DELIVERABLE

Project Acronym: ETNA
Grant Agreement number: 270746
Project Title: European Thematic Network on Assistive Information and Communication Technologies

D8.1

Archive of the ETNA webinars

Revision: Final
Due date of delivery: December 31, 2011
Actual submission date: March, 2012
Start date of project: 01.01.2011
Duration: 36 months

Organisation name of lead contractor for this deliverable:
FDCGO

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<td>C Confidential, only for members of the consortium and the Commission Services</td>
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Revision History

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Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Authors

Contents: Renzo Andrich, Sabrina Vincenti (FDCGO)

Executive Summary

Web seminars, called “webinars”, are the key tool chosen to achieve the objectives of Work Package 8, linked to exchanging expertise among the TN partners, as a primary factor for participants’ involvement and therefore for the project’s success. On-line seminars are intended to provide information on partners organizations’ activities and key thoughts in the ICT AT area, in order to inspire discussion and prompt advancements in this field. Due to the big size of the Consortium, the partners’ short introductions at plenary meetings are not sufficient to get a detailed understanding of each partner’s activities and ideas, that’s why these on-line meetings were conceived.

Each webinar is moderated by a member of the FDCGO staff and is devoted to the detailed presentation of two partner organizations and activities, during which the audience has the opportunity to listen, to ask questions and to discuss the key issues presented.

The webinars are held by means of the Adobe Connect 8 Platform, chosen and administered by FDCGO after market surveys and attentive testing. This Platform gives the opportunity of voice interacting, presenting slides, videos and other materials, and has management tools to facilitate discussion.

During 2011 there were 3 educational webinars, according to the following calendar:

- June 8, 2011
- September 14, 2011
- December 14, 2011

This deliverable explains the use of the webinar platform and illustrates the webinars held so far, including a collection of all the presentations delivered.

The first chapter (Methodology) describes the features of the Adobe Connect Platform and its potential.

The second chapter (The Webinars) summarizes the contents of each webinar, including a list of the partners who actually attended to each meeting.

The Annexes include all the presentations delivered (Annex 1-6).
All these materials are available for download on the ETNA website, [www.etna-project.eu](http://www.etna-project.eu), as well as the webinars recordings.

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### Methodology

Based on a market survey and direct testing, the Adobe Connect 8 Platform was chosen as the most suitable and efficient solution to ensure smooth communication among such a large group of partners.

This Platform allows to manage meetings and seminars on-line, involving a maximum of 200 people; it gives the opportunity of voice interacting, presenting slides, videos and sharing materials, and has management tools, such as chat and “status pods”, to facilitate discussion.

The connection to the platform doesn’t require participants to purchase any product, they just need to download a free plug-in and connect to the URL provided before any meeting.

![Example of the Adobe Connect 8 “virtual room”](image)
It is important to highlight that Adobe Connect 8 Platform has accessibility features that enable people with disabilities to use the Meeting functionality without a mouse. Participants were trained on how to use the facilities provided by this tool and got more and more familiar with the platform and with the related communication behaviour.

In detail, the training phase included individual training sessions for all partners and audio tests, and was organized by FDCGO staff. They also coordinated all scheduled meetings and managed the participants’ subscription and attendance.

Once solved the partners’ technical problems, the webinar “virtual room” proved to be a simple tool, offering the opportunity to discuss and share contents to a wide audience. Furthermore, the steady communication allowed by this tool greatly contributed to strengthening the network, by fostering mutual knowledge and understanding, thus building the premises for further collaborations also outside the Consortium.

The webinars

First Webinar
The first educational webinar was held on Wednesday 8th June 2011, hosting the presentations of the Project Leader Organisation, Fondazione Don Carlo Gnocchi Onlus (Milano, Italy) and another Italian partner, Ausilioteca AIAS (Bologna, Italy).

Participants:

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDCGO</td>
<td>Renzo Andrich</td>
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<tr>
<td></td>
<td>Sabrina Vincenti</td>
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<td></td>
<td>Valerio Gower</td>
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<td>IWKOELN</td>
<td>Britta Lüssem</td>
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<td>CNR</td>
<td>Mauro Tavella</td>
</tr>
<tr>
<td>JKU</td>
<td>Klaus Miesenberger</td>
</tr>
<tr>
<td>TECNALIA</td>
<td>Igone Idigoras</td>
</tr>
<tr>
<td>CEAPAT</td>
<td>Lucia Perez-Castilla</td>
</tr>
<tr>
<td>AIAS</td>
<td>Evert-Jan Hoogerwerf</td>
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<td>HAC</td>
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<td>Jari Vaisänen</td>
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<tr>
<td>FTB</td>
<td>Niels Hanekamp</td>
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</table>

Second webinar
The second ETNA Webinar took place on-line on September 14, hosting the presentations of two partners: CNR, Istituto Tecnologie Didattiche (Genova, Italy) and Access Centre, Technical University Kosice (Kosice, Slovakia).

Participants

FDCGO  Renzo Andrich
Sabrina Vincenti
Valerio Gower
Matteo Serratoni
IWKOELN  Britta Lüssem
HMI  Thomas Lyhne
CNR  Stefania Bocconi
Michela Ott
Mauro Tavella
TECNALIA  Igone Idigoras
CEAPAT  Lucía Perez-Castilla
AIAS  Evert-jan Hoogerwerf
TUKE  Alena Galajdova
Dusan Simsik
SU-DART  Mats Lundälv
CERTH  Olga Gkaitatzi
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FTB  Nils Hanekamp
ACE  David Colven
DLF  Warren Goodland
SU-DART  Mats Lundälv
HZ  Jeanne Heijkers
THL  Tuula Hurnasti
CERTH  Olga Gkaitatzi
DN  Anna Evangelinou
FAIDD  Jari Vaisänen
FTB  Nils Hanekamp

Third webinar

The third ETNA Webinar was held on-line on December 14, hosting the presentations of two partners: TECNALIA (San Sebastián, Spain) and DART- Centre for AAC and AT, Sahlgrenska University Hospital (Göteborg, Sweden).
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<td>Lindsay Evett</td>
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<td>FTB</td>
<td>Nils Hanekamp</td>
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ANNEX 1
Webinar 1

EXCHANGING EXPERTISE
projects and experiences by partners FDCGO and AIAS

June 8, 2011

Fondazione Don Carlo Gnocchi Onlus
www.dongnocchi.it

- Founded in 1952 by don Carlo Gnocchi
- 5400 employees
- 28 Centres in 9 Regions, 2 Clinical Research Institutes
- Any ages, pathologies, disabilities
- 3634 hospital beds
- About 9000 clients being cared daily

