and contributions (BDCT, UPF and TU-Graz)
28.12.2010	1.0	METI	BDCT formatting
29.12.2010	1.1	METI	Final version delivered to the EC

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1   Introduction

The BrainAble Project started in January 2010, with the partners: Fundació Barcelona Digital Centre Tecnològic; Graz University of Technology; Universitat Pompeu Fabra; Meticube – Sistemas de Informação, Comunicação e Multimédia; Guger Technologies OEG; AbilityNet; Fundació Privada Institut de Neurorehabilitació Guttmann.

The project's main objective is to help to improve the quality of life of people with disabilities by overcoming the two main shortcomings they suffer - exclusion from home and social activities. This will be achieved using an ICT-based human computer interface (HCI) composed of BNCI sensors combined with affective computing and virtual environments, developed in the duration of BrainAble.

The areas of research of this project are, due to their pertinence, being the focus of other R&D activities. In order to maximize the efficiency of BrainAble's R&D, as well as its dissemination, a network of projects and entities that share the same interest will be created through clustering activities.

2   Clustering

Several research and development activities relevant to BrainAble Project are currently being undertaken. Developments achieved in other projects can help to maximize the efficiency of our own research and development, and vice-versa..

A cluster of different research activities is more likely to achieve greater results. So, this project will promote the establishment of a Project Cluster with sibling projects relevant to BrainAble's own research and development. The cluster will promote the cooperation with projects concerning AAL and IL, BCI and VR technologies, human-computer confluence, or otherwise related to BrainAble.

Technical and strategic cooperation will be undertaken, also, for the purpose of achieving the maximum visibility and impact for each, and all, project results.

These clustering activities will focus in areas related and relevant to BrainAble but will be transversal in what regards type of project (industry, national funding, FP6, FP7, AAL JP …).

2.1   Targeted projects

The following projects are already considered for the cluster. The potential of synergism is the main reason for the list, although the present or past participation of a BrainAble Project partner is also taken in consideration. Nevertheless, the list of cluster participants is a living list, and should always be modified, as long as new projects arise, and current evolve.

2.1.1   INREDIS – Interfaces for relation between environment and people with disabilities

INREDIS – Interfaces for relation between environment and people with disabilities – project is focused on the development of basic technologies that allow creating communication and interaction channels between people with special needs and their environment. The project tackles different environments of the daily life of people, as the domestic and urban environment, work environment, banking and retail, among others. A common interoperability SOA provides the soil for the integration of external and internal services enabling interaction with common use devices using a cellphone. Issues such as accessibility,

ubiquitous computing, interoperability, multimodal interaction and security are managed and encompassed in the final solution.

The project will develop over the period 2007–2010, and has as Coordinator, Technosite (http://www.technosite.es/).

Website: http://www.inredis.es/presentacion.aspx
BrainAble Participants: BDCT.

Figure 1 – INREDIS logo

2.1.2   Future BNCI

Future BNCI is a project devoted to helping BCI research and the BCI research community. Also intending to explore future directions with BCIs and new emerging class of systems called BNCIs.

Future BNCI (FBNCI) is a two year project that began in Jan 2010. It is responsible for producing completed accomplishments at specific times. For example, by providing information for the BCI community and other groups about this project, other projects, and BCI and BNCI research in general.

That dissemination has been done through various methods, such as a website and professional talks and posters at scientific conferences.

Conference, reports, papers in peer-reviewed journals and books, several sessions along with established conference, and one book will be some of the outcomes of this project.

Future BNCI is also responsible for helping to explore the best future research opportunities in different aspects of BCI research, such as which signals and sensors are most promising, which groups of users are most likely in the near future, and which interfaces are best. Roadmaps will be developed and obstacles and opportunities for collaboration will be identified. Interaction among different groups, with different backgrounds, will be encouraged, since this research field requires different disciplines.

