

Ageing, Disability and Independence - European Research and Development

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Gunnar Fagerberg
European Commission
Information Society Directorate-General
gunnar.fagerberg@cec.eu.int



Research and Development in Europe

Demographics

Total EU population: 374 million

Over 60 years of age:

2003 20%

2020 25%

2050 33%



Research and Development in Europe

R&D programmes - Elderly people and people with disabilities

TIDE pilot phase (1991-95): 22 projects, 18 Meuro

TIDE bridge phase (1993-98): 55 projects, 42 Meuro

4FP: TAP (1997-2001): 53 projects, 56 Meuro

5FP: IST (2000-2004): 43 projects, 57 Meuro

QoL (2000-2004): \approx 20 projects



Example project: AUDETEL



AUDETEL: Audio-description system for TV viewers with visual impairments and/or cognitive difficulties

Now implemented by the Independent Broadcasting Authority, UK and contributing to the European Standard for audio description.



Example project: PAM-AID



PAM-AID

Prototype intelligent stroller for frail, elderly persons with visual impairments, using infra-red sensors and control technologies

GUIDO



Photos by Vartry Research

Example project: *SAFE-21*

Medical monitor



Technology & Communications
Intranet, Internet
E-mail, SMS, Fax, ISDN
Full duplex speech

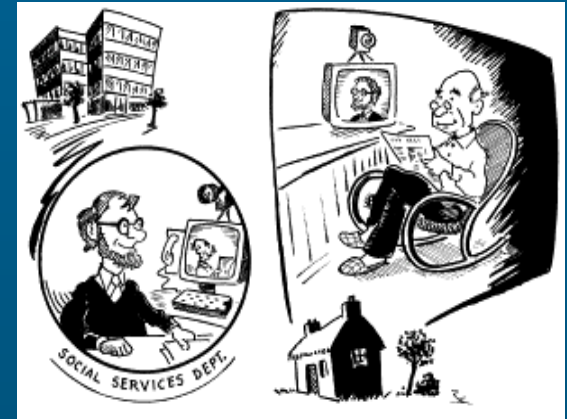


Alarm unit

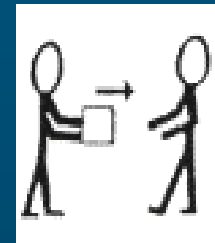


Communication devices

Example project: *IMPACT*



**CD-ROM with multi-media courseware
for care professionals,
introducing assistive technology**



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IST

People with special needs

Priorities

- Design-for-all products, systems and services
- Adaptive systems: communication tools, mobility support devices, robotics control systems
- Multimedia applications for supporting daily living and social integration
- Take-up, validations and demonstrations



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IST - Project examples

PACKAGE - accessible consumer packaging and label information for disabled and older users, demonstrating design-for-all principles and create a database of products and packaging

SAID - a range of telematics services for social assistants and elderly people using digital television infrastructure, intelligent software agents and mobile phone information services

SeniorWatch - a market study in eighteen countries about the specific information society technologies needs of older people to guide industry, researchers and policy-makers



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IST - Project examples

SILC - an intelligent alarm system to increase the safety and independence of elderly and disabled citizens, using a range of biometric sensors which can be programmed individually

TeleCARE - a framework for tele-supervision using remote services from health and care centres, developed around a set of Internet sites, to provide expert supervision and care facilities to support elderly persons and their families



An Information Society for All

VisiCAST

Development of realistic virtual humans (avatars) generating and recognizing

European deaf sign languages.