NGO for cooperation programmes in developing Countries

- Founded in 1952 by don Carlo Gnocchi
- 5400 employees
- 28 Centres in 9 Regions, 2 Clinical Research Institutes
- Any ages, pathologies, disabilities
- 3634 hospital beds
- About 9000 clients being cared daily

Settori tematici del Polo Tecnologico
Thematic sectors of the Biomedical Technology Department

- Bioingegneria applicata al sistema neuromotorio
  Bioengineering applied to the neuro-motor system
- Bioingegneria applicata al sistema cardio-respiratorio
  Bioengineering applied to the cardio-respiratory system
- Biofisica, Bioimmagini, Nanomedicina
  Biophysics, Medical Imaging, Nanomedicine
- Analisi dei segnali biologici
  Bio-signals analysis
- Ergonomia e medicina del Lavoro
  Ergonomics and Labor Medicine
- Tecnologie Assistive per la disabilità e l’autonomia
  Assistive Technologies

Ricerca e innovazione tecnologica: il Polo Tecnologico
Research & technol.innovation: The Biomedical Research Department

- Area di ricerca
  Research area
- Tecnologie Assistive
  Assistive Technologies

www.siva.it
Valerio Gower

biomedical engineer

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Annex 1 pg 2/5

Ongoing projects: information systems

- SIVA (www.portale.siva.it)
  The Italian Portal on Assistive Technology
- EASTIN (www.eastin.info)
  The European on Assistive Technology
- IIATIP (www.ati-alliance.net)
  The International Alliance of Assistive Technology Information providers
- ETNA (www.etna-project.eu)
  European Thematic Network on Assistive Information and Communication Technology

Ongoing projects: socio-economic issues in AT

- SISAPR (Ministry of Health)
  Development of tools supporting quality and appropriateness of the public Assistive Technology Service Delivery system
- IMECAP (Ministry of Health)
  Study on the economics of the public AT Service Delivery system
- DISABILITY AND WORKSITES (Ministry of Labour)
  Re-design of worksites for people with disabilities, based on risk analysis

Ongoing projects: partnership in national R&D

- ACUBE – Ambient Aware Assistance
  Advanced integrated infrastructures for intelligent monitoring in nursing homes
  (Autonomous Province Trento – Bruno Kessler Foundation)
- RETE ACCESSIBILE (Accessible Network)
  Advanced learning environment for university students
  (Ministry of University and Research – IUSM Roma)

Ongoing projects: partnership in international R&D

- SRS
  Multi-role Shadow Robotic System for independent living
  (European Commission FP7-ICT-2009-4)
  Leader: University of C endo (IX)
  Other partners: Fraunhofer Gesellschaft (DE); Bulgarian Academy of Science (BG); Stuttgart Media University (DE); HP Italy (IT); Foundation Ingema (ES); Profactor GmbH (AT); Robotnik Automation (ES); University of Bedfordshire (UK)
- EASTIN-CL
  Crosslingual and multimodal search in a Portal for support of assisted living
  (European Commission FP7-ICT-2009-3)
  Leader: Linguatech GmbH (DE)
  Other partners: Tilde (LV); Morphologics (NL); Institut der deutschen Wirtschaft (DE)

Research area

Assistive Technologies

Co-ordinator: Renzo Andrich, engineer

Team:
- Valerio Gower, biomedical engineer
- Lucia Pigni, biomedical engineer
- Andrea Agnoletto, software engineer
- Matteo Serratoni, software engineer
- Sabrina Vincenti, sociologist
- Antonio Caracciolo, physiotherapist

Collaborators: Depending on the project
Educational and technical support activities

- POST GRADUATE CERTIFICATE IN ASSISTIVE TECHNOLOGY
  200 hours University Course
  (in collaboration with Catholic University – Faculty Educational Sciences in Milan, and Faculty of Medicine “Gennari” in Rome)

- TECHNICAL SUPPORT TO THE DAT SERVICE
  Development of the DAT Smart Home; technical support to individual AT assessment

- SIVA NETWORK
  Co-ordination of the Assistive Technology assessment centres of the Don Gnocchi Foundation

International Alliance of Assistive Technology Information Providers
Australia, Belgium, Brazil, Denmark, France, Germany, Ireland, Italy, Spain, UK, USA

SISAPR (Ministry of Health)
Tools supporting quality and appropriateness of the public AT Service Delivery system

Enter components and prescription codes for each product

Generate NHS prescription and technical dossier for quality control

IMECAP
Study on the economics of the public AT Service Delivery system

- Economical model for pricing custom-made AT products and AT-related professional services
  \[ K = \sum c_i \cdot q_i \cdot (1+i\cdot j) \cdot (1+c) \cdot (1+m) \]
- Market price observatory for off-the-shelf AT products
- Quality control tools for the AT products provided

IMECAP
Consultations for individual AT assessment

- On-Centre Assessment of general AT needs; € 60
- On-Centre Assessment for mobility/seating; € 90
- On-Centre Assessment for ADL equipment; € 60
- On-Centre Assessment for home adaptation; € 60
- On-Centre Assessment for environmental control; € 160
- On-Centre Assessment for computer access; € 150
- On-Centre Assessment for augment. communication; € 150
- At-Home Assessment for home AT needs; € 130
- At-Home verification of the equipment provided; € 130
- Technical check-up of the equipment provided; € 220

DISABILITY AND WORKSITES
Re-design of worksites for people with disabilities

- The issue
  If working tasks are carried out in inadequate conditions, workers with functional limitations may, over time, risk developing further disabilities

- The project
  A methodology was developed for the technical and organizational re-design of a worksite, based on risk assessment.
  It was tried out and validated with a sample of 16 workers with disabilities, whose worksites were redesigned.
TECHNOLOGY ASSESSMENT – AT Cost Outcome
SCAI (SIVA Cost Analysis Instrument)

Estimating the costs of individual AT interventions

<table>
<thead>
<tr>
<th>Solution (4 alternatives)</th>
<th>Side-mounted stairclimber</th>
<th>Vertical conveyor</th>
<th>Mobile stairclimber</th>
<th>Two helpers</th>
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<tr>
<td>Purchase cost</td>
<td>9.880</td>
<td>15.600</td>
<td>3.867</td>
<td>86.400</td>
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<tr>
<td>Additional social cost in 10 years</td>
<td>21.780</td>
<td>18.650</td>
<td>61.324</td>
<td>86.400</td>
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<tr>
<td>Expenses by the user</td>
<td>4.578</td>
<td>8.302</td>
<td>27.200</td>
<td>43.200</td>
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<tr>
<td>Expenses borne by L.H.Authority</td>
<td>8.934</td>
<td>-</td>
<td>4.407</td>
<td>43.200</td>
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<tr>
<td>Expenses borne by the Municipality</td>
<td>5.299</td>
<td>27.000</td>
<td>43.200</td>
<td>-</td>
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<tr>
<td>Fiscal benefits</td>
<td>3.195</td>
<td>5.049</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Overall expense in 10 years</td>
<td>12.180</td>
<td>18.650</td>
<td>63.134</td>
<td>86.400</td>
</tr>
</tbody>
</table>

