

Towards an Inclusive Information Society: Some Principles from the Margins

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ABSTRACT

As the Information Society develops, it is becoming clear that several already disadvantaged groups are being excluded. This paper attempts to identify these groups, the benefits that inclusion might bring and the barriers obstructing their inclusion. We motivate and identify some general guiding principles and illustrate them with some example policy initiatives and recommendations drawn from the Irish context. The principles assume availability of adequate resources and aim at efficient and effective deployment of ICTs for inclusive social objectives. The paper provides a timely, useful perspective for technologists engaged in the construction of tomorrow's information society. The need for urgent action is clear, action informed by the social context and the useful guiding principles presented here.

Keywords: Universal Design; Information Society; Social Inclusion; Social Marginalisation; Policy Recommendations; guidelines for Inclusion; Principles for Inclusion; Information and Communications Technology; Telecommunications Regulation; E-Commerce Legislation;

Introduction

It has become evident that some groups, already marginalised in society generally, are also being left behind by the evolving Information Society (IS) [ISC00]. While such groups have much to gain from Information and Communication Technologies (ICTs) and the emerging information society, significant barriers exist to the realisation of this potential. This paper describes some of these barriers and puts forward principles that underpin recommendations to address these inequalities. The principles assume availability of adequate resources and aim at efficient and effective deployment of ICTs for inclusive social objectives. The principles are illustrated briefly with reference to examples in the Irish context, but it is hoped that the principles may be of wider use.

Many of the exclusions experienced by marginalised individuals (e.g. housing, transport, poverty, inaccessible physical and electronic environments) cannot be addressed by technical experts using ICTs in isolation. However by deploying ICTs within the community and voluntary organisations that serve these excluded groups some headway can be made. This paper focuses on the needs of people with disabilities and of community and voluntary organisations generally because of the challenging and different applications involved and also because these needs must be addressed in promoting social inclusion.

The paper is written from the point of view of someone who has acquired a physical disability and has experienced both inclusion in the mainstream and marginalisation. An attempt has also been made to include the views of voluntary and community groups who are working with other marginalised groups. The paper is heavily influenced by the Irish context in which the author is involved.

A brief profile of excluded groups is given in Section 1 and the potential benefits to them of an inclusive information society are outlined in Section 2 where some barriers are also examined. Several guiding principles that are important in delivering ICT-based benefits to these groups are presented in Section 3. Application of these principles is intended to combat social exclusion by successful ICT deployments for and by marginalised groups. We illustrate the principles in section 4 by reference to various recommendations suggested by these groups in the context of the Connected Communities Advisory Group of the Irish Information Society Commission. The contributions of the paper are summarised in the final section.

1. Who is Excluded?

We use the term “Information Society” to denote the changed society being formed as a result of the fusion of information, media and telecommunications including far reaching organisational and institutional changes in all aspects of human activity (e. g. workplace, leisure, shopping, commerce, education) [Steph98]

The groups excluded from the information society in Ireland include the following [ISC00]:

- Unemployed people, particularly those experiencing long term unemployment
- People in relying on social welfare benefits or public services or residents of local authority housing
- Farmers or residents of remote rural areas
- People with few or no educational qualifications or with literacy difficulties
- Older people
- Travellers and ethnic minorities, refugees and asylum seekers
- People with disabilities

The common thread among these groups is that they usually already experience some form of social exclusion¹. Other countries have found similar evidence – that divisions in the information society follow wider societal fault lines [PAT15-00], [NTIA99]. It is also becoming clear that the small community and voluntary associations addressing these social exclusions are also in danger of exclusion from the information society for various reasons including low and uncertain funding, lack of awareness of the opportunities offered by these technologies and lack of technical expertise. Another factor in this exclusion is the uneven deployment of the required infrastructure, also along the same societal fault lines [FCC00].

