2.8 Ireland

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2.8.1 Introduction

This report provides an overview of the participation of disabled and elderly end users in the R&D of ICT and assistive technology products and services in Ireland. The products and services examined include both services and products specifically developed for these groups and mainstream services and products.

The aim of this study was to collate information on the existing situation in Ireland with regard to the above. In general, Ireland has a small manufacturing base and overall very few companies are engaged in the production of technical aids. This means that the majority of assistive technology products supplied in Ireland are imported. However, where an adaptation is necessary to a piece of equipment this is usually carried out by an Irish company.

This report describes information gathered from organisations and companies working in four main areas - national organisations representing disabled and elderly people, other national organisations (such as testing bodies, telecommunication company), Irish partners in European R&D programmes, (in particular projects funded under TIDE and TELEMATICS programmes) and industry (manufacturers and service providers).

2.8.2 Methods of approach in carrying out the inventory

A list of companies and organisations that could provide the information sought by the FORTUNE project was drawn up from a number of sources reflecting the four areas outlined above. The Irish partners of projects funded under TIDE were identified from the TIDE Bridge Synopses and the Irish partners of projects funded under the Telematics Applications Programme were identified from the TELEMATICS web site. The WRC's own existing network of organisations working with or on behalf of elderly and disabled people in the area were added to the list and the other companies and organisations working with or on behalf of elderly and disabled people were taken from the National Social Services Board directory. Other sources include national organisations such testing and standards agencies and the

main telecommunication company. In addition, organisations and companies interviewed often provided information and contact details for further examples that they were aware of.

The companies and organisations on the list were contacted by telephone and the most appropriate person to speak to in relation to the issue was identified. The respondent was asked some preliminary questions to establish whether they had ever been involved a relevant project, the manufacture of products or the provision of services which included the participation of disabled and elderly end-users in the R&D of the product or service. If they were then they were interviewed about the way in which this participation took place. The interview was conducted using the guidelines circulated by Rehab - Nor (see Appendix 1). At the end of the interview respondents were asked if they knew of any other companies that might have done some work in this area.

2.8.3 Inventory: Institution, organisation, actors

A large number of organisations and companies were contacted as part of this survey. While some of them were aware of the special needs of disabled and elderly people with regard to products and services only a few of them were directly involved in the manufacture or provision of these and many of the companies were only involved in the supply and distribution of assistive technology. Most of the organisations representing disabled and elderly people, have as their brief the provision of information and advice to disabled and elderly people, the promotion of awareness of the issues affecting these groups and provision of social support and assistance to these groups rather than any indirect involvement in R&D of products and services. However, in recent years quite a few of them have become involved in R&D through European funded research programmes. Only those companies and organisations that provided information relevant to the project are listed below.

Table 1. National organisations providing services to disabled and elderly people

Organisation	Address	Contact details
National Association for the Deaf **Barry Dunne**	North Frederick Street Dublin 1	Phone: 8723800 Fax: 8723816 Email: nad@iol.ie
National Rehabilitation Board **Sean Kenny**	North Great George's Street Dublin 1	Phone: 8307033/8747727 Fax: 8747490
Central Remedial Clinic **Bob Allen**	Vernon Avenue Clontarf	Phone: 8332206 Fax: 8335496 Email: ballen@crc.ie
National Council of the Blind in Ireland **Blaithin Gallagher**	Whitworth Road Drumcondra Dublin	Phone: 8307033 Fax: 8307787 Email: ncbi@iol.ie
Disability Resource Centre **Donnie O'Shea**	North Great George's Street Dublin 1	Phone: 8307033/8747727 Fax: 8747490
Irish Wheelchair Association	24 Blackheath Drive Dublin 3	Phone: 8338241 Fax: 8333873
National Council on Ageing **Catherine Mulvenna**	22 Clanwilliam Square Grand Canal Quay Dublin 2	Phone: 6766484/5 Fax: 6765754
Age Action Ireland **Tom McGuirk**	114-116 Pearse Street Dublin 2	Phone: 6779892 Fax: 6717782 email:ageact@indigo.ie
Institute for Design and Disability **Tina Leonard**	National College of Art and Design Thomas Street Dublin 8	Phone: 6711377 email: eidd@tinet.ie
Disability Federation of Ireland **Roger Action**	2 Sandyford Office Park Dublin 18	Phone: 2959344/5 Fax: 2959346