ACube project – The Vision

Project supported by the Autonomous Province of Trento

The ACube prototype

Monitoring Scenarios:
- Anomalous behavior
- Fall
- Escape
- Health emergency

EASTIN-CL project

Enhancing the EASTIN portal using language technology:
- Multilingual technology: searching in the user’s own native language (query processing and automatic translation)
- Multimodal technology: speech input and output

The EASTIN + EASTIN-CL crew

SRS: Multi-Role Shadow Robotic System
for Independent Living
http://srs-project.eu

Development of a multipurpose, remotely-controlled, semi-autonomous robotic device to support elderly people at home

Participants

- Cardiff University - WALES, UK
- Central Lab Mechatronics & Instrumentation, Bulgarian Academy Of Sciences - BULGARIA
- Fondazione Don Carlo Gnocchi Onlus - ITALY
- Fraunhofergesellschaft zur Foerderung der angewandten Forschung E.V - GERMANY
- Stuttgart Media University - GERMANY
- Hewlett-Packard Italiana Srl - ITALY
- Fundacion Instituto Gerontologico Matia –Ingema - SPAIN
- Profactor Gmbh - AUSTRIA
- Robotnik Automation sll - SPAIN
- University of Bedfordshire - ENGLAND, UK

Sorry… I was missing
A “shadow” robot: operated by parents or carers, who can help them also physically from a remote location.

FDGCO role:
- Define the application domain
- Define user needs and requirements
- Validate the prototype

Thanks for your attention…

... to the whole ETNA crew
From the centre of medieval Bologna…

Webinar, 8/6/2011

Presentation of organisation and services
Service delivery model in AT
Project work – some thoughts
– User centred design
– Living labs

AIAS Bologna onlus

Association of people with disabilities, family members, carers
Emancipation – Awareness
(self) Advocacy and rights
Design of services to respond to needs
High interest in AT to support autonomy and independence.

100 Employees (home/day/residential care services)
30 year of experience in working with end users and AT:
AUSILIOTECA TEAM

Our work in key words
Supporting people of all ages in identifying appropriate technological solutions for increased autonomy and independence in all realms of life
No commercial interests

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ICT PSP – ETNA project (270746)

A network of competence centres sharing common resources and supporting local teams

- Centre for Assistive Technology
- Centre for Infant Neuromotor Disabilities
- Regional Centre for Assistive Technology
- Domotized Apartments
- Green Area
- Centre for Adaptation of the Home Environment
- Regional Centre for Cognitive-Linguistic Disabilities

AT Area: Network and relationships at local level

To support projects aiming at independence

- Province of Bologna (Employment services for pwd)
- City of Bologna - ASP (Social services - Housing)
- University of Bologna (Student support centre)
- User organisations (Aias, Uildm, Assisla, …)
- Schools (provincial school office)
- State Health Agency Centre Rare Diseases
- Accessible tourism Project Communication devices
- Rehabilitation clinics (Montecatone Ri, …)

AT area: Integrated services for clients

For People with Disabilities
- Assessments (in the Centre and on site)
- Support & Training
- Loaning AT Devices
- Information
  - Specific service path for Rapidly Evolving Pathologies

For professionals and institutions
- Professional Development and Training
- Advice and Guidance on Technical and Methodological issues
- Policy Development

Designing AT solutions

Not only technology but a wide range of devices, development paths, strategies, practices and procedures, that are put in place to compensate limitations, to facilitate daily life and to allow people with disabilities to realise the highest possible level of independence in their life context.
Dimensions to be considered in designing technological solutions for and with people with disabilities

This requires:
- Multidisciplinary team work
- Participative design
- Communication and a shared language between actors
- A holistic approach
- More than solutions: we are supporting life projects

AT Area: the multidisciplinary team

Professional backgrounds
- Education/training
- Technology (electronics, ICT)
- Health (PT, OT)
- Building (architecture, domotics)
- Admin

Main Areas of AT
- Communication
- PC access
- Environmental control
- Home adaptation, Domotics
- Mobility
- Solutions for daily living
- ...  

AT service delivery guiding principles

- Person centred approach
- Holistic approach (focus on quality of life - ICF)
- Open referral policy and free access
- Independent advice (no commercial interests)
- Long term commitment
- Integrated services (internal & external Corte Roncati)
- Inter-institutional collaboration – and steering group

- Support people in identifying appropriate technology that suit their needs in different areas of independence, participation and inclusion: supporting informed choices
- Intervention in different settings: centre, home, work, etc. (holistic approach)
- Long term relationships with clients (changing needs)

Wide range of solutions available in the Centre: hands on approach and supporting informed choices

An example: The “home & daily living” assessments

- Pre Assessment
  - First contact and analysis request
  - Decision service flow
  - Relevant Data Collection
  - Involvement of all stakeholders, relevant experts
- Assessment (in the centre or on site)
  - Discussion and identification expectations and needs
  - Analysis of the Life style and of the Living Environment
  - Advice (technical solutions, adaptations, strategies, ...)
  - Advice Legislation/ Funding
  - Visit to AT showroom and Casa Amica apartments
- Post-Assessment
  - Production of documentation
  - Referral to other services (if necessary)
  - Availability for follow up support
Matching the person and his/her environment

Technologies, tools and strategies that create solutions for the person in his/her living environment.

Key word: Compatibility

environment

legislation

Continuous

process

Matching the person and his/her environment

Technologies, tools and strategies that create solutions for the person in his/her living environment.

Key word: Compatibility

environment

legislation

Continuous

process

General overview of the CAT service delivery model targeting children

AT Area of Corte Roncati access numbers 2010

<table>
<thead>
<tr>
<th>Number of persons accessing the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>End users</td>
</tr>
<tr>
<td>Professionals supporting pwd’s</td>
</tr>
<tr>
<td>Participants in training events</td>
</tr>
<tr>
<td>274</td>
</tr>
<tr>
<td>2117</td>
</tr>
<tr>
<td>2180</td>
</tr>
</tbody>
</table>

Past project work

- BRIDGE Project (2002)
  - Raising awareness among policy makers
    - www.at4inclusion.org
- Keeping Pace with Assistive Technology (2006)
  - Guidelines for lifelong learning in AT (communication, environmental control and pc access)
    - www.at4inclusion.org
- Nadia (2008)
  - Satellite navigation technologies applied to individual mobility of people with motor and sensorial disabilities
    - http://www.asi.it/en/activity/navigation/nadia_project
  - And other European, national and local projects

Network project:
Person Centred Technologies
http://www.impact-in-europe.eu/

The overall aim of the ImPaCT partnership is to facilitate the development and implementation of Person Centred Technology for the benefit of key stakeholders within the health and social care sectors in Europe, namely service providers, care staff and most importantly end users. All of the activities of the network will involve and empower the end user of the technology to evaluate its effect on their daily lives.