¹ Social Exclusion is defined in Ireland’s National Anti-Poverty Strategy as “Cumulative marginalisation from production (employment), from consumption (income poverty), from social networks (community, family and neighbours), from decision making and from an adequate quality of life.” – see [NAPS98]

2. Benefits and Barriers

The more frequently touted benefits of the information society include access to information and commercial services, but ICTs can also contribute to greater social equality in social, economic and political terms. For example:

- Excluded individuals can use ICTs to communicate with friends, relatives and others with shared interests in ways that overcome other barriers (e.g. time, distance, physical impairments or badly designed systems).
- Excluded groups and individuals can use ICTs to organise themselves more effectively, building their capacity in the same manner as mainstream public sector and commercial organisations.
- ICTs permit excluded groups to provide content about themselves to counter absent or negative commentary in other media and to organise more effective lobbying and advocacy campaigns.
- ICTs can be a tool to enhance active citizenship, pluralism and social rights by accessing government electronic information in these areas and participating in democratic decision-making structures on-line.
- ICTs can be used by excluded groups to develop and support partnerships and social capital and nurture communities by supporting local networks.
- ICTs can be used to access and enhance employment opportunities in the same way as other members of the labour force.
- ICTs can be a means of accessing life-long learning – identifying and participating in distance learning courses.

It is clear that inability to exploit the new ICTs as outlined above can perpetuate existing marginalisation and create a new exclusion from the emerging information society. Several barriers hinder the uptake of ICTs by excluded groups. These include:

Lack of Awareness and Motivation

Many marginalised groups are unaware of the benefits and opportunities afforded by ICTs in the information society and thus not interested in acquiring necessary skills. For groups struggling to meet basic needs (e.g. transport, housing) access to the information society is unlikely to be a high priority. It is therefore vital that ICTs be seen as a tool in the struggle for inclusion. Applied in this way, marginalised groups become motivated to acquire ICT skills and use them to improve their situation.

Confidence

A common barrier among marginalised groups is anxiety associated with ICTs [Bee00] – Have we the correct equipment? Are we using it correctly or to best effect? Will we fall behind or lose credibility?

Financial Constraints

Probably the most significant barrier facing excluded groups is the capital cost of acquiring a connected computer. Even when the equipment has been purchased, the on-going costs of maintenance, training, technical support and connection charges may not be affordable.

Technical Support and Training

Some IT projects associated with marginalised groups fail because insufficient technical support and training are provided. Also it may be necessary to provide these supports in a different manner appropriate to the circumstances of the group involved [EMP98].

Disability

Groups excluded by disabilities experience barriers to inclusion – particularly the high costs of acquiring and maintaining appropriate assistive technology, training and technical support. These groups are firmly of the view that the cause of their exclusion is not their physical impairments but a failure to consider their needs when the systems are first designed. They frequently point to a failure to apply the principles of Universal Design (UD) and are usually delighted to participate in the design process when asked.

It is also important to recognise that provision of ICTs alone cannot solve some problems of exclusion (e.g. literacy deficits, housing, transport).

While the above list indicates some of the barriers which exist to successful uptake of ICTs by marginalised groups, it is interesting to note that in mainstream IT projects the reasons for failure are also almost always non-technical. Clegg indicates that the reasons for failure are often human and organisational [Clegg96].

3. Guiding Principles

Having presented some of the potential benefits of ICTs for marginalised groups together with some of the barriers to inclusion, we now discuss briefly some guiding principles that inform and motivate sample recommendations presented later in the paper. The availability of sufficient resources is assumed in the principles below, thus we concentrate on how the resources should be deployed. Clearly financial obstacles must be addressed but a deployment informed by the principles below should make for a more effective and efficient intervention and, in the longer term, a more inclusive information society.

The guiding principles will be illustrated with example recommendations in the next section. Here we present each principle, an abbreviation for later reference in parenthesis, a short statement of the principle in italics and finally a short commentary.

1. Accompaniment Principle (Acmp)

Accompany the marginalised group in its struggle for inclusion; do not foist technology upon the group blindly.

If ICTs can be used in a tailored way to support the marginalised group's struggle for inclusion, they are perceived as relevant and the excluded group is motivated to acquire necessary technical skills and mastery [Mogg00], [Bee00]. The metaphor of accompaniment on a journey seems appropriate here. In a mutual learning process technical experts acquire knowledge about the group's needs in order to design and

deploy ICTs appropriately. The group also learns more about the technology in a way that is deeper than straightforward training – the group acquires technical mastery. The key is learn the agenda of the marginalised group and work with it. One author describes this process as formative evaluation [Mogg00]. Again we note that in mainstream commercial scenarios the reasons for failure of IT projects are often non-technical [Clegg96].

2. The Three Ts: Technology, Training and Technical Support (3T):

Provide the three Ts in roughly equal proportions, but adapted to local need.

Preliminary findings ([EMP98]) indicate that inadequate training and technical support can doom an ICT project with marginalised groups to failure. When financial resources are scarce, training and technical support are sometimes the first items to be cut from the budget. However, sometimes the failure is due to inadequate accompaniment (see above) – training may have to be provided in a non-standard way.

