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"Used properly, information technology can empower ordinary people and their communities, putting them more in control of their working lives, allowing them a fuller exercise of their rights and an outlet for their creativity".

The Net Result

"A global information society does not necessarily mean a universal one".
"The problem with technology is that we've never got one thing right before we move on to the next".

Social Inclusion in the Information Society

"The Information Society is not an exclusive club".

"Used properly, information technology can empower ordinary people and their communities, putting them more in control of their working lives, allowing them a fuller exercise of their rights and an outlet for their creativity".



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Report of the National Working Party on Social Inclusion (INSINC)

"A global information society does not necessarily mean a universal one".
"The problem with technology is that we've never got one thing right before we move on to the next".



“A society characterised by a high level of information intensity in the everyday life of most citizens, in most organisations and workplaces; by the use of common or compatible technology for a wide range of personal, social, educational and business activities; and by the ability to transmit and receive digital data rapidly between places irrespective of distance.”

The INSINC Working Party definition of the information society

foreword

As a leading technology company, IBM is part of an industry that is synonymous with change. But we do have traditions and one of the most important, that goes way back in IBM's history, is our sense of responsibility for other people, both inside and outside the company; a focused determination to improve the communities in which we work and live.

No matter how our technologies change - and they are certainly advancing and developing rapidly - we in IBM aim to do everything in our power to ensure our inventions work to the benefit of all people everywhere.

Today we see technology causing the tectonic plates of society to shift and the emergence of a new Information Society. For some, this is heralded as an imminent utopia. For others, the Information Society remains a closed world, shrouded in mystery.

Wherever you stand, new technologies are shrinking the globe, pulling us together and increasing our interdependence. Some people are concerned - rightly - that technology is creating a lot of new issues regarding privacy, security and universal access, and the possibility of a world of 'haves and have-nots'. These are all legitimate concerns and we must deal with them.

As a leader in creating technology and as a corporate citizen, IBM takes its responsibilities seriously. We firmly believe that, managed properly, technology can help to solve centuries old problems for people and communities.

In 1995, IBM launched 'Living in the Information Society', a range of projects centred on the Information Society debate. As part of this programme, IBM set up INSINC, the National Working Party on Social Inclusion in the Information Society, in collaboration with the Community Development Foundation. Its brief was to examine the impact of new information technology on local communities, and the potential for greater social inclusion within the Information Society.

Since its launch in 1995, the Working Party has researched, considered and debated some of the most complex issues facing society. Now it has distilled its findings and conclusions to produce this report.

I feel we must stress that in setting up INSINC, IBM simply wished to facilitate the debate rather than steer it and while we nurtured the Working Party, it is an autonomous committee, expressing independent views. Naturally, we applaud the achievements of the Working Party. And when you read this report, I feel sure you will agree that it represents a substantial and unique effort.

We hope the report will be useful to many people - policymakers, government, educationalists, businesses, community agencies and all those with an interest in applying technology to help develop a socially inclusive Information Society.

While INSINC has fulfilled its brief, I feel that its achievements will endure.

Khalil Barsoum

Chairman and Chief Executive, IBM United Kingdom Limited

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introduction

“Used properly, information technology can empower ordinary people and their communities, putting them more in control of their working lives, allowing them a fuller exercise of their rights and an outlet for their creativity.”

Networks for people and their communities: making the most of the information society in the European Union: First annual report to the European Commission from the Information Society Forum.

Commission of the European Communities

June 1996, chapter 2, section 4.

<http://www.ispo.cec.be/infoforum/pub/inrep1.html>

Introduction

The notion of an 'Information Society' implies social relationships between people and groups of people. These relationships could have a variety of characteristics. They might be largely unequal, confrontational, distrusting; or they could be co-operative, open, empowering. They could exclude or include others. A goal of social policy is to influence the nature of those relationships.

Our society is evolving into an Information Society, permeated with highly accessible and malleable information of all kinds. An increasing amount of communication takes place remotely, from one-to-many, from many-to-many, and from one-to-one. Such a society is not just about new ways of communicating, it's about new ways of relating. People will relate to one another in quite different ways, and they will be able to relate easily with a broader range of other people.

This report has been produced by the National Working Party on Social Inclusion in the Information Society (INSINC). It is based on the belief that a socially inclusive Information Society is desirable, and that there is a role for social policy in influencing its development. The report addresses several questions: How can a socially inclusive Information Society be brought about? What will it look like? And what are the implications for communities and community organisations?

It is important to consider possible developments in the context of our present society:

(i) The significance of the community sector

The community sector comprises *'the whole range of autonomous collective activity, directly undertaken by individuals within their neighbourhood or community of interest to improve collective life and conditions. It is a spectrum which extends from very informal networks and activities based around households, to more formalised community groups and community-based organisations.'* (1) Until fairly recently, this sector has been mostly invisible in social policy, but its central role in confronting disadvantage and ensuring sustainable regeneration is increasingly recognised. Given an appropriate role in shaping and implementing policy, the community sector will make a valuable contribution to the development of the Information Society.

(ii) The future power of the technology

Much of our understanding of the future lies in projections of the power of the technology. We have certainly seen consistent increases in this power over the last 20 years or so. We can expect much of the technology we use at present to improve in quality and reliability; and we can expect significant new developments.

All technology amplifies. Apparently indiscriminately, it amplifies efficiency or inefficiency, risk or caution, waste or saving, advantage or disadvantage. The more powerful the technology, the greater this effect is likely to be. When access to technology is linked to other social advantages such as wealth, education, and employment - as is usually the case at present - the risk of social exclusion will also be amplified.

"The SuperHypeWay does not exist: it describes a future means of transport for digitised information. The Internet is merely our string-and-chewing-gum model for what it might look like."

Mike Holderness

'Falling through the net'

In New statesman and society, 13 October 1995, p24

"The capability of computers and telecommunications makes their invention more wide ranging in its importance than, say, a new household gadget, because of the influence, privilege and authority which derives from its use."

Bryan Glastonbury and Walter LaMendola

The integrity of intelligence: a bill of rights for the information age.

Macmillan Press, 1992, p9

(iii) The convenience of access

'Access' (to resources, to facilities, to information, to channels of communication) is a complex notion and it is not neutral.

Access can be denied in subtle ways or it can be promoted and defended. The convenience of access is a crucial aspect of the Information Society: where access is inconvenient, complex, cumbersome or time-consuming, it will constitute a barrier.

(iv) Information handling skills

Recognising information needs, articulating those needs, gaining access to information and then exploiting it - these are already critical skills and will be even more essential in the future. But the tendency is for the Information Society debate to focus too much on the technology and lose sight of the need for such skills.

(v) Changes in the nature of institutions

The Information Society is likely to see the continued '*growth of networks and partnership models to replace the hierarchical, centralised model of decision-making and services provision which has developed during the past three decades.*' (2)

The technology of online communication will play its part in the continued disintegration of hierarchical structures and institutions.

"The technology comes across as relatively benign but people think institutions don't trust them, and people don't trust institutions."

Comment at INSINC consultation seminar

Leeds, November 1995.

The argument that this report raises is about social investment. While recognising the dangers of exclusion and alienation which are implicit in any major social changes, the Working Party is persuaded that there is genuine potential for greater equality and social inclusion in the Information Society. We acknowledge that, as a recent European Union green paper points out, '*Many people fear that the new technologies will reinforce rather than reduce existing inequalities,*' (3) and we wish to stress the importance of concerted social policy to address these risks.

Ensuring a socially inclusive Information Society will require investment, particularly in the mechanisms by which people gain access to equipment and to the information highway. The information highway possesses what are known as 'public good externalities', in that it offers social benefits far beyond simply providing the connection of individuals to the network. Similarly, the widespread free availability of much information is very much a 'hidden property good'. It often has unpredictable spin-off benefits through its discovery, accumulation, and sharing; through learning and insight and unexpected connections of ideas. The social cost of ignoring this - in terms of the waste of capacity, lack of participation, erosion of democracy, polarisation of social groups and so on - could be significantly high.

The INSINC Working Party was established by IBM UK and the Community Development Foundation in 1995 with the following brief:

... to examine the impact of new information technology on local communities, and the potential for greater social inclusion of people in communities within the Information Society.

The members of the INSINC Working Party were:

Jo Habib (Chair)

FunderFinder

Kevin Harris (Secretary)

Community Development Foundation

Samantha Hellawell

IBM

Debby Matthews

Sussex Rural Community Council, formerly Hastings and Rother Information Initiative

Janie Percy-Smith

Policy Research Institute, Leeds Metropolitan University

John Taylor

Consultant, formerly British Telecom

Bill Thompson

Journalist and consultant, formerly The Guardian New Media Lab.

During its initial period, IBM also contributed to the Working Party through Sandra Sanglin and Chris Thomas.

Turn to Appendix IV on page 71 for biographies.

The Working Party met several times between 1995 and 1997 and consulted with numerous individuals and agencies, both formally and informally, in a wide range of forums. Two consultation seminars with community organisations were held in Leeds, and interim findings were presented at a policy seminar, held at IBM's South Bank location in London in March 1996.

The Working Party is grateful to all who contributed to the debate and report. Particular thanks are due to those members of community groups who gave up their time to discuss issues with us and to share their views. We wish also to thank IBM for its hospitality and patience.

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3 Living and working in the information society: people first: green paper. Bulletin of the European Union, supplement 3/96, 1996, para 82.
<http://www.ispo.cec.be/infosoc/legreg/docs/peopl1st.html>

findings and recommendations

The INSINC Working Party has found that:

- There is clear potential for the Information Society to be a more inclusive society, in which communities can be more active, informed, and coherent.
- A change of emphasis is desirable, from discussion of 'information have-nots', to recognition that some groups of people might become disadvantaged by being denied *access to the communication opportunities* which the technology is beginning to provide.
- A network of Community Resource Centres, providing opportunities for raising awareness, and access to multimedia and online technologies at local level, is called for.
- The Information Society promises new levels of empowerment but this will not come about without strategies for community involvement, and basic capacity-building among community groups.

Recommendations

- The factors which give rise to social exclusion are mainly economic. If the gap between wealthy people and people on low incomes is not to widen in the Information Society, social policy needs to continue to confront and to overcome economic disadvantage. (Section 2)

- Measures are needed urgently to raise levels of awareness and to provide access to information technologies, particularly for people on low incomes and for those who are neither in employment nor in education.
- Concerted efforts are needed in the education and training sectors to improve levels of 'information capability', focusing on people's ability to recognise information needs, to access information, and to exploit information. (Section 3)
- Information which is essential for full participation in society, and for support in times of need, should be available at no cost at the point of delivery. A working group is called for to establish a definition of the categories of information which should be deemed 'essential'. (Section 3)
- Those responsible for providing public access facilities should take particular account of the needs of community groups which do not have premises of their own, and consult with them on the conditions of access. (Section 4.33)
- Lack of understanding and experience of working effectively in partnerships is hampering the development of the Information Society. All sectors need to address this question urgently. (Section 5)
- Policy is needed to stimulate the development of 'neighbourhood areas' in community networks and other local networking initiatives. (Section 5)
- The potential for communities to provide their own information is enormous: local authorities in particular have a role in helping community organisations to prepare and publish their own material.
- Pioneering experience in the development of community networks needs to be analysed, evaluated and disseminated widely. (Section 5)
- The Information Society offers genuine promise for increased participation in democracy: further experiments and wider involvement are called for. (Section 3)
- Community organisations need ongoing, externally-funded advice and help which they can trust and which understands their needs, if they are to begin developing their information capability and exploiting the potential of information technology. (Section 4)
- Many local communities which are not integrated or are dysfunctional, will need intervention to help build their capacity to exploit the technology and participate more fully in society. Community development strategies are still needed to help bring this about.
- A network of Community Resource Centres should be established across the UK using appropriate bases such as schools, libraries and community centres. These centres must be publicly funded and based on sustainable business plans. (Section 5)

The Information Society

“The key issue is not the technology and what it can do, but the needs of communities and how the technology can be used strategically to meet those needs.”

Terry Grunwald

‘The seven public interest telecommunications heresies’,
unpublished paper, NCexChange, North Carolina.

1 The Information Society

- 1.1 The House of Lords Select Committee on Science and Technology, in a major report published in July 1996, notes that *'The Information Society is not an exclusive club.'*⁽¹⁾ It is significant that the Committee should imply that the Information Society is a club at all: *'Every British citizen'* it says, *'should be able to become a member.'* This notion of membership is promoted by the marketing departments of the industry, advertising Internet access as the key to 'joining the Information Society', inviting subscriptions so that the privileged individual can enjoy certain benefits that membership provides. This immediately poses the question: are we to have one society within another - a capsule Information Society for 'members' and a wider society comprising those who choose not to join, those who would if they could, and those who do not understand, or feel alienated by, the conditions for joining?
- 1.2 This issue is at the heart of the debate on the socially-inclusive Information Society. It is problematic because the development of the technological infrastructure depends to a great extent on people becoming 'members'. But the culture of membership will not give rise automatically to a culture of social inclusion. There is a tension between how, as a society, we establish and manage a utility on the one hand; and, on the other hand, how we deny or seek to ensure the universal availability of that utility. It is a tension which raises fundamental questions about rights and citizenship. So far, in our view, the debate has paid insufficient attention to the notion of an Information Society which is about rights rather than membership. Thus we see the principle of citizenship, which carries with it implied rights and responsibilities, as fundamental to the Information Society.
- 1.3 The Information Society is a natural extension of the democratic society, which requires public information in order to function. Intrinsic to the Information Society is the notion of certain fundamental rights which have to do with access to information and to communication channels: these we discuss in Section 4. Capitalist democracies are evolving, often painfully, from a strong industrial orientation based on the exploitation of the natural world and organised around the principle of full employment, to an information-intensive blend of economic and social development in which lifelong learning, paid and unpaid work will feature strongly. Whereas full citizenship, hitherto, has been associated with having a job and somewhere to live, it may be the case that in the future an additional 'badge of citizenship' will be access to the information highway. Just as in today's society, those who do not have homes and jobs are at risk of social and political exclusion, so in the future those who are unable to make effective use of information resources will also risk exclusion unless social, economic and educational policies are introduced to maximise opportunities for participation and contribution.

"... failure to assert the primacy of policy over technology is an alarming and increasingly dangerous phenomenon in the modern world."

Kurt Waldheim

cited in Many voices, one world
(Macbride Commission report),
Kogan Page, 1980, p33.

- 1.4 One milestone in this debate was a proposal in a seminal report in 1978 by the National Consumer Council, that information should be regarded as the 'fourth right of citizenship'.⁽²⁾ Perhaps the fact that the NCC's recent highly informative study of the Information Society⁽³⁾ makes no reference to this previous argument is an indication of the technological orientation of current debate.
- 1.5 Much of the Information Society debate reflects and endorses an economic model. Partly to redress this imbalance, our own concerns have had more to do with the nature of information and communication, and with the social significance of communities. Nonetheless, it is important to outline here broadly what we mean when we discuss the technology.
- 1.6 In this report we make frequent use of the term 'information highway'. Our use of the term corresponds to the term 'information superhighway' in the House of Lords report: *'The information superhighway ... has a central role to play in the new information revolution and as such it was taken as the starting point by the Committee. For the purposes of this enquiry we have defined the information superhighway as a publicly accessible network capable of transferring large amounts of information at high speed between users. This broad definition transcends the physical nature of the technology employed.'*⁽⁴⁾ We also make frequent reference to the Internet since it is, for most people, almost synonymous with the information highway. We acknowledge that the Internet is only one of the technologies at issue, and indeed that its present significance may dissolve in the future.
- 1.7 We also wish to draw attention to the significance of multimedia (both offline and online) as part of the mix of technologies. We are keenly aware of the community development potential of multimedia - for example, as a tool for a local campaigning group preparing a presentation on environment and transport, where sound or image can carry as much weight as text or at least reinforce the message. At the same time we recognise that, in the 1980s, similar expectations were held for video, and in relatively few cases was this promise fulfilled. As part of the development of multimedia for community applications, we would expect a resurgence in the use of video.
- 1.8 In addition, we stress the significance of the new level of interactivity in communications. Arguably the most revolutionary element in the Information Society is the new potential for systems to become genuinely interactive and hence for people's 'information income' to be less dominated by centralised institutions: we discuss this in greater detail in Section 3.
- 1.9 It is important to draw attention to the likelihood of fundamental changes in the economics of information. For example, there have been predictions that most telecommunications costs could reduce almost to zero; and that what we will pay for will be information retrieved. The changes and their implications are far from clear, but we have two observations to make:
- (i) The notion that there are costs associated with the generation, storage and retrieval of information is not new and is not specific to the new technologies. Indeed, we should acknowledge that the economics of printed information are highly complex, with all kinds of hidden and unacknowledged costs; and that some technologically-assisted clarification of this might be healthy.

"...we found that the community groups have long used a wide variety of media and immediately saw the communication potential of multi-media and the Internet. They wanted to be producers however not just consumers and at the same time gain new skills. Ideas are not in short supply."

Morris Williams

University helps local groups develop multimedia
<http://www.communities.org.uk/>

(ii) Any cost at the point of use becomes a barrier to access. This means that certain categories of information, which could be considered essential for people to participate in society or for them to get support in times of need, should be paid for universally in advance, through taxation. This is the '999' principle: we do not expect people to have to give a credit card number before an ambulance is called for them, nor should we expect them to pay for information about housing benefit or child health. We return to this issue in Section 3. Some of the cost implications of the Information Society are considered in Section 4.

1.10 During the lifetime of the Working Party the technology has developed and we are conscious of the speed of change. We have not sought to predict this change, but necessarily we had to have some understanding of possible key developments in the foreseeable future which might have implications for social inclusion. Some of these are described in the Glossary and Technical Appendix.

1.11 We have noted in meetings and correspondence that community agencies often consider information technology in terms of the office operation of computers, rather than in terms of online communication and multimedia. In such cases we would recommend the report of the IT and Communities Working Party, Press enter (5), as a useful preface to the present report.

1.12 The Working Party offers the following definition of the Information Society:

A society characterised by a high level of information intensity in the everyday life of most citizens, in most organisations and workplaces; by the use of common or compatible technology for a wide range of personal, social, educational and business activities; and by the ability to transmit, receive and exchange digital data rapidly between places irrespective of distance.

An Information Society which is socially inclusive:

- (i) will have ready, easy-to-use public and individual access to the communication channels without heavy dependence on private or public agencies as intermediaries;
- (ii) will ensure that information which is essential for full participation in society, and for support in times of need, is available at no cost at the point of delivery;
- (iii) will invest heavily in the information handling and communication skills of its citizens, raising their levels of information awareness, competence in discriminating when faced with large quantities of information, and ability to exploit information.

The early history of the Information Society in the UK

The notion of the Information Society has a 'stop-start' history. It was a popular topic for theorists in the 1980s, with a few writers such as David Lyon (6) exploring the notion from a sociological rather than an economic perspective. This intellectual activity then faded for a few years as technology developed according to some of the predictions. The sudden popularity of the Internet, and the high profile given by US Vice-President Al Gore to the concept of an 'information superhighway', led to renewed speculation about the nature of this future society. *continued*

"A 'telecottage' is usually a 'community based' facility that is there to assist learning, access to technology, access to work etc for its local community....

Telecottages tend to emphasise 'social support' for their users, few of whom will work full time at the telecottage, more of them will 'drop in' to use some facilities, book themselves in for some training etc, but also be connected to the telecottage from their home, where they may have their main workbase."

Ian Simmins

European Telework Online Frequently Asked Questions
<http://www.eto.org.uk/faq/faqtcvtc.htm>,
 10 August 1996.

continued

In 1994 the European Council published a brief paper known as the Bangemann report,(7) which can be said to have achieved one of its objectives which was to stimulate debate about the Information Society in Europe. This report built on the emphasis placed on the technology in an important EC white paper (known as the Delors white paper).(8) If short on critical analysis, the Bangemann report was alert to, and upbeat about, the economic and social opportunities which the new technologies promise. This report was followed by the UK government's first consultative document on the development and use of the information highway,(9) which was similarly upbeat. It is remembered by many for almost completely overlooking the role of local authorities, but it gave rise to a great deal of discussion, through conferences and newsgroups, as well as establishing the National Inventory of IT initiatives (10).