Table 2. Irish Partners in TIDE and Telematics Application Programme projects

Organisation	Project(s)	Address	Contact details
IMS **Sean Breen**	ACT-IT CHEF HYPIT	Clara House Glenageary Park Glenageary Co Dublin	Phone: 2840555 Fax: 2840829 email: sbreen@ims.com
National Council of the Blind in Ireland **Blaithin Gallagher**	TESTLAB PAMAID TACIS	PV Doyle House Whitworth road Dublin 9	Phone: 8307033 Fax: 8307787 email: ncbi@iol.ie
Dublin City Library **Betty Boardman**	TESTLAB	South William Street Dublin 2	Phone: 6775877

Irish Library Council **Alan Bevan**	LISTED	53 Upper Mount Street Dublin 2	Phone: 6761167/6761963 email: abevan@libcounc.iol.ie
CRC **Ger Craddock**	MECCS NIBS	Vernon Avenue Clontarf	Phone: 8332206 Fax: 8335496
Irish Guide Dogs **Simon Higgs**	ASMONC	Mount Street Dublin 2	Phone: 1850 506300 Fax: 01 874152 email: igda@iol.ie

Table 3. National Organisations

Organisation	Address	Contact details
FORBAIRT Information officer	Wilton Park House Wilton Place Dublin 2	Phone: 6689600 Fax: 6605095
National Standards Authority of Ireland Information officer	Glaseviin Dublin 9	Phone: 8370101 Fax: 8379620

Table 4. Industry

Organisation	Address	Contact details
Telecom Eireann **Eamon Duffy**	St Stephen's Green Dublin 2	Phone: 6714444
ASH Technolies **Hugh Maguire**	Unit 31 Whitestown Ind. Est. Dublin 24	Phone: 4526380
Infidel **Aubrey Thompson**	Shankill Business Centre Shankill	Phone: 2823688

2.8.4 Methods and experience

2.8.4.1 Participation in the different stages of the value chain

The participation of disabled and elderly end-users in R&D of ICT and or assistive technology products and services in Ireland varies amongst the areas outlined above. The highest levels of participation was found in projects funded under the TIDE and Telematics Applications Programme.

In TIDE and TELEMATIC projects end-users were involved in the project at various stages during the design cycle (value chain). They were most often involved in the analysis/specification stage and the evaluation phase of the project. The type of involvement end-users had varied during the different stages. User participation during the analysis stage was usually through a user needs survey which was

generally conducted using a questionnaire. The types of user involvement during the evaluation stage varied and involved a range of techniques including field trials, recording user information electronically or on video, interviews, questionnaires and discussions with end-users. With regard to the problem definition stage and the development phases, in cases where users were involved it tended to be the involvement of one or two users only. It was also common to find that during these phases the input on disability needs was made by professional with expertise in the area rather than direct input from disabled individuals. Overall it can be said that the relatively high level of user participation in European R&D has been encouraged by the explicit reference to user participation in these programmes.

