

CHAPTER IV

SUSTAINABLE ENLARGEMENT OF PUBLIC ACCESS

Sustainable provision of public internet access

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1. Introduction

In recent years, rapid movement towards the Information Society has become part of the rhetoric of governments all over the world. Official studies and declarations of intent are proliferating, and increasingly these are being backed up by concrete plans and actions ¹⁸. Highly relevant to us in Europe is Romano Prodi's eEurope initiative, announced in December 1999 and discussed by Member States of the EU in March 2000. The statement ¹⁹ begins:

"The objective of the eEurope initiative is ambitious. It aims to bring everyone in Europe – every citizen, every school, every company – online as quickly as possible".

It goes on to discuss ten action areas and gives 50 or more detailed targets, of which two are especially relevant to this paper:

"By the end of 2001, access to Internet and multimedia resources in public centres should be made available to all youngsters, including in less-favoured areas"

"By the end of 2000, Member States and the Commission should ensure that citizens have two-way electronic access to basic interactions (e.g. tax forms, applications for funding etc) which enables them both to receive information and submit returns"

Most European countries ²⁰, if they commit themselves to anything resembling these goals ²¹, will need to devote greatly increased efforts to providing public internet access, and will need to deepen their understanding of how best to proceed. This volume aims to contribute to that understanding.

Public internet access is a new and dynamic area of activity. As yet there is little "received wisdom" on the subject, and it is premature to draw conclusions on the success of many young ventures or the merits of the approaches underlying them. However, this chapter aims to round off the volume by illustrating a variety of options and highlighting some of their key features.

Several interwoven strands seem to be essential to a sustainable, successful public internet access project. At a high level we identify the following, each of which we discuss below:

- Sustained leadership and co-ordinated management.
- Sound, continuing funding.
- Balanced attention to different user needs.
- Community roots.

Sustained leadership and co-ordinated management at both national and local levels are of the first importance. The vital role of central government in articulating a national vision is well recognised ²²,

government has also to lead by example. By co-ordinated management we mean information sharing and partnership among all concerned in different initiatives. This is the way to avoid three similar facilities being provided in one area and none at all in another, where the needs may be even greater. A degree of central planning is needed ²³, which at the same time respects and nurtures local enterprise. The mutual support provided by networking among telecentres in a region, or with common interests, can also make a big difference.

Sound funding is not the whole story in getting public internet access off the ground. However, it is essential to success. And funding goes well beyond money, into the realms of control and relationships – the English proverb “he who pays the piper calls the tune” doubtless has its equivalents in all European languages. Our discussions below are largely structured around different sources of funding. A recurring theme will be partnership, often three-way – involving the public sector, the private sector and the community and voluntary sector.

Balanced attention to a range of user needs is equally essential. Providing suitably housed and connected **equipment** is a start, but it is not enough. Users will be attracted to the facility not by the equipment but by the **content** to which it gives access. This content has to be relevant to their lives. Most users will need human **support** and **training**, and the facility and equipment will certainly need ongoing **maintenance**. If provision for any one of these needs is out of step with the rest, the whole project can fail. Keeping up momentum after the initial enthusiasm has worn off is a special challenge.

Community roots have been found to underly the success of many projects. The best project leaders are often **local champions** who understand local needs and whose enthusiasm inspires others. And the strongest projects grow with community **participation** and support. These are often existing communities – maybe a village or a club – but equally, new communities of interest may be fostered by the facility itself.

The main part of this chapter consists of a series of examples within a conceptual framework, both illustrating current practice and pointing to likely future directions. This is presented below. But first we discuss a few basic ideas:

- What do we mean by the term “public internet access”?
- What are the functions of public internet access, and is it a transitional phenomenon?
- The importance of the access environment and social context.

1.1 The meaning of “public internet access”

This paper uses the term “public internet access” to mean a physical location where any member of the public can gain general access to internet resources for at most a moderate charge. This excludes, for example, a large proportion of educational access provision, which although in a public institution is accessible only to the students of the institution concerned and not to anyone ²⁴. “General access” here excludes certain special-purpose systems, which although physically accessible to the public provide limited information, for example only on government services ²⁵.

In keeping with the inclusive philosophy of public internet access points, there will normally be an intention to make the facilities equally accessible to people with disabilities ²⁶. Of course, it must be

recognised that by the nature of their disabilities some disabled people will be much better served by access in their home or in another place which they visit regularly.

Note that our definition of public internet access does not refer to public purposes or public funding. Indeed, as we shall see below, we expect much public internet access to be provided with the help of commercial funding. Also, our definition is in terms of physical access rather than of content. We acknowledge and will return to the vital role of appropriate content in making physical access meaningful or worthwhile; equally, however, content without physical access is useless.

1.2 The functions of public internet access

The obvious current function of public internet access is, by analogy with public telephones, to provide access for individuals who do not have it otherwise – whether at home, or at work or school – or who are temporarily unable to use their usual place of access, maybe because of travel or school holidays. The rapid growth of home and workplace internet access may make the first function seem unnecessary, or at best a transitional and probably short-lived requirement. Similarly, the spread of sophisticated internet-capable mobile phones may make the second function seem equally transitional.

We argue, however, that public internet access is likely to be here to stay – though its size and shape will change as fast as the internet phenomenon itself changes. We assume a continuing fast growth of internet applications in many areas of life which affect everyone, including commerce, government, education and leisure. The reasons for continuing public access include:

Training: Good public internet access points supply not just physical access for those who already know the ropes, but staff and colleagues offering tuition and support for those who are new to the internet. The demand for such “induction training” may be expected to peak and then gradually fall away, as the majority of interested adults become internet-literate, while all young people will receive such training as part of their formal education. However there will be a continuing long-term need for both refresher and update training, for a wide audience, to handle new features and techniques. Such training will appear in various forms (self-tutorial, formal classes etc) but a personal approach offered at a convenient local centre will be attractive to many. Exhibit 1 demonstrates the warm reception given to induction training in Malta, and how it lays a foundation for branching developments.

Exhibit 1: Community Empowerment Centres (CEC) in Malta

The idea is to set up centres in community spaces that stimulate and motivate the community to come in and learn ICT skills. The community is then urged to go back and assist in community building by using their ICT skills. The inspiration for this was the US Community Development Corporation concept from the Kennedy administration in the early 1960s. Corporations were challenged to partner with inner city communities encountering social and economic problems, and together develop projects that help to uplift the particular community.

My concept is that CECs are initially used as learning centres, then skills acquiring centres and ultimately they can also be used as opportunity centres for teleworking and telebusiness initiatives.