In 1995 the Department of Trade and Industry launched its 'Information Society Initiative' (ISI) (11) which was aimed primarily at the small business sector, widely recognised to be the sector requiring the most persuasion to exploit the benefits of technology. At the same time, the academic sector was also being stimulated. Higher education was able to benefit from access to the advanced telecommunications network, JANET (and the higher speed of SuperJANET), with a number of schools benefiting from Campus 2000, the Schools Online initiative (12) and the Education Department's 'Superhighways in Education' programme.

In due course, it was recognised that such initiatives excluded a large proportion of people who were not in education or work. As a response, the DTI launched 'IT for All' in December 1996, an

initiative principally intended to raise and broaden awareness of the possibilities of the Information Society. The aim was to maximise the proportion of the workforce able to exploit the technologies.(13) At about the same time the Central IT Unit produced a green paper on the electronic delivery of government services.(14)

Much of the pioneering work regarding the social and community uses of new information technology was carried out at local level by the Community Computing Network (15) and in the so-called 'telecottage' movement - also called 'community teleservice centres' (CTSCs). Originating in Scandinavia, with an accent on economic development for isolated rural communities, these are community resource centres offering a range of IT facilities for various purposes, not just to support teleworkers.(16)

Over the last couple of years, the literature relating to the Information Society has flourished, with a vast amount of material available through newsgroups and on web sites. Since the Bangemann and UK consultative documents were published in 1994, there have been three significant areas of development :

• Local and regional network initiatives

These have arisen in many places, usually led by local authorities (eg at district level, at county level, or based on a regional network as is the case with IRISI in north west England) (17). These initiatives are arguably the most important foundation for the Information Society, and their invisibility in government policy is a glaring and potentially problematic omission.

• Community networks

The number of community networks has also grown significantly since 1994, and often it is not easy to distinguish them from local and regional initiatives. Community networks are communication initiatives where members of an identifiable local community or community of interest seek to exploit the information highway for their own benefit. World Wide Web pages of a number of community networks can be viewed via the Communities Online site (<http://www.communities.org.uk>) or the Sheffield University list of initiatives (<http://panizzi.shef.ac.uk/community>). The extent to which local authority-led initiatives eventually become genuine community networks is an important factor in the evolution of the Information Society. We discuss the characteristics and significance of community networks in Section 5.

• Academic research

Media interest in the Internet and the Information Society has spawned a challenging volume of academic and policy-related activity, including this Working Party and similar initiatives. Perhaps the key issue to emerge is that many local projects were set up without ongoing evaluation built-in from the outset (funders have been as guilty here as the developing projects), so that it is difficult for successors to assess and articulate what difference the new systems are making. Subsequently, a number of students and other researchers have begun investigating local projects. However, some of the more successful and better-publicised projects are having to decline visits because of the time involved in hosting them.

- 1.13 A huge amount of time, energy and resources is now committed to initiatives relating to the Information Society. It features strongly in the agenda of the European Union; it was a factor in the 1997 general election in the UK; local authorities, schools, community organisations and many other kinds of agency are developing strategies in the light of experience and anticipated change.
- 1.14 The risk of exclusion from this emerging society has been referred to with increasing frequency, often contrasting the early 'hype' with horror scenarios expressing fears of computer addiction and, more usually, a divide between the 'haves and have-nots'. In the clamour of extreme optimistic and pessimistic claims, more balanced calls for a socially responsible policy approach have been barely audible. A good example is buried in paragraph 18, Annex B of the CCTA report on information superhighways, where the Library Collaborative Open Group commented:
- 'Compelling evidence exists of a marked discrepancy between the rapidly developing communications technology and information resources available to the public, and the public's ability to use these resources. Librarians and information professionals are agreed on the pressing need to ensure that those unable to access such information due to the costs involved or an inability to use the technology available are satisfactorily catered for.'* (18)

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11 See <http://www.isi.gov.uk/>

12 See http://www.ultralab.anglia.ac.uk/pages/school_online

13 Contact: IT for All Team, Department of Trade and Industry, 151 Buckingham Palace Road London SW1W 9SS, 0171 215 1380. <http://www.itforall.gov.uk/>

14 Government direct: a prospectus for the electronic delivery of government services: CM 3438. HMSO, November 1996. <http://www.open.gov.uk/citu/cituhome.htm>

15 Community Computing Network, ccn@mcr1.poptel.org.uk

16 Information about The Telework, Telecottage and Telecentre Association (TCA) is available from tca@venus.co.uk, telephone 0800 616008, fax 01453 836174.

17 See <http://www.u-net.com/northwest/irisi/irisi.htm>.

18 CCTA report on information superhighways. CCTA, July 1995, p34.

- 1.15 It would be a mistake to interpret this as an instance of the library profession implying that people are unable to use information without help. Such comments are valid and deserve close and early consideration. The INSINC Working Party took the view that it was important to go beyond expressions of concern, and to outline steps which are necessary, if not crucial, if a socially inclusive Information Society is to be brought about. In addition, our brief was to provide a community development perspective on these issues. This report therefore is neither a comprehensive review of the social aspects of the Information Society, nor an agonised warning about potholes on the highway ahead. It seeks to draw attention to the genuine potential of a more inclusive society, in which communities can be more active, informed and coherent; and urges a number of policy measures to help bring this about and to minimise the risks of exclusion.



The social context

“Exclusion processes are dynamic and multidimensional in nature. They are linked not only to unemployment and/or to low incomes, but also to housing conditions, levels of education and opportunities, health, discrimination, citizenship and integration in the local community.”

“There is an increasing trend toward seeking solutions for social problems ... in a flexible and decentralized way, through community organisations and through producers’ or consumers’ co-operatives. This creates a need for continuous and many sided communication - a need that often outruns the communication resources that exist in a local framework. The creation of the required facilities cannot be the sole responsibility of local initiative; governments, as well as larger non-governmental and private bodies, are expected to make their contributions.”

Many voices, one world
(Macbride Commission report),
Kogan Page, 1980, p115.

2 The social context

- 2.1** The notion of an Information Society implies significant social change. Much of the Information Society debate gives an impression of a society struggling to keep up with technological advance and economic justification, where politicians cajole citizens into accelerating the pace of adaptation. Relentless technological and economic change often appears to be self-fuelling, and it is important to restate the fact that human beings as social animals can rarely change so quickly without significant stress. Social policy must confront and reject technological determinism, and reassert the primacy of the citizen and the community as the agents and subjects of controlled change.
- 2.2** Of course, the Information Society should not just be about society adapting to the technology which it invents. The technology and its economics are themselves part of a social context which has been undergoing major transformation over the past 20 years. In this chapter we consider briefly a number of elements in the social context which relate closely to the forces which are driving the transition to an Information Society. From this discussion we go on to consider social inclusion and the consequences of exclusion; and finally we explore briefly the notions of ‘community’ and ‘virtual communities’.

The breakdown of barriers between sectors

- 2.3** The most distinguishing social characteristic of our age may prove to have been the breaking down of the barriers between traditional sectors - private, public, academic, community and voluntary. This is sometimes referred to now as the ‘mixed economy’, although in practice it is far more than an economy, it is a feature of the way we organise ourselves around social objectives.
- 2.4** The reality of this change is apparent, for example, in the importance of partnership, in the fragmentation of responsibilities for social development. Local authorities, health authorities, TECs and LECs, private companies, colleges and universities, welfare agencies, voluntary sector umbrella bodies, independent consultants - all kinds of agencies now routinely work together on social development initiatives. Ten or 15 years ago there may have been fewer agencies, but there would have been less cooperation. One effect of this has been to transform the nature of funding for the community and voluntary sectors. As one community worker put it, ‘the nature of funding is increasingly opportunistic and competitive, and distorts organisational activity’.
- 2.5** Related to this we have seen the rise of the so-called ‘contract culture’, characterised by a strong emphasis on economic efficiency in the delivery of services, the application of management information systems, and reported high levels of stress among workers who no longer enjoy security of tenure.
- 2.6** The notion of ‘the social economy’ has emerged to give identity to a whole sector which carries out ‘not-for-profit’ activities and which contributes to the economy. Similarly, attention has been drawn to the social and economic significance of unpaid work, particularly by working mothers but also by all those contributing to community groups. As an example of the kinds of cross-sectoral change taking place, we may see new models of businesses being set up, profit-making organisations linked to non-profit subsidiaries.

- 2.7** Certain features of the labour market (which we discuss in Section 2.14) should be mentioned here. They include:
- (i) Casualisation of labour**
A well-documented trend with *'new contracts of employment that have emerged such as fixed term, temporary working, teleworking, home working, and part-time working'*.⁽¹⁾
 - (ii) Demise of lifetime career**
People now expect to have to re-train several times in their working lives with the prospect of periods without paid employment.
 - (iii) Early retirement**
Combined with increased life-expectancy, early retirement creates a huge and underexploited reservoir of expertise and experience. There is also the potential for retired people to make effective contributions of time to society on a voluntary basis.
- 2.8** Such trends in combination with the so-called 'demographic shift' (the increase in the proportion of older people in the population) could be significant in the Information Society. One scenario suggests that, in say 10 years time, a large number of retired people will be exploiting the information highway, using interactive multimedia for a range of personal leisure interests, occasional consultancy projects, and contributing knowledge and ideas to local, national or international interest groups.
- 2.9 Dislocation**
The new technologies have an affinity with, and may accelerate, increased diversity, decentralisation, and dislocation across society.
- 2.10** By dislocation we mean things not being in the same place. Thus for example we find:
- (i) dislocation of work, where a person's work is not in the same place as he or she lives;
 - (ii) dislocation within the workplace, where colleagues are in physically separate locations;
 - (iii) dislocation of services like education, (as for example with distance learning);
 - (iv) dislocation of social and cultural activities, such as when people watch actors at a distance on television, or listen to the radio, or 'surf' the Internet rather than gather together in a hall or stadium. Until fairly recently, dislocation depended very heavily on print, and on reading and writing skills. With the newer technologies, oral and visual literacy are becoming increasingly important.
- 2.11** Dislocation affects different communities unequally. 'Getting on your bike' is an inadequate prescription for the problem of work no longer being in your own locality. Getting on a 'virtual' bike might be a more appropriate solution, but the skills involved in riding that virtual bike - getting onto and navigating the Internet for example - are skills which most people learn at work, not out of it. In areas where traditional industries have collapsed, dislocation has a very different impact from that created in leafy suburbs which see an increase in teleworkers home during the day.
- 2.12** A sense of dislocation also occurs within neighbourhoods, typically when the topography is changed radically by a planning innovation such as a new by-pass, with the demise of corner shops or the closure of a local school. People can lose their sense of identity with a place if that place changes significantly and suddenly.

Social exclusion

- 2.13** In order to understand what a socially inclusive society might look like, we must first understand the causes and characteristics of social exclusion in UK society at present. While there is considerable debate about what social exclusion means and what indicators might be used to measure it (2), there is widespread agreement that fundamentally it is an economic phenomenon which has important social and political consequences. In what follows we provide a brief overview of, first, the economic causes of social exclusion, secondly, the social consequences of exclusion, and finally, the nature of 'community'.

Economic causes of social exclusion

- 2.14** The economic causes of social exclusion must themselves be seen in the context of the consequences of global economic restructuring which has resulted in three related phenomena:
- (i) an increase in unemployment, especially long term unemployment, which is disproportionately concentrated among those who worked previously in manual, unskilled occupations;
 - (ii) an increase in male non-employment;
 - (iii) an increase in female labour market participation, particularly in part-time employment (3).
- 2.15** Unemployment in the UK, as elsewhere in the EU, remains high and is projected to continue at roughly similar levels despite forecasts of economic growth. This is particularly the case for long term unemployment (a year or more). However, perhaps more significant than the unemployment rate has been the significant decrease in the employment rate of working age males (ie the percentage of males aged 16-64 in employment) in Britain. The non-employment rate for this group rose from 8% to 23% between 1975 and 1993. However the unemployment rate (the percentage of the labour force that is jobless) for this subgroup increased from only 5% to 12% in the same period. The difference is explained by the increasing inactivity rates among working age men (the percentage who are jobless but no longer consider themselves a part of the labour market). There are a number of possible reasons given for inactivity including being permanently sick and having taken early retirement. Much of this increase in inactivity is concentrated among unskilled men and is strongly associated with the collapse in demand for unskilled male labour.
- 2.16** The 1980s saw a dramatic increase in employment rates among women. However, much of this increase has been in part-time work, especially in the service sector. But while part-time work may be of benefit to women whose partners are in full-time employment, the structure of the benefit system makes it less attractive for women whose partners are unemployed. After a very low threshold, the woman's earnings only have the effect of reducing the partner's social security benefits.

Social consequences of exclusion

- 2.17** Such developments in the labour market contribute to a growing gap between 'work-rich' and 'work-poor' households and increasing exclusion for the latter.

- 2.18** The concentration of joblessness within households is strongly associated with the concentration of jobless households within particular spatial areas. These areas then, typically, become associated with social as well as economic decline, exhibiting all or some of the characteristics associated with disadvantage including:
- decaying physical infrastructure
 - withdrawal of local shops and services
 - over-stretched, poor quality public services
 - high levels of crime and vandalism
 - breakdown of traditional family structures
 - a lack of the social skills and values of employed working class and middle class communities
 - high levels of ill-health
 - educational under-achievement
 - political marginalisation
 - and the risk or actuality of social disorder.
- 2.19** These aspects of social exclusion may be exacerbated where socially excluded groups are disadvantaged in other ways, for example as a result of disability, or are discriminated against, for example ethnic and racial groups.
- 2.20** Social exclusion, then, is a feature of both individuals and communities. In addition the European Commission (4) has identified three other features of social exclusion which should, perhaps, be incorporated into any definition.

(i) Social exclusion is structural

It is a consequence of structural changes such as:

- persistent long term unemployment
- industrial change and its effect on the labour market
- the breakdown of traditional family structures
- changes to value systems, notably the weakening of cohesion and traditional forms of solidarity
- the trend towards social fragmentation with the consequence, for traditional representative institutions, of reduced participation.

(ii) Social exclusion is dynamic

It is a developing problem because, for example:

- employment trends offer no hope of improvement in the short term;
- European Monetary Union requires that Member States reduce their budget deficits, creating new pressures on public spending;
- general changes in lifestyles and trends in family structures show little possibility of change in the short term.

(iii) Social exclusion is multi-dimensional

It impacts on, and has implications for, a wide range of policy areas.

- 2.21** For our purposes, the key issues that arise from this discussion of social exclusion are as follows:
- Will progress towards the Information Society exacerbate the situation of those groups and communities which already experience social exclusion?
 - Will progress towards the Information Society offer possibilities that will ameliorate the situation for groups and communities that already experience social exclusion?
 - Will the Information Society result in new forms of social exclusion for different groups and communities?
 - Will the Information Society offer the possibility of a radically different future?

Community

2.22 In this report we discuss the impact of the Information Society on communities, acknowledging that the meaning of 'community' is contested and vague. In general, 'community' is thought of in two ways - communities of interest, and spatial communities. The Working Party has been concerned primarily with the notion of local communities, noting that many of the issues we address apply just as much to communities of interest. There seems little doubt that for many communities of interest, the information highway offers powerful opportunities for communication, sharing of experience, and learning. We note also that current thinking in community development views the distinction between these two kinds of community as overemphasised, in that they tend to overlap more commonly than has been appreciated.

2.23 The term 'community' has broadly positive connotations, which can disguise very real local differences and conflicts. For example, within an inner city neighbourhood there may be conflict between ethnic groups; on a peripheral estate there may be divisions between older and younger people; within rural communities there may be differences between long-standing residents and newcomers. Thus any discussion of community must take account of the possibility, indeed likelihood, of there being communities within communities between which there may be significant differences and divisions.

2.24 A community development approach to evaluating successful communities (5) has identified the following benchmarks for assessing the extent to which a given community can be said to be 'developed'. These indicators provide us with criteria for measuring the impact of the Information Society on communities:

(i) Material conditions of life

- Income level - local wage rate; benefit take-up
- Condition and tenure of the housing stock
- The accessible 'social wage' in an area or for a given user group, eg schools, libraries, parks, swimming pools, clinics etc.
- Measures of physical and mental health
- Equal opportunities and equality outcomes eg proportion of black students gaining educational qualifications, numbers of buildings with wheelchair access, profile of local women in the labour market
- Accessibility, range and appropriateness of local services

(ii) Functioning of the community

- Numbers / proportions of people involved in community groups including equality measures
- Assets / funding base of local community and voluntary groups

(iii) Process indicators

- Local residents choose their own criteria for good quality of life in each of these areas
- Good structure for representing the community and voluntary sector in partnerships
- Professional community work support where it is needed
- Good consultation between council members and officers and local residents
- The community sector is a vigorous participant in local developments.

Virtual communities

- 2.25 Virtual communities are commonly described in positive terms as being free from discrimination and disadvantage, in that their members need not reveal gender, class, ethnicity, age or other characteristics. They are disembodied and are therefore radically equal. It is argued that virtual communities are anarchic, intentional and consensual. Others suggest that virtual communities, unlike real communities, impose no responsibilities on their members: *'Virtual community is community at zero cost'*. (6).
- 2.26 For most people virtual communities are not and will not be a substitute for face-to-face communities. Access to the information highway is still far from universal and in any case, for the majority of people, contact with others - however like-minded - through virtual communities is no substitute for supportive, face-to-face community networks. While a virtual community might be able to provide advice on childcare, and can help organise it, it will not be able to pick your children up from school.
- 2.27 John Gray has commented on the changes implied in the notion: *'The danger of the new technologies is that, allied with a techno-Utopian ideology, they will be used to distract us from increasing poverty and isolation in our everyday lives. Virtual communities are surrogates for the communities we are fast losing. In schools and neighbourhoods, in streets and workplaces, human exchanges have an unfathomable depth of meaning that no computer can simulate. The mirage of virtual community serves to reconcile us to the growing dereliction of the social institutions and public places in which these unprogrammed encounters occur. If cities are desolated and schools stalked by fear, if we shrink from strangers and children as threats to our safety, a retreat into the empty freedom of cyberspace may seem like a liberation. Yet living much of our lives in this space means giving up part of what makes us human.'* (7).
- 2.28 These provocative remarks take us to the heart of the debate about the perceived 'good and bad' of the Information Society. We should be clear that virtual communities are not necessarily 'surrogates' for real communities. It is disingenuous to imply that computers 'simulate' the depth of meaning of human communication: computers don't simulate, they are a medium, a device. Again, the notion that people might 'live much of their lives' in cyberspace relates in our view to a minority and implies a degree of alienation: this is a social problem about alienation, where socially we tend to regard certain kinds of behaviour (from introspective obsession with handguns, for example, to heavily reclusive involvement in computer or video games) as 'unhealthy'. For most people, it's not about 'living much of their lives' in this space, but whether the facilities to be found there can be used to explore, to stimulate, to augment and enhance other options for interaction.
- 2.29 Having said that, the potential for alienation is already apparent. Sherry Turkle has studied the changing nature of identity with particular reference to multi-user games on the Internet. She points out that: *'In cyberspace, hundreds of thousands, perhaps already millions, of users create online personae who live in a diverse group of virtual communities where the routine formation of multiple identities undermines any notion of a real and unitary self.'* (8)

"One of the great problems with the atmosphere of free expression now tolerated on the Net is the fragility of communities and their susceptibility to disruption."

Howard Rheingold

The Virtual Community: finding connection in a computerized world. Mandarin, 1995, p64.

- 2.30** There are two important issues in this discussion. First, personal physical interaction with others *is* different from online remote interaction; but the latter is still interaction, it comprises exchanges which contribute to 'what makes us human', just as telephone conversations do. The use of email, for example, already contributes hugely to effective human interaction. Secondly, there is a difference between virtual communities, where human exchanges take place, and game-playing or 'surfing', where they tend not to.
- 2.31** A final point concerning the relationship between 'real' and virtual communities is to note that 'being online' is not the same as being 'connected' to a community of others (whoever or wherever they happen to be) who share one's interests. Getting online to the information highway is after all only one stage - albeit a technically complex one - towards participation in and contribution to such a community.
- 2.32** The question which arises from this discussion is not whether virtual communities will replace real communities; but whether or not information and communication technologies can enhance those characteristics of communities that are valued, and help to counteract the negative aspects of contemporary communities. This requires us to consider the nature of information and communication in communities.