The Project Coordinator is the Technische Universitaet Graz (Graz University of Technology).

Website: http://future-bnci.org/
BrainAble Participants: TU-GRAZ.

Figure 2 – Future BNCI logo

2.1.3   TREMOR

The main objective of the TREMOR project is to validate, technically, functionally and clinically, the concept of mechanically suppressing tremor through selective Functional Electrical Stimulation (FES) based on a (Brain-to-Computer Interaction) BCI-driven detection of involuntary (tremor) motor activity.

TREMOR proposes a multimodal BCI in which the main goal is identifying, characterizing and tracking involuntary motor bioelectrical activity as a command to trigger a biomechanical suppression of tremor.

The Project was extended until 2011 (http://storm.uni-mb.si/tremor/team.html), and is coordinated by Consejo Superior de Investigaciones Científicas – CSIC.
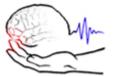
Website: http://www.iai.csic.es/tremor/

Figure 3 – TREMOR logo

2.1.4 TOBI : Tools for Brain-Computer Interaction

TOBI is a large European integrated project which will develop technology for brain-computer interaction (BCI). The duration of the project is from November 2008 to December 2012. The project is coordinated by Ecole Polytechnique Fédérale de Lausanne.

TOBI will design non-invasive BCI prototypes that will be combined with existing assistive technologies and rehabilitation protocols. In such a hybrid approach users can couple brain interaction with muscle-based interaction or can naturally switch between the different ways of interacting.

TOBI is expected to have an impact by broadening the appropriate use of BCI assistive technology, by incorporating adaptive capabilities that augment those other assistive technologies they are combined with. The consortium has identified four application areas where BCI assistive technology can make a real impact for people with motor disabilities: Communication & Control; Motor Substitution; Entertainment and Motor Recovery.

Website: http://www.tobi-project.org/
BrainAble Participants: TU-GRAZ.

Figure 4 – TOBI logo

2.1.5 BETTER – Brain-Neural Computer Interaction for Evaluation and Testing of Physical Therapies in Stroke Rehabilitation of Gait Disorders.

BETTER is a European project that will develop a new approach for gait training in which such assistive technologies (ATs) might be improved if combined with non-invasive BNCI in order to increase the effectiveness in recovering function.

The principal goal of BETTER is to improve physical rehabilitation therapies of gait disorders in stroke patients based on BNCI assistive technologies, producing improved systems, providing guidelines for improving future systems, and developing benchmarking and evaluation tools. The project will validate, technically, functionally and clinically, the concept of improving stroke rehabilitation with wearable exoskeletons and robotic gait trainers based on a TOP-DOWN approach: The robot exerts physical stimulation -at the periphery- as a function of targeted neural activation patterns (related to user involvement).

This project started in February 2010 and will end in January 2013, and is coordinated by Consejo Superior de Investigaciones Científicas – CSIC (http://www.csic.es/).

Website: http://www.iai.csic.es/better/
BrainAble Participants: TU-GRAZ; G.TEC.

Figure 5 – BETTER logo

2.1.6   DECODER – BCI and Detection of Consciousness

DECODER is a European collaborative project that will deploy Brain-Computer-Interfaces (BCI) for the detection of consciousness in non-responsive patients. The duration is from February 2010 to February 2013, and coordinated by the University of Würzburg (http://www.uni-wuerzburg.de/en/home/).

DECODER will develop BCIs into single-switch based systems to practically enhance inclusion of patients who are otherwise only little or not at all able to interact with their environment and share Interface Computer Technologies (ICT).

Through the deployment of BCIs for non-responsive patients DECODER will provide access to modern information and communication technology such as internet, personal computer or home appliances when only a single response of a person is available.

Website: http://www.decoderproject.eu/
BrainAble Participants: TU-GRAZ; G.TEC.