3. Continual Observation Principle (CO):

Evaluate and research the project throughout its life.

In order to ensure that a project is addressing its social goals, evaluation during the project is vital [Mogg00]. In the formative evaluation process this offers, provides opportunities for corrective action and supports the mutual learning process. In a wider social context, research to determine the extent and nature of need helps to target resources effectively.

4. Highlighting Principle (H):

Highlight models of good practice.

There is an old Irish proverb - ‘mol an óige agus tíochnaigh sé’ - which roughly translated means “praise youth and it will blossom”. Drawing attention to models of good practice clearly helps to replicate them. However, they also serve a less widely known motivational function: they inspire similar groups (sometimes in another region or country) to undertake similar initiatives.

5. Universal Principle (Univ):

Apply Universal Design principles universally.

The barriers faced by people with disabilities are often addressed by application of universal design principles and especially so when applied from the start of a project. Requirements ignored at the start of a project are more difficult to incorporate later. Unfortunately the UD approach is “more honoured in the breach than in the observance”. People with disabilities continually stress the importance of urgent action in all areas on this issue [RNIB00]. For them, delay or selective application amounts to violation of UD principles. The eEurope initiative and the operation of the Irish Information Society Commission have been criticised for confining discussion of UD principles to a forum involving people with disabilities. The principles are universal, every group can (and should) contribute and the resulting benefits accrue to all. UD is not just a “special needs” issue. The eEurope discussion was launched with a discussion document in PDF, a format inaccessible to people with visual impairments.

In the longer term, particularly difficult technical challenges posed by physical impairments may not be answered immediately. However, in line with UD philosophy, a successful solution is often of benefit to all. Successful mainstream

technologies such as the telephone, the typewriter, the starter motor, the radio pager and speech recognition had their origins in assistive technology.

6. Urgency Principle (Urg):

Take informed action as soon as possible.

The urgency for action to address social exclusion is clear: failure to act means that divisions will persist and, in the case of the information society, barriers will remain and divisions widen. When a recommendation is made, specific, measurable targets should be set and adequate resources should be allocated. In many cases history shows that it is cheaper to have an excluded group participating equally in the labour force than to pay the costs of supporting them (or of not supporting them) on the margins of society. People with disabilities express dissatisfaction with the pace of change and offer valuable suggestions on possible courses of action [RNIB00].

The above principles overlap with the five As principles (affordability, availability, accessibility, awareness and appropriateness) of the PROMISE project [PRO98] that addressed the needs of disabled and elderly groups. The PROMISE principles of accessibility, awareness and appropriateness have much in common with our accompaniment and universal principles. One could argue that the PROMISE awareness principle is subsumed in (or is a pre-requisite for) our accompaniment and universal principles. The principles discussed here assume the availability of resources and concentrate on the effective and efficient deployment of these resources. Some groups are wary of a principle that concentrates attention on cost issues alone. They point to the way the “reasonable cost” clauses in legislation have been interpreted as “zero cost” to their detriment. From a design perspective, too early a focus on cost needlessly restricts the exploration of alternative designs which, following the Universal Principle, are subsequently found to benefit society at large. Clearly it is important to examine cost issues, but perhaps as part of a full cost-benefit analysis after alternative designs have been examined.

The PROMISE project focussed on disabled and elderly groups. An attempt has been made to include the views of a wider spectrum of excluded groups (community and voluntary organisations) here. Furthermore, the perspective taken here is more from the point of view of the excluded groups themselves.

4. Some Policy Initiatives & Recommendations

We now outline a selection of policy initiatives and recommendations from the Irish context to illustrate the guiding principles above. A commentary is provided to provide contextual background from the Irish situation to explain the linkages between principle and recommendation. While the recommendations are specific to one country, they may prove instructive for others but we use them for illustrative purposes here. The Connected Communities Advisory Group (CCAG)² of the Irish Information Society Commission has discussed some of the examples presented, but the examples may (or may not) form part of the recommendations of the Information Society Commission’s (ISC) final report which is unfinished at the time of writing. We have categorised the example recommendations for convenience of presentation as follows: Raising of Awareness, Structures, Legislation and

² The CCAG of ISC includes representatives of many marginalised groups – travellers, farmers, people with disabilities, older people, people on low incomes etc... Also included were representatives of government departments and the ISC (see <http://www.isc.ie> and look for Advisory Groups)

Regulation, Research and finally Supporting Measures. The quoted recommendations include references to the guiding principles identified in Section 3. .