References

- 1 Living in the information society. IBM, 1996, p9.
- 2 See, for example, G Room (ed), Beyond the threshold: the measurement and analysis of social exclusion. Policy Press, 1995.
- 3 V K Borooah and M Hart, 'Labour market outcomes and economic exclusion', Regional studies, 29(5), 1995, p433-438.
- 4 Official Journal, 30 December 1993.
- 5 Gabriel Chanan, 'Evaluating improvements in the local community sector'. Community Development Foundation, December 1995, unpublished.
- 6 John Gray, 'The sad side of cyberspace'. The Guardian, 10 April 1995.
- 7 Ibid.
- 8 Sherry Turkle, Life on the screen: identity in the age of the Internet. Weidenfeld and Nicolson, 1996, p267.

**Information and communication
for social inclusion**

“... information skills are fundamental coping skills.”

Library and Information Commission, 2020 vision, 1997.

3 Information and communication for social inclusion

- 3.1 The current phase of the information society debate has been suffused with rhetoric about ‘information poverty’, ‘information have-nots’, and the revival of the 1970s catchphrase ‘information is power’. These represent strong expressions of anxiety over the potential for social exclusion; but our understanding is not furthered when they are used just as slogans. In this section we explore these notions, focusing on the need for an understanding of ‘information capability’; we consider the nature of information and communication in neighbourhoods; we address the question of marginalised people and groups at risk of exclusion from the Information Society; we discuss the questions of information and democracy, and ‘essential’ public information; and finally we return to a policy discussion of the skills required in the Information Society.

‘Information capability is power’

- 3.2 The relationship between information and power (as between knowledge and power) is seldom straightforward. Obviously there are circumstances in which information (too much, or the wrong kind, or incomplete, or false information) can be disempowering; just as there can be circumstances in which a single ‘nugget’ of information, in the right place at the right time, can transform power relations.
- 3.3 The slogan ‘information is power’ may serve to confuse the question of how knowledge can contribute to empowerment, since it perpetuates the notion that information is like a commodity or property which you either have or don’t have. It may be more useful to introduce the concept of ‘shared’ and ‘unshared’ information: unshared information is that which concerns people but to which they are denied access.⁽¹⁾ This does not necessarily mean that information is power, because in practice there are three dimensions to what we call ‘information capability’, the skills involved in the acquisition and use of information:
- (i) information awareness, the ability to recognise that what may be needed in a given situation is information;
 - (ii) access to information;
 - (iii) the ability to exploit information once it has been acquired.
- 3.4 This principle of ‘information capability’ highlights the fact that many people have a capacity to acquire and use information, which could be developed. This, in our view, is a far more constructive approach than labelling people as ‘information poor’ or ‘have-nots’, because it identifies a process of development rather than describing a negative condition. Perhaps then, it can be argued that ‘information capability is power’, ie the development of the capacity of an individual or group to identify and use information is in itself empowering.
- 3.5 Indeed, it may be misleading to suggest that some people are information ‘have-nots’. Depending on circumstance, the form and type of information that people need varies. For example, for self-help groups, for women’s groups trying to confront drug and crime issues on a peripheral estate, for groups struggling to get health or transport or play facilities in a rural area, the notion that just getting information will somehow empower them is at best misleading and may be offensive. Access to external information cannot be isolated from a context in which economic opportunity, communications opportunities, levels of education and articulacy, confidence and morale are all too low for the information to be

“We should be wary of simply spreading hardware around the public which will solve problems of information poverty. What most people need is power, not information. It is only if you have some power that information is useful.”

Geoff Mulgan,

cited in *Living in the information society*, IBM, 1996, p8.

“Information handling skills are closely related to confidence and capacity-building, and hence to the general problem-solving ability and development potential of a group or community.”

Press enter: information technology in the community and voluntary sector.

Community Development Foundation, 1992, p15.

“One community in which we conducted a study was the South Chicago neighbourhood... Approximately 40 percent of the residents are below the poverty level... This was a low-income community. Yet we found in our survey that the typical family spent \$170 a month on information, including print and broadcast, telephone, and other communication.”

Allen W Batteau,

The social architecture of computing,
December 1995 <http://www.benton.org/cgi-bin/lite/Uniserv/batteau.html>.

exploited in any meaningful way. People who are labelled as ‘information have-nots’, we suspect, are not so much constrained by the non-availability of information as marginalised through an inability to influence the decision-making processes which affect their lives. As J K Galbraith has argued, ‘*nothing so condemns to silence and submission as a total absence of money and audience.*’ (2)

Information in the neighbourhood

3.6 Information exchange at local community level is characterised by informality, diversity, and flexibility. Compared with other contexts, such as academic or business environments, a significant amount of information exchange takes place at the most informal level - chance meetings at the corner shop, parents chatting at school gates, the local plumber talking with neighbours in the pub, and so on. A diverse range of information can be exchanged in highly flexible ways - overheard conversations, telephone numbers scribbled on cigarette packets, informal care organised. Again, in contrast to other sectors, only a small proportion of information exchange in the neighbourhood is obligatory: people volunteer their knowledge as they do their time and energy, and they make their own judgements on the reliability and authority of the information they receive.

3.7 Slightly more formal organisation is also found at local level, for example among school fundraising committees, tenants groups, allotment associations. A further degree of formality takes place among those community agencies such as advice agencies which are required by their funders to prepare business plans, and by extension require relatively detailed records and projections of their activities. Indeed, wherever the community sector interfaces with institutions, such as the local authority or other funder, information exchange necessarily becomes more formalised - for example with the use of grant application forms, contracts, statistics, databases, etc. The more formal the requirements, the more appropriate are the structures of formal information provision and transfer: committees, correspondence, reports, and so on. Of course, the strength or health of a local community should not be seen solely as a function of the ability of its members to engage with institutions. But where there is communication with institutions, there will be a high proportion of information flowing into, and out of, the community.

Marginalised people in the Information Society

3.8 Fundamental to our argument is the principle that all citizens should be able to participate in the way society is organised, and contribute to community life if they wish to. The barriers to participation are numerous and take many forms, including for example geographical, educational, wealth, cultural and other factors which serve to define social exclusion.

3.9 Participation in community life depends on three ingredients:

- Association in some way with the community in question
- Communication skills: the ability to listen, interpret, and express ideas, knowledge and experience
- Information, and access to the channels through which information flows.

“... all too many people in society lack the opportunities or the abilities for any kind of achievement, let alone the pursuit of information-led goals and values.”

William Martin,

Community librarianship: changing the face of public libraries
Library Association Publishing, 1989, p158.

- 3.10 Many people who are isolated, or who may be marginalised in some way, find it difficult to use a telephone, to approach others for advice or information, to deal with bureaucracies, or even to chat with their neighbours. In order to overcome their exclusion, if they wish to, marginalised people need a combination of
- (i) Reasons to communicate,
 - (ii) Opportunities to communicate,
 - (iii) The appropriate lifeskills.

In the future, they may need a fourth element - access to the information highway. We note also recent research which suggests that for some people on low incomes, feelings of powerlessness are closely linked to a culture of secrecy, and of not sharing or seeking information. (3)

- 3.11 An informal neighbourhood network or a community group can be an ideal environment to minimise social exclusion: a classic example might be an allotment association, which offers just sufficient contact to satisfy many people's need for connection to others, without being overwhelming or imposing. For many marginalised or near-marginalised people, that basis of connection with a community may be all that they need: for others, it may give rise to some stronger and more fulfilling community involvement, as opportunities to communicate are taken and lifeskills are developed.

- 3.12 The Information Society offers a new and powerful range of options for people at local level to connect with others. The nature of community communication is likely to change significantly, and the social relevance of small, informal forums could be realised if community networks take full account of the more subtle aspects of the 'neighbourhood network'. Otherwise, for those whose connection to their community is fragile, what is needed in order to 'connect' with others is simply too complicated, or too far outside their experience.

- 3.13 People experience marginalisation through poverty, homelessness, lack of opportunities to participate in public life, or through other cultural factors such as lack of fluency in the English language or lack of familiarity with bureaucracies. The category of people most likely to be marginalised are people on low incomes. Everyone of course can be categorised in several ways, and many experience multiple disadvantage. Three social groups in particular have frequently been identified as being 'at risk' from exclusion in the Information Society, whether or not they experience poverty: women, ethnic and racial groups, and older people. In addition, people in rural communities may experience particular difficulties which are largely related to the adequacy of the infrastructure provided (we discuss this in section 4.18).

- 3.14 Each of these groups has a very strong tradition of contributing to community life; so if there is a likelihood of such groups being relatively excluded from the Information Society, it is of particular concern. While it is not our brief to explore in any detail the needs of specific groups, which require specific research, we wish to stress the urgency of the issues around awareness and access for these groups. We add here some specific points.

Women

- 3.15 Women who are not in education or in employment, or whose employment gives them no opportunity to use new IT (women who aren't 'institutionally affiliated') (4) may have least inclination to explore the information highway or multimedia applications for

themselves. Community Resource Centres, which we discuss in Section 5, will of course need to provide for the needs of men and women with child care responsibilities, who may have severe time-constraints but wish to learn about or use the technology on a flexible basis.

- 3.16** Some women have acquired basic IT skills in an office environment and may just need support and opportunities to 'move-up' and become adept with more advanced systems. However, recent research into 'perceptions of the Internet' among students may give cause for concern. Ford and Miller report that, while the men in their sample seemed to enjoy browsing, *'The women ... seem relatively disoriented by and disenchanted with the Internet, generally feeling themselves unable to find their way around effectively. They tend to use it for work purposes as opposed to personal interest, to use it only when they have to, and to look at items only when they have been suggested to them...'* (5) Firm conclusions cannot yet be drawn, however, from this small study: and by contrast there are expressions of optimism from women who identify strongly with the new emphasis on communication and the greater flexibility of the systems: *'The challenge taken up by campaigning women has usually been to confront hierarchical structures, bureaucracy and systems perceived to block or frustrate equal access to opportunities... Now there is less frustration at blockage in the 'vertical' system and structure of 'authority' because lines of communication are opening up horizontally in an unmediated, un-edited way.'* (6)
- 3.17** Once the advantages of email as a device for informal communication become more widely appreciated, it may be used to augment the use of the telephone in a fairly distinctive way. Ann Moyal, in a study of Australian women, found *'that the telephone played a key, and continuing, role in building kin and friend relationships; fortified a sense of security and self-worth; created a 'psychological neighbourhood' that substituted for face-to-face contact, and that the familiar, 'invisible' telephone had assumed a distinctive significance for older Australian women as an essential part of their culture and as a central factor in the conduct of their lives.'* (7)
- 3.18** Two questions arise from this: will the technology become (or seem to have become) as easy to use as the telephone? And what happens to the art of listening (described by Moyal in passing as 'a form of interactional work particularly associated with women') when interactions are delayed, as with email?

Ethnic and racial groups

- 3.19** The involvement of black minority groups with new technology has been slow to gather momentum. There are early examples, such as the African and Caribbean Elders group, which has a web site (<http://www.vois.org.uk/ace>). 'Lack of funds and awareness' were cited as the main reasons for low levels of take-up among black and ethnic minorities in UK communities: *'We see the process of increasing the availability and use of information technology as key to supporting self-help initiatives and providing much needed support for minority communities in Britain. To this end we see the development of our new Black Information Link (BLINK) as a significant and important one that will revolutionise the way in which ethnic minority organisations can seek to effect change for their communities at a local level. It should be stressed however that information available on BLINK is also meant to inform the population at large on race relations and social issues affecting the lives of black people.'* (8)

- 3.20 The Working Party was advised not to expect to find cultural reasons for the low take-up of new IT in the black community. The implication that cost and relative wealth are the critical factors is supported by a recent US survey, which suggests that *'the barrier of entry to cyberspace among African Americans is lack of ownership of PCs rather than lack of interest.'*(9). As costs come down, it may be that some black groups will adopt online multimedia in a distinctive way - community radio was suggested as an example of how this can happen. Nonetheless, a great deal depends upon the success of the BLINK initiative if opportunities for awareness and exploration of the technology are to be opened up. This applies particularly for those members of ethnic and racial minority groups which feature disproportionately in the statistics for unemployment and leaving the education system at an early age. (Labour force survey statistics suggest that young Bangladeshis and young Pakistanis in particular do not achieve their potential in the education system).
- 3.21 It is important to draw attention to the issues around language, since English is the dominant language of computer use. Those whose first language is not English may need longer to learn and practice with the technology, and they may wish to have access to software written in their own first language. Particular recognition should be given to the fact that ethnic and racial groups whose language is not based on the Roman alphabet suffer an additional disadvantage.

Older people

- 3.22 Most older people are unemployed and outside the education system, so that on the whole their exposure to the new technologies is very limited. Against that, many have time during the day to spend exploring their own interests, or working with others to develop some initiative or activity, should they wish to. As the proportion of older people increases it becomes ever more valuable to establish ways in which their experience can be woven into that of their communities.
- 3.23 Thus for example, multimedia researchers at Anglia Polytechnic University's Ultralab (<http://www.ultralab.anglia.ac.uk>) have proposed a project whereby the expertise of older workers leaving employment permanently might still be tapped by young learners. The idea is to equip them with modem and Internet access, and for them to offer advice and support online. The computer, modem, and connection would be paid for by their former employers, who themselves then find it easy to keep in touch with their experience.
- 3.24 The crucial issue would seem to be around providing opportunities for older people to find out about and explore the technologies. Here the huge diversity of resources available over the Internet can be exploited. Older people tend to be regular users of libraries and are often interested in history or travel, for example: this suggests some natural projects investigating available content, and developing their own content - a multimedia local history archive perhaps, as was developed at the Artimedia Project in Batley. (10) Against this, it has to be remembered that the startup costs of individual access to the information highway at the moment are prohibitive for many older people. Appropriate public access and community development work which helps bring older people into Community Resource Centres, could make a huge difference. Finally we should note that most older people are likely to want to go at a slower pace

than children or people who are learning work skills; however, they often have more time, patience and persistence, once their interest has been engaged.

People with disabilities

- 3.25** We would add here a concern for the interests of people with disabilities. Massive individual benefits have been brought about through technological advances, such as synthetic speech or specific hardware modifications - for example, keyboard emulation devices which use specific switches activated by at least one muscle or by breathing. But constraints such as cost, technical complexity, or low levels of awareness, mean that many people with disabilities may still be excluded from opportunities to explore the new technologies. Well-publicised individual instances may mask lingering problems of access, and unaddressed information needs, for a large but dispersed number of potentially very isolated people. The Working Party is concerned that policy for development over the next few years, especially on the provision of public access, should take a positively inclusive approach to disability, with maximum consultation on facilities, appropriate equipment and support, and physical access.

The potential for social inclusion

- 3.26** We would welcome more detailed research, commentary and debate on the needs and options of particular social groups in the Information Society. In lieu of systematic research, we feel there are two points applicable to members of these groups:
- (i) Many of them will feel by-passed by Information Society developments, with low awareness and no sense of involvement or positive anticipation.
 - (ii) The potential for the technology to contribute to their economic and social development is in most cases considerable and demonstrable. Paradoxically perhaps, the technology promises richer and more meaningful participation, for those who are able and willing to exploit it. Hence, the reality of exclusion assumes greater significance - the excluded individual may feel more distant from society than ever before.
- 3.27** For people who are engaged in formal education, and for those who use technology in the workplace, the incentives to adopt IT are to hand, indeed often they are more like pressures. However, for marginalised people on the fringes of our communities, there are considerable disincentives to communication of any sort, well before IT becomes an option. After all, most of us experience communication as receivers in massive disproportion to our experience as transmitters or creators of information: television and newspapers are the main phenomena which account for this. Thus the challenge, which the new technology may facilitate, is to improve the opportunities and incentives for meaningful communication, for disadvantaged groups and marginalised people. It is in this context that online interactive communication and multimedia publishing hold real potential to influence social inclusion.

Information cultures

- 3.28** Our present knowledge culture is several hundred years old and is based on the technology of printing. Its main cornerstones are the publishing industry, the educational system, the principle of copyright, and the skills of literacy. It also depends heavily on libraries, museums, and professional organisations. Among its more potent symbols are the buildings which house our national

libraries of course; and there are other images which reflect other characteristics, for example the paperback book which offers what George Steiner called 'easy democracy of access'.

- 3.29** Our information culture is characterised by the notion that knowledge is something which can be isolated and pinned down. Something almost tangible, that is, and around its production and reproduction, storage and transmission we have built up various patterns of behaviour - for example to do with teaching, political consultation, broadcasting, the use of libraries, dissemination of official information, and so on. The Information Society renders much of this behaviour redundant; it promises a *deinstitutionalisation* of information and communication, and a new culture of information handling.
- 3.30** There are four characteristics of the prevailing print-based knowledge culture to be considered here:
- (i) It requires investment of time, energy and resources, for the individual or group wishing to participate, in terms either of gathering information or of disseminating it.
 - (ii) It gives rise to a strong emphasis on formal information (published books, journals, broadcasts, etc) and devalues the experiential knowledge of ordinary people, where this is not committed to paper or recorded.
 - (iii) It has established structures which help organise knowledge and which help users to navigate. These structures include, for example:
 - hierarchies (or quasi-hierarchies) of status to do with the authority of documents (from peer-reviewed journal articles to so-called 'vanity-publishing');
 - a range of different formats such as newspaper, academic article, textbook, handbook, advice leaflet etc;
 - hierarchies and other structures *within* documents such as chapters, running titles, footnotes, indexes etc;
 - structures *between* documents (including quasi-hierarchies such as those in the Dewey Decimal Classification);
 - structures within the knowledge industry (publishers, libraries, 'think-tanks', universities, etc).

In this sense, the knowledge industry is highly institutionalised.
 - (iv) It gives rise to an overemphasis on access to information, through the institutions which control access (such as libraries or government offices), so that there is less emphasis on information awareness and on exploitation of information.
- 3.31** People in local communities can be said to benefit in all sorts of ways from the power of print, for example through the availability of information about local services, health advice leaflets, advertisements in local newspapers, and so on. Nonetheless, the capabilities of a literate population are constrained by the economics of publishing. As Howard Rheingold has said, '*literacy did not create Utopia, it did not create democracy.*' (11) The opportunities for people in communities to influence policy or to access power are seriously limited by the problems of gaining access to conventional publishing or broadcasting media. 'Alternative' publishing and broadcasting, from 18th century handbills to the campaign leaflets of contemporary green politics or racist groups, has after all seldom made a significant impression on the distribution of power.
- 3.32** Thus we argue that the dominant knowledge culture of the 19th and 20th centuries, based firmly on the technology of printing and the institutions which have grown up around it, has failed to

“... while the library as a store of knowledge can be seen as an empowering and creative resource, as with the formal education system and the publishing industry, it can also be viewed as a kind of restrictive corset which allows only a certain kind of cultural growth, and effectively excludes those for whom it is inappropriate. In short, libraries can be seen as helping to perpetuate the system of privileges: this might be related to the fact that ... some 57% of socio-economic class DE do not use libraries.”

Kevin Harris

Bog-snorkelling the Internet: a heretical note.
In *Assignment*, 12(2), January 1995, p39

establish equalities. It is biased in favour of those who already have power, wealth, and influence, and the levels of investment required of people who are outside this system are disproportionately high.

- 3.33** The promise of the Information Society, on the other hand, is of an information culture in which informal communication is more valued, compared to formally published or broadcast material; in which verbal articulacy is less dominant as the prerequisite for power and influence; and in which institutions are less impenetrable. Above all, the feature of the new technology which perhaps has been most heralded is its promise of ‘disintermediation’, bringing a new, less structured directness and immediacy to publishing and to communication. It is in this sense that the Information Society offers the possibility of enhancing social inclusion.
- 3.34** For this to happen, there will need to be:
- (i) widespread, user-friendly and inexpensive access to the information highway, (ie having a point of connection, email address etc), which we discuss in Section 4;
 - (ii) a focus on helping to raise people’s information awareness and enhancing their skills to analyse, interpret, repackage and publish information.