Figure 6 – DECODER logo

2.1.7   Health Cluster Portugal

The Health Cluster Portugal (HCP) has as its main objective the promotion and implementation of initiatives and activities leading to the creation of a national cluster for competitiveness, innovation and technology, with an international outlook and, as such, taking into account high standards of quality and professionalism, to promote and foster cooperation between companies, organizations, universities and public entities, with a view to increase business volume, exports and qualified employment, in the economic areas related to health and to the improvement of health care.

It currently has more than 100 entities involved.

Starting 2011, in the scope of QREN Portuguese financing programme, Health Cluster Portugal will support the Project Ambient Assisted Living For All – AAL4ALL, with the objective of the mobilization of an industrial ecosystem for the massification of products and services in the area of AAL, focused on the definition of specifics standards (for products and services).

This project counts with more than 70 participants.

It will focus in the next scopes:

- Technical foundations of architecture and frameworks – normalized ecosystem;
- Technical requirements and specifications for equipment in:
  - User in home;
  - User in care facilities;
  - Remote management of devices;
- Large field trials.

Website: http://healthportugal.com/
BrainAble Participants: METI (starting 2011).

Figure 7 – Health Cluster Portugal logo

2.1.8 TICE.PT

The TICE.PT Center for Competitiveness and Technology, Center for Information, Communication and Electronics Technologies, was formally recognized by the Portuguese Government in August 2009, as part of the QREN's Strategies for Collective Efficiency.

TICE.PT's overall strategy comprises building a coordination platform that will involve and mobilize the TICE's main players in innovation processes, R&DT, transfer of knowledge, advanced training, development, production and marketing of products and services, marketing and internationalization.

TICE.PT currently involves 49 bodies, 54% of which are Companies, 26% are part of the National Scientific and Technological System, and 20% are Associations, basically distributed throughout northern and central Portugal, as well as in the area of Lisbon and the Tagus River Valley. These 49 bodies account for a turnover of € 1,8 billion (1,16 % of GDP), € 290M in exports, M€ 124 invested in research, development and innovation and 14.000 direct jobs.

TICE.PT is promoting, in the scope of QREN Portuguese financing programme, two projects:
- TICE.Healthy – Systems of Health and Quality of Life. With project Coordinator: HIS. Project starts in 2011 and ends in 2013. Meticube is one of the participants of this project.

  This project seeks to develop, integrate and test innovative technological approaches that will serve as a basis for new products and services for markets linked to the aspect of "Health and Quality of Life." TICE.Healthy's mission is to being about the presence of Portuguese companies and organizations, and, in particular, those of the CCT TICEs, in global markets in the field of strategy of TICE.PT called "Health and Quality of Life". The mission shall be brought about along 4 lines of action, which shall group the various sub-projects, ad whose objectives, so-called Technical Objectives [TO´s], are listed below:

  a) Creating condition for safety, surveillance and self-control in a hospital environment [TO1];

  b) Increasing patients' autonomy and reducing their stay in a hospital environment [TO2];

  c) Developing key technologies, such as biosensors and secure communications and their integration in systems to be worn or implanted, thereby providing both citizens and health-care professionals with an omnipresent management of their health status [TO3];

d) New reliable software tools providing support to health-care professionals so they can immediately make the best possible decision, for prevention, diagnostic and treatment purposes [TO4];

e) Interoperability of eHealth systems (integrated information in terms of both diagnosis and process) [TO5];

f) Developing technologies and products for personalized, continuous treatments, with patients actively participating in prevention and treatment [TO6];

g) Developing remote diagnosis and treatment solutions for specific conditions (cardiovascular diseases, diabetes, kidney and liver ailments, among others) [TO7];

h) Developing IT-based solutions for providing support to people with mental illness and stress [TO8].