The first CEC in Malta was set up in Fgura (Pop. 12,000) in 1996. In a period of about 15 months over 450 people underwent ICT awareness courses. The ages varied from 5 years to 76 years. We also did morning sessions for housewives, and a special programme for disabled people. In view of the interest generated during the housewives' sessions I went further and developed a programme called Women Empowerment Initiative. The programme was directed to raise ICT awareness among women. 45 women attended and this was very successful.

I then opened another Centre in Bormla (Pop. 7,000); around 100 people attended here. Once I did another two villages a national epidemic started and today over 45 local councils (out of a total of 67 in Malta) have conducted ICT awareness courses, with over 3,300 people having attended. In a telephone survey we conducted after the Fgura experience we found that 25% of the attendees purchased a computer and 75% went on to attend more specialised courses.

The overall objective of the course is first to help people overcome their fear of technology. Secondly we help them to understand that this is not rocket science and that they can do it too. Thirdly we expose to them some tools which they can use for learning, working, doing business or plain leisure. The attendees are asked to participate in a very informal environment. The sessions have facilitators not teachers or lecturers. I like to think that we are facilitating their entry into cyberspace and giving them some basic tools to explore and discover themselves. It is a very simple hand holding exercise...which works.

We promote the courses through a flyer which is distributed door-to-door. We use other sources too. For example in Fgura because the parish priest supported the programme he would announce it during mass every Sunday. The programme is very well liked by the media too and politicians have visited the programme on various occasions.

Funding is mainly part organisers and part course attendees. The Local Council provides the premises. The companies provide the hardware, software and courseware. The attendees pay Lm 16 (US 2.65 = Lm 1) for 10 hours.

Source: Adapted from material supplied by Joseph G. Woods, WOODCO Ltd, Valletta, Malta

Technical facilities: Public internet access points may continue to offer technical facilities that are a step ahead of what most individuals have at home, and much better than the older equipment which less-well-off households are likely to have ²⁷. Currently, for example, this could mean fast access through a high bandwidth connection, and a large, clear screen display. Coming soon will be smart card readers and full two-way video. In future we might envisage "virtual reality" facilities which envelop the user in an alternative environment – and who knows what else? People who have had the chance to try out better facilities will be more likely to upgrade their own installations, so there will be strong commercial motivation to make the latest technology available for "test driving".

Backup capacity: Even in an era (whose arrival is at best uncertain) of universal home internet access, we should expect a demand for complementary public access. Home systems may fail, or be required at the same time by more members of a household than can be catered for. People who are used to home access will want the same when they are away from home, and may not possess a mobile terminal, or may prefer the quality of a fixed installation to that of a mobile. And for as long

as home access is not universal, public access will remain the primary access option for many.

Group and community use: Some internet activities are by their nature individual and best carried out in private - for example this applies to much work, much study, and to most transactions. However, there are also unending possibilities for peer support, team projects, group entertainment, and so on, which are by their nature suited to shared access points ²⁸. Such surroundings will stimulate immediate interaction and debate. One of the most exciting aspects of the internet is the new scope it offers for community initiatives, and we may expect continuing growth in group uses for the internet, with a corresponding demand for appropriate premises and facilities.

Support for the view that public internet access will continue to be needed comes from a recent Danish study ²⁹. This observes that Scandinavia saw the earliest telecentres (in the 1980s), but their number has declined in Denmark and Norway in the face of very high penetrations of personal computers in private homes. However, in a recent public hearing in Denmark, establishment of public IT centres was given top priority among private citizens.

1.3 The access environment and social context

Closely related to the point above about group use is the question of the environment and social context for public internet access. To achieve sustainable funding, a public access centre must have a reliable user base. Educational institutions have captive user bases, but nobody is compelled to use any particular public internet facilities. The success or failure of a public internet access point depends on the public that it attracts, and this in turn is greatly influenced by its location and the environment that it offers.

Assuming equal awareness of both, young people may gravitate towards a café atmosphere with background music chosen by their own generation, while a different group would feel much more comfortable in the public library. People responsible for small children may only be able to use internet facilities that are co-sited with a creche. Members of existing community or religious groups may be happier to experiment on these groups' premises than elsewhere; and so on.

The content that people expect to find interacts subtly with the environment and social context. For example, the Austrian government now makes available a large body of Austrian law online ³⁰. Many citizens may prefer to use this in a "serious" environment, such as an advice centre with qualified support staff available. Internet chat or entertainment may however feel more appropriate in a "club" atmosphere.

Creating awareness is itself a costly challenge, which may be achieved for example by a cybercafé's city centre shop window, by advertising, or by going through the channels of an established affinity group ³¹. Concerted IT awareness campaigns concentrated on a few days are becoming increasingly popular ³². As well as getting a message to the public, they may bring new business partners into play, who are initially only prepared to open their premises for a day, but could eventually extend their contribution.

2. Conceptual framework

Before introducing examples, we consider the range of sources of finance for public internet access,

and the motives that each source may have for devoting resources to this end. For clarity it is worth distinguishing these, but in reality most projects are funded from more than one source and for a mixture of motives. There are good arguments that mixed funding is not only often necessary but also desirable, leading to broader-based support and greater stability than single-source funding. It is no accident that a major UK initiative for online communities calls itself Partnerships Online ³³.

The main sources of funding that we distinguish are:

- **Governments**, and governmental organisations, at all of their various levels: local, regional, national, and international. Local government has taken special initiatives in a number of areas, such as Pirkkala in Finland ³⁴ and Manchester in the UK ³⁵. International seed funding, such as from the EU in Europe and from the ITU in developing countries worldwide, has been especially influential in recent years. A good example of national government funding is that of Canada ³⁶.

- **Private sector commercial organisations**, with direct or indirect interests in public internet access. Microsoft ³⁷ is an example of a company with resources and influence exceeding those of many countries. Exhibit 2 shows some of its current activities with partners in the US. At the other extreme, there are some small internet service providers whose offices may double as public internet access points.

Exhibit 2: Corporations fund US youth access

A partnership called PowerUp will align rivals America Online and Microsoft, sports-snack maker PowerBar and Gen. Colin Powell in a multimillion-dollar initiative to combat the growing gap between the digital "haves" and "have-nots." The partnership will work closely with America's Promise: Alliance for Youth, Gen. Powell's much-publicized program to try to improve the lives of children. The private-public partnership aims to bring computer access to every child in the nation by creating thousands of technology centers in poor communities over the next few years. It is the largest such program to date. The Case Foundation is providing an initial \$10 million grant; half will go to staff salaries, and the remainder for community programs. Gateway is committing 50,000 computers and AOL will give away 100,000 accounts. Microsoft and Sun Microsystems will sponsor sites in their hometowns. Nonprofits such as the YMCA and the National Urban League are lending classrooms and outreach while the federal government will loan AmeriCorps-VISTA volunteers to serve as trainers and mentors. Although AOL's Steve Case promised that children using the new computer centers would not be bombarded with advertisements, the initiative is unarguably a marketing boon for major sponsors since the children will be accessing the Internet through AOL accounts on Gateway computers. PowerUp plans to erect at least 250 new tech centers by this time next year. Four pilot sites opened earlier this month.