Information, communication and democracy

- 3.35** Information might be described as the lifeblood of democracy, in that it is essential for democracy to function. Poor quality of information indicates poor health in a democracy. Information needs to flow without getting clogged, and to be subject to varying levels of demand from different parts of the organism of society.
- 3.36** Essentially there are two requirements:
- (i) Ready access for citizens to information from their governments about their responsibilities and rights (legislative and official information);
 - (ii) The availability of user-friendly forums and channels of communication whereby citizens, policymakers, and officials can discuss issues.
- These are expensive requirements: a fully functioning democracy on any significant scale requires social investment in the systems and skills to provide information and to communicate. Where democracy functions poorly it may often be due to the failure of one or both of these conditions.
- 3.37** People will naturally look to the new technology to consider whether or not its use can enhance the functioning of democracy (for example by demonstrating a mandate for specific decisions); or improve the quality and amount of information and opinion on which that mandate is based; or increase the level of citizen participation in democracy (thereby enhancing its validity). It is widely recognised that the proposed systems (sometimes called ‘teledemocracy’ but more usually now called ‘e-democracy’) have to be far more than just voting mechanisms for, say, householders. The service provided by UK Citizens Online Democracy (UKCOD) (12) offers the following facilities:
- Easy access to information relevant to the democratic process (eg Hansard)
 - A public forum for all members of the general public
 - A civic forum (for representatives of civic organisations only)
 - A politicians forum (for politicians only).

Issues raised by the public will be addressed in the politicians forum, where material can be read but not interrupted or edited. Thus citizens raise issues, discuss them, and then ask politicians to discuss them without an interviewer and without interruption.

- 3.38 UKCOD has also run a local exercise for the London Borough of Brent, in which the citizens who were consulted not only called for their council tax to be increased but also specified what it should be spent on. Based on experience with the Minnesota Electronic Democracy project which has been running since 1994 (13), UKCOD is offering a facility which was not possible with any other medium, and which looks set to enhance democracy by providing for unmediated interactive consultation by politicians with ordinary citizens. Its independence is obviously critical and has to be protected.
- 3.39 Three issues arise.
- (i) We can envisage extensive local use of such a facility, with organisations such as community agencies or local newspapers, facilitating debates on local issues.
 - (ii) Community groups may feel they can justify an increased investment of time in trying to influence policy, if they see greater likelihood of their lobbying having an impact.
 - (iii) Public access to such facilities is crucial to ensure the widest possible involvement. Thus Cliff calls for 'citizen participation centers' (14) and the Working Party proposes a role for enhancing democracy in the Community Resource Centres (see Section 5).

"In a simple sense, we are creating an open and on-going town hall meeting where ideas, agendas, personalities, interests, and beliefs mix dynamically. We are creating an arena for public expression, development of opinion and accountability."

Steven L Cliff

Building citizen-based electronic democracy efforts. Paper to 'Internet and Politics' conference, Munich, February 1997.
<http://freenet.msp.mn.us/people/cliff>

'Essential' information

- 3.40 Our investigations have highlighted the importance of information as the basic currency of democracy, and there are various concerns about the provision of public information, and public access to the information highway. Public access is considered in Section 4. Here we are concerned with the kinds of information which should be made available freely to all citizens.
- 3.41 Our contention is that in a socially inclusive Information Society, *'information which is essential for full participation in society, and for support in times of need'*, should be available at no cost at the point of delivery (Section 1.12). This returns us to the notion of the availability of information as a 'right of citizenship', which we endorse. However, we recognise that there is a particularly urgent need for a consensus and a clear definition of the categories of information. What is deemed 'essential' by one individual, group or authority may differ significantly from the requirements of another. It may be that two categories of information will be necessary:
- (i) Essential information, which is fundamental to citizenship, such as contact details for authorities, or legal rights;
 - (ii) Critical information, such as details of agencies offering advice on child care.
- We repeat that information in both categories should be available at no cost at the point of delivery.
- 3.42 It would be appropriate for a working group to be established, to define what information might belong in these categories. This might involve such organisations as the Society for Public Information Networks (SPIN), the Community Services Group of The Library Association (CSG), the National Consumer Council, The Campaign for Freedom of Information, Aslib Social Sciences Information Group (ASSIG), and the Coalition for Public Information; perhaps sponsored by the Home Office or CCTA.

- 3.43 We would add here that, as the Internet gradually becomes more commercialised, information providers and service providers may need to pay careful attention to distinguishing between free and charged information services.

Policy for information and communication skills

- 3.44 Policy for social inclusion will have to address the issue of lifeskills, the skills in question being communication and information handling.
- 3.45 For the citizen, the Information Society places increasing emphasis on the use of information for problem-solving, decision-making, and personal development. This calls for adequate skills, which we have referred to as 'information capability'. If these skills are not developed, participation in the Information Society is likely to be greatly constrained. The development of information capability is a capacity-building process for the individual or group, which might call for abilities and experience in a range of social settings such as: group discussion, formal interviews with authorities, group presentations to authorities, 'cold' telephone contact, map and timetable interpretation, questionnaire design, administering a partnership project, committee procedures, and so on. Without experience of this kind, adapting to communication on the information highway is likely to be that much harder - we think it unlikely that many people who find themselves constrained in communicating in their present day-to-day lives, will take readily to online or multimedia technology as if it were just what they needed all along. Having said that, of course, the technology can de-institutionalise the learning process, reducing the imposing and sometimes off-putting formality of education and training. This may make learning to use communication systems more acceptable and accessible to people.
- 3.46 Throughout the age of print, the key to access has been the set of skills known as literacy. Over the last couple of centuries in developed and developing countries, this has given rise to enormous social investment in an educational infrastructure, an infrastructure which can still be exploited in undemocratic ways by those in positions of power. Indeed, while overall it can be argued that print literacy has been a force for democratisation and empowerment - requiring a given level of economic surplus before it could filter down through social stratification (15) - it could also be argued that, more recently, mass media have had a decelerating effect on that process: newspapers, radio and television, being non-interactive, can dull the instinct for critical interpretation, and extinguish cultural identities. (16)
- 3.47 The Information Society will also depend on a set of skills, arguably an extended set because those which relate to the technology may not be that different from basic print literacy and communication skills. What the Information Society throws into relief, however, is the possibility that our traditional education system may have created an unnatural distinction between literacy and communication skills.
- 3.48 Support for people to develop their information capability is a fundamental requirement of the Information Society, and we agree with the EC Information Society Forum's notion of the 'Lifelong Learning Society'. (17) It is an educational issue, relevant at all levels of the educational system and for citizens of all ages; and it requires the involvement and commitment of the library and information profession, which hitherto has been

"... as a rule of thumb, 50% of community information content, at least, is dialogue."

Peter Davis

Milton Keynes Community Network, p.g.davis@open.ac.uk, newsgroup posting, November 1996

"People want a means of communicating more than they want access to information."

Howard Rheingold

The virtual community: finding connection in a computerized world. Mandarin, 1995, p272

largely preoccupied just with access to information. In this respect, we welcome the references to information handling skills in the Library and Information Commission's strategy statement, 2020 vision. (18)

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- 18 Library and Information Commission, 2020 vision, leaflet, 1997(?)
- 19 Roger Blamire, *Information rich and information poor: avoiding a new divide in Britain*. NCET, 17 December 1996.
- 20 See <http://future.sri.com/vals-survey.results.html>

- 3.49 In our view, the dangers lie in policies which allow excessive unevenness in educational opportunities. All school children, and all adults in further education, should have ready, supported opportunities to develop their information handling and communication skills. This applies within and beyond the context of the National Curriculum, adult education and the system of vocational qualifications. Schools and colleges have a social function which is too seldom appreciated. We feel they represent an ideal environment for the development of information capability, for example through the use of newsgroups, exercises in supporting local community arts groups, correspondence with other schools or colleges, joint projects with local businesses, and so on. According to the National Council for Educational Technology (NCET), while 'perhaps 85%' of UK secondary schools are connected to the Internet, no more than 5% of primary schools are estimated to have access. (19) There is a worrying lack of development here. We are concerned at the sharp decline in the number of school librarians, and that, for example, there appear to be no firm plans to ensure that every primary school classroom has a telephone point. The fact that 'plain old telephone' use by children doing research projects in school is almost unheard-of, reflects not only the perceived costs and the lack of physical access: it also reflects our traditional bias towards formal (eg library) sources compared with informal (eg local author or business owner or community group) sources.
- 3.50 Blamire points out a US research study which reveals that Internet 'have-nots' are excluded less because of low income than because of limited education (20). This suggests that a greater sense of urgency is called for among policymakers, to ensure that children leaving school have experience in using the information highway and multimedia in various ways - for research, for communication, for design, for creativity.
- 3.51 We have stressed that those most at risk of exclusion from the Information Society are those who are not in employment and not in education. There is a clear role for community development and community education to address the developmental needs in these cases. We have also drawn attention to the difficulty of engaging people who are on the very margins of society. The development of information capability for these categories of people is a significant social policy challenge. It is bound up with the principles of lifelong learning and public access - the problem is clearly both about appropriate use or purpose, and about opportunity. Without a demonstrated purpose for communicating, for generating or sharing information, few people will make the effort to explore the information highway, especially if they have not made use of conventional information sources. Therefore they will not develop their skills. The requirement, then, is to provide both the purpose and the opportunity for informal learning and communicating. It is here that we see the importance of community networks and Community Resource Centres (see Section 5).

A question of access

“People in communities should be able to gain access to the systems and services that enable them to participate as fully as they wish in the information society.”

4 A question of access

- 4.1 Human societies depend upon the continuous communication and interpretation of information. The Information Society can be described as information-rich or information-intensive, in the sense that this dependency will become pervasive. The level of information-intensiveness is itself a function of the amount of information which can be stored and the ease with which it can be retrieved, transferred, re-packaged, and so on. It follows that we should pay particular attention to the question of access in the Information Society.
- 4.2 We would stress that this means access both to the channels through which information can be acquired, and to the associated channels for communication. The inclusion of access to *communication* is crucial. One of the promises of the Information Society is the degree to which the cultural domination of mass broadcasting may be countered by 'horizontal' communication at local level and within communities of interest; and by an increase in upwards communication from viewer to broadcaster. (1)
- 4.3 While we have expressed doubts over the use of the term 'information have nots', the possibility of a class of 'access have nots' gives genuine cause for concern. The issue here is how much access can be denied, and how much it can be used to facilitate and sustain social inclusion. In this section we discuss six key aspects of access to the information highway (these are in addition to the question of skills, which we covered in the previous section):
- the notion of 'universal access' and universal service, including issues for people in rural communities
 - levels of computer ownership
 - the principle of public access
 - the costs of getting connected
 - the technology for access
 - expert help.

Universal access and universal service

- 4.4 The terms 'universal access' and 'universal service' have distinct meanings. The first is to do with the idea that people everywhere should be able to access a range of services which meet a given set of needs. The second is a more legalistic term, referring to a demand placed by Regulators (OfTel, and in future the EU Regulator), on telecommunications companies (notably BT), to provide a minimum standard of service to all who seek it. For our purposes it is appropriate to consider the broad policy issues of these concepts together.
- 4.5 OfTel has carried out extensive consultations on universal service in the UK over recent years, leading a complex debate on the definition and conditions of universal service. The services which might be deemed appropriate for universal access are becoming more diverse, and may not be limited to telecommunications-based services. OfTel defines the concept as 'a basic minimum level of service at an affordable price, which should be available to all on reasonable request.' (2)

Key sources of information on universal access

OfTel

50 Ludgate Hill, London EC4M 7JJ, tel 0171 634 8700.

The Benton Foundation's universal service and universal access virtual library

<http://www.benton.org>

- 4.6 The proposals include measures to increase the proportion of households connected to the telephone network and reduce the number of disconnections for debt; measures to protect and improve provision of public call boxes; and a range of essential services for people with disabilities. All of these are critical issues for social inclusion in the Information Society. For example, people in homes which are disconnected from the network because of debt are a significant step further away from the Information Society than if they remain connected to receive incoming calls only. In practice, the Regulator is concerned to ensure that anyone who requires basic access to the telephone network should obtain it, and that price should not be a major barrier to that.
- 4.7 Our concern is that people in communities should be able to gain access to the systems and services that enable them to participate as fully as they wish in the information society. The following questions arise:
- What constitutes the basic minimum level of service?
 - Is this adequate for people to participate fully in the Information Society?
 - If not, what else is required to ensure that participation?
- 4.8 Oftel proposes that the basic level of service (for the period to 2001) should include *'a connection to the fixed network able to support voice telephony and low speed data and fax transmission.'*(3) This level is adequate at present as a basic level of access to provide, for example, email services, but it exposes requirements in other areas:
- (i) A higher level of computer ownership (see Section 4.23);
 - (ii) Support for provision of public access to the information highway (see Section 4.28).
- 4.9 As far as the definition of universal service is concerned, we feel that Oftel should have a future objective to make high speed transmission (relative to today's norms) a condition of universal service. This of course requires the upgrading of the telecommunications network to be comprehensive. Those who have computers and access to high speed networks are experiencing the Information Society in a way which gives them a distinct advantage over others who may have limited, low speed access or none at all. The category of people most likely to be excluded from access to such networks are those in rural areas. We discuss this issue in Section 4.18.
- 4.10 Networks capable of delivering much higher data bandwidths to and from residential customers have yet to be installed. Both the current telephone network and the cable TV network (which today passes approximately 6 million homes with about 20% take-up in the residential market) could be upgraded to provide such high bandwidths, but no clear market case for these upgrades (which in broad terms cost several hundred to £1000 per customer connected) have yet emerged. If the provision of a new broad bandwidth infrastructure is left to market forces and private enterprise we can be certain of two things:
- (i) No investment will be made without a solid business case justifying the investment required;
 - (ii) Dense populations will be upgraded before rural areas because the cost of installation in sparsely populated areas is higher than in urban centres.

- 4.11 Meanwhile, market cases are being built around an essentially broadcast entertainment model. Satellite and digital terrestrial TV broadcasting provides the high bandwidth 'downstream' channel (to the user) and the user has a relatively low bandwidth channel 'upstream', through which fairly simple instructions such as film choice, and payment authorisation can be made. Terrestrial broadcasting depends on a network of regional transmitters, and the broadcasters invariably supply high population densities first and rural populations more slowly, so again rural populations will receive the benefits later. On the other hand, satellite based solutions will be equally available for rural and urban centres.
- 4.12 The market cases for each of the proposed broad bandwidth systems make assumptions about the way we will use these networks. The most important assumption, which generally will be valid, is that people will receive more data than they send. Hence, the bandwidth available to the user is higher than that available from the user. The issue which needs addressing is the degree to which this is the case. Models based on satellite and terrestrial broadcasting, while delivering more channels of television into our homes, offer little in the way of a participatory service, merely reinforcing a consumer-supplier mindset, where customers simply choose from a list of offerings. These systems may entertain some people but the concern is that if upstream bandwidth is too limited the potential for empowerment is lost.
- 4.13 Upstream data rates (from the user) of about five hundred kilobits per second should be adequate for most people's requirements for the foreseeable future. Such bandwidths, allied with improvements in compression technologies, should allow an excellent video telephony service to be developed, as well as facilitating good audio transmission, email, fast file transfer and extremely fast web browsing. Such bandwidths would not support high quality moving images or extremely high resolution still images, but these are highly specialised requirements.
- 4.14 The Working Party has never been persuaded that the Information Society would be entertainment-driven, but neither are we persuaded that there is (yet) a market case, or a clear social case, for upstream links of a prescribed medium-high bandwidth. It seems to us that this remains an issue for market forces, with appropriate regulation, until such time as the ability to publish over the same link is seen as a right, in the same way as the ability to receive incoming calls is now seen by many as a right.
- 4.15 Policy debate on universal service has led to the suggestion that priority should be given for schools to access the information highway. Not all commentators agree with this. For example, COST 219 - a Europe-wide project working on telecommunications services for older people and people with disabilities - argues that access to the 'education superhighway' should not be a matter for universal service and '*represents a set of 'wants' which will have higher priority than the 'needs' of disabled people.*' (4) Thus there is a social inclusion issue: if policy is extended to include one group but not another, what is the justification used? The National Consumer Council, on the other hand, suggests that policy might go further:

'We hope that Oftel will explore the practicalities of extending the proposal on schools' services to include facilities which would reach other age-groups and sections of local communities, through for example, further education, services in community

centres and libraries, and services for disabled people.’ (5) The Working Party strongly endorses this view and welcomes discussion of a broad definition of access and of provision for future developments.

- 4.16 Our understanding of the Internet is that it constitutes a peer-to-peer network which guarantees a potential route for data between any two points. The role of the Internet is to achieve this particular level of universal access. Access to the Internet, via modem, cable or satellite, increasingly becomes part of the debate.
- 4.17 Similarly, it is worth drawing attention to the proposals made in the Rand report on Universal access to e-mail in the USA, which recommends policies which, the authors anticipate, will take a decade to implement. Their conclusions, in this context, include the statement that ‘It is critical that electronic mail be a basic service in a national information infrastructure’. (6) In our view, given the importance of email as a stimulus for the use of the information highway, such a forward-looking principle should become part of policy thinking in the UK also.

Key sources on rural communities and the Information Society

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The Rural Development Commission, January 1997.

Rural communities and the Internet

Moira K Stone, 1996.

<http://www.communities.org.uk/articles/rural.html>

Falling through the net: a survey of the ‘have nots’ in rural and urban America

US Department of Commerce, July 1995.

<http://www.ntia.doc.gov/ntiahome/fallingthru.html>

Policies for the information society: social innovation and rural communities

Peter Day and David Horner. In: Technological innovation and global challenges: proceedings of the European conference on Management of Technology. Aston University, 1995.

People in rural communities

- 4.18 In theory, rural communities stand to gain from Information Society developments because technology helps to overcome so many aspects of disadvantage associated with geography and distance. Thus the availability online of council services, banking services, information about schools and hospital waiting lists and so forth, could be highly beneficial. The experience of the ‘telecottage’ movement, which we referred to in Section 1 above, has shown the social and economic value of promoting community teleservice centres for rural communities.
- 4.19 However, we see three key issues concerning the evolution of the Information Society in rural areas. The first, which we alluded to in our discussion of universal access, reflects widespread concerns about the availability of high speed telecommunications for rural users. At present the market-driven introduction of cable in the UK is largely bypassing rural communities, and this will create imbalances in the quality of people’s access.
- 4.20 Secondly, it is important to keep in mind that partnership initiatives can be more difficult to establish, and less well-resourced, than they are in urban areas. For example, there are fewer universities whose expertise and resources might be drawn on. Therefore the options for pooling resources and attracting additional contributions are fewer. Typically, a rural local authority may well have little choice but to ‘go it alone’ - as has been the case with Powys in Wales for example or North Kesteven in Lincolnshire - in the development of an information infrastructure.
- 4.21 Thirdly, the nature of employment in rural areas - in such industries as small-scale agriculture, forestry and tourism - perhaps offers fewer opportunities for developing IT skills than is the case in urban areas. The advent of teleworking may be bringing some skills into certain areas, but this is largely arbitrary and piecemeal.
- 4.22 These are all policy issues requiring research and close attention at national level. Without intervention there will be imbalances in the quality of access between urban and rural communities.

“Many people in rural communities live at some distance from services of all kinds (such as shops and post offices, schools and colleges, doctors, advice and benefit offices, and cinemas and theatres). And these services may be found in completely different directions.”

Moira K Stone

Rural communities and the Internet, 1996.

<http://www.communities.org.uk/articles/rural.html>

“Generally, the less that one is educated, the lower the level of telephone, computer, and computer-household modem penetration.”

Falling through the net: a survey of the ‘have nots’ in rural and urban America.

US Department of Commerce, July 1995.

<http://www.ntia.doc.gov/ntiahome/fallingthru.html>

Computer ownership

- 4.23 The recent IT for All survey of public awareness of Information Society issues (7) found that 34% of respondents have a computer at home. The presentation of the findings is misleading because many of these were ‘plug in’ games, rather than computers which could be used to access the information highway. But it is apparent that levels of standard computer ownership need to be increased significantly before we can claim to live in an Information Society.
- 4.24 Studies suggest that the two key factors in non-ownership of computers are wealth and education. Levels of Internet use reveal a familiar profile:
‘As you might expect, users tend to be young (almost two-thirds are aged under 35). They are also upmarket (almost four-fifths are ABC) and relatively wealthy (despite the fact that almost a quarter of Internet users are students, 20% have a household income in excess of £40,000).’ (8)
- 4.25 This suggests a powerful need to address the cost accessibility of basic computers, and to increase the opportunities for school children to familiarise themselves with information technology. The cost of computers is slightly deceptive to the potential new user. They may believe they only want a machine which will run, say, word processing and communications software, which might call for a computer costing perhaps £300-£400. But the high street does not offer such a machine. It offers a fairly high-capacity computer with CD ROM for about £1000. Thus many potential new users are put off by the apparently high entry level price. Having said that, we are well aware that there may be little to be said for having entry level computers with a lower specification; and that prices continue to fall.
- 4.26 There seem to be two other angles of approach to this question of increasing the levels of computer ownership. First, schemes which recycle and re-use existing equipment should be promoted, and reputable companies might be ‘kitemarked’ to avoid inappropriate, unusable or poorly maintained equipment being offloaded into the sector. In this respect, we welcome the news that Business in the Community is in the process of setting up an association of computer reuse projects which take surplus used computers from companies and pass them on to voluntary organisations. Secondly, schemes need to be developed to reduce the startup costs for community groups and charities.
- 4.27 It may well be that in the future the computer and software that provide access to the Internet are not separately purchased. The chip and software may be built in to the TV or entertainment system which we buy, and the costs may be less easily identifiable. This does not negate our point, which is that we cannot assume that everyone who wants to exercise their rights in the Information Society will have the personal resources to afford the technology that will enable them so to do.