- Awareness raising
- Training needs
- Ethical code
- Conferences and seminars
- Partnership of 7 organisations that form the backbone of a Special Interest Group on Person Centred Technology within EASPD.

IMPACT UPCOMING EVENTS

Connect, Personalise, Care:
Person Centred Technology for Greater Quality of Life (working title)

Save the Date:
Sundance, 4th and 11th November 2011
Final Conference-ImPaCT In Europe Project
TOBI is a large European integrated project which will develop practical technology for brain-computer interaction (BCI) that will improve the quality of life of disabled people and the effectiveness of rehabilitation.

AIAS Ausilioteca is leader of the WP "User evaluation" and our role is to contribute to the definition of needs and specifications, as well as the evaluation of the prototypes with end users and professional users.

The challenge is to do this as user centred as possible.

Conceptual Framework for UCD in TOBI

UCD as driver for Technology Transfer

"The lack of user involvement or incomplete user requirements are the main reasons for the failure of ICT system development." - The Standish Group. Chaos Report 2009.

ISO 9241-210 human centred design processes for interactive systems

ISO 9241-210 is a technical revision of ISO 13407 - "Human" stands for user + significant others

For ex. 6.5.2 Conducting user-centred evaluation + 6.5.4. User Based testing

Living Labs for open innovation

"Living Labs is an approach to develop and evaluate products together with end-users.

Key characteristics are the involvement of end-users in every stage of the design process, and observing and testing in the user's own environment with as little disturbance as possible. " http://knowledgecentre.livinglabs.eu

Jens Schumacher/Veli-Pekka Niitamo (Ed.: European Living Labs a New Approach for Human Centric Innovation

Usability Net (EU project) methods and tools: www.usabilitynet.org

User Centred Design

Actors involved

- Potential end users: people with temporary or permanent disabilities
- Professional users
  - AT experts
  - Rehabilitation doctors
  - Carers
- Family members

Roles and relationships

UCD ensures that the target users' needs are considered from the outset.

It can be difficult for target users and system designers to effectively communicate their ideas given their diverse backgrounds and perspectives.

This challenge can be exacerbated when working with users with impairments.

Domain experts working in research projects can help to reduce challenges in UCD, such as those related to communication and to help modify the UCD process so that users with disabilities can participate.

Ref: Allen et al. (2008), Univ Access Inf Soc

Roles of AT (domain) experts

Researcher: They can both inform the design of the research and assist in executing the research. They can also help in planning and carrying out the research.

Liaisons: can facilitate subject recruitment, act as communication intermediaries, establish trust with the target population, and assist participants in understanding and completing consent forms.

Representative: the involvement of the target(land users) is not always practical or feasible. In these cases, domain experts can take part in the design process as representatives of the target users. P. e. early prototypes for severely impaired.

Team/Collaboration: AT Experts and Target Users collaborate in the product development process...

Living Labs – features

A "permanent" community of users who are iteratively asked to become integrated in some stages of the design/development/validation and marketing process and where feedback is collected by means of various socio-ethnographic research methods (focus groups, surveys, testing, polls, etc.)

- Different stakeholders working together for innovation
- Open innovation concept: sharing and spreading
- Real life testing environment: seamless and spontaneous interaction between people and technologies (+ environments)
- User centric approach to innovation: people's feedback is put at the core.
Some conclusions

- An AT Centre (as described) seems to be appropriate setting/resource centre for the implementation of user centred design processes in AT.
- AT Centres can benefit from and contribute to the understanding and further development of User Centred Design principles and practices.
- AT experts can be considered both professional users and domain experts near to potential end users of BCI applications.
- Research activities and service delivery could coexist, creating the conditions for permanent living labs that contribute to ongoing innovation in AT.
- Nevertheless there is a need for ongoing user training and empowerment.
ANNEX 3
THE INSTITUTE FOR EDUCATIONAL TECHNOLOGY, CNR

Michela Ott, ITD-CNR
Francesca Pozzi, ITD-CNR
Jeffrey Earp, ITD-CNR
Stefania Bocconi, ITD-CNR

Here we are …

www.itd.cnr.it

Italian National Research Council
C.N.R.

Italian main public research institution

109 Institutes
314 territorial units
11 Departments
- Agribiod
- Cultural Heritage
- Cultural Identity
- Earth and Environment
- Energy and Transport
- ICT
- Life sciences
- Materials and Devices
- Medicine
- Molecular Design
- Production Systems

SCImago Institutions Rankings (2009):
CNR in the first 25 (with France, Germany, Spain)

Rationale for 21st century Educational Technology Research

Knowledge society
New challenges to education

Problems
- Improving quality and results (e.g., PISA)
- Empowering scientific education
- Individualization

New needs
- New skills
- New approaches
- New contents
- Life-long learning

EDUCATION FOR ALL

Institute for Educational Technology
ITD-CNR

- ITD has a unitary focus on Educational Technology
- ITD is a key actor in the sector both in Italy and in Europe
- ITD is strongly interdisciplinary

Personnel
Researchers & Technologists
Admin. & tech. staff

Ga 22 7
Pa 19 7

Deliverable D8.1 – 09/03/2012
Annex 3 pg 1/6
Jeffrey Earp

- CNR-ITD at a glance
- ITD research lines
- ITD active Networks
  - STELLAR
  - V-MusT
  - GALA
- ITD ongoing projects
  - ESSEDIQUADRO
  - Share.TEC
- Conclusions
- Open Questions

ITD research lines

- The school of the future: educational technologies for school innovation
- ICT for improving the learning of disciplinary content: mathematics & scientific education, language education, cultural heritage education
- Tools, methods and innovative infrastructures for teacher education and training
- New competencies for the knowledge society
- Models and methods for on-line learning: e-learning, computer supported collaborative learning, communities of practice
- Games for learning
- E-inclusion: accessibility, education of students with disabilities and education of migrant students

ITD & European TEL research

First CNR Institute to coordinate an EU project (DELTA) – 1988

In recent years:
- Partner in 8 EC projects (coordinator of 3)
- Partner in 4 Networks of Excellence (NoEs):
  - Technology Enhanced Learning, Virtual Museums & Cultural heritage Serious games, Assistive Information and Communication Technologies

Current ITD NoEs

- CNR-ITD at a glance
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Francesca Pozzi
STELLAR
Sustaining Technology Enhanced Learning at a LArge scale

- The STELLAR Network of Excellence (FP7-ICT-2008-4) represents the effort of the leading institutions and projects in European TEL (Technology Enhanced Learning) to unify the TEL community.
- Main aims are to:
  - Overcome fragmentation in the field
  - Enhance visibility of TEL work
  - Set up a new and critical foresight agenda for TEL.