The level of involvement of national organisations in end-user participation of disabled and elderly users in R&D depended on the function of the organisation. Many of the organisations of and for disabled and elderly people exist to provide information and support services to these groups, or to government about the issues affecting these groups. Some of the national organisations were directly involved in the supply of assistive technology to a people with a specific disability e.g. deaf people and visually impaired people. In most of these cases the equipment supplied was off-the-shelf and the only time users were involved was in a few cases where the equipment required a modification to meet the particular needs of the individual. This modification was usually carried out by qualified personnel within the user organisation. The National Rehabilitation Board have a special department, the Disability Resource Centre whose purpose it is to provide information on the products and services available to disabled people. A large number of items are on display in the centre so that members of the public and professionals working in the area can view them and try them out. On occasion, staff at the centre been approached by companies for advice about involving end-users in the design of products and services. However, the centre is more often asked for the expert opinions of professionals working there. The staff in the centre also make sure that they react to any complaints they receive from disabled people about difficulties and problems they have with specific items of equipment by providing feedback to and making complaints on their behalf. They also try to encourage companies that seek their opinions to use disabled people in the R&D of products and services.

At present, the only service provided specifically for disabled people by the national telecommunications operator is the relay service for deaf people. In the setting up of this service there was little in the way of participation by end-users. The service was set up in reaction to a lobby from a deaf representative organisation and with the expertise of the staff from the organisation. More recently this company has started to actively look at elderly and disabled people as a distinct group and they are in the process of planning and putting together a range of services for these groups. They are just about to start conducting research amongst elderly people with regard to their opinions of existing service and about that types of services they may require. The research will be undertaken by a market research organisation and the elderly users opinions will be sought through their involvement in focus groups. A similar exercise will be undertaken with disabled people in the near future.

As regards the bodies responsible for standards and testing in Ireland, neither of these were presently involved in testing or implementing standards specifically for assistive technology products.

The majority of the industrial companies contacted during the survey were engaged in the supply of assistive technology to disabled people and as such the type of user participation they were involved in tended to be in relation to the adaptation of technical aids to suit individual requirements. Only two companies reported on in the survey were directly involved in the development and manufacture of assistive technology for disabled people. Both make products for visually impaired people and involve visually impaired people at some stage in the design process. One organisation has developed a working relationship with a few visually impaired people who they call upon during the analysis and development stages. This organisation uses a larger group of visually impaired people from a school for visually impaired children at the evaluation stage. The other organisation involve visually impaired people at the evaluation stage of products. When their product is at the pre-production stage, they contact a user organisation and ask them to host a one day workshop at which visually impaired end-users can use the product and comment on it. The ironic thing about this organisation is that the products tested by

Irish visually impaired people are for export and are not available on the Irish market yet.

2.8.4.2 Description of methods of approach in the different stages

Identification of user selection strategies

User participation in R&D was most prominent in the TIDE and TELEMATICS projects and this section makes reference mainly to these. In many cases the organisations involved in these projects were organisations representing specific user groups and they were involved in the project to provide their expertise on the area. In these cases the organisations involved used people from within their membership for the parts of the project where user participation was required. In other cases where user organisations were not partners in projects the selection of users varied and strategies used to identify users included contacting user organisations and asking them to nominate a user(s), liaising with institutions that had a number of people with a particular disability and using all or a subset of these people and selecting people on a more ad hoc basis such as through personal contacts with the person(s) from the required target group. A number of different methods of selection were used ranging from personally contacting enthusiastic people, to circulating members and asking them to participate, to approaching members when they visited the organisation for some other purpose.

Co-operation with user organisations

As described in section 3.2.1 above, most of the co-operation with user organisations during the R&D of ICT and assistive technology products and services took place within the TIDE and Telematic Applications Programme projects. In these projects user organisations were often members of the project consortium or otherwise they were called upon to provide end-users for parts of the project. Other examples of co-operation with user organisations was where organisations were called upon to provide their expertise in relation to the R&D of ICT and assistive technology products and services for industry.

Examples of good practice

Two examples of good practice are described below. The first of these concerns the evaluation of a piece of software designed to provide information to disabled people. It has been included in the report because it used a comprehensive and a systematic approach to gathering information on the opinions of a range of disabled end-users during the evaluation stage of the project. The second example is about the development of a piece of software designed to teach learning disabled people independent living skills. It has been included because end-users were involved in a systematic way throughout the product design cycle.