Public access to the information highway

- 4.28 We define ‘public access’ as access to the information highway from public places. The ideal of universal access, for all citizens in their homes, remains a serious objective for policymakers, but as Professor Charles Oppenheim has argued, it will not be brought about through market forces. (9) Thus in the short to medium term, the policy approach to public access is hugely important for the development of a socially inclusive Information Society. This is a complex area in which there seems to be considerable activity but no sense of strategy at policy level.

- 4.29** The Working Party is aware of arguments which suggest various options for providing points of public access to the information highway. These include public kiosks, schools, community centres, and public libraries: post offices, supermarkets, pubs, and video stores have also been suggested. Some aspects of this debate are immediately apparent. For example:
- Kiosks would need to be in public places such as shopping malls and may be inappropriate for rural areas; poor weather would be a major disincentive to using an open kiosk.
 - Primary schools are probably the most local option, and the spin-off benefits for children would be considerable; but daytime access would be needed and some people would find the institutional context unacceptable.
 - Community centres have the advantage of local accountability and credibility; but often their facilities are inadequate, and they do not exist in all areas.
 - Libraries, like schools, can claim to be local and to have a national network as well as a tradition of information provision; but like schools they have an 'image problem', being strongly associated with middle class leisure interests.
- 4.30** It could be argued that in policy terms the most efficient systematic approach would be to select one option and 'make it fit' to decide, for instance, that libraries would be the public access providers and require them to address any suitability issues concerning access, convenience, the reluctance of some people to use them, and so on. Another approach would be to devolve responsibility to local authorities, with appropriate guidance on the success or otherwise of certain models. This approach would acknowledge for example that what might be suitable for one rural area may not be appropriate for another. Thus a thousand flowers might bloom, each in theory appropriate for its locality. The Working Party favours a variation on this approach, which would involve stipulating certain principles and conditions for a network of community-based resource centres, functioning as access points. We discuss this in Section 5.
- 4.31** Given the social significance of access to information and the challenge of social inclusion, we would regard an approach which left developments to market forces and chance as irresponsible.
- 4.32** Notably, the UK government has been promoting kiosks through the CCTA - the government centre for information systems. We would wish to see them promoting other forms of public access more vigorously. We recognise also that, given significant changes in recent years, local government could be seen by some as too weak to take on a coordinating role on public access. This is not a reason for failing to introduce coordinated policy on such an important issue. Local authorities are the most appropriate bodies for this role and should be resourced fully to carry it out. Organisations such as SPIN (the Society for Public Information Networks) (10) and SOCITM (the Society of Chief IT Managers) (11) have already played a leading role in developing practice and stimulating debate, which must be maintained.
- 4.33** Certain practicalities of public access are covered in Section 5, but it is essential here to stress that many community groups do not have their own premises, not even regularly used rooms in a community centre. They have nowhere to put a computer even if they had one, except in the home of the secretary or other representative. Such groups are not in a position to offer access

to their members. The issue for them is to negotiate the conditions of public access: hours of opening, costs, availability of support, wheelchair access, provision of childcare facilities, and so on. This will sound terribly familiar to them: many have been working away at such issues for years in other contexts, and social policy must ensure that information technology doesn't just become another chapter in this history.

- 4.34 Two more specific points concerning public access deserve mention. First, there is an issue about private transactions being carried out on public terminals: such transactions may need to be constrained, and this obviously affects the degree to which universal access genuinely can be available. Secondly, while we can anticipate that the uses made through public access will tend to be quite different to private access at home or business access, we have still no clear understanding of the implications of such differences. Our understanding is that software is being developed which will allow public access terminals to re-configure themselves once the individual user has been recognised. So for the user the experience of exclusive access and shared access will converge.

Costs

- 4.35 Experience from IT and Internet awareness days with community organisations confirms that potential new users are immediately concerned about the startup and ongoing costs of information technology generally, and online use in particular. These costs are notoriously difficult to estimate, and change too frequently, for us to make meaningful indications here. However, it is valuable to offer here a basic list, indicating the range of items to be considered:

Getting Started

- equipment: computer, printer, modem
- software: word processing, communications etc
- email and Internet subscriptions
- initial training

Ongoing Costs

- telephone rental and connection charges
- continuing training and support
- web space and data storage costs
- insurance
- web page design and authoring
- peripherals: disks, paper etc
- software upgrades
- depreciation of equipment

- 4.36 Larger organisations may often be able to absorb some of these costs but for smaller agencies and groups they can be inhibiting or prohibitive. We note, however, the following point made in research among Australian community agencies:

'... it would appear that many organisations perceive the affordability of electronic communications equipment as a greater problem than it actually is.' (12)

- 4.37 Many community and voluntary agencies take the approach of identifying a similar agency to themselves, where IT has been researched and adopted; and to ask for recommendations and estimates of costs. This is a valid approach and we would always point out the need to go to more than one organisation to get a clear understanding.

"Are you talking about disadvantaged people using the Internet?"

"Yes."

"Well how can they afford this sort of thing?"

Discussion at Brighton Community Internet Day
March 1997

- 4.38 It is also important to keep in mind that while the adoption of IT may seem expensive, if it's based on a clear information strategy which is consistent with what the organisation is setting out to achieve, the overall costs are likely to be far lower than current information-handling costs (which, typically, are well-hidden). This is the principle implied in the modern adage, 'three hours in a library can save you 10 minutes online.'

The technology for access

- 4.39 The Working Party has found that one of the most problematic aspects of the Information Society is the appropriateness of the existing technology. This in itself is not surprising, but scant attention is paid to this point in other commentaries.
- 4.40 The explanation for this probably lies in the sheer seductiveness of the technology when it works. Privileged people have trouble-free access to the information highway, and then enthuse about its enormous potential. Finding confirmation in the experience of others similar to themselves, they lose sight of the fact that their advantage follows from a combination of good fortune and perhaps technical astuteness on their part, or on the part of another. At this delicate stage in the evolution of the Information Society, the comfortable evangelist can be dangerous.
- 4.41 As we make clear elsewhere in this report, on the whole we concur with those who make strong claims for the democratising and empowering potential of online communication. However, it seems mysteriously easy for those with privileged access to overlook the fact that the existing technology is extremely cumbersome and off-putting to the naive user, especially to those without a technologically-adept contact who can advise and support them. For many, the Internet is characterised by the 'egg-timer' symbol which appears on the screen to warn them that after 10 minutes of inaction they will reach a web site which is under construction and contains no useful information. Others will be put off by the often tortuous logistics of loading a browser; finding their entire online access disabled after following a service provider's instructions on loading their software upgrade; replying to an email message and having the reply 'bouncing'; being put in a lengthy telephone queue when they call their service provider's helpline; having their modem disabled by a service provider's visiting expert, or worse... All these scenarios, and others, have been experienced by members of the Working Party.
- 4.42 For the most part, this technology is not particularly new. Recent advances have mostly been improvements on existing possibilities. And we fully agree with the challenge to the IT industry when a correspondent says to us, *'why should I have to know about trumpet and winsock.dll and uuencode and file transfer protocol and so forth: it's 1996, why should I?'*
- 4.43 It is to be hoped that computer and online technology will soon have outgrown its phase as a domain for specialists, a priesthood with protected knowledge. We find encouragement in the analogy of the development of motorcycles. For a long time, motorcycles were of interest only to people who didn't mind getting oil on their hands or on their clothes: this was part of the culture and British manufacturers did little to discourage it. Motorcyclists were not just users, they were also mechanics, mostly men, fascinated by the technology for its own sake, adept specialists who spoke a common language of their own. In the 1960s, Japanese manufacturers perceived that, properly

"The problem with the technology is that we've never got one thing right before we move on to the next."

Daithi O'Flaherty

CINNI, personal communication
September 1996

“Another problem with the Internet is that, as the Newspaper Society put it, “it does take a degree of perseverance and at least two children to be able to understand how to operate it properly.”

Information society: agenda for action in the UK: fifth report of the Select Committee to consider Science and Technology.

HMSO, 1996, para 4.38.

<http://www.hmsoinfo.gov.uk/hmso/document/inforsoc.htm>

“... whilst it is useful to remind everyone how dreadful it (the Internet) all is at the moment, we need to recognise the power of the rate of change in technology - things will improve, and we need to ensure that there be a community voice in that improvement.”

David Fitzpatrick

Computer Access, personal communication,
November 1996

presented as reliable, clean, safe machines, motorcycles could appeal to people who did not need to know how they worked, did not need to speak the jargon, and did not identify with the prevailing associated culture.

- 4.44 The technology of personal computers, modems, browsers and so forth is, hopefully, approaching a comparable stage, when equipment which provides straightforward Internet access is available to the consumer as an appliance, not as a specialist tool. Without this transformation taking place, however, a socially inclusive Information Society in our view simply cannot be brought about.
- 4.45 It follows that policymakers have to consider ways in which the IT industry can be encouraged to address the interests of the naive consumer, in technological terms rather than in marketing terms. At the moment what happens is that marketing experts present consumers with a glorified image of membership of the Information Society, an image which disguises the problematic complexity of the technology. A handful of technically proficient community activists and development workers struggle to bridge the expertise gap which this creates; and initiatives in the community sector are forced to call for intermediaries to help set up and use IT.
- 4.46 This is complex technology, and we do not wish to suggest that users should remain wholly ignorant of the basics involved in going online. However, there is clearly a lot of ill-feeling about the ways in which users are exposed to confusion. Trying one or two remedies based on partial knowledge can soon entangle the user more deeply in dysfunctions with continuing repercussions.
- 4.47 A huge training industry is one of the consequences, but in an Information Society very little IT training, in the conventional sense, should be necessary. It is essential that we see, soon, a technology which is as appropriate to the end user as a microwave oven or a television: that is, a reliable system, compatible with existing patterns of behaviour, requiring a manual of no more than a few pages written in plain language.
- 4.48 Our concern is that new users may quickly be discouraged and so opt out of the Information Society. Experienced users come to treat as acceptable a situation in which both system software and content may well be flawed or incomplete. At this point what concerns us is not so much that things don't work properly, as the fact that they're not necessarily expected to.
- 4.49 The social implications are that the 'literacy' of participation in the Information Society will call for more complex skills than should be necessary. This is not to say that training and learner support should be unnecessary, any more than teachers and schools should be. But there is an undercurrent of distrust caused by the impression that the IT industry is focused entirely on developing sophisticated new features while failing to improve the reliability of basic communications software. We regard it as unhelpful for social policy to depend upon an army of trainers and the establishment of training institutions: this will simply perpetuate inequalities which the technology, potentially, can overcome. The need is to persuade representative bodies in the IT industry that they have some responsibility for minimising the technical skills necessary in the Information Society.

Expert help

- 4.50 Barriers to access can be overcome with the help of intermediaries, and of course there are various sources of expertise available for new users to consult. Community groups and organisations tend to be suspicious of high street dealers and computer consultants if they understand little of what they are being told and if they feel their own ethos is not shared. Furthermore, most are concerned and uncertain about the likely costs, being aware that their need for expert support is likely to be recurring.
- 4.51 From our visits and consultations it is apparent that there is still a strong need for community development support for the adoption and use of information technology. Various agencies have contributions to make, including private companies such as Internet providers, who may begin to target community and voluntary organisations. Libraries and academic institutions have a role to play both in offering individual expertise, and in running awareness days and training sessions. Community networks and Community Resource Centres, which we discuss in Section 5, should be an obvious focus for development and the coordination of support.
- 4.52 Community organisations need ongoing, externally-funded advice and help which they can trust and which understands their needs, if they are to begin developing their information capability and exploiting the potential of information technology. This is a policy issue for local authorities, TECs / LECs, regeneration partnerships, the academic sector, and grant-making trusts.

References

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- 3 Ibid.
- 4 Universal service: what is it and why is it important? COST 219, RNIB, January 1996.
- 5 The information society: getting it right for consumers. National Consumer Council, April 1996, p58.
- 6 Universal access to e-mail: feasibility and societal implications. Rand, 1995, Chapter 7. <http://www.rand.org:80/publications/MR/MR650/>
- 7 Read all about IT: a survey into public awareness of, attitudes towards, and access to information and communication technologies. HM Government, December 1996, p4.
- 8 Fiona Warren, 'Geeks or junkies? Consumers and the Internet', in SRA news (Social Research Association), November 1996, p4.
- 9 Charles Oppenheim, 'The politics of multimedia', in *Managing information*, 2(6), June 1995, p25.
- 10 <http://www.spin.org.uk>
- 11 <http://www.socitm.gov.uk>
- 12 Electronic communication and the community sector: final report. Australian Council of Social Service, July 1996, p113.



Community networks, resource centres and partnership

“ ... a community network is an electronic network linking people with information and people with people. It enables communication, education, trade and empowerment and serves the living needs of communities. A goal of community networks is that they will enable whole communities to benefit from electronic interconnection.”

Colin Millar and Doug Williams

BT Labs, <http://www.labs.bt.com/ourwork/cnet/index.htm>

Key sources on community networks

How to use IT in the Community

DTI, 1997. (<http://www.communities.org.uk>)

The effects of community networks on political participation: a resource guide

Kim Gregson

Unpublished thesis, School of Library and Information Science, Indiana University, 1996.

<http://ezinfo.ucs.indiana.edu/~kgregson/teledemocracy.html>

New community networks: wired for change

Douglas Schuler

Addison-Wesley, 1996.

UK Communities Online

<http://www.communities.org.uk>

Sheffield University

Community Information site: <http://panizzi.shef.ac.uk/community/>

BT Labs, community networks

<http://www.labs.bt.com/ourwork/cnet/index.htm>

'The community networking page'

University of Michigan, School of Information. <http://www.si.umich.edu/community/>

5 Community networks, resource centres, and partnership

5.1 This report has progressed from a focus on the social context, through an emphasis on information and communication, to a consideration of issues to do with access to the information infrastructure. We now address more specifically some of the practicalities of that access, exploring the ways in which communities have already begun to develop mechanisms to answer their needs. We begin here with a discussion of community networks: we then put forward suggestions regarding perhaps the most important practical feature of a socially-inclusive Information Society, the Community Resource Centre; we discuss questions about partnership which are key to the infrastructure of the Information Society; and we comment on the role of the academic sector and on the predicted development of 'community intranets'.

Community networks

5.2 The development of so-called 'Community Networks' (or c-nets) is critical to the Information Society. C-nets have huge potential as a stimulus for, and major medium of, communication and information in local communities. If this potential is not fulfilled, then it is likely that some form of exclusion from the Information Society will have become entrenched. The debate concerning the nature and role of c-nets, and policy for their development, has grown enormously during the time of the Working Party. Here we draw attention to certain key aspects of that debate.

5.3 Two other terms are commonly used to describe the same kind of initiative: 'freenets' and 'civic networks'. The terminology in this field is still fairly loose and distinctions are unclear. Freenets, the first of which was established in 1986, are community networks which are or were intended to be free. The term civic networks is seldom used in the UK but could become useful to distinguish systems established and run by local authorities rather than by communities, particularly the so-called community intranets which we discuss in Section 5.35.

5.4 A further term, 'digital cities', is in use to describe city-wide initiatives to network resources, offering for example a virtual women's square, sports square, local authorities square, and so on. The advantage of such an initiative is the pooling of resources to overcome problems of scale. The disadvantages, however, are also likely to relate to scale and how the service relates to its communities. The best-known digital city, in Amsterdam (1) has been the subject of some evaluation which suggests that '*for the majority of the digital citizens, the Digital City does not seem to be part of their 'normal' activities.*' (2)

5.5 Definitions of community networks are summarised by O'Brien & Miller (3). They include the following from a major piece of research carried out in 1995:

'... a network of computers with modems that are interconnected via telephone lines to a central computer which provides:

- *community information;*
- *a means for the community to communicate electronically.'* (4)

An example of c-net services

Craigmillar Community Information Service includes a range of telematic services with an emphasis on free or low cost access for local groups:

- Free Internet email accounts
- Free in house, public WWW access on 9 terminals linked up to a 64K leased line
- Free user support & training
- Direct dial up access to the WWW for 20 local groups and agencies
- Help with the creation, hosting and posting of Web pages for community groups on our three Web servers
- Free dial up access to bulletin boards/newsgroups.

See: <http://www.ccis.org.uk>

Source: Andrew McDonald, Craigmillar: a community development approach to cyberspace.
<http://www.communities.org.uk>

"We are setting up community access points (CAPS) around the country to provide free access to the Internet so BLINK can effectively reach its main target audience. These access points will be hosted by organisations which have consistently demonstrated successful self-help schemes and have made significant impact in the minority communities. Each CAP will have a PC, a modem and a dial up Internet connection."

John Adams

BLINK, personal communication
March 1997

- 5.6 Beamish goes on to identify three characteristics of c-nets:
- Their focus on local issues
 - Access: a concern and effort to ensure inclusion of all members of the community
 - The belief that the system can strengthen and vitalise existing communities.
- 5.7 Other writers stress that what distinguishes c-nets are the core values such as empowerment and participation. Law and Keltner, for example, in their chapter on civic networks for the Rand Corporation study, suggest that most civic networks '*typically aim to reach underserved populations*'. (5)
- 5.8 The Working Party's perspective on c-nets, however, would place traditional community networks at the centre of the definition. C-nets come about because people, usually through representative agencies at local level, seek to exploit the new technologies to extend existing networks, so that they can communicate more readily, be more informed, and participate more effectively. The 'net result' is stronger communities. Thus in what follows we refer to c-nets as initiatives which come about because *people initiate a process*: they get together locally, as well as communicating online, to learn about and develop electronic platforms, in order to increase their options for communication. This process is part of community development.
- 5.9 Local people on their own are unlikely to have the expertise and the wherewithal to establish the infrastructure for an online network. It follows that c-nets require the involvement, in partnership, of those who can contribute in this respect - private companies, local authorities and academic institutions. The nature of these partnerships is of critical importance, as we stress in Section 5.28. It has been pointed out that in such partnerships 'the default mode is commercial' (6), and this can lead to conflicts where members of the community do not feel that their interests are integral in the development of the local infrastructure.
- 5.10 C-nets are usually perceived as referring to 'local' communities, rather than to communities of interest. Dispersed communities of interest may have quite distinct problems, resulting from being peripheral to social and economic policy. For example, women who have suffered domestic violence might benefit from mutual support and advice available over the Internet, but the difficulties for them in gaining access and the necessary skills may well be far greater because of their isolation. (Issues to do with virtual communities and communities of interest have been discussed in Section 2.)
- 5.11 The relationship between c-nets and Community Resource Centres (see Section 5.18) should obviously be close and mutually-beneficial. In the UK, at present, such relationships are only just beginning to be developed, for example at South Bristol Learning Network (7) where extensive training facilities are used by a wide range of local agencies and businesses; and at Newtel in the London Borough of Newham (8), where the c-net has been based on an established community development agency.