SOURCE: Washington Post, November 1999, summarised by Benton Foundation news service

- **Private sector non-profit organisations**. Many powerful organisations with substantial funds at their disposal have purposes other than profit; for example they may further charitable, educational, religious or political goals. The Soros Foundation ³⁸ has been instrumental in the funding of public internet access points both in its founder's native Hungary and in Estonia.

- **End users**. Usually as an addition to one or more major funding source, but sometimes (on a co-

operative or commercial basis) as the major source of funds, end-users' contributions are vital – not just in themselves, but as a way of keeping the management responsive to its customers' requirements.

We divide the motives for supporting public access into tangible and intangible. The tangible motives are relatively transparent, and apply across the board. All types of funding source seek, to varying extents, to:

- **Save costs.** For example, by enabling remote teleworking, a rural telecentre may save companies office costs and/or permit the employment of cheaper labour.
- **Deliver services more effectively.** For example, local government may be more readily accessible to its constituents through many distributed access points than through a single central office.
- **Increase their revenues, directly or indirectly.** The phenomenon of "free" internet service provision, in fact funded by phonecall and/or advertising revenues and so indirectly by consumers, is already well known in many countries. We expect a growth of analogous developments for public internet access. This motive naturally applies most strongly in the world of commerce, and we explore it more fully below.

Intangible motives are harder to identify with certainty, but are potentially important to recognise. They include, for example:

- **Idealistic motives**, for example in support of democracy, culture and education, openness of information, and equality of opportunity – all widely accepted ideals. These underlie the Council of Europe's own initiative for Universal Community Service, as is made clear in the preamble to the recommendation [39](#).
- **Stimulating economic growth** is a popular motive for governments at all levels. For example, seeking the largest possible markets for e-commerce could be one of the strongest drivers for public internet access in the UK [40](#).
- **Spreading ideas** that are less widely accepted than their proponents would like them to be could prove to be a potent force in internet access development. These could for example be political or religious ideas, or simply enhancing the reputation of a company or government. While such motives are not necessarily undesirable, it is obviously important to be aware of them when assessing related content.

In the light of this analysis of motives, we now look in more depth at the characteristics of the first two main funding sources identified above.

Government funding of public internet access appears typically to have one of two main motives:

- Spending from current account may be justified by operational savings or improved effectiveness, for example savings in providing information about benefits eligibility coupled with improved benefits delivery.
- Spending from capital account may be seen as an investment in social equity, or more cynically in improving the government's prospects of re-election.

To make the best use of scarce public resources, government funding is often structured so as to provide an incentive for complementary private funding, for example through matching funds or tax concessions. As a side-effect this leads to shared control of the projects in question, which may be a good thing or not depending on your point of view.

Private sector commercial funding has the straightforward motive of realising a profit. This could contribute to public internet access in a variety of ways, direct and indirect. We expect to see more of this in the next few years. For example:

- The telecoms, IT and internet service provision industries benefit directly from increased internet usage. They have a clear incentive to foster the widest possible internet access and to grow use. In some countries ⁴¹ this motive has been institutionalised and the telecoms industry is required to subsidise public internet connections.
- Any company with a product or service to sell may regard part funding of public access as a useful route to market. For example, a baby food manufacturer might sponsor access for a women's group.
- The presence of an internet terminal on commercial premises may offer synergies with other sales. An obvious, if minor, example, is the coffee sales of cybercafés. In some shops, for example bookshops, an internet terminal could play a useful role in simply getting more people inside, following which they may make impulse purchases. In others, the terminal could be provided primarily to support sales of the main product (e.g. in a bank, for financial services, or an estate agent, to browse available properties) while offering wider access as an attractive extra facility.

An analysis of **end user requirements** is a subject too big for this paper. However we do point to its absolute necessity in each individual case. Plainly, users in an area of declining heavy manufacture will be looking for something different from those in an isolated farming village or a city centre. Traditional socio-economic classifications may not be the best basis for further analysis. As an illustration, user research carried out in London ⁴² (outside the centre, but still urban) divided users into the following categories, according to their attitude to new technology:

- Self-styled experts
- Enthusiasts
- Future users
- Academic interest
- Necessary evil
- Technophobes

As is well known in development circles, misunderstanding of user needs is a quick route to wasted resources and project failure. A classic example is the provision of piped water to homes in a village. The residents continued to draw water from the well because it was the centre of social interchange.

Anchor use and ancillary services

A great variety of products and services may usefully be provided alongside public internet access. Richard Fuchs, a telecentre pioneer, observes:

“...In Wales and Australia, the focus was on training. In Sweden it was on distance education

services. In Canada it was on small business information and support. In South Africa the Mamelodi telecentre emphasizes community information, events and resources while in Senegal, the focus is squarely on telephony....it is important to have an anchor use or “major tenant” for the telecentre...”
[43](#)

The exhibit below illustrates the “other facilities or services” provided at one or more of 48 Hungarian telecottages surveyed in May 1999.

Exhibit 3: Facilities and services provided at Hungarian telecottages

Facilities	Services	Services continued
Advertisement board	Agricultural information service	Public information service
Computers	Almanacs, catalogues, encyclopaedias	Supporting community initiatives
CD-drive	(CDs too)	Employment service
Colour printer	Second hand book store	Multimedia programs
Black printer	Coffee, tea	Education, training courses
Phone lines	CD-ROM rent	Information desk services
ISDN lines	Civic service centre	Computer use consulting
Modem	Public e-mail service	Computer game
Videoconference	Tourist information centre	Computer working
Fax	Newspaper reading room	Social services assistance
Copier	Translation service	Consulting
Color copier	Sale of books, postcards, etc.	Telebanking
Scanner	Local advertising and information	Teleshopping
TV set	Local homepage redaction	Telework assistance
Video recorder	Local calendar and other publications	Teleeducation
Video camera	Local phonebook publishing	Teleadministration services
Video projector	Local radio broadcasting	Televillage centre
Flipchart	Local cable TV redaction	Carpool and other transport services
Overhead projector	Local newspaper redaction	Local information centre database
Sound devices	Youth Centre	Local development centre assistance
Refrigerator	Public Internet access	Local development project management
Coffee, tea machine	Office services, facilities	Tourist information centre
Minibus	Local stationary exhibition	Public administration client service help
	Trade, business intermediation	Blood-pressure measurement
	Needs and offers	Videoconference
	Local area development services	
	Computer assisted school training	
	Local competencies information service	

Source: Hungarian Telecottages Association (<http://www.telehaz.hu>)

3. Some examples of current practice

In this section we identify five current models of public internet access point and locate them within

our conceptual framework. Each is illustrated by specific examples. The five models are:

- Commercial cybercafés
- Local government access points
- Public libraries
- Community telecentres
- Public information kiosks.