● TICE.Mobilidade – Advanced communication systems, for transportation

The project´s mission involves exploring new, more efficient and comprehensive solutions for urban transportation, through the use of communication and information technologies (CIT) to make it possible to integrate the various available solutions, in an ecological, energy-efficient way with better quality for users, in combination and cooperation with other domestic initiatives. The mission shall be brought about along 4 lines of action, which shall group the various sub-projects, ad whose objectives, so-called Technical Objectives [TO´s], are listed below:

a) Increasing acceptance and adopting new solutions and technologies for urban transportation [TO1];

b) A more comprehensive urban transportation system providing better access for everyone [TO2];

c) Reducing CO2 emissions, pollution and noise emissions, at least in conformity with E.U. legislation [TO3];

d) Increasing energy efficiency in urban transportation [TO4];

e) Reducing the number of private vehicles in an urban setting [TO5];

f) Exploring synergies and means of cooperating with other CCT's and their partners [TO6].

Project Coordinator: Meticube. Project starts in 2011 and ends in 2013.

Website: http://www.tice.pt/
BrainAble Participants: METI.

Figure 8 – TICE.PT logo

2.1.9 PRESENCCIA

The PRESENCCIA Project undertook a Research Programme that had as its major goal the delivery of presence in wide area distributed mixed reality environments.
The environment included a physical installation that people could visit both physically and virtually. The installation was embodied of an artificial intelligent entity that understands and learns from its interaction with people. People who inhabit the installation will at any one time be physically there, virtually there but remote, or entirely virtual beings with their own goals and capabilities for interacting with one another and with embodiments of real people.

Processes within the environments adapt and correlate with the behaviour and state of people, and in addition people are able to effect changes within the environment through thought as well as through motor actions.

The project duration was from 2006 to 2009, and had as coordinator Universitat Politècnica de Catalunya.

Website: http://www.presenccia.org/
BrainAble Participants: TU-GRAZ; G.TEC; UPF.

Figure 9 – PRESENCCIA logo

2.1.10   RGS – Rehabilitation Gaming System

The Rehabilitation Gaming System (RGS) is a Virtual Reality (VR) based rehabilitation system that exploits our growing understanding of the central nervous system and interactive technologies to deliver optimized training protocols for patients with varying neurological deficits. One application of this approach is in the rehabilitation of the motor deficits of the upper extremities after stroke.

The project started in April 2009 and should finalize in 31st March 2012, and is coordinated by Universitat Pompeu Fabra.

Website: http://rgs-project.upf.edu/
BrainAble Participants: UPF; G.TEC.

Figure 10 – RGS logo

2.1.11   CEEDS – The Collective Experience of Empathic Data Systems

This FP7 Integrated project aims to advance a novel integrated technology that supports the experiencing, analysing and understanding of massive datasets. Key axiom of CEEDS is that discovery is the identification of patterns in complex data sets by the human brain. It is these implicit information processing capabilities that CEEDS seeks to exploit. CEEDS users will be immersed in synthetic reality spaces, allowing them to explore complex data whilst following narrative structures of varying spatio-temporal complexity. Unobtrusive multi-modal wearable technologies will provide an assessment of the behavioural, physiological and mental states of the user.

CEEDS is a new FP7 ICT IP, in the area of Human Computer Confluence, that started in September 2010, and will end in September 2014, being coordinated by Universitat Pompeu Fabra.

Website: http://ceeds-project.eu/

BrainAble Participants: UPF.

Figure 11 –CEEDS logo

2.1.12 BrainGain

BrainGain is a Dutch research consortium consisting of researchers, industry and potential users of Brain-Computer and Computer-Brain interfaces. The program started in September 2007 and is funded by SmartMix (http://www.smartmix.nl/), a Dutch initiative to support applied research. BrainGain is researching possibilities of applications for both ill and healthy users, and aims to eventually manufacture off-the-shelf products making use of their research results. The project is coordinated by Radboud University Nijmegen (http://www.ru.nl/english/).

The project research areas are:

- Control and communication for patients by BCI;
- BCI applications for healthy users;
- BCI applications for healthy users;
- Modulation of abnormal brain activity by neurostimulation;
- Self-modification of brain activity by feedback and training.