Software testing

The Disability Resource Centre was involved in a project which developed a database of information of interest to disabled people. To try and assess how accessible the fields were for retrieving information they involved a panel of end-users in the evaluation of the prototype software. A profile was drawn up of the range of disabilities which may have difficulties in accessing the software and a panel was then made up of a cross section of people that covered both a range of disabilities and also a range of computer literacy. This panel was gathered together from people known to staff of the Disability Resource Centre and from representatives of the disabled groups of interested who were nominated by user organisations.

The group was brought together for a 2 day workshop during which the aims and objectives of the workshop were explained, a basic introduction to the software was given to the users and then they were set a series of tasks which challenged them to retrieve the information from the database. During the performance of these tasks, they were monitored and observed by an evaluator in order to assess how they were getting on with the task and any comments that were made were noted down. At the end of the set of tasks, the group was brought together again to discuss the evaluation and to pin point the difficulties they had and to make any additional comments they thought valid.

Software development

The aim of this project was to develop a multimedia instructional tool to teach learning disabled people simple cookery skills. It was funded under the TIDE programme. The company undertaking the development of the software in Ireland liaised with an institution for learning disabled people in order to obtain a relevant user group. In total, 18 learning disabled users were involved in the project and their involvement took place throughout the project at various stages. Six users participated in the specification and design part of the project, a different six people took part in the user trials stage and a further six people participated as a control group. The control group were taught the traditional method of learning to cook and served to provide comparative information on the merits of computer based learning methods versus traditional methods.

During the user needs part of the project the participants carried out the cookery task in the traditional way and their performance was recorded on video. The video coverage was analysed by Occupational Therapists (OT) and other professionals and the user needs information specified from this analysis. The users who were involved in the user trial stage were all trained in how to use the multimedia software developed to teach them cookery skills. They were trained by the OT and were then asked to use the software in their residential homes at scheduled times over a six week period. The usage of the software during this period was recorded by video and the progress the users made was assessed by analysing the video coverage. The control group carried out the task in the traditional manner with the support of the OT and their progress was assessed by the OT during the session.

2.8.4.2 User participation in standardisation work and in comparative testing by testing agencies

Testing

There are very few companies engaged in the manufacture of assistive technologies in Ireland and there are no systematic procedures in place for the testing of such products. Products that are produced comply with safety and health marks such as ISO, BS and more recently CEN codes, and do not have to undergo any testing to

ensure that they are user approved. The national agency supporting the development of Irish industry - FORBAIRT will test products to specification on behalf of manufacturers who request and pay for such testing. As a result it is mainly the larger manufacturing companies that undertake product testing. In practice this means that there is no compulsory testing of any products in Ireland and few if any assistive technology products manufactured in Ireland are tested during the R&D cycle.

Standards

At present there are no national standards for assistive technology in Ireland. In practice this means that the few assistive technology products that a produced in Ireland need to comply with the European safety standards but are not subject to any other standards requirements.

Usability testing

As regards testing for suitability and usability there are no formal procedures in place in Ireland at present. Where usability testing takes place is usually during the evaluation phase of R&D projects that have end-users as part of their project.

2.8.5 Overview about user training

During the course of the survey no specific examples of user training aimed at empowering or qualifying individuals for user participation were identified. Where user training took place it tended to be on a once off basis at the testing or evaluation stage of R&D. Training at this stage took a pragmatic approach and the content was mostly about teaching or demonstrating to users how to use the product being tested.

Two new projects are just about to begin in Ireland which look at the provision of training regarding assistive technology. While neither of these are directly aimed at training end-users for participation in R&D they provide recognition of the issue of end-user involvement in assistive technology distribution and open up opportunities for further developments such as directly involving disabled and elderly users in R&D. One programme is aimed at training rehabilitation professionals in how to assess the need for assistive technology and how to proceed with training the user to

use the technology. The other example is a project funded under the HORISON programme, which is looking at training disabled people in local independent living centres around the country in the use of assistive technologies so that they in turn can provide training to other users.