These models were chosen to provide a broad picture, not a comprehensive classification. Many existing facilities are mixtures of these models – for example the “pure” commercial cybercafe model is often mixed with an element of community interest and funding. Schools are not included among the models, because their primary aim in providing internet access is always the education of their own pupils rather than the public at large. However there is plainly huge scope for school access to be extended to the wider community, under a variety of funding approaches.

Because of the European focus of this book, most of the examples have been taken from Europe. It is important however to realise that public internet access is a challenge being faced all over the world, and that many valuable resources and lessons are available from other regions. We touch on two – North America and the developing world.

North America

North America has among the world’s highest levels of home access both to telephony and to the internet. The idea of publicly supported universal access for both is widely accepted as a simple necessity, to avoid the spectre of the “digital divide”, and much progress has been made in this direction in recent years.

A recent US book on universal e-mail ⁴⁴ states “Simple access to terminals capable of supporting e-mail communications does not appear to be a serious problem. The principle of free access to public-use terminals – in libraries, schools, government buildings, social service centers, and other places – is widely accepted. Such access also appears to be fiscally and administratively feasible, since examples of such public-use terminals abound.” ⁴⁵. Exhibit 4 shows that public access does appear to be used by those without home access.

Exhibit 4. Americans Increasingly Use Internet Outside the Home

As Internet use has soared over the last year, Americans are connecting to the Internet from various locations to complete more and more tasks. In addition to the 22.2% of Americans currently connected to the Internet from home, 17.0% access the Internet outside the home at places such as work, school, libraries, and/or community centers. Those groups with higher access from work tend to be the same groups with higher home usage rates, while demographic groups with lower access rates at home or work are far more likely to use the Internet at a public place.

Highlights:

- 22.2% of Americans have Internet access from their homes, while 17.0% use the Internet outside the home. Nearly one-third (32.7%) use the Internet from any location (at home and/or outside the home).

- People without home computers are almost 1.5 times more likely than home computer owners to obtain outside Internet access through public libraries or community centers.
- More than half (56.3%) of Americans who use the Internet outside the home access it from work.
- The second most popular point of access outside the home is the Kindergarten-12th grade school (21.8%).
- For those accessing the Internet outside home, 8.2% of Americans use public libraries as an access point.

Source: NTIA press notice based on report *Falling Through The Net: Defining The Digital Divide*, July 1999, at <http://www.ntia.doc.gov>

Initiatives to overcome the “digital divide”, through the provision of public internet access and otherwise, also abound in the United States. The largest single organisation is probably CTCNet ⁴⁶, but there are many others. The Benton Foundation ⁴⁷ provides a valuable means for sharing experience among them. As a broad generalisation, most are publicly funded ⁴⁸ with minimal contributions requested from users, and these more to help to ration a scarce resource than to make a significant contribution to funding ⁴⁹.

Canada is widely thought to have the largest national programme for public internet access ⁵⁰ of any country, both in absolute terms and relative to its population. So far around 5,000 rural ⁵¹ access points have been established and there are plans for a further 5,000 in more urban locations by the first quarter of 2001. This will amount to one access point per 3,000 population.

Developing countries

At the other end of the spectrum, many countries in the developing world are still working towards providing basic shared telecoms access for most of their population. Public internet access points now play an increasingly significant part in universal telecoms access strategies. The same modest installation may provide the only telephone for a village, as well as the only accessible internet access and other facilities such as a photocopier. Naturally, funding is largely through international agencies - only token contributions can be accepted from most users if these centres are to fulfil their social purposes. Much valuable experience in how best to run “community telecentres” is being gained and shared, for example through the ITU ⁵².

3.1 Commercial cybercafés

The commercial cybercafé is an increasingly familiar sight in large cities the world over, and in smaller towns in wealthier countries. Primarily targeted at young people, they now even have international guidebooks enabling the backpacker to keep in touch by email from (at latest count) 132 countries. An enthusiast’s website ⁵³ also gives a long list (including quite a number of “cyberpubs” where the refreshments are alcoholic).

The key features by which we distinguish the commercial cybercafé model are:

Wholly or largely commercially driven, hence often relatively expensive to use (but see below) and located in town centres with plenty of passing trade.

Generally targeted at the already competent user – support, while available on request, is not a

primary feature.

Premises clearly dedicated to internet access, with ancillary services (eg refreshments) not normally the main reason for a visit.

Exhibit 5 gives more information about easyEverything, under the same management as the EasyJet low fares airline. As explained below, pricing varies by load, and has been as low as £1 for 9 hours at night (£1 an hour during the day is fairly normal). The easyEverything establishments have hundreds of terminals inside and queues outside. They are rapidly opening more branches throughout central London and plan the world's largest cybercafe in Amsterdam in early 2000.

Exhibit 5: easyEverything cybercafes

The heart of the shop is a state-of-the-art work station featuring the very latest in flat screen technology with the fastest possible access speeds making the world wide wait a thing of the past - luxuries that people can't afford at home. The screens chosen are 15 inch flat panel display

The stores have been designed to appeal to the widest possible range of customers from all age groups providing an open, clean and functional environment and avoiding the "techie" and bohemian style of cyber cafes.

easyEverything are introducing a brand new pricing scheme aimed to:

- provide you with the cheapest Internet access around, 24 hours a day, 7 days a week
- reduce the queues during the peak periods

The price now fluctuates depending upon how busy the shop is. Remember, you never pay more than your logon rate at each visit. If the rate decreases below your logon rate, you automatically receive extra time for that visit. Please see the screen at the front counter which details how much Internet access credit you receive for £1. This rate gets updated every 5 minutes.

Why does it work financially?