V-MusT.net
Virtual Museums Transnational Network

- The V-MusT.net Network of Excellence (FP7-ICT-2000-6) represents the effort to build upon and consolidate the work done so far in the field of ICT-based solutions for Cultural Heritage preservation and education, with a specific focus on Virtual Museums.
- Main aims are to:
  - Improve the sustainability of existing Virtual Museums (VMs)
  - Define shared technologies and methodologies to build new sustainable Virtual Museums (VMs)

GaLA
Games and Learning Alliance

NoE on Serious Games co-funded by the EU under FP7 – IST ICT (Technology Enhanced Learning)

Serious Games are... (digital) games designed - or usable - for purposes beyond entertainment, and especially for learning

Main aims:
- overcome fragmentation in the SG field
- shape and boost the SG research sector
- address challenges facing European SG stakeholders
- disseminate knowledge, best practices and tools internationally
GaLA

Games and Learning Alliance

Areas of investigation

- SG mechanics
- Personalisation & Artificial Intelligence
- SG architecture
- Human-computer interaction
- Interoperability & semantics
- Assessment
- Psychology
- Pedagogy
- Neuroscience

Transversal field of application

- Education

Specific fields of application

- Business & management
- Engineering & manufacturing
- Health & fitness
- Security, safety & crisis management
- Humanities & Heritage
- Personal and social learning & ethics

http://www.galanoe.eu

Stefania Bocconi

- CNR-ITD at a glance
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- Open Questions

ITD EU/National Projects

MAGICAL (2011-2014)
Mixing Games in Collaboration for Learning
LPP 2011 - Key Action 3

eSG (2011-2014)
Scheduling entrepreneurship through Service Games
Lip 2001 - Sub-Progr. Erasmus

UniSchools.Labs (2010-2012)
LPP - Compassus

VODIE (2010-2012)
Vocational Education of Visually Impaired People via Distance Education
LPP - L. Da Vinci

ESSEDIQUADRO
LPP - L. Da Vinci

Stefania Bocconi

- A support service providing comprehensive, up-to-date information on educational software.
- Database including over 4,000 educational software and multimedia products (commercial and open source) from both Italy and abroad.
- An ‘online’ and ‘onsite’ support

http://www.sd2.itd.cnr.it

ITD EU/National Projects

MAGICAL (2011-2014)
Mixing Games in Collaboration for Learning
LPP 2011 - Key Action 3

eSG (2011-2014)
Scheduling entrepreneurship through Service Games
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Vocational Education of Visually Impaired People via Distance Education
LPP - L. Da Vinci

ESSEDIQUADRO
LPP - L. Da Vinci

http://www.sd2.itd.cnr.it
SHARE.TEC

- Sharing Digital Resources in the Teacher Education Community
- eContentplus programme
- Duration: 36 months (June 2008 - May 2011)

Consortium:
- Istituto per le Tecnologie Didattiche, CNR (IT) (Coordinator)
- Trinity College Dublin (IE)
- Università Ca’ Foscari, Venezia (IT)
- Stockholm University (SE)
- Open University of the Netherlands (NL)
- Universidad de Valladolid (ES)
- Sofia University (BG)
- CLUEB Editore (IT)

Target Users:
- Teacher educators (individuals and institutions), Student teachers and In-service teachers
- Educational publishers
- Educational technology developers
- Research inst., schools of education
- Technology developers
- Educational publisher

SHARE.TEC

Deployed portal

http://www.share-tec.eu

Michela Ott

• CNR-ITD at a glance
• ITD research lines
• ITD active Networks
  • STELLAR
  • V-MusT
  • GALA
• ITD ongoing projects
  • ESSEQUADRO
  • Share.TEC
• Conclusions
• Open Questions
Conclusions

Knowledge society                          New challenges to education

Problems                                      New needs
− Improving quality and results (e.g. OCSE PISA)
− Empowering scientific education
− Individualization
− ... ...

Re-thinking learning, teaching and education

New needs
− New skills
− New approaches
− New contents
− Lifelong learning
− ... ...

EDUCATION FOR ALL

Questions

Michela Ott
Francesca Pozzi
Stefania Bocconi
Jeffrey Earp

www.itd.cnr.it
TUKE – Technical University of Košice

Technical University of Košice
Access Centre
and
Department of Automation,
Control and Human Machine Interactions
Mechanical Engineering Faculty

Dušan Šimšík, Alena GALAJDOVÁ
Email: dusan.simsik@tuke.sk
http://web.tuke.sk/AC/indexACeng.html
http://www.sjf.tuke.sk/karakr/en

ETNA Webinar, 14th September 2011

TUKE – Technical University of Košice

founded in 1952

TUKE today

The number of students currently attending nine TUKE Faculties exceeds 16,000. Approximately 13,000 of them are full-time students, out of which there are 8,500 Bachelor students, 4,000 Master students and over 500 PhD students. Almost 900 teachers work here, and the same number of research and administrative staff.

Faculties

- Faculty of Mining, Ecology, Process Control and Geotechnology
- Faculty of Metallurgy
- Faculty of Mechanical Engineering
- Faculty of Electrical Engineering and Informatics
- Faculty of Civil Engineering
- Faculty of Economics
- Faculty of Manufacturing Technologies
- Faculty of Arts
- Faculty of Nanotechnologies

Central Institutes

- University Library
- Department of Language and Information Technology
- Department of Physical Education
- Institute of Computer Technology
- Institute of Life-long Education
- Centre for Information and Telecommunication Technologies
- Student Residence and Dining Halls
- Centre of Drugs Prevention and Counselling
- Institute of Regional and Community Development
- Collegium Technicum Mixed Choir

TUKE – Technical University of Košice

ACCESS CENTRE TUKE

established 1.7.2000 as special pedagogical workplace

Expertise of the Access Centre staff from the Technical University of Košice is based on research and pedagogical work in rehabilitation field at the Department of Biomedical Engineering since 1990. Experience in Assistive technology and Social inclusion programme comes mainly from European transnational projects:


Training of the staff at: Fondazione Don Carlo Gnocchi, Onlus, Milan, University of Bristol
CIRPS University of Rome La Sapienza
Thames Valley University London
CRC Central Remedial Clinic Dublin

TUKE – Technical University of Košice

ACCESS CENTRE - TUKE

TUKE – Technical University of Košice

SLOVAKIA
Further knowledge and experience in Assistive technology and Social inclusion programme comes mainly from European transnational projects:

- Design for All for eInclusion - DfA@eInclusion” (2007-2009)
- ACCESS CENTRE - TUKE

European organizations and Networks:

- EDeAN
- AAATE
- EASTIN
- ETNA
- DfA
- eACCESS+
- AAATE
- ICTA Europe Rehabilitation International
- EFRR

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**ACCESS CENTRE - Main activities**

- cooperation with management of Faculties and Universities in creation of better conditions for students with disabilities
- coordination between three involved Universities in Košice
- counselling, advisory for students and teachers
- technical support for students

**ACCESS CENTRE - Key Issues**

Communication: teachers – students with disabilities
Assessment of Students and Assistive Technology selection
ACCESS CENTRE TUKE

ACCESS CENTRE – Key Issues

- Using low cost Assistive technology
- Using high – tech Assistive technology
- Advisory and AT solutions for Public
- Information and Training for Public and Professionals
- Inclusive University development

ACCESS CENTRE – Low cost solutions

Construct geometry
- drawing is connected with plan to project planes
- in this case we used low technology solution as it was creation of pictures with different kind of strips and pins on wooden board.

ACCESS CENTRE – Low cost solutions

Strength and elasticity
- T1/statically determined tension compression problem, where one end of link is free and the second is supported.
- T2/statically undetermined problem tension – compression, both ends of link are cantilevered.

ACCESS CENTRE – Low cost solutions

Solutions - Strength and elasticity

T3/tension-compression statically undetermined problem, the solid figure linked by links supported by joints.

It is connected with drawing and calculations of parameters in this case for the description of problems there were used combination of Braille code and relief pictures made by gluing of different thickness papers slips.
ICT PSP – ETNA project (270746)

**ACCESS CENTRE – Low cost solutions**

Parts and mechanisms of machines – blind student is able

- find mistakes in technical drawing
- explain how to construct technical drawing for concrete machine parts which she has in her hand (according her guide another person can draw)
- recognise and select an appropriate drawing to the real model of machine part and reversal

ETNA Webinar, 14th September 2011

**Training and Information for Public and Professionals**

- Assessment of persons with disabilities as AC clients
- Selection of proper AT and AT training
- Cooperation with trained clients

ETNA Webinar, 14th September 2011

**ACCESS CENTRE High-tech solutions**

Access to Information and Communication for persons with motorical impairments:

- Headmaster
- Jouse

ETNA Webinar, 14th September 2011

**Result of Adam’s design work with Headmaster**

Access Centre web page: www.tuke.sk/AC
GATEWAY web page in English, French, Slovak and Slovenian: www.gateway2at.com
InfoREDIS e-learning project for development of training in close cooperation with physicians

ETNA Webinar, 14th September 2011

**Training and Information for Public and Professionals**

ATTAIN modular training for professionals and non professionals

ATTAIN modular training for professionals and non professionals

Access Centre web page: www.tuke.sk/AC
GATEWAY web page in English, French, Slovak and Slovenian: www.gateway2at.com

ETNA Webinar, 14th September 2011

**ACCESS CENTRE - PROJECTS**

Our goal is to facilitate the environment for professionals working with/for people with disabilities using products from several European projects.

Grundtvig project ATTAIN – “Assistive Technology Consultant/Advisor Training Development and Delivery” is one of our initiatives in that process helping in faster transfer of knowledge and experience from other EU countries to Slovakia and in exchange of particular national experience.

ETNA Webinar, 14th September 2011

Deliverable D8.1 – 09/03/2012

Annex 4 pg 4/7
ASSISTIVE TECHNOLOGY CONSULTANT/ ADVISOR
Training Development and Delivery
Duration: 2 years, 2002 - 2004

ATTAIN - Participating institutions

Danish Centre for Technical Aids, Rehabilitation and Education, NetJob Aarhus
HIBERNIA Learning Partnership, Dublin
Foundation Don Carlo Gnocchi Onlus, Milan, Italy
Thames Valley University, Learning Resource Centre, London, UK

CIRPS - Interuniversity Research Centre on Sustainable Development - University of Rome “La Sapienza”
Alliance of Organizations of Disabled People in Slovakia
Regional Office in Kosice, Slovakia

ATTAIN Outputs - English, Italian and Slovak Handbooks and Accessible CD

Through Gateway, a website was created to raise awareness among Young People, Education and Guidance Practitioners and Employers relating to the variety of Assistive Technologies available and the ways in which they can enable people with disabilities to reach their own potential.

3 virtual doors of the website:
- students/employees
- employers
- guidance counsellors

Info-ReDis
The project aims to the development of a sustainable system of the re-qualification of people after spinal cord injuries in information technologies, and development of accessible ODL training materials, which will become a part of the rehabilitation process.

The pilot courses on Computer skills will be delivered to the persons who undergo the process of rehabilitation under the supervision of the physicians.
Inclusive University building

- Architectonical accessibility at University development
- University community Disability Awareness development
- Quick Implementing of the legislation supporting development of social inclusion

ACCESSIBLE UNIVERSITY ON THE WAY TO AN INCLUSIVE ONE

Back door access

Lecture rooms Access (ZP)

Lecture rooms Access (ZP)

Refreshment

The SMILING system is an innovative training device aimed at the prevention of falls in elderly people by training of walking.
The objective of the MonAMI project is to demonstrate that accessible, useful services for elderly and disabled persons living at home can be delivered in mainstream systems and platforms. This will be done in close cooperation with users and by involving key mainstream actors throughout the whole process.

http://www.monami.info/
ANNEX 5
Health Technologies Unit

ETNA Webinar
14 Dec 2011

Igone Idigoras
Alfonso Dominguez
Leire Martinez

Who we are
Health Technologies Unit of TECNALIA

TECNALIA Research & Innovation
A Spanish private applied research & technology organisation centre set up in 2010 and integrating experience and strengths of 8 research institutes.