- 5.12** A community network offers huge potential for social inclusion because it constitutes a forum for people to:
- (i) Extend and develop their existing network of local contacts and communication - the 'neighbourhood net', which can be both a gossip-grapevine and a collection of mutual support or campaigning groups.
 - (ii) Exploit the possibilities of communication beyond that neighbourhood - for example by sharing experience with 'twin town' communities, broadcasting their experience on the world wide web, or searching databases on subjects which interest them individually.
 - (iii) Participate in the decision-making processes which affect their lives, through contact with authorities and through online consultation procedures.
- 5.13** C-nets have a role in demonstrating and explaining the nature and potential of IT applications. This may call for a variety of approaches such as drop-in sessions, awareness days, and outreach. We have even been told of the use of community drama to help people explore the issues involved.
- 5.14** The relationship between c-nets and their constituencies is obviously of critical importance. We see three key areas here:
- (i) Infrastructural issues to do with Internet providers and telecommunications services at local level, and to do with the symbiosis of access and content.
 - (ii) The degree to which forums which have been set up to develop a c-net - or which find themselves working on it as a natural extension of their activities - are representative.
 - (iii) The demographic size and geographic scope of the c-net.
- 5.15** C-nets have begun developing in the UK partly through the foresight and energy of a number of enthused activists, and sometimes where local authorities or other agencies have seen a need and assumed an enabling responsibility - for example facilitating meetings and early development. Elsewhere, authorities seem to have perceived a strategic need to develop electronic networks with public access points, for the provision of information and the purpose of reducing the costs of service delivery. These might perhaps be better described as 'civic networks', although c-nets may evolve from them. Often c-nets have evolved from other initiatives such as community teleservice centres (see Section 1, The early history of the Information Society in the UK) or community computing projects. Some established community computing projects, however, have evolved with a strong focus on skills acquisition and employability, which may not emphasise information or communication. As one experienced practitioner told us, *'IT skills are not seen to have anything to do with information'*. (9).
- 5.16** The complex development practicalities mean that c-nets typically have a far larger geographical constituency than could be described as a 'local community'. It may be 'community' in the broad sense used by local authorities and politicians, but this seldom corresponds to the rather more local understanding which people have of their own neighbourhood.

"What do you mean you've never been to Alpha Centauri? For heaven's sake mankind, it's only four light years away you know. I'm sorry, but if you can't be bothered to take an interest in local affairs that's your lookout."

Douglas Adams

The hitchhiker's guide to the galaxy, Pan, 1979

“The challenge is to develop market models which will sustain local community networks as independent economic entities.”

Doug Williams

BT Laboratories, personal communication,
March 1997.

“Whilst Vemdalen began as an attempt to solve the problems of unemployment and depopulation, its focus developed a dynamic concerned with growth, development and enhancement of the quality of life for both individual and community. One of the interesting facets of the initiative was that it encouraged self-reliance by stimulating individual initiative. Individuals participated freely in the governing and management committees, this coupled with education and training programmes in the exploitation of information for business, citizenship or communication purposes helped nurture active participation in community affairs. As participation in training courses was voluntary, people developed at their own pace. The underlying model here contrasts sharply with the policies advocated, for example, by the Bangemann report.”

Peter Day and David Horner

‘Policies for the information society: social innovation and rural communities.’

In: Technological innovation and global challenges: proceedings of the European conference on Management of Technology. Aston University, 1995.

5.17 The danger here is that the networks become dominated by the more powerful interests in the area, such as colleges, local authorities or large professionalised voluntary agencies. The development of relatively large-scale community networks such as those we are seeing may be inevitable, because of costs and the need for a critical mass of users. But there is a need to develop within them examples of ‘neighbourhood areas’ which are genuinely local and representative.

Community resource centres

5.18 As our society moves away from its emphasis on traditional educational and employment patterns, the need for local resource centres is likely to increase sharply. We have identified seven functions for locally-based information and IT resource centres. These functions do not depend upon the use of a building – for example, community networks providing email and newsgroup facilities can operate without a publicly-accessible location. However, they are far more likely to contribute to the community if they are associated with a physical, local focus. (We return to this point in paragraph 5.26).

(i) Community development

A centre should operate as the hub of various kinds of community activity and by its very existence will stimulate and support such activity. All the following functions in themselves will contribute to community development.

(ii) ‘Horizontal’ communication

Networks based around Community Resource Centres will generate communication across and within the community, in contrast to the volume of material coming into the community from powerful centralised agencies. Considerable stimulus will come from increasing use of email and newsgroups.

(iii) ‘Self publishing’

The new technologies offer significant opportunities for community groups to publish information about their experiences and views, inexpensively and on a magazine or bulletin basis if they wish.

(iv) Enhancing local democracy

By providing access to local services at various points, and channels for consultation and discussion, a resource centre can improve participation in local democracy and thus strengthen it.

(v) ‘Community information’

Community Resource Centres should provide general information about the local area, in the way local libraries do. A popular example is ‘community calendars’, an online diary of forthcoming local events.

(vi) Skills acquisition

A resource centre should be a place where people can acquire communication and information-handling skills, informally and in some cases formally.

(vii) Access to the ‘universe of knowledge’

Community Resource Centres should provide access to available information beyond the community, again this is the traditional role of public libraries.

- 5.19 In addition, there are other functions which may be appropriate for such centres in certain situations, for example an economic development role, or an advice centre role.

Establishing Community Resource Centres

- 5.20 A number of community networks and CRCs already exist around the UK which equate to the model we are proposing. However, their unevenness and the variety of structures makes it difficult to draw particular conclusions about what works and what doesn't. In what follows we offer some suggestions about the ways in which CRCs might be established if they are to make significant contributions to a socially inclusive Information Society.
- 5.21 CRCs should have policies which prioritise access for those who are not in work or in education.
- 5.22 Local people will use a CRC if there are projects to which they can contribute (eg local history or arts initiatives); if there are local issues (eg planning, transport) which affect them and which they can influence through the Centre; if it functions as a public centre or meeting space; and if they see practical or leisure advantages in the acquisition of the skills which they can develop there.
- 5.23 CRCs should be locally owned and managed, so that members of the community have a clear and effective influence over what happens. This calls for a community agency to develop, and keep to, a strategy which merits ongoing use of core funds.
- 5.24 CRCs require core public funding, they should not be subject to funding trends or be dependent on success in challenge bids. The risks involved in small business development and the need to chase contracts and temporary funding are too uncertain and always likely to distort activities. Experience (if common sense prediction were not enough) has shown that obliging the community teleservice centres to become self-funding distorts their purpose so that they become businesses with a hazy 'community' history. It is important to ensure local accountability for the source of funding. With a little political perception, this is far less problematic an issue, we believe, than it is usually taken to be. Public libraries, traditional community centres, schools and local colleges have all been funded or supported to a greater or lesser extent by public money, and each has the potential to contribute substantially to the CRCs of the future. Local authorities will have a clear enabling role in resolving this particular problem.
- 5.25 The involvement of public libraries could be critical to the development of CRCs, and we offer them here as a possible model for two reasons. The first has to do with their information role in local communities, and the perception of them as neutral public spaces. The second has to do with the fact that the provision of library services by local authorities is a statutory requirement. One element of the resource centre could be either a community-controlled extension of the library service, or an outpost of it. Libraries have staff, resources, expertise, facilities and space to contribute. In some cases all that is lacking is a grasp of the nature of partnership in the community and of the need to move away from traditional service models. The development of a network of CRCs depends on new relationships and structures for community agencies and libraries, under the aegis of 'community services' or leisure services divisions in local authorities. It is important to remember that, while libraries are 'based in the community', they are not 'community-based'.

"Most funding and resourcing of local groups is discretionary. This alone ensures that it is regarded as less fundamental than official services."

Gabriel Chanan

Out of the shadows: local community action and the European Community. European Foundation for the Improvement of Living and Working Conditions, 1992, p119.

Furthermore, as the *Public library review* demonstrated (10), they are significantly under-used by certain socio-economic groups, for whom they may lack relevance or appeal, and who may well feel uncomfortable with the 'institutional' atmosphere of many library buildings. Therefore we would certainly not recommend, under their present culture, that public libraries take responsibility for CRCs. However, they have undoubtedly a major role to play in shaping a socially inclusive Information Society. The identification of appropriate community structures is an urgent requirement and should be addressed through The Library Association's Community Services Group and Public Libraries Group, in dialogue with community sector agencies such as the Community Sector Coalition.

- 5.26 The physical location of a centre requires careful consultation and planning. It is essential to retain the sense of a local centre which people regard as a natural place for them to visit frequently. The availability of advanced telecommunications will not change the importance of that. Opportunities to use appropriate sites are of course always constrained, but there exists an extensive literature on locating library buildings and school buildings, for example, so there is experience to draw on. A review of the development of East Manchester's 'electronic village hall' (EVH) makes the point that:

'... one of the key problems in East Manchester was the mismatch between the proposed physical location of the EVH and activity patterns of individuals within the area... Even in the information age, it would seem necessary to construct strategies for community development in terms of the physical dimensions of urban space.' (11)

- 5.27 We cannot envisage a socially inclusive Information Society in the UK which does not have a developed network of community resource centres right across the country. The market principle which assumes universal individual home access, in our view, will never bring about the necessary conditions; not least because it overlooks the need for purpose and appropriate use among those who otherwise would have no reason to get connected. Community networks and CRCs, however, require considerable policy input at a national level, and the kind of nationwide vision which created the railway, school and library networks.

Partnership

- 5.28 The information society is being built by the local and regional partnerships which establish community or civic networks. We have come across a wide range of partnership projects, often set up as a response to a new funding opportunity. A huge amount has already been achieved across the UK. However, in many cases the authenticity and openness of some partnerships is in question. It is essential that they are open to both the community and the voluntary sectors from the outset. Such partnership initiatives should establish policies which enable community groups to go online themselves and, in due course, to publish their own material online if they wish to. We are also concerned at the lack of strategy in many instances. An information strategy is essential for local and regional initiatives of this kind, and should take account of all sectors contributing to the information resources of the area, in the way that the best library and information plans (LIPS) have done.

- 5.29 The Working Party is convinced that the involvement of community organisations in partnership initiatives will prove to be crucial. Social exclusion from the Information Society could become entrenched if network partnerships are formed which do not truly represent local communities.
- 5.30 The rhetoric of community involvement is now widely accepted but the practice still appears to baffle many authorities. Sometimes this is apparent from attitudes towards 'community information'. Library services which invest in community information often do so very much in a top-down manner, collecting and making available, in their own terms, information about agencies known to them. Yet there is enormous potential for community organisations to self-publish online once they have access to the systems. Enabling such agencies to contribute should be an essential part of an authority's information strategy.
- 5.31 Part of the problem here has to do with the attitudes of community organisations themselves, and their appreciation of new opportunities. For most such agencies, the day to day skirmishes of financial survival, provision of critical services and other demands, leave little time to be invested in initiatives of uncertain promise, which cannot be applied directly to the organisation's short-term needs. In consequence, at the outset they may be reluctant to participate, and will require persuasion. Many community groups are only interested in ownership and consultation on issues with which they feel comfortable, issues which they know about. The role for the authority or lead agency is to demonstrate the importance of the proposed network as a social resource, and therefore the incontestable requirement for community groups to be involved. Two issues arise:
- (i) The language used should not be technical and partners should be prepared to outline all implications in terms comprehensible to non-specialists.
 - (ii) It may be necessary to make adjustments to any proposed timescale: community organisations must be on board, but very often they have not the ability to go at the same speed as larger organisations and businesses. They must be enabled to go at their own pace: in the long run, this is in the overall interest of the community as a whole.
- 5.32 Partnerships can founder on poor appreciation of the differences in organisational cultures. People accustomed to working in bureaucracies may find frustrating the apparent preoccupation of community groups with consultative procedures. Similarly, community groups may find it incomprehensible when someone within the authority applies for a modem and this results in a complete overhaul of the council's IT strategy. We note that, anecdotally, most complaints about partnerships suggest that it is bad feeling between public sector agencies (rather than, say, cultural differences between the community and private sectors) which causes the most difficulties. Time and understanding, and a commitment to a common stated purpose, are necessary to make partnerships work.

Key sources on partnership

The guide to effective participation

David Wilcox
Partnership Books, 1994.

An a-z of partnerships

David Wilcox
Partnership Books, 1994.

Both titles can be found at:
<http://www.communities.org.uk/>

The role of the local academic sector

- 5.33 Overall take-up rates around the UK could be heavily influenced by the academic sector. For example, there is a sharp difference between Brighton, with two universities, and Hastings which has none. The former is well on the way to developing a local community network whereas in Hastings progress is comparatively delayed. The point is that universities and colleges do not just play a role in teaching and research. The presence in the town of students, ex-students, tutors and other related professionals, and their likely involvement in the community sector, may mean that people are more adventurous in their use of IT. They may have more time, energy and expertise to contribute to community projects. Policymakers should be aware of such regional discrepancies and need to consider ways of redressing the balance, through additional support via local authorities, or possibly TECs/LECs, in areas without a major academic centre.
- 5.34 We should also acknowledge the massive imbalance between IT investment in universities (through JANET and SuperJANET) and that in schools and public libraries. Until this is redressed to some extent, there is a particular responsibility within higher education to make expertise and resources available to community agencies seeking to get connected.

Community intranets

- 5.35 We have heard convincing suggestions from those working on local government IT systems, that a key future development will be 'local broadband intranets'. These will be 'civic' networks, covering a local authority area, which are capable of carrying greater amounts of data at higher speeds than most of us are used to. They have been described as 'private and secure Internets' and they will use Internet technology without using the Internet thoroughfare. So access points in council offices and local businesses would provide high speed access to public information provided by the local authority, perhaps with other resources made available, together with a means for going through a 'gateway' to the outside world of the Internet.
- 5.36 This raises again the question of whether a two-speed Information Society will evolve. If community groups are excluded from such developments, they may simply be left with slow communication channels which have difficulty handling graphics and moving images. Again, if a local intranet does not include local groups in its content and among its users, we might ask to what extent a local authority should be investing in it? A promising example of community provision is beginning in Hull with the IT in the Community project:
'using existing centres with training facilities it will be possible to train local people to develop their own content and then pass that up to the central server for everyone to access.' (12) The issue of establishing genuine partnerships is crucial for this kind of development.
- 5.37 Similarly, we would be concerned that local intranets will be commercially driven and that therefore the initial emphasis will be on the provision of broadcast entertainment, at the expense of developing local content and interactive facilities. The general failure of community cable in the UK causes concern, because the technology can be exploited in more proactive and creative ways.

5.38 There is a further concern about the potential for this kind of service to create 'virtual ghettos'. If, whenever they venture outside their local, high-speed, broadband network, people are faced with comparatively sluggish response times and technical hitches, are they likely to persevere, or might they tend to retreat into the local resource and make do with that? Comments from users of intranets suggest that they can create 'fortress' cultures which constrain the sharing of information with the outside world, giving legitimacy to the protection of information. One way of thinking about this is to consider what it might be like if two intranets emerged in Northern Ireland representing each side of the divide. In such a context an intranet could function as a mechanism for exclusion. It is a possibility for policymakers and technicians to keep in mind.

5.39 Related to these points is the suggestion that local development of web content is about to expand, partly because the promised 'global' market for advertising is commercially disappointing. So private 'virtual developers' may well invest in local web sites to provide a range of local facilities:

'If you are a launderette it makes no sense to advertise in a local New York newspaper, but maybe you would pay \$300 a year to a service which could target the 10 blocks around your launderette.'
(13)

5.40 Again, this kind of development could well be highly desirable, possibly generating a mix of local area information (because people will not visit the sites unless, for example, they have information about cinema times which might be augmented with local school children's film reviews) and promotion of local small businesses.

References

- 1 See <http://www.dds.nl>
- 2 Peter van den Besselaar, 'Electronic infrastructures and social networks', in: Proceedings, Community space and cyberspace conference, Seattle, March 1997, Computer Professionals for Social Responsibility, p15.
- 3 Fiona O'Brien and David Miller, Community networks, <http://panizzi.shef.ac.uk/community/compap.html>
- 4 Anne Beamish, Communities online: community-based computer networks, unpublished Masters thesis, Massachusetts Institute of Technology, February 1995, <http://alberti.mit.edu/arch/4.207/anneb/thesis/toc.html>
- 5 Sally Ann Law, Brent Keltner, 'Civic networks: social benefits of on-line communities,' <http://www.rand.org:80/publications/MR/MR650/mr650.ch5/ch5.html>
- 6 Cited by David Wilcox, 'Will ordinary people get a look in?' In *Assignment*, 14(2), January 1997, p8.
- 7 See <http://www.sbln.org>
- 8 See <http://www.newtel.org.uk>
- 9 Barry Lillis, Burley Lodge Centre, personal communication, January 1996.
- 10 DNH review of the public library service in England and Wales: draft report. The Aslib Consultancy, September 1994.
- 11 K Ducatel, P Halfpenny, 'Telematics for the community? An electronic village hall for East Manchester', in *Environment and planning C: government and policy*, 11, 1993, p378.
- 12 Chris Smith, 'Intranets for citizens', in *Electronic public information*, January-February 1997, p14-15.
- 13 John Borthwick, quoted by Louise McElvogue, 'Bright sites, big city', in *The Guardian online*, 20 February 1997, p3.

The issues of social inclusion

“A key benefit of the new technology is that it gives ordinary people and community groups access to inexpensive publishing and broadcasting media, the power to express their knowledge and describe their activities to a wide audience, to give validity to their experience.”

'Public opinion polls have suggested that most people want access to non commercial information and new ways to communicate, rather than additional vehicles for entertainment, home shopping, and 15-second sound bites.'

Inventing the future: nonprofits and the new technologies: summary.

The Benton Foundation, 1996.
<http://www.cdinet.com/benton>

6 The issues of social inclusion

6.1 Our exploration of social aspects of the Information Society has thrown up a huge range of issues, some of which are enormously complex and beyond the scope of this report. In this section we refer to certain specific issues which could make a significant difference to organisations and policymakers seeking to promote social inclusion.

Strategic approaches to information and communication

6.2 The Information Society is already affecting the ways in which organisations communicate internally and share information, and the options for workers to be located in different places. The need for a strategic approach to information - which emphatically should precede an IT strategy - has probably never been greater. Because its applications are so diverse and so powerful, the technology can lead to a distortion of organisational activity. The decisions taken by community organisations have to be based on their objectives, and an understanding of the information and communication options which can best meet those objectives.(1)

6.3 Of course, while it can lead to distortion if not managed, the technology can also give rise to a controlled exploration of new areas. Thus an organisation with little history of publicity or campaigning work may begin to use the opportunities of web publishing to develop a new strategy and new objectives. If much of the information which is needed is available in machine-readable form, the organisation can move on to establishing procedures for re-packaging, sharing and publishing data.

6.4 Sufficient research and anecdotal evidence now exists among community and voluntary agencies for the key benefits of access to the information highway to be demonstrable. The IT for All booklet to be published in June 1997 will contribute significantly in this respect. (2) In the USA, a key piece of research published by the Rand Corporation in 1995 found three significant benefits for organisations associated with the use of electronic networks:

- (i) Collaborative idea generation and problem-solving (working with other agencies).
- (ii) Streamlining internal communications and decision-making (particularly in larger organisations).
- (iii) Collaborative grant application and report writing (gathering background information and sharing drafts, etc). (3)

6.5 There are always subtleties in the ways in which people communicate, which cannot be replicated with the technology. Thus, for example, some people have found that email doesn't work well for organisational decision-making, and that they still need the 'high bandwidth' of face-to-face meetings.

Information overload

6.6 Concerns have been raised about the content and volume of material which will become available in the Information Society. We discuss content in Section 6.19. Here we address problems to do with information overload, which reflect the fact that the technology of publishing will be radically different. Very much more material, of greatly varying quality, will be more easily available. It is not uncommon to hear views of concern about the amount of junk on the Internet and calls for some kind of quality mechanism.

Quite how any controls might be applied is unclear, but in any case we have doubts about the idea of intervention here.

- 6.7** A key benefit of the new technology is that it gives ordinary people and community groups access to inexpensive publishing and broadcasting media, the power to express their knowledge and describe their activities to a wide audience, to give validity to their experience. The community development potential of such 'self-publishing' is enormous, and we would not support any policy measures which had the effect of denying this new power to community groups.
- 6.8** Furthermore, it makes sense to consider how people deal with information overload, which after all is not a new phenomenon. There can be several responses to it. For example, where large amounts of formal information are involved, such as in the academic sector and in certain professions, we are likely to find increased subject specialisation, enabling the user to define and exclude areas of knowledge which lie outside their field. People also take steps to limit the amount of information which comes to them, perhaps by not taking a newspaper, tuning the radio to a music station rather than a news station, posting a 'no circulars' note on their door, 'unsubscribing' from an Internet newsgroup, and so on. We tend to develop skills in assessing sources which will benefit us and those which are unlikely to. One interesting aspect of information overload is that people do not necessarily focus just on their perceived information needs, nor do they focus solely on information for problem-solving or for decision-making. They still browse and explore according to their interests. An example of responses to overload can be seen in behaviour at busy railway stations, where agents may be handing out free magazines or leaflets. Relatively few people will take them, although they may step past and go into the newsagents to browse.
- 6.9** This discussion suggests two points. First, information overload is unlikely to be any more problematic than it is at present, provided that users are supported in developing their information and communication skills; and provided that, as we are led to believe, the systems in use are very much quicker than they are at present. With the kinds of search tools which are being developed for scanning machine-readable resources worldwide, the issue perhaps is not overload but awareness of the fact that a search is unlikely to be comprehensive. People adopt their own, often unconscious, strategies for controlling the flow of information which reaches them. But there is a tendency to perceive a database search, especially on the Internet, as having retrieved all relevant items that exist.
- 6.10** Secondly, a high volume of information is unlikely to reduce the extent to which users browse and explore. We feel this is important because information systems which are based on responses to expressed need reflect only one of the ways in which people acquire information. Furthermore, online and multimedia resources usually stimulate serendipity and hence creativity.
- 6.11** There is a further dimension to consider. There is a limit to the amount of information which people are willing to consume. At present, because of the nature of our information culture, most people's 'information income' is dominated to a huge extent by mass media: a high proportion of what we receive comes from powerful centralised sources, which are influenced if not

"What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it."