2.8.6 Overview of organisations frameworks for user participation.

While user participation takes place in Ireland there are no structured or formalised approaches to user participation. The most common framework for user participation in Ireland was through reference to user organisations. In the case of TIDE and Telematics Application Programme projects user organisations were often partners in the consortium and provided end-user participation through membership of their organisations. Other companies involved in these programmes contacted user organisations representing disabled groups to provide end-users or made contact directly with institutions where disabled people were looked after on a day care basis or as residents. The survey did not identify any specialised pools of expertise and or any specialised panels of users who were called upon for their participation in R&D of either ICT and assistive technology products or mainstream products and services. Another area where user participation was evident was amongst user organisations that provided services, such as training services and sports activities to their membership. Here users were sometimes involved in the development or evaluation of a programme or activity before it was launched by the organisation. Another example of user participation in organisations is at local level where organisations have centres nation-wide. A disabled person often sits on the local committee and provides direct input into the type of services available for the membership.

2.8.6 New initiatives in Ireland

A number of new Information Society initiatives are under way in Ireland and within these there is some level of activity with regard to the inclusion of disabled and elderly people. An Information Society Commission has been set up to assess how the information society might develop in Ireland and what types of services are needed by different sectors of society. This Commission has a 6 committees, one of

which is looking at social inclusion. The brief of this committee includes the inclusion of all marginalised groups in society. It has members representing disabled people who provide information on the needs of disabled people with regard to the Information Society and inclusion.

There is another initiative - The Information Age Town. Here the main telecommunications operator is going to equip a town in Ireland with state-the-art telecommunications and technological equipment to see what types of services people use and need. A disabled person has been nominated to sit on the committee for this project and propose services that might be usefully tested out for disabled people.

Finally, the government has recently launched an initiative to equip all schools with state-of-the-art IT by the year 2000. An organisation representing visually impaired people have begun actively lobbying government to include one of their representatives on the organising committee in order to ensure that the needs of visually impaired students are met.

2.8.7 Summary of findings.

Overall Ireland has a small manufacturing base with very few indigenously manufactured assistive technology products. The area with the most activity as regards user participation in R&D of ICT and assistive technology was under the European funded research programmes.

The situation with regard to user participation in R&D in Ireland is very fragmented. The most prominent area of activity with regard to the development of products and services for disabled and elderly people was under projects funded by European R&D programmes. A large number of the industrial companies contacted were only involved in the supply of assistive technology. In most cases this equipment was manufactured outside of Ireland and end-users were only involved when an adaptation was required to suit the special needs of a particular individual. Also in some cases the expert opinion of professionals working with disabled people is sought by people manufacturing goods and providing services, rather than the expressed opinions of the disabled user.

While user participation does take place in Ireland there are no systematic procedures in place for involving end-users in ICT or assistive technology product development. In the main, users were involved through the membership of user organisations and or institutions where they were looked after or resident. Where end-user participation does take place it is usually at the analysis/specification stage and the evaluation stage of products and services. It is notable that the majority of examples of end-user participation that were identified in this survey were in relation to disabled people and that very little was identified in relation to elderly people. Perhaps this is because most elderly people do not have any special needs in relation to many products and services and where they do these requirements are of elderly disabled people and are similar to those of disabled people.

Given Ireland's small manufacturing base it seems that there will be a small demand for guidance in the area of user participation in the R&D of assistive technology and mainstream products. With the large growth in the number of services offered to the public via telecommunications - telebanking, various Internet services such as on-line shopping, on-line support services etc. perhaps the sector that would benefit most from training in end-user participation in R&D in Ireland is the service sector and in particular the tele-service sector.