TECNALIA activity is organized in 5 divisions
Health Technologies Unit

What we do

“We develop new technologies to improve the quality of life of the elderly and/or those with disabilities, as well as of their carers and health care staff”

We research to:
• Add quality of life to the ageing process
• Rehabilitate and compensate for situations involving disability and dependence
• Help professionals in the social and health care sector

We work in three areas:

- Rehabilitation
  - Neuro
  - Orthopedic
- E-health
  - Telecare
  - Telehealth
- Assistive Technologies
  - Interaction
  - Cognition

Our team

45 Researchers
60% Doctorates/Pre-Doctorates
30% International (10 different countries)

Our facilities

We work actively with the 4 nodes of TECNALIA

- SERBIA
  - Biomedical Engineering
  - Neuroprostheses
  - Physical and cognitive rehabilitation
- GERMANY
  - Neuroprostheses
  - BCI: Brain-Computer Interfaces
- FRANCE
  - Modeling and simulation
- ITALY
  - Service robotics
  - Assistive technologies
  - Biorobotics and rehabilitation
Our Facilities

Homelabs:
- Fully-furnished 45 m² dwelling equipped with numerous technologies for intelligent control of the environment and monitoring activities in the home.
- 50 m² dwelling with two observation rooms. NCT adapted in order to identify real needs.

Laboratories
- Laboratory for movement analysis
- Laboratory for physiological signal analysis
- Electronics Laboratory
- Prototype workshop

Our Activity

Rehabilitation
Neuro and Orthopedic rehabilitation:
- Rehabilitation robotics and functional electrical stimulation for physical training and recovery
- Tools to quantitatively assess improvements
- Technologies that enable rehabilitation in out-patient facilities and at home
- New methods to assess cognitive and motor learning and training related neuronal changes
- Persuasive principles in software development

Objectives
- Portable, low cost device for upper limb training
- User-friendly games
- Appropriate for clinical and home use

Results
- Hardware for measuring/supporting 2D movements & vertical force
- 3D Games
- First usability testing with patients
- Patented

Partners
- TECNALIA Spain

Funding & Duration
- Spain: FIK Investments
- 2008 - 2011

Armassist

Objectives
- Portable, low cost device for upper limb training
- User-friendly games
- Appropriate for clinical and home use

Results
- Hardware for measuring/supporting 2D movements & vertical force
- 3D Games
- First usability testing with patients
- Patented

Partners
- TECNALIA Spain

Funding & Duration
- Spain: FIK Investments
- 2008 - 2011

Armassist
ICT PSP – ETNA project (270746)

Telerehabilitation

Objectives
- Deliver therapies to homes
- Remote assessment and support using low cost portable equipment/robots
- Use motivational gaming, community and group therapies

Results
- Software platform for telerehabilitation
- Assessment of platform features in focus groups

Partners
- TECNALIA, IBV Valencia, Cetemmsa
- Guttmann Institute, Hospital La Fe

Funding & Duration
- Spain: Plan de Centros
- 2008 - 2011

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E-Health

Tele-care:
- Care solutions, risk prevention and support solutions for independent living
  - Lifestyle monitoring
  - Fall detection systems
  - Prevention
  - Caregiver support tools

Tele-health:
- Personalized healthcare solutions and management of long term conditions at home
  - Telemonitoring (vital signs)
  - Medication compliance
  - Personalized healthcare applications
  - Prevention
  - Clinicians support tools

Objectives
- Enhance the quality of life of elderly people making them feel safer

Results
- Patented automatic fall detection algorithm
  - Fall, panic and wandering alarm including geolocation & hands-free communication system
  - Remotely (call center) configurable & upgradable

Partners
- TECNALIA

Funding & Duration
- Spain: FIK investments
- 2006-2009

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Deliverable D8.1 – 09/03/2012

Annex 5 pg 4/8
**Objectives**
- Development of an intelligent assistant which helps in making medical decisions in the early detection of neurodegenerative diseases.

**Results**
- The system analyzes the behavior patterns of the individual in activities of daily living at home and their deviations incorporating machine learning techniques.
- The project has developed a platform with different tools:
  - For the medical professional: variance analysis based on medical rules.
  - For the patient: medication management, calendar, reminders.
  - For the caregiver: detection of risk behaviors.

**Partners**
- TECNALIA, Ibernex, Ingema, AIT, Cure, Meticube

**Funding & Duration**
- European: AAL Joint Programme (2009-2011)
Tools for caregivers and medical professionals

Information divided by CDR domains: memory, orientation, personal care, ...

Leire Martinez

Assistive Technologies
Interaction:
- Assistive products for people with low or no vision or hearing
- Interfaces, systems and devices that improve person to person interaction or person to system/machine interaction
- Home management solutions
- Ambient Intelligence
- Object manipulation and haptics

Cognitive support:
- Systems that provide support or help for persons with cognitive impairments in performing activities and tasks
- Cognitive training

HaptiMap - Haptic, Audio and Visual Interfaces for Maps and LBS

Objectives
- Develop tools that make it easier for developers to add adaptable multimodal components into their applications
- Raise the awareness of accessibility issues via new guidelines and to suggest extensions to existing design practices so that accessibility issues are considered throughout the design process

Results
- A toolkit used to build a demonstrator together with ONCE
- Help visually impaired people when completing a route in unknown areas

Partners
TECNALIA, Lund University, Queen’s University, University of Glasgow, OFFIS e.V., Commissariat à l’énrgie atomique, Siemens AG, SIIB, C-LAB, Finnish Geodetic Institute, BMT Group Ltd, Lunds kommun, ONCE, Kreis Soest, NAVTEQ B.V, GeoMobile

Funding and length
European Commission, FP7, 2008-2012

HaptiMap Demonstrator, User Application

Route loaded

Load route from file
Types of user profile

Advanced configuration (e.g.: sound enabled traffic lights)

Objective

- To develop a "Fluent Human-Robot object exchange", through the design of a control law taking into consideration the human motion characteristics during such procedure.

Expected outcome

- Development of a formal characterization of fluent human-human object exchange in natural domestic settings.
- Design, description, and specification of effective and acceptable human-robot fluent object exchange modes and strategies.
- Implement the developed control law strategies onto a commercial robot (Kuka LWR) and validate from tests in lab environment.

Partners

- TECNALIA
- Funding and duration
  - Plan Nacional
  - Nov 2010- Jun 2013

FLUENT: Fluent Human-Robot Exchange of Everyday Objects

Testing done in lab environment with motion capture system in order to track and store the arm and upper body movement while object exchange.

Arm controlled by face movement in simulator

COGLABORATION (2011-2014) An additional european project to progress on this research line.