- Prime retail sites of 5-15,000 square feet are required to achieve visibility as well as the necessary economies of scale in labour and rent.
- Bulk purchasing reduces the cost of hardware and telecommunications.
- Extended opening hours and high occupancy levels reduce the unit cost (measured in pounds per work station per hour).
- Additional revenue streams will come from the coffee concession, in store and online advertising.
- The easy brand is known and trusted to give the best deal bar nobody and will make marketing more cost effective. A recent survey has shown that more than 81% of people in the Carlton/LWT area recognised the easyJet brand.

Source: Adapted from material at <http://www.easyeverything.com>

3.2 Local government access points

Recent years have seen a spate of “wired city” projects both in Europe and elsewhere. These often focus on the provision of a good user interface to local information, and the creation of a virtual community accessible from any terminal, private or public. Some projects however also include a specific public access element. The characteristics by which we distinguish this model are:

- A large role for local government, often as both prime mover and co-funder.
- Correspondingly, a high profile for local government content and applications.

Public access may be co-sited with local government offices or in other public buildings (including public libraries, schools etc).

It is hard to pick examples from the wealth available, but Stockholm, Antwerp and Halle are all well-known⁵⁴. In Antwerp, fixed public access points (more than 40 cybercafes, booths and kiosks) are supplemented by two cybercafe buses which visit schools, festivals, fairgrounds and markets.

3.3 Public libraries

To some, turning a public library into a public internet access centre seems a wholly natural extension of its functions, permitting a broadening of the search for information. Such a change can properly be funded from the public library budget – which will obviously itself need extension, to cover extra accommodation, equipment, staffing, and maybe opening hours. Resistance may however be met both from some potential internet users, who do not feel at home in a library, and from library staff, whose other duties or training may not allow for this extra load.

Nonetheless, many libraries throughout the developed world are now offering internet access, usually free or at very low charges. Most developed countries have plans to provide public internet access at practically all public libraries.

In Norway, libraries are important public access points. Some years ago, an extraordinary grant of NOK 5 million towards improving information technology in public libraries was used to subsidise connecting to the internet. The grant was shared among the county authorities that in turn distributed the funds to a total of 136 municipalities. In addition financial support was also given in 1997 to projects dealing with the library as a meeting-place, children in a new media world and IT in the public library. NOK 2.3 million went to supporting 25 existing long-term projects, while 12 new projects were granted an overall total of roughly NOK 1.1 million. Today, libraries in 451 of the total 452 municipalities have Internet access, and the citizens can use the service for free.⁵⁵

Finland, which leads the world in work, school and home internet access, also has an extensive network of public internet access points, mainly in public libraries. Some of these have succeeded in creating a non-traditional environment that attracts a wide cross-section of the public⁵⁶. Exhibit 6 shows how Ireland’s libraries are leading the way for public internet access in that country.

Exhibit 6: Internet access through libraries in Ireland

There are currently 322 branches of the public library service in Ireland together with 28 mobile libraries operating under the control of the 32 library authorities. The Department of Environment

and Local Government allocates capital funding of up to 75% of approved costs of library projects. Operational costs are administered by the Local Authorities. In January 2000 there were 891 PCs available for public use, many (but not the majority) of these with Internet and email access.

The Libraries On-line project is a prime example of how certain libraries have undertaken their own successful initiatives in partnership with the private sector. This particular project involves the public libraries in Ballyfermot, Castlebar, Limerick and Dungarvan in partnership with Microsoft. In each library public access is provided to an eight computer local area network, equipped with high speed Internet access and multimedia programmes. Demand for the facilities is high and usage has run at 95% since the project was launched in December, 1997.

The case for a much-needed investment in IT in public libraries has already been made strongly in the report *Branching Out* published by the Department of the Environment and Local Government. In turn the Government has committed to providing funds for PC's and ISDN connections to be installed in every public library. €1.27m has been committed in the current year to provide Internet PCs in public library authorities. The investment will cover the capital costs of hardware, software, communications links, Internet Service Providers and training costs associated with the provision of Internet PCs for public use. A grant of €2,539 has been given for each Internet PC provided for public use, plus a grant of up to €1,270 for adding Internet functionality to suitable existing PCs and providing training.

The number of Internet PCs to be installed as part of the first phase of this project in a particular branch will relate to the potential usage and hours of opening of the branch. The Department's guideline is shown below. Currently, 39% of public libraries are open over 30 hours per week and the trend in opening hours is upwards.

Opening Hours - Internet PCs (suggested)

0-10: 1

10-19: 1-2

20-29: 2-4

30-39: 4-6

40 + : 6-8

Typically, the services offered by the libraries on-line are free of charge. However, there may be opportunities to enter into partnership arrangements with commercial interests to expand the provision of information and communications technology access to the general public. For the present at least, it is felt that any such arrangements should respect the principle that access to Internet and other IT facilities in public libraries should be available free of charge.

Recommendations:

- Libraries should provide the key focus in a State investment in IT Access for All.
- The speed of the roll out of investment in information and communications technology in libraries should be escalated.
- Government should allocate extra funding to significantly increase the number of access points available in libraries.

- The mobile library service should also provide Internet access points.
- Internet access in libraries should be available free of charge.

Source: Adapted and updated from discussion document on IT Access for All, Irish Information Society Commission, at <http://www.infosoccomm.ie>

3.4 Community telecentres

Of our five models, what we term “community telecentres”⁵⁷ is the one that has acquired a sense of mission supported by an international movement⁵⁸. Here, the key distinguishing features of a community telecentre are:

- A facility provided for and by a local community (usually with the help of outside funding), intended to serve both individuals and broader community purposes.
- Often in multi-purpose accommodation such as a community centre, church or village hall, or club.
- Staffed by people well-qualified to help new users.

Because of their particular appeal to small business people without their own office facilities, and their potential for enabling telework, community telecentres at present are predominantly a rural phenomenon⁵⁹. However they are also increasingly appearing in lower-income urban areas in many countries⁶⁰. Of course, a minimum population density is required to make a community telecentre viable – it is acknowledged, for example, that they are barely relevant in remote areas of Australia, where individual household access is the only answer.

Excellent examples of community telecentres abound. Exhibits 7, 8 and 9, from Estonia and Hungary, were chosen to illustrate:

- The variety of local partners involved in funding Estonian telecottages (the primary funding source being the charitable Soros Foundation)
- The variety of different funding programmes and activities covered under the auspices of the Hungarian Telecottages Association.