Building applications for Television, Multimedia and the Web



WAI-DA, WAI-TIES

Standards for web accessibility for all



An Information Society for All

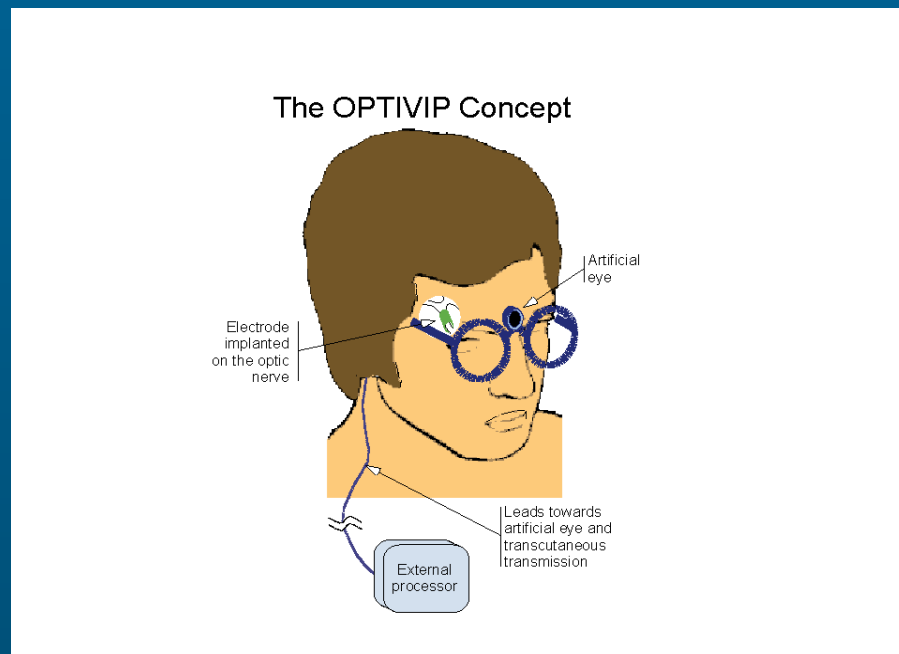
OPTIVIP



• “Making the blind see”

• Optical implant: Stimulating the optic nerve

• Expected results: Pattern and landmark recognition and grasping (visuo-motor interaction)



An Information Society for All

WAI-DA, WAI-TIES

Web accessibility for all

- implementation support
- promoting awareness
- pool of experts
- review teams
- harmonisation with WAI guidelines



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Quality of Life programme

The Ageing Population and Disabilities

Objectives

- to enhance the quality of life, autonomy and social integration of older people
- to improve quality, efficiency and user-friendliness of care, welfare provision and technological support
- to support policy and planning



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Quality of Life programme

The Ageing Population and Disabilities - project examples

GENTLE/S uses robotic assistance in rehabilitation, incorporating machine-mediated therapies into established stroke rehabilitation practices.

ELDERATHOME aims to help older people with functional limitations to cope better with their home environment by developing standards for housing, appliances etc

ENABLE will develop and test products that can help persons with dementia to carry out tasks of daily living, in particular to support memory, provide pleasure and comfort and facilitate communication.



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Quality of Life programme

The Ageing Population and Disabilities - project examples

CORTIVIS will try to demonstrate the feasibility of a cortical neuroprosthesis, interfaced with the visual cortex, as a means through which a limited but useful visual sense may be restored to profoundly blind persons.

FRR will design friendly restrooms for older people with different disabilities, taking into account different cultures and social attitudes in different countries

AGILE aims to enable older age groups to continue driving safely by developing training, information, counselling and driving ability assessment tools for the elderly.



The Information Society for All - a vision

- h An open, inclusive society, accessible to all citizens without discrimination
 - h Participation of all citizens, of all ages and abilities:
 - citizens seen as a resource and not a burden
 - h Increased possibilities to enhance all citizens' capacities
 - h Opening up new markets and stimulating industry
- ...driven by research and policies



6FP Work programme 2003-4: eInclusion

Objectives

- To promote eInclusion as a core horizontal building block in the establishment of the Information Society to ensure equal access and participation for all in Europe
- To develop intelligent systems that empower persons with disabilities and ageing citizens to play a full role in society and to increase their autonomy



6FP Work programme 2003-4: eInclusion

Focus

- Research on advanced interfaces in **assistive devices** and information modelling and web semantics to improve **web usability**
- Development and demonstration on **intelligent housing** for persons with special needs to be addressed in an integrated approach
- Networking of research teams,
in **assistive technologies** to strengthen research on the quality of life of users with physical, sensory or cognitive impairments, and
in **design-for-all** for mainstream products and services, exploring, for example, cognitive demands and new multimodal platforms.