You can access to some videos of our projects in:

- [http://www.youtube.com/playlist?list=PL41DB1AC72671C1AC72671C1AC72671C1AC726](http://www.youtube.com/playlist?list=PL41DB1AC72671C1AC72671C1AC72671C1AC726)
ICT PSP – ETNA project (270746)

Deliverable D8.1 – 09/03/2012

Annex 5 pg 8/8
DART – Centre for Augmentative and Alternative Communication (AAC) and Assistive Technology (AT)

A team of 15 people:
- Speech language therapists
- Occupational therapists
- Special teachers
- Technician
- Computational linguists
- Administrative staff

DART – Location / Premises

Near the city centre of Göteborg
Sharing premises with SPSM – the Swedish “Agency for Special Needs Education and Schools”

DART – Background / History

- Started in 1988
- Project co-ordinated by the “Swedish Handicap Institute” (Now SIAT – the Swedish Institute for Assistive Technology) with funding from “the Heritage Foundation”
- One of several regional “Computer Resource Centres”
- Permanent since 1992
- KomP – AAC Centre project 95-97, integrated into DART 1998
- The Regional Habilitation and DART are part of the Sahlgrenska Univ. Hospital since 1998

DART’s activities

- Assessment and counselling for people with severe disabilities concerning their needs for AAC aids, tailored ICT systems, etc.
- Courses and education for users, parents, therapists, teachers, etc. in the use of relevant hardware, software and methodologies.
- Research and development activities, such as software and methodology development; evaluation of hardware, software and methodologies, case studies, etc.
Assessment and counselling: Collaborative problem solving

- An intervention model that
  - includes assessment and implementation
  - involves child, family, professionals and other important persons in the child’s social network
  - includes the components of ICF that are needed; focus will be on activity & participation
  - is functional and solution oriented
  - is dynamic not static – works well with goal setting

Assessment and counselling: Assessment

- What are the resources / capabilities / motivation?
- Identify and describe the problems / limitations
- Find different explanations to the problems
  - In the physical and social environment, the individual, interaction and access to AAC and AT aids etc.
- Identify possible / probable strategies to improve the situation
  - ... based on the potentials of the individual and the environment

Assessment and counselling: Implementation

- Set goals that relate to the described potentials and problems – prioritize (GAS)
- Use methods that relate to explanations of capabilities and limitations / problems
- Evaluate
- Revise – follow up and set new goals – think development!

Assessment and counselling: Documentation table

<table>
<thead>
<tr>
<th>Resource / Capability</th>
<th>Problem / Limitation</th>
<th>Explanation</th>
<th>Goal</th>
<th>Method</th>
</tr>
</thead>
</table>

Why is this so good?

- Points at the child's resources
- Makes others interested and engaged
- Concretizes and makes problems, goals and methods clear
- Is realistic and positive
- Increases participation from others
  - everyone knows what to do, how and when as well as what to expect
Research and Development

- A strong tradition since the start, and an expanding part of DART
- Linked to r&d groups at Reg. Hab. and DS-BUS
- Most projects run in close co-operation with stake-holder organisations, companies, other centres and/or academic research teams.
- 2009 decision to strengthen the organisation and structure of DART’s internal r&d work
- A local research group was formed. Group leader: Ulrika Ferm

Research and Development (2)

- Research program with
  - formulated goals, activities, methods and types of meetings
  - Guidelines for projects
  - Involves the whole team but to different degrees
- Currently two open R&D das yearly
  - Followed by an internal R&D day for project staff
- Joint organiser and scientific lead of the yearly "Communication Carnival of Western Sweden" conference

Research and Development (3)

European Projects:

Currently running:
- ETNA

Previous European projects:

European Projects - AEGIS:

- Develop building blocks for accessibility
- Building on previous achievements and concurrent efforts for access to desktop environment – now also for Internet services mobile devices and services
- Researching how to build a foundation – an OAF – "Open Accessibility Framework" – facilitating for mainstream developers to bring out products that work better for people with disabilities
- Contributing to a free/open infrastructure for a11y

Europe Projects - AEGIS:

Inclusive Multi-modal Language Support
The Concept Coding Framework (CCF) multi-modal and multilingual support in a free standard office suite offers a truly inclusive productive environment for a wide range of users and needs, e.g.:

- Early literacy or second language learning
- Cognitive impairments resulting in reading and writing difficulties and/or need for AAC
- Supporting the facilitators

Research and Development (3b)

European Projects - AEGIS:

Inclusive Multi-modal Language Support
The Concept Coding Framework (CCF) multi-modal and multilingual support in a free standard office suite offers a truly inclusive productive environment for a wide range of users and needs, e.g.:

- Early literacy or second language learning
- Cognitive impairments resulting in reading and writing difficulties and/or need for AAC
- Supporting the facilitators

Research and Development (3c)

European Projects - AEGIS:

Writing and reading with symbols displayed outside text helps comprehension and spelling

No symbol insertion in text. The CCF Symbol Server displays looked-up concepts and symbols (ARASAAC + Bliss) as words are written, and/or as the text cursor is moved in the text.
Research and Development (3d)

European Projects - AEGIS:
Writing with full AAC (Blissymbol) support

Writer with CCF Symbols and SAW

Research and Development (3e)

European Projects - AEGIS:
Helpers producing symbol material

Mixed mode document – b&w symbol fonts, as well as colour graphics insertion in text

Research and Development (3f)

European Projects - AEGIS:
The same open and free CCF technology applied for AAC on the mobile device

Research and Development (4)

Current National Projects:
Development of technology – computational linguistics

• GRASP – Development of a tool for training of grammar for children who use AAC.
• LekBot – Robot play for children with Cerebral Palsy. Interaction with peers during play. A lego-robot (mindstream)., a PC with a dynamic screen application and speech synthesis makes it possible for the children to give commands to and engage in dialogue with the robot.
• Tivoli – Development of a tool/computer play for training of manual signing. Cooperation with KTH.
• Pratmakaren – Development of a software that allows reading of text strips used on a computer (DVD, TV)

Research and Development (5)

Current National Projects (cont):
Provision of knowledge, methods and tools for the individual and the partner

• Pragma –development of methodology and tools for working with pragmatically organized communication books. Collaborative teaming/networking including preschools, families and habilitation staff.
• Komm-A – Communication using a communication book for partner-dependent communicators with aphasia
• Talking Mats and Parkinson’s disease. 12 couples are trained to use and evaluatesTalking Mats as support during conversations about communication in daily activities.
• Lyssna – Use of Talking Mats to allow children to share their views of their assistance.

Research and Development (6)

Current National Projects (cont):
Provision of knowledge and tools to partners (cont):

• AKKliv – Development and research of parental courses about, communication, responsive strategies, play and use of AAC – in co-operation with local habilitation services etc.
• KomHIT – Communication using AAC and ICT in hospital care settings.
• KOMPIS – Communication using aided language stimulation within the school environment.

Most of these and previous projects result in AAC material that is made available via SIAT, SPSM and/or at DART’s website – at low-cost or for free.
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