Herbert A Simon

cited in Hal R Varian, 'The information economy' Scientific American, September 1995, p161

controlled by political interests. We see encouraging potential for this equation to be altered in the Information Society. If people are using the networks to communicate horizontally, broadcasting information about themselves, and finding information about other local level initiatives which previously simply did not exist, the mass media could have far less influence over culture as a whole, since people will spend less time passively absorbing them. This is speculation of course, and developments may depend heavily upon broadcasting policy decisions taken over the next few years. There may be little time for a culture of interactive communication to take root, before the dominance of anaesthetic broadcasting is restored.

The legitimacy of experimentation

- 6.12 On one of our project visits it was pointed out to us that in small local agencies, it is very hard to be strategic about the new technology. Equipment options are changing all the time; content and carriage are converging; available services and software are evolving rapidly; the critical mass for email is growing; some of the options for multimedia or web publishing are only gradually becoming apparent or are just being discovered.
- 6.13 The problem for some agencies is that it is difficult to justify the time necessary to explore and learn about these possibilities. Many community and voluntary organisations operate with tight work programmes and are very task-oriented. Lack of resources and increasing demands on their time often means that there is no 'slack' for experimentation or development. Yet getting to grips with the technology is essential in order to make an informed assessment of its relevance to the group or organisation. As the ITaC Working Party argued in 1992:
- 'In no sense are we arguing that people are foolish not to adopt IT. However, we are concerned ... to point to the benefits which users have found accrue from using the technology, however basic or crude the machines or software happen to be.'* (4)
- 6.14 The character of current IT developments, regarding both the information highway and multimedia, tends to confound strategic approaches. In the short term, inclusion in the Information Society calls for organisational cultures which recognise the need to give time to exploring the potential and pertinence of systems and services. Funders, managers and trustees in the sector should acknowledge the legitimacy of experimentation in the context of the Information Society.
- 6.15 In many ways, community and voluntary agencies are more likely to be able to take advantage of the flexible, more friendly systems and services which are becoming available, than are other kinds of organisation. Over the past decade, small unprofessionalised agencies have had to grapple with rigid, linear computer systems which require mandatory combinations of keystrokes and which force the user down paths with few or no options. By contrast, today's graphical interfaces are suited to a different kind of temperament - more creative, more flexible, less mechanistic. The mouse is the metaphor for this new kind of familiarity in computer use, and those who take to it may be those least comfortable with hierarchical and command-driven systems - people and organisations who have no difficulty thinking laterally, reacting creatively and innovatively.

"... groups and agencies who take the plunge into electronic information storage, publishing and retrieval are amply impressed by the merits of doing so."

David Deacon and Peter Golding

'The voluntary sector in the information society: a study in division and uncertainty'
in *Voluntas*, 2(2), November 1991, p84.

Getting Connected

Examples of learner support initiatives:

- For several years South Bristol Learning Network has been running 'Cyberskills' workshops covering the Internet, email, online services, www, CD ROM multimedia, and video and data conferencing, for people and organisations from all sectors. SBLN tel 0117 987 1187, <http://www.sbln.org.uk>

- The National Institute for Social Work is working with the Family Welfare Association to enable voluntary organisations in Greater London to develop an understanding of how the Internet can become an integral part of the strategic use of information within their organisation. <http://www.nisw.org.uk/fwa/fwa.html>

Training and learning support

6.16 The Press enter report (5) emphasised the need for an 'educational environment' rather than 'training', and the development of exploitative rather than operational skills. The voluntary sector has a strong tradition of commitment to training. However, we are slightly concerned that this can become like a palliative, particularly if organisations are not looking at the use of information in a strategic way or if they are trying to rush the adoption of new technology. The argument that operational training (carrying out a given operation for a given effect: 'press f2 to save', for example) is a less and less appropriate way of learning to exploit the new technology, is related to our comments above concerning the value of experimentation.

6.17 After costs, availability of 'training' is probably the topic most frequently raised by potential new users in community and voluntary organisations. The Rand Corporation study in the USA found that *'Without exception, interviewees in this study viewed training as a critical first step to getting individuals online.'* (6) However, we suspect this is partly a question of language. We don't have a single word in common currency for the kind of readily-available learner support, with its peaks and troughs and unexpected needs, which people would find most valuable. We suggest that this area calls for the following:

- (i) Opportunities to become aware of the potential of the technology - awareness days, demonstrations at conferences and exhibitions.
- (ii) Opportunities for familiarisation, so that people can relate the potential of the technology to their organisation's purpose - hands-on experience and experimentation, relatively frequently, and at their own pace.
- (iii) Troubleshooting support from human beings, in person or by telephone.
- (iv) Support to extend competence when ready for it, once the user is comfortable with basics and may be interested to develop skills like improving web searching, web page design, or setting up and managing a newsgroup.
- (v) A mechanism (eg a human network) for sharing experience and picking brains - eg How do I set up an email address group? What software should I look at for web authoring?

6.18 Initiatives which have gone beyond awareness-raising to provide continued learner support, such as the Family Welfare Association project with the National Institute for Social Work, (7) suggest that it is easy to underestimate the huge amount of time necessary for people to become familiar with the technology. Funders and organisations need to move away from thinking in terms of traditional training, and to seek imaginative solutions to the need for less-intensive, ongoing learner support.

Content development

6.19 In the past, new users of the Internet have often been put off by the apparent dearth of material which is of use and interest to them. However, more and more data and newsgroups are available over the Internet, publishing on disk is less cumbersome than in the past, and CD ROM publishing is becoming less expensive. As a consequence, relevant content is becoming available - information is catching up with the technology.

- 6.20 Three categories of information are likely to attract community organisations and to justify their interest in the information highway:
- (i) Information which they produce themselves about their community, their experiences, their needs.
 - (ii) Information produced by other community agencies, sharing experience and ideas.
 - (iii) Information produced by external agencies such as health services or education services, which when made more easily accessible, helps people to take decisions and to generate their own information.
- 6.21 The availability online of information in the third category is improving rapidly. The development of content from community agencies, however, is only just beginning, although there are many promising signs. Communities Online (8) has been accumulating material and links to other sites. And in March 1997, the Department of National Heritage funded a small project called 'Getting Connected' (9) which, in addition to running awareness seminars, will collect and stimulate relevant community development content.
- 6.22 Initiatives like these can be expected to generate momentum and become self-sustaining, and the Communities Online site is likely to become the key gateway to information for community organisations. Nonetheless, there is a strong need for a cultural change in many authorities, to augment these developments. We are aware of the persistent centrifugal force by which bureaucracies generate information about others and have difficulty making it easily available. Even public libraries establish 'community information services' which in practice consist simply of the library's own list of local and/or non-profit agencies. In such instances, the potential for communities to provide their own information is overlooked. The role for the authority is to enable local agencies to prepare and publish the material themselves. By providing supported access to the Internet for publishing as well as searching, services such as health authorities and public libraries can make a huge contribution to the development of content, at the same time as raising awareness of the technology and boosting the capacity of the community sector.

Currency of content

- 6.23 The Internet is highly appropriate for material which is ephemeral, such as information about meetings, notes about current activities and so on. This applies to some material on web sites as well as email postings and newsgroup messages. At the same time, most users find it irritating to visit web sites which have 'passed their sell-by date'. Electronic communication favours ephemeral information, but the information highway also offers efficient ways of storing and making available material which is of more interest in the longer term. We suspect that many of the problems to do with currency of content - from differing assumptions about the frequency with which email needs to be checked, to the failure of organisations to appreciate the time commitment called for in maintaining a web site - are teething problems as we make a cultural shift to new ways of communicating and sharing information. Principles and examples of good practice are beginning to emerge, and the integration of community and voluntary agencies into the Information Society can be expected to become smoother once greater familiarity is gained.

Signposting and navigation on the information highway

- 6.24** The Internet is both the embodiment of, and a metaphor for, a particular sort of connected-ness. In three dimensional space, classification and connecting - whether arranging books on a library shelf or joining communities by railway or road - tends to be linear and hierarchical. Nothing can be in more than one place at a time. But virtual space offers a new freedom. In theory, any word or image or sound can be the subject of a search, and any combination of bits can be linked to any other. Hypertext links allow all kinds of 'free associations'.
- 6.25** This recognition of both the connected-ness and the diversity of things, and the ideas of plurality and equity that the Internet seems to promise, has contributed a visionary sparkle to much current crystal ball gazing. If our day-to-day experience is that power and information flow from the centre to the peripheries, then we may welcome the prospect of a construct without a centre, where most transactions are peer-to-peer, where all web-sites start off on an equal footing. If our day-to-day experience is of being defined by nineteenth century taxonomies and crude linear sliding-scales - left/right, black/white, female/male, gay/straight, poor/wealthy, old/young - then the untamed wilderness of the Internet may seem liberating. This, after all, is life's rich pattern.
- 6.26** The Internet reflects this rich unordered growth, and on the whole it's a friendly environment in which to browse and 'surf', to follow a thread and see where it takes us. It has some drawbacks, however, if we want to find something specific. Finding specific things can be problematic in spite of excellent searching devices; and this is not unique to the community sector. Much effort is going into the development of better search engines, agent software, 'push' technology and so on. The skills currently needed to use search tools effectively are part of information capability discussed earlier and are not that different from the 'library skills' many people already have. What makes the Internet intrinsically different from paper-based systems, though, is the fact that there are no recognised classifications, no intermediaries are at work in a backroom establishing subject relationships based on content. Everyone with a web site decides where to position themselves and what other points in the universe of knowledge they should be linked to. Anything more than the most basic web site will require some kind of structure, usually section headings and contents page, to provide order for the content and for internal and external links.
- 6.27** Linking can be an unstable process requiring regular review. The term 'link-rot' has been coined to describe the process by which links on a web page become obsolete as the sites to which they're connected change location or atrophy. 'Cob web sites' are those overdue for an update. The very fact that terms are being coined for these phenomena indicates an infrastructural problem. People seldom revisit dead-ends on the web. In addition, while it is becoming far simpler to establish a home page, many individuals and organisations are still not aware of action they might take to publicise their presence, from giving the URL on their own stationery, to registering with the established search engines. It may be relatively cheap and easy for a local community group to 'tell it like it is' on the web, but if that site is visited only by the passing voyeur, the group is doing little more than vanity publishing.

“It’s clear from the seminars that even those participants who have been connected for some time are essentially ‘lost in cyberspace’ and what is coming from this is that they want a secure environment. A few have suggested a Yahoo purely for the voluntary sector.”

Mark Watson

NISW, personal communication
March 1997.

“He’s quite right about people being lost; the rather larger number, however, are those who haven’t got far enough to be lost.”

Brid McGrath

personal communication
March 1997.

6.28 A related problem is the question of the extent to which people feel comfortable following links, and the extent to which they may get the feeling of being lost and therefore losing control. Partly this may be a question of familiarity. Most web users, we suspect, quickly become accustomed to the practice of following links, and adopt their own style. It may also be a question of how clear and informative the links are.

6.29 There are three key points which we wish to make. The first is to stress the importance of good practice in setting up and maintaining links on web sites. This means:

- Researching appropriate links,
- Communicating with the linked site and agreeing the link,
- Finding an appropriately concise but informative wording for the link,
- Checking that it functions when established (it’s surprising how many new links appear not to have been tested),
- And reviewing them periodically.

It also means occasionally carrying out a little further research to try to find new sites which might merit a link. Behind all this is the message that managing a web site, however small and simple the site, does require some time commitment: it is not a once-off project.

6.30 Secondly, we would stress the value of exploring cross-sectoral links. Many community and voluntary agencies could benefit greatly from links to and from local authorities and colleges, or local businesses, for example. Similarly, good practice in moderating a newsgroup would seem to suggest that appropriate cross-postings from other subject areas would be worthwhile.

6.31 Thirdly, there is a clear role for umbrella agencies, especially national and international organisations, to stimulate content development in their fields, to liaise with other key agencies, and to work on building up directories of machine-readable resources for their subjects.

6.32 Finally, we should note that, while conceptually all web-sites may be equal, or all cable channels may be ‘equal’, in fact once again ‘the default mode is commercial’. The young, ‘free-for-all’ spirit of the Internet may soon be only a memory. The commercial world is putting resources and thought into steering potential customers to one site rather than another, to one channel rather than another. And as the heralded ‘push’ technology is developed, (see Section 6.33) with systems which push selected categories of information at the user rather than leaving the user to pull their own material from the web, the potential for other people to influence what we see and hear and experience may grow significantly. Hence the importance of information capability, to help to ensure that people have the skills and independence to make their own judgements about their ‘information income’.

“It’s the difference between home delivery and going to the news-stand.”

Ira Machefsky

cited by Karlin Lillington in ‘When shove comes to push’,
The Guardian online, 27 February 1997, p11.

‘Push’ technology

- 6.33 At present the Internet is a resource, like a library. We turn to it to address an information need or to explore an interest: it doesn’t come to us. Librarians serving organisations, however, often use ‘current awareness’ devices for drawing relevant material to the attention of their users, thus saving them the trouble of browsing. Such a service might be tailored according to a ‘profile’ of the individual’s work areas. Now web services are being developed along similar lines, through so-called ‘push’ technology. Various services are becoming available which enable users to have delivered to them ‘only’ information which is of interest to them.
- 6.34 There are obvious concerns over the amount of advertising which might accompany such services, because companies will be able to tell a good deal about people’s areas of interest. Users will want full control over the process of selection, and the ability to limit and change easily the kind of material they receive. They will also want to retain, without complication, the ability to browse the web beyond the ‘push’ service. But it may be that for community and voluntary organisations the process of exploiting the resources of the web could become less baffling, if services of this kind, oriented to their needs and interests, are established.

Privacy and freedom of access to information

- 6.35 The Information Society raises well-known issues to do with privacy and the availability of information. These reflect the tension between, on the one hand, rights to publish and to have access to certain categories of information; and on the other hand, the right to be protected from some kinds of material (such as racist hate literature) and to have some control over the availability of information about oneself. These issues are not new but often they will be more acute given the power of the technologies to search, accumulate and process large quantities of data. On the whole these issues are beyond the scope of this report, but as far as social inclusion and the interests of community agencies is concerned, we have the following points to make.
- 6.36 There appear to be two kinds of invasion of private information to be considered. First, the deliberate, targeted invasion of a restricted-access file without authorisation. Secondly, the passive gathering of data on an individual or agency (eg collecting their email messages sent over a period of time, or tracking the ‘footprints’ left as they visit web sites). With this practice it is possible to build up a picture of someone’s activities without their knowledge or consent. This could become a significant issue for communities of interest, such as those working in politically sensitive areas. It could become significant for local groups as well, for example if they are campaigning against powerful interests.
- 6.37 It is possible to introduce controls on the flow of information, which restrict freedom and constrain access, under benign and laudable security principles - for instance, policing paedophiles or protecting against viruses. In intranets, the establishment of so-called ‘firewalls’ - barriers which prevent the transfer to or from a network of certain kinds of data or file - is an example of a context where such justification is likely to arise, and of course it is very difficult to counter such arguments.

Online shopping services

- 6.38 Online shopping services are available for people to select and order goods, which are then delivered or collected from a given point. Such services are likely to offer benefits to some individuals and communities, partly by widening access and possibly through reducing dependency on retailers. As the National Consumer Council says, it could give some consumers - particularly those outside urban areas - *'better access to a wider choice of consumer goods than they have at present. It seems less likely to displace ordinary retail shopping in urban areas.'* (10) We note that these services could have a radical influence on local economies, for example by driving even more corner shops out of business. This is a policy issue and we believe most planning departments are well aware of it.

What price print?

- 6.39 At present, it is widely accepted in most areas of public information that 'hard copy is essential' and 'electronic is desirable' - ie any publication must be available on paper but where appropriate should also be made available on disk or online. It is reasonable to view this as part of a transition phase to the Information Society. We may envisage a time in the future when, while it may remain appropriate to publish some information on paper, the rest could be made available electronically if all citizens have access to the information highway.
- 6.40 Our concern is that, for economic reasons, some authorities or government departments will be too impatient to wait for the end of this transition. If a small minority of people remain unconnected and have no means of public access, or very restricted access, the costs of printing on paper for them may be perceived as disproportionately high. Policymakers need to be alert to this issue. It could prove to be a strong incentive for establishing Community Resource Centres and other public access points as soon as possible.

References

- 1 For a discussion of information strategies, see Press enter: information technology in the community and voluntary sector, CDF, 1992, Section 3.5.
- 2 How to use IT in the community. DTI, June 1997.
- 3 Universal access to e-mail: feasibility and societal implications. Rand, 1995. <http://www.rand.org:80/publications/MR/MR650/>
- 4 Press enter: information technology in the community and voluntary sector, CDF, 1992, p9.
- 5 Ibid, Section 5.
- 6 Op cit, chapter 5.
- 7 Mark Watson, 'Getting voluntary organisations online with NISW,' NISW noticeboard, Spring 1997, p1-2.
- 8 See <http://www.communities.org.uk/>
- 9 See <http://www.communities.org.uk/>
- 10 The information society: getting it right for consumers. National Consumer Council, April 1996, p71.



Social inclusion in the information society

“At its heart, the new digital literacy is ... profoundly democratic. It insists that the rich mixture of perceptive talents once thought to distinguish a ruling aristocracy must now be extended to everyone. It thus embodies fully the inevitable failures, and the extravagant hopes, of democracy itself.”

Richard A Lanham

'Digital literacy', In Scientific American, September 1995, p161.

7 Social inclusion in the Information Society

- 7.1** The Information Society is perceived in various forms - as some imminent utopia in which machines will do many things on our behalf; as the actual current context of most western or westernised societies, in which our economies are projected to flourish; or as a context in which imbalances of wealth and power will be accentuated sharply and perhaps dangerously.
- 7.2** These then are the three main strands to the Information Society debate:
- (i) The technological, which focuses on the impact and power of the technology to transform many of the things we do.
 - (ii) The economic, which tends to stress that the new technology will be good for business, and that organisations should adopt it quickly or perish.
 - (iii) The 'socially-divisive', which draws attention to the potential of the technology to widen the gap between those who have and those who 'have not'.
- 7.3** Intentionally, we have placed our effort outside these streams. The role of the INSINC Working Party was to explore the potential for social inclusion in the Information Society, from a community development perspective; and to try to identify policy measures to that end. While seeking to understand any problems and disadvantages, our approach was to consider what might be realistic benefits for communities. Thus, rather than analyse 'information poverty', we have drawn attention to the importance of information capability; rather than dwell on the division between home Internet users and marginalised people, we have stressed the potential of Community Resource Centres which can bring people together, to help them to communicate and inform themselves, and to empower them.
- 7.4** In this report we have looked at the nature of social exclusion and the communities which might be most at risk of exclusion. We have examined the nature of communication and the importance of information in communities. We have explored issues of access to the information highway and have made practical recommendations on increasing that access through community networks and Community Resource Centres. We have also looked at a number of specific aspects of the Information Society which have a bearing on social inclusion.
- 7.5** The key features of our report, we believe, are these:
- (i) Initiatives should target people on low incomes and those who are neither in employment nor in education. There is a danger of creating a class of people who are denied access, or who have constrained access, to the powerful communication channels of the information highway.
 - (ii) It would be a mistake to underestimate the importance of communication and information-handling skills in the Information Society. Too much attention paid to the technology draws attention away from the need for people to be able to exploit information once they have it, and to generate and publish their own material.
 - (iii) Community networks and Community Resource Centres have enormous potential to contribute to social inclusion. Policymakers have a role in helping to establish such initiatives and supporting them.