6FP Work programme 2003-4: eInclusion

Socio-economic, regulatory and policy dimensions to ensure availability of information society services for all at a reasonable cost will also be addressed.

Proposals will describe how objectives, project work, results and funding from international, national and regional programmes and international co-operation initiatives will contribute to the EU funded programmes.

Projects should aim at fostering partnership between advanced research laboratories in the key IST domains from the industry, system integrators, service providers and relevant users.



6FP - the instruments

New instruments

- Integrated projects (IP) - objective driven
- Networks of excellence (NoE) - exploratory research

Traditional instruments

- Specific targeted research projects (STREPs)
- Co-ordination actions (CAs)
- Specific support actions (SSAs)



Expressions of Interest

- Domain: **Systems and Applications for All, including the Elderly and Persons with Disabilities**
- Total Expressions of Interest : **65**
 - Integrated Projects : **2/3**
 - Networks of Excellence : **1/3**
- “*True*” and mature *Integrated Projects*: **10%**
- Several interesting *Network of Excellence*: **15%**

Analysis of research priorities

Research topics addressed

- IST as a tool for social integration of elderly and disabled persons – 45%
- Smart homes and remote care for elderly and disabled persons – 20%
- Intelligent assistive technology systems – 12%
- Physical accessibility – 8%
- Other proposals



Analysis of research priorities (cont'd)

Main needs/problems addressed

- Social inclusion of elderly and people with disabilities
 - Closing the digital gap
 - Using ICT for communication and integration
- Economic inclusion of elderly and people with disabilities
 - Using ICT for remote work/assisted work
- Autonomous living for elderly and people with disabilities
- Integration of EU research on assistive technologies



6FP - Timetable Call 2

- Open June 2003
- Close 17h00 15th October 2003
- Evaluation of written proposals: 3-14 November, 2003
- Hearings (IPs, NoEs): end Nov, early Dec, 2003
- Evaluation reports to proposers: Mid-December, 2003
- Invitation to negotiations: January, 2004
- First contracts expected March/April, 2004
- Latest contracts expected May/June, 2004



eEurope 2002 - Participation for all

1. Policies to avoid info-exclusion
2. Adoption of WAI guidelines
3. Publication of design-for-all standards
4. Review of relevant legislation and standards
5. Networking centres of excellence and European curriculum in design-for-all



eEurope 2005: An information society for all

By 2005, Europe should have:

- modern online public services
 - e-government
 - e-learning services
 - e-health services
- dynamic e-business environment

enabled by

- widespread availability of broadband access
- a secure information infrastructure



eEurope 2005: An information society for all

e-Inclusion

“eEurope contains measures regarding e-inclusion in all action lines”

“by supporting the emergence of alternative access platforms, the new action plan will further facilitate e-inclusion, also for people with special needs”



eInclusion in eEurope 2005

COCOM subgroup on electronic communications and users with disabilities (INCOM)

Accessibility of new platforms : Digital TV, 3G mobiles,...

Support to eInclusion policies in eGovernment, eLearning, eHealth

Accessibility criteria in public procurement

Recommendations for a European curriculum in design-for-all

Accessibility ombudsman function

Monitoring and benchmarking by the eAccessibility group



FP6: Sources of Information

European research:

<http://www.cordis.lu>

eInclusion research:

<http://www.cordis.lu/ist/so/einclusion>

IST helpdesk

Fax : +32 2 296 83 88

E-Mail : ist@cec.eu.int