Exhibit 7: Open Estonia Foundation’s Public Internet Access Points

The Public Internet Access Points (7th Internet-related competition), was announced in June 1997 as an initiative to reduce the emerging social injustice as regards to the access to information. Public Internet Access Points (PIAP) are facilities where everybody can use the basic computer and Internet services free of charge. They also provide on-line information, on-site consultation and reference materials as well as training to their visitors. PIAP projects had to fulfill the following requirements:

- 20% local matching financing
- technically competent project team
- renovated premises with easy public access (preferably in libraries, museums or other community centers, but not schools)

- training and co-operation component
- guarantee for covering the further maintenance expenses

Of the 35 projects that were submitted 16 projects were granted EEK 2,340,851 (~USD 165,000) by the board resulting in 30 PIAPs all over the country by the end of 1997; mostly will they all be in smaller towns and villages in peripheral areas. The Exhibit below shows the projects approved.

Source: Open Estonia Foundation (<http://www.oef.org.ee>)

Exhibit 8: OEF PIAP competition 1997: successful projects, with funding partners

Place	EEK	Third Party Grants
Kambja and Ülenurme (5 PIAPs)	350,000	Kambja Local Government, Ülenurme Local Government, AS Koreiko, AS Regio, Hoiupank, A-Finantsid, AS Ösel Foods, Jüri Ruut
Räpina (5 PIAPs)	305,900	Räpina Town Government, Räpina Parish Government, AS ETK Räpina Leib, AS Astel, Räpina Free Education Community, Vorberg Community ABF (Sweden)
Elva	261,889	Elva Town Government, EENet
Chaplin Art Center, Pärnu	234,278	Chaplin AS, Pärnu City Government
Valga	180,000	Valga City Government
Märjamaa (7 PIAPs)	141,555	Märjamaa Parish Government, Loodna Local Government, Märjamaa Local Government
Järva-Jaani	70,000	Järva-Jaani Parish Government
Paldiski	121,600	Paldiski Town Government
Kilingi-Nõmme	125,180	Kilingi-Nõmme Town Government
Käru County	46,223	Käru Local Government
Antsla	97,602	Antsla Town Government, Antsla Local Government
Paikuse County	80,900	Paikuse Local Government
Türi	62,000	Türi Town Government

Väike-Maarja	150,500	Väike-Maarja Local Government, Ministry of Agriculture , Ministry of Internal Affairs
Tamsalu	51,224	Tamsalu Town Government, Tamsalu Local Government, AS Alice, AS Hallik, Hoiupank, Porkuni Forest District, OÜ Vello Talu, OÜ Hilvia, AS Kasepuu, AS Tamsalu TERKO, AS Element, TO.RE
Lehtse	62,000	Lehtse Local Government, Ministry of Agriculture, Ministry of Internal Affairs

Source: Open Estonia Foundation (<http://www.oef.org.ee>)

Exhibit 9: Ongoing and Completed Telecottage Sub-Programs in Hungary (1994-2000)

1. USAID – DemNet Network Development: In 1997-99, in four rounds of grant competitions, 31 telecottages were established. They gained further aid for their operation with American support, with a budget of about 300 million HUF (1.5 million USD). The program will continue in 2000, and by the autumn of 1999 a new call for proposals has been released.
2. OMFB (National Technical Development Committee) "Ikta", Network Development: It supported the establishment of 4-5 telecottages and a dozen satellite offices in 1997-98, with a budget of 30 million HUF (150,000 USD).
3. KHVM (Ministry of Transport, Telecommunications and Water Management) network development: In 1998-99, 42 telecottages were established with a subsidy from the former Telecommunications Fund of 110 million HUF (500,000 USD).
4. USAID, USDOL Network and Service Development: The US Department of Labor's quick-response local economy development program, in cooperation with the National Telecottage Association, established 11 telecottages in 1998-99, with about 40 million HUF (180,000 USD).
5. Services for Sub-regions, Rural and Local Economic Development, Network Expansion: The Ministry of Agriculture and Rural Development has provided subsidies of 100 million HUF (400,000 USD) in 1999-2000.
6. Social Care and Services for Village Caretakers: The program of the Ministry of Social and Family Affairs first subsidized this service in 1994, with 2,4 million HUF (25.000 USD), then again in 1998-99 with 30-40 million HUF (150.000 USD).
7. Administrative Assistance, General Public Administrative Access, "O.K. Telecottage" Sub-program: The budget of the program – within the framework of the administration-development governmental program coordinated by the Prime Minister's Office – is about 10-15 million HUF (50,000 USD).
8. Integration into Telework Networks, Intra-telework Network Development: With the cooperation of the Ministry of Economy and the Telework Public Purpose Corporation, a program is being organized, which includes the mapping out of organizations offering telework, teleworkers'

network development, and the utilization of opportunities offered by the OFA (National Employment Foundation) telework grant project.

9. Job-creating Telecottages Sub-program in Szabolcs-Szatmar-Bereg County (North-Eastern Hungary): The subsidy program announced by the County Labor Center in 1999, with a budget of 60-70 million HUF (270,000 USD), can serve as a national model. It is to establish telecottages specializing in job-creation services [6-7 in the county, each with a grant of 4 million HUF (16,000 USD) for equipment, wages and supplementary costs, for 3 years].

10. Access and Maintenance of Public Information Systems by Telework: A program is being developed with the participation of the Ministry of National Cultural Heritage, the Prime Minister's Office, the Ministry of Economy, and several national organizations.

11. Development of a Telecottage Network Business Center and Franchise System: The development of businesses systems on the telecottage network and the organization of its services can be attained by incorporating private capital in order to expand telecottage services and assure their long term sustainability.

12. The Hungarian Post Office – converting small post offices into telecottages: There are 600 small post offices. The Hungarian Post Office has already organized 8 postal telecottages; within a year it will open another 20. Subsidies to date: 40 million HUF (200,000 USD) in 1998; 80 million HUF (360,000 USD) in 1999. On May 17, 1999, Minister Kalman Katona declared in a Radio Kossuth interview that the Hungarian Post Office will convert all small post offices into telecottages.

13. Cooperation with NKÖM (Ministry of National Cultural Heritage), turning small libraries and small cultural centers into telecottages: On the basis of the past experience of telecottages, it entails the extension of telecottage-directional development for the cultural centers of small settlements. It is a program planned together with the Ministry of National Cultural Heritage for 2000 with an expected budget of 50 million HUF (200,000 USD).

14. Scientific research on the Hungarian telecottage movement: In cooperation with the Center for Information Society and Trend Research, this research is being conducted on the establishment, operation, sustainability, impact and prospects of telecottages. It aims to establish development strategies and programs – as well as training – for the telecottage network and service systems.

15. British Council Management Training Project: It includes the development of a training system for telecottage managers and staff, as an international model program under English-Hungarian cooperation (1999-2000). Its budget is about 40 million HUF (160,000 USD).