Website: http://www.nici.ru.nl/cgi-brain/index.cgi

Figure 12 –BrainGain logo

2.1.13 MindWalker

The purpose of this project is to conceive a system empowering lower limbs disabled people with walking abilities that let them perform their usual daily activities in the most autonomous and natural manner.

The project addresses 3 main different fields of expertise:

- BCI technologies;
- Virtual Reality;
- Exoskeleton Mechatronics and Control.

The project top level objective is to combine these expertises to develop an integrated MINDWALKER system. In addition the system shall undergo a clinical evaluation process.

Started in January 2010 and will end December 2012. Is coordinated by Space Applications Services (http://www.spaceapplications.com/).

Website: https://mindwalker-project.eu/

Figure 13 –MindWalker logo

2.1.14 BRAIN – BCIs with Rapid Automated Interfaces for Nonexperts

BRAIN aims at developing 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. These improvements will entail upgrades to all four components of a BCI system - signal acquisition, operating protocol, signal translation, and application.

Knowledge will be disseminated through conferences, workshops, and academic papers. A website with open source software and support tools will promote standardization and both commercial and academic development within and beyond the consortium. It is envisaged that 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.

It is coordinated by the University of Bremen. Started in 2008 and will end in 2011.

Website: http://www.brain-project.org/

Figure 14 –BRAIN logo

2.1.15 AsTeRICS

The goal of the AsTeRICS Project is to develop a construction set for assistive technologies which can be adapted to the motor abilities of end-users. AsTeRICS is intended to allow access to different devices such as PCs, cell phones and smart home devices, with all of them integrated in a platform adapted as much as possible to each user.

The main objective of the project is to develop a support platform that will facilitate and improve communication resources of people with motor disabilities in their upper limbs.

This project started January 2010 and will end in December 2012, being coordinated by KI-I – Kompetenznetzwerk Informationstechnologie zur Förderung der Integration von Menschen mit Behinderungen (http://www.ki-i.at/).

Website: http://www.asterics.eu/

Figure 15 –AsTeRICS logo

2.2 Potential Synergies

Following are displayed the potential synergies that are expected to arouse from the clustering activities.

2.2.1 INREDIS – Interfaces for relation between environment and people with disabilities

Synergies are mainly present on Accessibility, Ubiquitous technologies and Interoperability. Use-case studies, user requirements and usability have also been points of interest of INREDIS that have been useful for BrainAble. We have also attended different Workshops promoted by the INREDIS consortium. Although INREDIS is near to its end, acquired knowledge about accessibility issues and interface usability specific for people with special needs is and will contribute to the development and validation along the BrainAble project.

2.2.2 Future BNCI

The BCI research is a strong common point. The synergies will be mainly focused in the BCI technology development. Both projects can benefit from the development of each other.
As intended by the project "opportunities for collaboration will be identified. Interaction among different groups, with different backgrounds, will be encouraged, since this research field requires different disciplines".

2.2.3 TREMOR

As with Future BNCI, the main synergies created between TREMOR and BrainAble will be related to research and development in the BCI and BNCIs areas.

2.2.4 TOBI : Tools for Brain-Computer Interaction

By clustering TOBI with BrainAble, strong synergies will be present, since they both share the research and development in BCI technologies, combined with the use of assistive technologies. Also, most of the TOBI consortium's desired areas of actuation are strongly entangled with the ones of BrainAble.

2.2.5 BETTER – Brain-Neural Computer Interaction for Evaluation and Testing of Physical Therapies in Stroke Rehabilitation of Gait Disorders.

An important task shared by BrainAble and BETTER, is integration of BCI systems with other devices, present in the user's environment. Synergies will be present in the interfacing of BCI systems with other devices.