“... the transition to the information society ... must be accompanied by a strategy to enhance active participation within our communities.”

**Living and working in the information society:
people first: green paper**

Bulletin of the European Union, supplement 3/96, 1996, para 109.
<http://www.ispo.cec.be/infosoc/legreg/docs/peopl1st.html>

“Some groups will say they don't need it. Some people if they've never seen a boat will say they're ok swimming.”

**Discussion comment at INSINC seminar with
community organisations**

Leeds, November 1995.

- (iv) Community Resource Centres must have some form of public funding: without it they will not fulfil their potential in underpinning the Information Society across the UK.
- (v) The nature of partnerships in community networks is critical. They must be equal and all agencies need to examine their roles in this context.
- (vi) Community development strategies are still needed in local areas. These should incorporate strategies for access to the information highway and other IT resources. The Information Society may promise a new level of empowerment but this will not come about without strategies for community involvement, and basic capacity building among community groups.

76 The Information Society will be a frantic arena for various interests - economic, social, political, academic - which will not always progress together harmoniously. Public interests may need defending, indeed an independent agency may be necessary to act as a kind of midwife to the Information Society. With this in mind, an independent 'Digital Trust' has been proposed, which might promote debate and understanding, inform policy, and campaign on behalf of community networks, providing 'public access to public space for public good forever'. (1) We welcome this initiative.

77 The Working Party is not arguing that community groups must adopt the technology. Groups will need to make their own decisions, based on levels of awareness which, generally, need to be rather higher than they are at present. Nonetheless, we have been concerned to show that there are distinct advantages as well as disadvantages, and that the potential for a more inclusive society is genuine. In what follows we offer some final comments on the two most significant features of this debate: empowerment, and the nature of exclusion.

Empowerment

78 The notion of empowerment is at the core of community development and underlies much of this report. Power and resource issues are fundamental to the IT debate and, for most community groups, they are not new. In one of our project visits, the Working Party was struck by the contrast between one local project which was near the bottom of the IT learning curve and largely isolated from other initiatives in its city; and another elsewhere which was online, busy networking, and itself strongly supporting groups around it. Gaining access to the communication facilities can be the hardest step in the process of participating in a creative communication environment. Once there, most groups will know exactly how to exploit the technology.

79 Policymakers must be unambiguous about the empowering potential of the information highway. At present, our understanding of where political power is located is increasingly vague. Politicians, local and central government officers, and business people feel they have less control than most of us believe them to have. Geoff Mulgan of Demos has pointed out in a television programme that 'power resides increasingly in systems'. It remains to be seen whether it is in the nature of those (essentially 'bureaucratic') systems to limit the democratising potential of the Information Society in some way. The Internet does not favour hierarchies, it stimulates horizontal communication and the coalescence of opinion and representation. People in communities will be watching to see if policy measures taken can help and empower them to create the kinds of environment they want.

“... one-way information-providing technologies - whether broadcasting systems or technologies that provide only search and retrieval - are inadequate. Two-way technologies supporting interactive use and sending or dissemination by all users are key.”

Universal access to e-mail: feasibility and societal implications

Rand, 1995, Chapter 7.

(<http://www.rand.org:80/publications/MR/MR650/>)

Exclusion

- 7.10** We have noted a widespread concern that certain kinds of community, characterised by lack of interaction and social dysfunctions of various kinds (unemployment, crime, poor housing, lack of amenities, and so on) could become more commonplace and more entrenched in the information age. There is a tendency to focus this concern on the technology - partly because it is typically the wealthy and privileged who have access to it at present, and partly because it can ‘individualise’ or atomise social behaviour (as one seminar participant said to us, ‘Working on a machine is not participatory’). These views are not misplaced: technology which generates or reinforces top-down, centre-to-periphery communication, and which may reduce physical human interaction, can be severely disempowering, and the image of the lonely net-surfer, isolated in a garret and sitting for hours flitting from one web site to another, is sure to take its place alongside other images of urban alienation (and this is surely not just an urban phenomenon). But anyone who has witnessed (virtually or visually) the ways in which some community groups have grasped the networking and communication potential of this technology is likely to be aware of a strong and growing influence working in the other direction.
- 7.11** This is not to disregard the iniquity of social exclusion. Disadvantaged communities are usually so because of economic factors, but also often by cultural and class factors. Multiple disadvantage can fuel a vicious circle which the Information Society may not be able to break. To suggest that the role and influence of technology is so dominant that it can trump the multiple factors which contribute to exclusion - poverty, unemployment and poor housing, for example - seems naive. These are major, urgent social policy issues and the key question we have been considering is whether or not the new technologies can help communities to break out of the stifling impasse of disadvantage and disempowerment. For example, if the Information Society were characterised by new levels of partnership and participation, by a policy willingness to empower communities and renewed appreciation of social values, then the information highway and its associated technologies offer a powerful mechanism for such development. Without such a socially-supportive context, however, access on its own will not be enough.
- 7.12** It is clear to us that computer-based communication systems and services can play a significant part in minimising the negative aspects of contemporary communities, by reducing isolation, enabling more informed contributions to local management and politics, stimulating the sharing of knowledge and experience, and so on. And there is no reason to believe that the early predictions concerning the democratising potential of online communication were misleading. The indications from the development of community networks in the USA and in the UK suggest that, with appropriate community development where necessary, local community action and participation can be greatly strengthened by the use of this technology. The key to allowing this to happen will be social policies which acknowledge the structural nature of disadvantage; which develop sustainable initiatives which do not raise expectations and then disappoint; and which integrate access to communication channels with other measures.

- 7.13** A socially inclusive society requires informed communities which have the means, the skills, and the opportunities to communicate. Without these conditions in place, other social policy measures will fail.

References

- 1 The Digital Trust is being discussed under the aegis of UK Communities Online, <http://www.communities.org.uk>.

agent software comprises small independent pieces of software whose role is to act on behalf of a client in a software environment to find, supply and use information and to resolve problems. An example is product ordering, where software agents conduct negotiations between suppliers, installers, billing systems, and so on, to produce an optimum solution eg to when a product can actually be passed to the customer. In community networks, software agents might allow individuals or groups to track and participate in a range of activities such as large and complex regeneration initiatives.

bandwidth is the measure of the amount of data which can be transmitted in a given time. At present most telecommunications technology cannot provide bandwidth large enough for computer applications to operate at high speed. In the future, optical fibres and/or digital radio will support high speed interactions including processing. See compression technologies.

battery development: a missing link in current technology is a battery power device which is light, compact, rapid charging, long-lasting, and capable of delivering a significant amount of power. It is difficult to see how this challenge will be met and when. One possibility is the development of personal fuel cells, technically available now, but subject at present to the key safety problem of handling the constituent fuels (eg hydrogen and oxygen).

'bouncing' refers to when an email message is returned to the sender because of delivery problems.

a browser or web browser is a piece of software used for searching the Internet and displaying files. The browser is used offline as well as online to display material which has been downloaded.

CD ROM technology, by which data and software are stored on compact disks and run on computers, enables long and complex programmes and large information resources, to be duplicated, distributed and run, in multimedia formats, cheaply and efficiently, almost anywhere.

compression technologies provide ways of packaging data in order for it to take up less space during transmission, thus in effect increasing available bandwidth.

downloading involves transferring data (a message or other kind of file) from a remote source while online, to one's own computer. The opposite is 'uploading' - sending a file while online.

email (electronic mail) involves sending a message from one user, via computer and a telecommunications or other connection, to other computer users. The message goes to a computer where it is stored until it is picked up by the recipient, when they connect to their 'mailbox'. Mailing lists can be used to send messages to a group which corresponds regularly.

hypertext links see links

information highway: a publicly accessible network for transferring data between remote locations. (See para 1.6)

the Internet is a network of computer networks. A computer network comprises two or more computers which are linked together and can share files, software etc. The Internet uses common agreed standards to enable online communication between many thousands of computer networks around the world.

intranets are 'private and secure Internets', they use Internet technology but are not public. See para 5.35

'links' (or 'hypertext links') are connections between one location (usually a file on a computer) on the Internet, and another. Thus a link could be established between a page on, say, the web site of a community group in Aberdeen with a page on the site of a community group in Adelaide. On the screen, a link is usually shown as a piece of descriptive text and distinguished by colour and / or underlining, although increasingly they are shown as graphic images. The link is 'clickable', ie if the user clicks on it using their computer's mouse while online, the system connects with the linked page and displays it, using a browser.

mailing lists are online discussion groups, which require membership (unlike newsgroups where access is open). Messages are sent from a member of the list to a central email address, from where it is usually automatically transmitted to all the others.

multimedia computing means the use of text, sound, and images (which might be moving or still). The use of multimedia online, for example sending video to a remote computer via telecommunications, is constrained by bandwidth. One aspect of multimedia is video on demand, which is predominantly for entertainment, but could also provide public access videos about the local environment, planning proposals, social security, training materials, etc.

network computers (NCs) are based on the idea that a computer need have little storage capacity when connected to a server, which can provide the software which it runs, together with file archiving, security and so on. Thus they offer a low-cost alternative to the established PC (personal computer), providing

a combination of basic applications such as word-processing, with easy access to powerful applications, services and resources (such as networked CD ROMs or the World Wide Web). In practice NCs may be hybrids, with some local storage, much central software, but also local, customised software (plus software to overcome any access speed problems).

newsgroups are online discussion groups dedicated to a given topic, which might be anything from adoration of a pop group to saving whales. Users contribute their news, suggestions, comments etc for others to read, and there is usually an archive and a moderator. See also mailing lists.

online usually means that there is a live connection via a telecommunications link between one computer and a computer service, eg an Internet service provider. (The term is also used when a machine is connected to a local network or to a printer).

'push' technology: World Wide Web technology which enables users to receive information according to a profile of their interests. See para 6.33.

a search engine is a service to help the user to search for information on the Internet. Search engines hold databases of the addresses and descriptions of web pages and newsgroups, with increasingly sophisticated software for searching and for ranking the results of the search.

a server is a computer or a piece of software which services clients using other computers on the same network, for example providing storage capacity or software. See also network computers.

a service provider supplies an Internet connection and software, and will usually provide email and space for web pages. Charges and charging structures vary.

set-top boxes are designed to exploit the ubiquity of the TV, providing access to the Internet, or to intranets. They use the television itself as the viewing device, thus saving on hardware, but may have no more than a TV-type remote control device for the user to select from a menu of choices. The system may well use a network computer approach, although the development from dumb receiver, through interactive receiver, to processor may take some time.

'surfing' means browsing the Internet and following links with no particular objective.

unsubscribing means cancelling a registration with a newsgroup or mailing list.

a URL (uniform resource locator) is an address of a web page, ie it refers to a file on a given computer which is connected to the Internet. A url usually looks like this: <http://www.name.org.uk/file.htm> and they can be quite lengthy because they can be referring to a specific file on a large-capacity computer. The url can be typed-in using a browser, and browsers allow for the use of 'bookmarks' which save frequently used addresses without the need for retyping.

video-conferencing and telepresence are ways of combining the use of video and computers to allow people who are geographically remote, to work together on a particular task. Telepresence can mean, for example, a surgeon working remotely on several operations at once, giving advice and directions to a more junior surgeon on the spot. In principle it would enable people who are unwilling or unable to travel, to participate in increasingly life-like distance interactions.

'visiting a web site' means connecting to it via the Internet. Many sites have counters which record the number of visits they have.

voice recognition means the use of voice input to give instructions or data to a computer system. Significant advances have already been made and are available eg via on-line banking. The use of voice recognition in word-processing (and in other applications not capable of resolution to simple phrases) is constrained, however, by the ambiguity of language (both grammar and meaning).

webcasting comprises live sound and video, broadcast as participatory events over the World Wide Web.

web pages or 'sites' are files of information prepared for the World Wide Web, and thus can take advantage of the web's facility to display text and graphics in combination. Increasingly, web pages include sound and simple moving images. Web pages have to be viewed using a piece of software known as a browser.

the World Wide Web (or web or www) is the network of web pages or sites on the Internet. They are powerful because they allow the use of text, graphics and sound in combination. Pages or sites on the web can be linked together (see links), for example because of a common or similar subject: hence the notion of a 'web'.

www see World Wide Web

Yahoo is the name of a popular search engine.

IBM in the community - Living in the Information Society

IBM in the UK has chosen 'Living in the Information Society' as the theme for its corporate social responsibility programme in 1997. The company's aim is to stimulate debate and advise policymakers on how all citizens can use technology to overcome disadvantage and how technology can help to create a more socially inclusive society.

Building on its research programme, IBM UK's community projects harness the company's expertise in network computing and other creative technologies to break down barriers of time, distance, access to knowledge and prejudice.

IBM's efforts are being channelled into two key areas and a range of exciting projects are underway:

Building an inclusive society

- Research is being carried out with the Community Development Foundation to evaluate community IT initiatives and present recommendations to policymakers and practitioners.
- A series of seminars have been organised by the independent think-tank Demos - supported by IBM and the Economic Social Research Council - to investigate the social challenges posed by the information society.
- Volbase, IBM's network computing-based employee volunteering programme was judged the winner of the 1997 Award for Innovation in the Employees in the Community Awards.
- IBM's Community Connections award scheme helps not-for-profit community, education, cultural and arts organisations to use technology creatively to overcome social disadvantage.

Examples of successful projects include:

- **Project Fullemploy** which has won an award to enable it to enhance its consultancy and advice for mainly ethnic minority community organisations, via the Internet.
- **Liverpool's Social Partnership in Drugs Prevention** which has set up an Artskills project to help young people to develop marketable skills and qualifications in art skills including graphic design.
- **The Geese Theatre Company and Jubilee Arts**, the UK's only professional theatre company specialising in using drama to prevent crime, plans an interactive CD-ROM of one of its most successful productions, called '*Lifting the weight*'. It will be distributed to prisons and organisations working with young people at risk.

Learning in the information Society

• Classroom connections

People in local IBM offices across the UK are developing links with local schools and colleges. This includes a programme at IBM's Laboratory in Hursley, where Hampshire teachers and students use videoconferencing facilities to link up with pupils in other countries.

IBM is also working with the Department of Trade and Industry on a two-year 'Schools on Line' project to help pupils and teachers explore the benefits of linking their PCs to the Internet.

• Training for work

A pilot project at IBM's Technology Centre is helping homeless job-seekers upgrade their computer skills. In Liverpool, IBM has donated 26 multimedia PCs, IBM NVQ software and CD-ROM applications to help equip a mobile Internet cafe touring areas of high unemployment.

Widening the debate

To raise the debate around the social impact of technology to a European level, IBM has also organised a seminar – Social Exclusion, Technology and the Learning Society. The seminar was held in Salzburg, Austria, and aimed to pinpoint the specific needs of excluded or disadvantaged groups in training provision; identify how technology could help to meet those needs; and propose solutions for overcoming any barriers.

Living in the Information Society – reports to date

Living in the Information Society – The Debate:

A summary of IBM's 1995/96 programme of seminars, lectures and events looking at how technology can enrich rather than divide and destroy society.

Social Exclusion, Technology and the Learning Society:

A summary of a seminar IBM ran in Salzburg in 1996 to consider how technology can make training more accessible and effective, in particular for groups at risk of social exclusion.

Widening the Information Society - How technology can contribute

Recognising the significance of many of the issues raised in the 'Living in the Information Society' programme, IBM has developed projects worldwide which investigate how technology can be used in a variety of ways in the community – for example to improve the teaching and learning process, to provide more effective training programmes, to develop the capacity of the voluntary sector, to work with offenders in prisons and to encourage and assist volunteering in the community.

In the United States, IBM is working with 10 school districts to develop leading-edge solutions to some of education's toughest problems. A typical example is a community-school network in Charlotte, North Carolina, enabling parents, at home, in work or in public libraries and community centres, to access their children's school work and their teacher's comments, and to participate more actively in their children's education.

In Denmark, IBM has a project with the Ministry of Education to assess the use of technology within the curriculum throughout the school, while in South Africa a major programme is making use of technology for basic literacy teaching as well as for subjects across the curriculum and with every age group. In Australia, IBM is working with the Royal Children's Hospital School in Melbourne to link hospitalised or homebound children

by videoconference to their schools, helping them to stay in touch with teachers and other pupils and to continue their schoolwork.

In Spain, the USA and Northern Ireland, IBM is working with a number of job training centres either specifically to provide technology training or to improve the provision and cost-effectiveness of training programmes tailored to individual needs.

In Sweden, IBM has worked with AIDS organisations to produce a CD-ROM for use with doctors and medical students to provide the most comprehensive professional information about AIDS.

For many years, worldwide, IBM has offered people with disabilities a wide range of technology solutions to enhance their ability to communicate and to work. Ranging from voice therapy software to talking newspapers, this area perhaps more than any other has already demonstrated the positive impact new technology can have for otherwise potentially socially excluded or disadvantaged individuals.

By exploring such applications for new technology, IBM is seeking to ensure that the information society works for everyone, and that technology is being used to address some of society's most intractable problems.

For further information on any of these initiatives, please contact:

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Community Development Foundation

The Community Development Foundation (CDF) was set up in 1968 to pioneer new forms of community development.

CDF strengthens communities by ensuring the effective participation of people in determining the conditions which affect their lives. It does this through:

- providing support for community initiatives
- promoting best practice
- informing policy-makers at local and national level.

As a leading authority on community development in the UK and mainland Europe, CDF is a non-departmental public body and is supported by the Voluntary and Community Division of the Home Office. It receives substantial backing from local and central government, trusts and business.

CDF promotes community development through:

- local action projects
- conferences and seminars
- consultancies and training programmes
- research and evaluation services
- parliamentary and public policy analysis
- information services
- publications, including CDF News.

For copies of our current publications catalogue, please write to:

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Chairman:
 Sir Alan Haselhurst MP

Chief Executive:
 Alison West

Jo Habib has worked in arts administration, teaching and the voluntary sector in the UK and overseas. She established the West Yorkshire Charities Information Bureau in 1981, and is currently Director of FunderFinder, the charity which produces software for grant-seekers. Jo was a founder member of the Community Computing Network and chaired the grants panel of IBM's Fund for Community Computing. She is on the Board of Yorkshire & Humberside Arts and is Vice-Chair of the Yorkshire & Humberside Regional Advisory Panel for the National Lottery Charities Board. She has been Chair of the Federation of Charity Advice Services, and served on the Home Office Implementation Committee looking at the funding of women's organisations, and on the Joseph Rowntree Foundation's Advisory Group looking at the funding of voluntary organisations.

Kevin Harris is Information Manager at Community Development Foundation, where he carries out information-related research, consultancy and development work in addition to managing CDF's information service. Previously he was Secretary to ITaC, a working party on IT and Communities, which reported in 1992. Before joining CDF in 1986 he was a British Library Research Fellow, and previously worked in a range of library and information service posts.

Samantha Hellowell is Community Programmes Manager at IBM UK. Previously she worked for Barnardo's in public affairs and as publications and publicity manager, before joining the National Council for Voluntary Organisations as Head of Communications. This led to a secondment to IBM to set up the Volbase project, a network computing project which supports employee volunteering. Samantha is now responsible for IBM's programme on social inclusion, a combination of research, informing policy and projects designed to strengthen communities through the use of information technology.

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John Taylor has spent most of his career in BT, initially in Management Services, and then later in Personnel, most recently responsible for Corporate People Strategy. Throughout his career John has had a parallel interest in academe, teaching psychology at several levels. He is also an Open University tutor in management studies. In 1997 John left BT to found his own business strategy consultancy, Agora, reflecting his special interests in the future of work and the learning organisation. He is co-author (with Tom Cannon) of *Management development to the millennium* (1994). John is a Fellow of the RSA, and an Associate Fellow of the British Psychological Society.

Bill Thompson is best known for his work for The Guardian newspaper, and is also a regular contributor to BBC Radio's coverage of the Internet and computing. He has worked in the IT industry since 1984, as a programmer, consultant, trainer and advisor. He has worked for Acorn Computers, The Instruction Set, and Pipex. He was the founder director of The Guardian's 'New Media Lab' in 1995, and since leaving The Guardian in September 1996 he has focused on writing and consultancy. He founded Mocha Ltd in October 1996 to explore new media opportunities, is an editorial advisor to Addison Wesley, and is technical advisor to the Nexus think-tank.