16. PHARE National Telecottage Strategic Plan and Development Projects: In the framework of a research-development program – through international cooperation and PHARE funding – it entails the development of the long-term strategy and sub-programs for the National Telecottage Programme, with special focus on the acquisition of EU funding sources and disseminating the Hungarian experience in the region. The support is about 30 million HUF (120,000 USD).

17. Urban Telecottage Sub-program: It entails the launch of model experiences in order to establish an urban telecottage network, and to search for partners and supporters.

18. Regional telecottage programs related to the development of 'intelligent' regions: In various regions – like Fejér, Hajdú-Bihar, and Nógrád counties – in cooperation with county municipalities, local telecom providers and MATAV (Hungarian Telecommunications Co.), we hope to extend the telecottage network for general access endpoints.

19. Development Program for Telecottages Beyond the Hungarian Border: With the participation of national and international organizations, e.g., Mocsary Fund, British Know-How Fund, USAID, and EU organizations, we are looking to utilize our experience and contacts to establish model telecottages beyond the Hungarian national boundary.

Source: Hungarian Telecottage Association, <http://www.haz.hu>

3.5 Public information kiosks

The essence of what we term a public information kiosk is that it is a stand-alone facility, normally unstaffed. These may provide free access to a limited set of information, either commercial (e.g. in Cyprus or Greece ⁶¹, in a hotel lobby, showing local sightseeing and restaurants) or official (e.g. in Portugal, facilitating delivery of government information) ⁶². Exhibit 10 describes a municipally funded kiosk project for Istanbul.

Exhibit 10: The City Info-Bank Project of the Istanbul Greater Municipality

In accordance with the developments in new CIS, Istanbul Greater Municipality has developed the City Info-Bank (CI-B) Project in order to provide information to the public on various subjects. For this purpose the Istanbul Greater Municipality is planning to place simple CI-B machines at different points of the city.

Main Purposes of the CI-B Project

- a) To provide information to the citizens,
- b) To guide citizens in their affairs with the official institutions,
- c) To let them to directly communicate their requests and complaints to the Municipality,
- d) To inform about the social, cultural and sportive activities of the city,
- e) To help citizens about various subjects.

The CI-B machines will be placed at 150 different points of the city. The first CI-B machine was placed in July 1999. The CI-B points will be:

- a) in front of Municipality buildings,
- b) near the provincial government offices,
- c) in front of tax offices,
- d) train stations,
- e) ship terminal stations,
- f) underground and tram stations,
- g) inter-city bus stations,
- h) near city theatres,
- i) exhibition areas,

- j) shopping and trade centres,
- k) historical and tourism places,
- l) hospitals,
- m) in front of palaces of justice.

About the Content of the CI-B

- Promotion of the activities of the Istanbul Greater Municipality
- City plan and city guide:
 - *Names of avenues and streets*
 - *City plan*
 - *Places of official buildings*
 - *Historical and tourism places*
- City agenda
- Traffic guide
- Travel guide
- Cultural and sportive activities:
 - *Cinemas and theatres*
 - *Exhibitions*
 - *Seminars and conferences*
 - *Sport activities*
- Bureaucracy guide:
 - *Addresses and telephone numbers of the official buildings*
 - *Information about which problems can be solved where*
 - *Important telephones and addresses*
- Education institutions
- Restaurants
- Shopping centres
- Fault reporting services:
 - *Water*
 - *Electricity*
 - *Natural gas*
 - *Road maintenance works*
- Health guide:
 - *Hospitals and dispensers*
 - *Pharmacies on duty*
 - *Important public announcements*
- Weather forecasting
- News from local administration
- Financial guide:
 - *Foreign currencies*

- *Information about banks and finance corps.*
- *Information about trade centres*

- Transportation guide:
 - *Schedule and lines of public buses*
 - *Schedule and lines of minibuses*
 - *Schedule and lines of underground*
 - *Schedule and lines of tram*
 - *Schedule and lines of trains*
 - *Schedule and lines of sea-buses*

- Information about the city:
 - *City photographs*
 - *History of the city*
 - *Poems about the city*

If full internet access is provided, payment is likely to be required, and it cannot be taken for granted that this will amount to a commercially viable undertaking. Exhibits 11 and 12 below describe recent ventures of this kind by BT in the UK and by Telecom Italia in Italy. During the Touchpoint trial, BT appears to have sought co-operation with local authorities on both siting and information content for the kiosks, but at the time was disappointed ⁶³.

Exhibit 11: BT -- from Touchpoint to Multiphone with Photo-Me

In autumn 1996 BT launched its Touchpoint interactive kiosk trial. By the spring of 1997, 200 multi-service kiosks had been placed in indoor publicly accessible sites in and near London, and these were attracting 2 million screen touches a month, growing at 20% a month. The objective of the trial was purely commercial, with the initial aim of understanding the marketing and design issues surrounding kiosks.

At the end of the 18-month trial, all the Touchpoint kiosks were decommissioned. Lessons learned from the trial included the need to ensure adequate transactional traffic, and to present an inviting and fail-safe interface to new users. These lessons were to be fed into the new generation of multimedia phone boxes.

In July 1999 BT announced its "Multiphone", a phone box housing a 30-cm touch screen unit which allows 24-hour access to e-mail and the internet as well as to phone calls. Over 1,000 of the machines, each costing £5,000, are to be installed at airports, railway stations, motorway service stations and shopping centres by mid-2000. The conventional keypad and keyboard appear as pictures on the touch-sensitive colour screen. New online users will be able to set up a free personal e-mail address from BT or another service provider. Websites can be surfed on a pay-as-you-go basis for 10p a minute, using a BT Phonocard or a credit card. Other facilities on the way include videophones; the ability to take, then send, a picture via e-mail; local street guides; a built-in printer; and directory enquiry information on screen.

A similar development includes a collaboration between BT and Photo-Me, the company which

provides photo booths in public places. Around 1,000 multimedia booths are planned to be operational from spring 2000. Photo-Me's curtained kiosks will be transformed into hi-tech centres offering Internet access.

Source: adapted from BT publicity material, <http://www.touchpoint.co.uk> and Touchpoint: the public multi-service kiosk system from BT (in 1997 EIP report).

Exhibit 12: Telecom Italia's kiosks

The Internet has hit the streets, and anybody can hitch a ride at Telecom Italia's new Internet Corner kiosks. If you to want to be scooped up in the Net but you do not have your own connection, or if you are out and about and need to check your e-mail or retrieve information of any nature, Telecom Italia's new public kiosks are the answer.