2.2.6 DECODER – BCI and Detection of Consciousness

Synergies regarding the research and development of BCIs are present between DECODER and BrainAble.

2.2.7 Health Cluster Portugal

Synergies will be strongly present in what concerns disabled users and the devices in their home, as well as the remote management associated. Also, adopting or respecting some of the outputs of AAL4ALL, namely in what concerns normalizations, will provide BrainAble with more expandability.

2.2.8 TICE.PT

Regarding TICE.Healthy, in what concerns "new products and services for markets linked to the aspect of "Health and Quality of Life", synergies between it and BrainAble are clear. By looking at TICE.Healthy's TO2, TO4 and TO5 (see 2.1.8), it is possible to envision BrainAble prepared to adopt such developments, in order to make it a broader product, but also, to easily integrate multiple sub-components.
When it comes to analyse TICE.Mobilidade, strong synergies are present when thinking in the different needs of mobility a disabled person has. TICE.Mobilidade's developments can help to design a final product that considers the present mobility needs and restrains, and use them to benefit BrainAble product. Since BrainAble also accounts for Urban Devices the knowledge generated in the course of TICE.Mobilidade in that area can be a potential of synergy.

2.2.9 PRESENCCIA

Synergies are clearly present on Virtual Reality (VR) research and development. Although PRESENCCIA has already ended, the acquired knowledge regarding VR and interactive immersive environments is and will contribute to the development of the BrainAble project in that area.

2.2.10 RGS – Rehabilitation Gaming System

RGS applies VR to rehabilitation. Part of BrainAble system will aim at developing VR and media-based tools and environments that will try to counteract cognitive and emotional decline of patients.
The full potential of this synergy still has to be analysed as both projects evolve.

2.2.11 CEEDS – The Collective Experience of Empathic Data Systems

CEEDS will explore greatly the capabilities of VR. As already mentioned, BrainAble will aim at the development of VR based tools. Synergies will be present in the field of VR.

2.2.12 BrainGain

Synergies between BrainAble and BrainGain are clearly centred in the BCI research and development.

2.2.13 MindWalker

Synergies are mainly present in what concerns BCI and VR research and development.

2.2.14 BRAIN – BCIs with Rapid Automated Interfaces for Nonexperts

BRAIN and BrainAble synergies will relate to the research and development in the BCIs field.

2.2.15 AsTeRICS

AsTeRICS project is aimed to develop user driven AT by combining emerging sensor techniques like Brain-Computer Interfaces to enable people with reduced motor capabilities to access the Human-Machine-Interfaces (HMI). Synergies will be present in the interfacing of BCI systems with other devices.

3 Clustering Activities

3.1 Clustering actions

During the first year of the project, dissemination actions were undertaken, trying to gather what are the projects that can, by now, integrate the emerging Cluster.

With the beginning of the second year, contacts in order to effectively establish the Cluster will be made.

The feedback provided by the 1st Year Project Review will be very useful to provide more tangible data about the project, and so, providing a better evaluation of the project needs in terms of clustering.

3.1.1 Past actions

Clustering activities already undertaken:

- BrainAble is part of a cluster of ten projects all focusing on BNCI research – BCI European Cluster – with TOBI, TREMOR, BRAIN, DECODER, BETTER, MINDWALKER, MUNDUS, AsTeRICS and Future BNCI. In September 2010, BrainAble partners participated in a cluster meeting. Also, in December 2010, at the second TOBI Workshop, BrainAble partners participated in several discussions with several cluster partners.

- At TOBI Workshop, February 2010, BrainAble participated in the Round Table cluster event in the first TOBI workshop in Graz. We got information taken into account for BrainAble when considering the central interface and developing the surveys.

- The Technische Universität Berlin is a TU-GRAZ's partner at TOBI. Some Python and other tools where provided by them, that supported the development of the central interface.

- In June 2010, TU-GRAZ distributed BrainAble flyers in the Asilomar BCI Meeting 2010 Conference.