Awareness Raising

The following publicity-related , example recommendations regarding the ISC's work illustrate several of the principles as indicated below:

The ISC should make the implications and benefits of UD a fundamental part of its day to day practice and of its awareness-raising work. For example:

- the requirements of the W3C's WAI Guidelines should be adopted, practiced and promulgated in all ISC's awareness raising work³. (Univ, H, Urg)
- The benefits of universally designed products should be publicised with consumer groups (e.g. Consumers Association of Ireland) and via television programmes such as RTE's *Dot.What?* aimed at late adopters. Excerpts from the RNIB/W3C video "Websites that Work" might also feature in the programme. (Univ, H, Acmp)
- Awards for website design excellence should require compliance with WAI guidelines at a minimum and innovative application of UD principles for the award. Avoid having "special prizes" for accessible sites may give the misleading impression that UD is only relevant for people with disabilities. (H, Univ)

Most of the above examples are focussed on the WAI Guidelines that are themselves based on the Universal principle. By definition, awareness-raising activities comply with the Highlighting principle. The television programme referred to is targeted at late adopters illustrating both the Highlighting and Accompaniment principles. The Urgency principle is illustrated by the recommendation for ISC to adopt and practice the WAI Guidelines since these have so far been largely ignored (although they are mentioned in a footnote in the government's own publishing guidelines for public sector websites [WPG99]).

The following examples of best practice illustrate the Highlighting, Accompaniment and three Ts principles, especially when the examples are publicised:

Clann Lir is promoted by Muintearas, a community based educational institution Lir in Connemara, Co Galway. The project offers training in multi media authorship for young people from Irish-speaking areas in five counties, provided through a mobile technology unit, a multi-regional mentoring network and distance learning technologies. The mobile unit also provided a range of short-term courses for a wider target group within isolated Irish-speaking communities. All courses were delivered through the medium of Irish. (H, Acmp, 3T)

Hi-Way Café is promoted by Youthreach Navan, Co. Meath. The project provided an Internet Café facility for training and integration of ICTs with special focus on disadvantaged early school leavers in the 16-20 age group progressing from Youthreach. The project developed a peer education scheme whereby their trainees were trained to give courses to other members of the community. (H, Acmp, 3T).

³ Following representations made in CCAG, the ISC website is being made WAI-compliant

Kilkenny Community IT Model was developed by Kilkenny Information Age Town which has set up a network of five community IT resource centres. Each centre has an IT support person who is responsible for equipment and training courses. This initiative is designed to benefit marginalised groups, in particular travellers, women wishing to return to work and people with disabilities. A community IT co-ordinator has been appointed to oversee the project. (H, Acmp, 3T).

Structures

The sample national policy recommendation below applies the Universal principle to the proposed policy initiative, tailoring it to Ireland's National Anti-Poverty Strategy and highlighting examples of good practice elsewhere. The scale of the proposal illustrates the Urgency principle though resources are not mentioned. The three Ts principle is also explicitly mentioned.

A strong national policy direction, supported by a nationwide administrative structure and coupled with supported local action will be essential to achieve equal access to the Information Society for our citizens. The Volnet initiative in Canada and the UK IT Access Centres are significant examples of good practice. In particular, revised targets under the National Anti-Poverty Strategy should include Information Society targets. Initiatives for excluded communities should focus on identifying and supporting local champions. Equipment training and technical support should be provided in roughly equal measure but taking account of local need. (Acmp, Univ, Urg, H, 3T).

Legislation and Regulation

The example recommendations concerning important websites below again comply with the Universal principle by reference to the WAI Guidelines. The suggestion of incorporating accessibility requirements into E-commerce legislation means that the legislation is itself universally designed which has an important practical benefit. Placing legal requirements in disability related or human rights legislation in other jurisdictions has led to delays due to legal arguments. The delay allows inaccessible sites to proliferate, and they are more expensive to repair than if they had been universally designed from the start. The recommendation also reflects the Urgency principle as the existing voluntary guidelines have been largely ignored with respect to accessibility. This was confirmed with tests on several Irish government sites using the Bobby tool at the time of writing. The Urgency principle is also illustrated by the recommendation to use government procurement practices immediately pending passage of legislation.