- BDCT gave a talk at the FBNCI networking session in Brussels, In September 2010. A general discussion about FBNCI issues followed.

- In September 2010, a BDCT booth was present at the ICT event, Brussels. That booth was shared with FBNCI, TOBI, Mindwalker, and BrainGain. A BrainAble BCI system was demonstrated along with other BNCIs from other projects.
- Recent hybrid BCI work in TU-GRAZ relies on the TOBI common implementation platform.

3.1.2   Timeline

From M15 to M18, each partner will propose his Cooperation partner/project, and PB will assign the responsible partner for that cooperation.
Until M18, identified projects will be contacted by respective BrainAble partners, and the Cooperation Agreements negotiated and signed.

By M20, the Project Cluster will be fully established, and a Kick-Off Meeting will be held.
By M21, a simple website will be set up, so that the Cluster can gain more visibility.

The contacts are done following the Clustering Procedure described in section 3.1.4.

3.1.3   Evaluation Meetings

After the Cluster establishment, meetings will happen in a regular basis, every three months, starting M23:

- PB will analyse the reports provided by Partners responsible for one or more cooperations;
- PB will evaluate the pertinence and suitability of that cooperation;
- PB will consider changes in cooperation agreements.

3.1.4   Cooperation Procedure

Next, the cooperation procedure is presented:

1. Contact between interested parties is made:
    a. Cooperation partner/project (the **ENTITY**) representative will contact the Project Coordinator – see "2.3 Contacting the Project Coordinator";
    b. BrainAble partner, with the support of WP7 leader, will propose cooperation to an **ENTITY**;
2. Project Coordinator, with the support of WP7 leader, selects the partner best suited for negotiating the cooperation (the **CONTACT**);
3. **CONTACT** negotiates cooperation model/agreement, on behalf of the Project Consortium;
4. PB ratifies the proposed cooperation;
5. Project Coordinator formalizes the cooperation, through a Cooperation Agreement;
6. **CONTACT** drives and monitors the cooperation, providing periodical reports on the status, progress, benefits, costs, etc.

PB may decide, at any time, to substitute contact partner for a given cooperation.

3.1.5   Future Activities

Until M18, identified projects will be contacted by respective BrainAble partners, and the Cooperation Agreements negotiated and signed.

By M20 (September 2011), the Project Cluster will be fully established, and a **Kick-Off Meeting** will be held on which strategies and concrete plans and actions will be defined.
The event should be scheduled while the 5th International Brain-Computer Interface Workshop, Sept. 22-24, 2011 in Graz, Austria.

By M21 (October 2011), a simple website will be set up, so that the Cluster can gain more visibility.

3.2   Cooperation Agreement

The Cooperation Agreement must clearly define:

- The scope of the agreement;
- The duration of the agreement;
- The roles and duties of each party;
- The objectives of the cooperation;
- Reporting period of progress and status of cooperation;
- IP rights;
- Confidentiality;
- Commercial rights, after the project – if applied.

A template for the Cooperation Agreement can be found in Annex 1.

3.3   Contacting the Project Coordinator

To contact the Project Coordinator, the cooperation partner/project representative will be able to submit a request for cooperation:

- Through an on-line form, available at the project website;
- By sending a filled **Cooperation Request Form** to PMO@BrainAble.org, available for download in the project's website – template available in Annex 2.

These forms must contain the following data:

- Institution (name and address);
- Representative (name and contact);
- Field of expertise;
- Summary of desired cooperation.

4   List of Key Words/Abbreviations

AAL	Ambient Assisted Living
AAL JP	Ambient Assisted Living Joint Programme
AmI	Ambient Intelligence
AT	Assistive Technology
BNCI	Brain/Neuronal Computer Interface
FBNCI	Future BNCI
FP6	Framework Programme Six
FP7	Framework Programme Seven
HCI	Human Computer Interface
ICT	Information and Communication Technology
IL	Independent Living
PB	Project Board
VR	Virtual Reality

Annex 1 – Cooperation Agreement Template

I.   PARTIES INVOLVED

The present Cooperation Agreement is between:

BrainAble Project Coordinator, **FUNDACIO PRIVADA BARCELONA DIGITALCENTRE TECNOLOGIC**, from now on designated as **COORDINATOR**, established in CARRER ROC BORONAT 117, 08018 Barcelona - SPAIN, represented by Mr Carles FRADERA RIERA, Managing Director;

and

[**Entity legal designation**], from now on designated as **ENTITY,** established in [address], represented by [name and position];

and

[**Partner legal designation**], from now on designated as **CONTACT,** established in [address], represented by [name and position].

II.   PURPOSE

The purpose of this Agreement is to establish a form of cooperation between the parties involved, in which both will settle a set of benefits for the other. The parties are obliged to use all possible means to fulfil the terms of this agreement, throughout the entire duration of the same.

The **ENTITY** will support the research and development of the BrainAble project, by the means described in IV.COOPERATION.

The **CONTACT** will manage the cooperation, and will provide reports to **COORDINATOR**, regarding the cooperation, every [days/months].

The **COORDINATOR** will be responsible to evaluate the **CONTACT**'s performance and suitability in what concerns the cooperation and cooperation management.

III.   DURATION

This Agreement is valid for the period of [years/months]/until the date [date].

Changes in the duration of this Agreement must be accepted by all the parties and requested, in written form, with thirty days prior notice.

Either party can terminate the Agreement upon [days — to be defined in each case] days written notice without penalties or liabilities.

IV.   COOPERATION

In the scope of this Cooperation Agreement, the **ENTITY** will:

- *Defined in a case-by-case basis.*

In the scope of this Cooperation Agreement, the **COORDINATOR**, as representative of the BrainAble Consortium, will:

- *Defined in a case-by-case basis.*

With the following objectives: *(if applied)*

- *Objectives.*

V.   IP RIGHTS

The pre-existing IP already existing in the scope of the BrainAble Project and of **ENTITY** is not affected by this agreement.

Must be clearly defined.

VI.   CONFIDENTIALLITY

Each party will treat and maintain as strictly confidential all the sensible/privileged/confidential information obtained in the scope of this Agreement.

Both parties will use the sensible/privileged/confidential information strictly for the use defined in the scope of this Agreement, abstaining of using it out of this context, either for personal or third-party benefits, unless clearly defined in this Agreement.

VII.   COMMERCIAL RIGHTS

Define the commercial rights, if necessary.

VIII.   APPLICABLE LAW

This Cooperation Agreement shall be construed in accordance with and governed by the laws of the same country by which the BrainAble Project is regulated. To what not implicit in this Agreement, the same laws applies.

IX.   SETTLEMENT OF DISPUTES

The parties endeavour to settle disputes amicably.

All disputes arising out of or in connection with this Cooperation Agreement, which cannot be solved amicably, shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

The place of arbitration shall be Brussels if not otherwise agreed by the conflicting parties.

The award of the arbitration will be final and binding upon the parties.

Nothing in this Cooperation Agreement shall limit the parties' right to seek injunctive relief or to enforce an arbitration award in any applicable competent court of law.

X.   CONTRACTUAL DOCUMENTS

The following documents are part of this Cooperation Agreement:

      a)

      b)

[Place], [date]

_____

(COORDINATOR)

_____

(ENTITY)

_____

(CONTACT)

Annex 2 – Cooperation Request Form

BrainAble Project – Cooperation Request Form

Institution	Name	
	Address	
	Website	
	Telephone	
	Main activities	

Contact person	Name	
	Position	
	E-Mail	
	Telephone	

Summary of desired cooperation	

Relevant work in the scope of desired cooperation	

To be sent to PMO@BrainAble.org.