Websites in the e-environment, like buildings in the physical environment should be required to be accessible by law. Government should legislate, perhaps as part of an E-Commerce package of legislation, for compliance with WAI Guidelines by websites belonging to affected bodies (level AA in the short term, level AAA when tools are available). Affected bodies should include:

- Government departments and related public bodies
- Private bodies providing an essential public service - banks, financial institutions, health insurance providers, transport companies, Internet Service Providers etc...

Tendering and procurement procedures for government websites should, starting immediately, specify - UD principles generally and WAI compliance in particular. Acceptance tests should include tests with Bobby, HTML validators (to exclude proprietary markup) and tests with various browsers and screen-readers. Government webmasters should be trained in accessibility awareness and compliance matters. It is expected that skills associated with construction of accessible websites will be fostered and make Irish web design companies more competitive in the international market.

In a manner similar to the above example the following draft recommendation concerning telecommunications regulation also illustrates the Universal and Urgency principles. The former is also illustrated in a double sense since the accessibility requirements are located in the same regulatory instrument and not elsewhere. ODTR refers to the Office of the Director of Telecommunications Regulation.

The ISC should make submissions to the ODTR on various legislative and regulatory issues relevant to the achievement of an inclusive information society. These include:

- Directory services.
These are not currently accessible to blind people - provision of WAI-compliant HTML versions of telephone directories would be one solution. The recently announced Golden Pages website is not WAI-compliant.
- Ubiquity.
This would ensure that services are available, even in remote areas where there is less profit for a provider. Subsidies may be necessary.
- Accessibility.
This is to ensure that all equipment is of the highest *international* standard of accessibility. Accessibility should include the *premises/locations* of public telephones and internet access points. Many such access points are not in accessible locations or mounted accessibly.
- SMS inter-operability.
This is to ensure that any new provider of SMS messaging services will inter-operate with existing ones (the deaf community relies heavily on SMS and interoperability would grow the market).
- 3G licence.
To ensure that service is provided at lowest possible cost to consumer the beauty contest mechanism is preferred to the auction alternative.

Research

The example recommendations below illustrate the Accompaniment and Continued Observation principles by stressing monitoring and evaluation activities and targeting the research activities towards social inclusion. The second example also illustrates the Universal principle since Design for All is explicitly mentioned.

Research on the Social Effects of the Information Society:

Government funding should be provided for a multi-disciplinary project team to undertake a research programme focused on improving social inclusion in the Information Society. The lack of funding for socio-economic research on ICT use in Ireland is a primary reason for the lack of knowledge about social exclusion from ICTs in Ireland. (Acmp, CO)

State R&D funding in the ICT sector for industry should have a requirement that the project funded addresses social needs as outlined in social policies (e.g. Design for All) - this is a central aspect of ICT R&D funding from the EU (the Fifth Framework Programme) and the Irish practice should follow the EU practice. (Acmp, Univ, CO)

Evaluation:

Evaluation and analysis must form an integral part of all state-funded projects promoting ICT access. (Acmp, CO)

Supporting Measures

The following recommendations below complies with the Universal Principle and the Urgency principle since the needs of people with disabilities are addressed at the early stages of the proposed activities. The Highlighting principle is also observed since these needs are stressed in a relatively novel way. The direct involvement of the adversely affected group promotes scrutiny by the group thus also upholding the Continued Observation principle.

Organisations representing people with disabilities should be invited to make submissions to and have on-going involvement in the development of standards and regulations for ICT products and services. (Univ, Urg, H, CO)

Questions should be included in the CSO's Household Survey and the next census in relation to disability or membership of other marginalised groups and particularly to use of ICTs (CO, Univ, Urg)

5. Conclusion

This paper motivates and presents a set of six principles focussed on promoting social inclusion in the information society. The principles assume availability of adequate resources and aim at efficient and effective deployment of ICTs for inclusive social objectives. The principles are illustrated briefly with reference to examples in the Irish context, but the principles may be of more general use.

In George Bernard Shaw's words – "You dream of what is and ask 'why?', but I dream of what never was and I ask 'why not?'" - the dream is an inclusive information society, and the tools are ICTs deployed effectively and efficiently according to the modest principles offered here.

Acknowledgements

Discussions with other members of the Connected Communities Advisory Group (CCAG) of the Irish Information Society Commission (ISC) inspired some of the ideas presented in this paper. The author acknowledges, with thanks, the insights they shared. The efforts of the Irish

ISC towards making their website WAI-compliant in response to representations made by CCAG are also acknowledged.

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