Internet Corner kiosks give you access to the Internet and e-mail. Using a touch screen, keyboard and processing unit you can surf the Net, access your e-mail services or create your own custom homepage. It costs just 200 lire per min. to use Internet Corner, and you can pay with any Telecom Italia pre-paid phonecard.

Telecom Italia began installing 50 Internet Corner kiosks at Milan Malpensa 2000 airport on 25 October 1998. During 1999 Internet Corner kiosks are being installed across the country in airports, major hotels, Internet cafes, barracks and many other public places.

Source: Telecom Italia (<http://www.telecomitalia.it>)

4. Some pointers to the way ahead

We have presented a bewildering spread of examples and options. What can be learned from these about how to go about establishing sustainable public internet access in Europe? We offer a few observations.

- It is unlikely that any one funding model will prevail, even in one country or sector.
- A variety of types of public internet access points will be needed to meet the equally varied needs of the market. Each must be carefully designed to match the requirements of its particular target segment. Funding sources will vary likewise.
- Public, private and community sectors all need to be aware of each other's potential contributions. Some of the most successful projects combine elements of all three to excellent effect.
- It is important to keep the process of obtaining funds as simple as possible, to avoid unnecessarily overburdening telecentre staff.
- Better value for money can be obtained through networked centres, which can share expertise and resources locally. Applications of this kind should receive preference when grants are made ⁶⁴.
- Rural telecentres, in particular, are more likely to succeed with the support of a national association of similar centres.

Public money is most often used as initial funding. In prosperous locations a well-run public access centre may possibly become self-supporting within three years; in poorer areas public support is likely to continue to be needed indefinitely.

A great variety of other services and facilities may be provided in the public internet access centre, and help to assure its overall viability.

* * *

Additional resources

Many valuable resources, usually including URLs, have been mentioned earlier in this paper, especially in the footnotes and exhibit sources. There is a huge and growing amount of material available relevant to our subject, and it would be neither practicable nor very useful to attempt a full list. Rather, the following selected websites are recommended for their wide coverage and links.

<http://www.communities.org.uk/resource/index.htm> The central resource bank for community networking, home for both European and international associations. Toolkits for practitioners, numerous valuable links including good coverage of North American developments.

<http://www.gksoft.com/govt/en/europa.html> List of central and local government websites by country throughout Europe (adjacent pages cover other continents). A remarkable resource offered by Gunnar Anzinger.

<http://www.netcafeguide.com> An online guide produced by Norwegian journalist Ernst Larsen to 2,800 internet cafes in 132 countries. Also some useful links elsewhere, including kiosk groups.

<http://www.arttic.com> Information on the EU initiative for modern and accessible local government, including public kiosk provision.

<http://www.challenge.stockholm.se> Hundreds of cities worldwide enter their electronic communication projects in this global competition.

http://www.uni-muenster.de/Jura.tkr/veranstaltungen/workshop/resources_eng.html Website for recent relevant conference, containing both the conference papers and links to other resources. Especially strong on references to the need for lower priced or unmetered internet access, and the national campaigns for this.

<http://www.digitaldividenetwork.org> Hosted by the Benton Foundation – an excellent starting point for exploring US developments.

<http://www.dcita.gov.au/rtif.html> The official Australian government website for its Networking the Nation programme, includes links to case studies and practical material.

<http://www.pat15.org.uk> Recent UK government site containing relevant research and reports from 1999-2000, and also a set of case studies on community internet access. The main report on this site, dealing with provision of internet access to deprived neighbourhoods in the UK, also contains an extensive bibliography.

<http://www2.brent.gov.uk/links.nsf> Planned IT good practice guide for UK local government (currently contains local government links).

<http://www.comm.unity.uk.net> Case studies of UK companies' voluntary IT projects of social value.

* * *

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¹⁸ For example: Announcement of more funds for Australia's Networking the Nation programme, February 2000, at www.dcita.gov.au/rtif.html. New US budget proposals, February 2000, at <http://digitaldivide.gov/2000-02-02.html>. Report *Achieving Universal Access*, Booz Allen Hamilton, March 2000, at <http://www.number-10.gov.uk>

¹⁹ eEurope – An Information Society for all. Communication on a Commission Initiative for the Special European Council of Lisbon, 23 and 24 March 2000. An interactive site to track progress is at http://europa.eu.int/comm/information_society/eeurope/index_en.htm

²⁰ Intending EU members, and other members of the Council of Europe, seem determined at least to match the pace of the EU. Excellent examples are the Strategy and Report on Information Society development in the Republic of Bulgaria (October 1999), available at <http://www.cpt.bg>

²¹ At the time of writing it seemed that the Lisbon Council had accepted the first target as it stands but delayed the date for achieving the second until 2003.

²² From many possible good examples of central government leadership we point to those of Portugal (see paper by Prof. Dias Coelho above at p. 71) and Bulgaria (see footnote 20 above). In Switzerland, by contrast, leadership is left to the cantons.

²³ Few estimates have been made of the number of public internet access points (PIAPs) that will eventually be needed. In Canada, one per 10,000 population is suggested. Applying this to the UK would result in fewer PIAPs than post offices but more than public libraries.

²⁴ Increasing numbers of schools and colleges are now making their access resources more widely available, which may move them into the “public access” category.

²⁵ It is not however intended to imply that all internet content must be available. For example, the use of filtering software in a public library to satisfy local preferences on taste and decency would not mean that this was no longer public internet access.

²⁶ See paper by Daniel Dardailler, above at p. 49. Other useful references: the Portuguese legislative framework at <http://www.missao-si.mct.pt>, including the pioneering Council of Ministers Resolution no 96/99 concerning the accessibility of public administration websites for citizens with special needs; and the papers from Technology and Disabilities conferences at <http://www.csun.edu/cod/>

²⁷ This is especially likely to be true with the rise of recycling cast-off business computers for use by low-income households.

²⁸ The social context will be vital for successful group use. We draw here and elsewhere in this chapter on the useful research on cybercafes and telecottages carried out by Sonia Liff, Peter Watts and Fred Steward in the UK, the USA and Finland. See project “Gateways to the Virtual Society” at <http://www.brunel.ac.uk/research/virtsoc>.

²⁹ See *Models for multi-purpose community information centres*, by Morten Falch, CTI Working Paper 49, September 1999, Technical University of Denmark. This useful study includes information from many different countries.

³⁰ The Legal Information System (Rechtsinformationssystem or RIS) of the Republic of Austria, at <http://www.ris.bka.gv.at>, contains 92% of federal law, the Federal Law Gazette since 1983, and laws from all 9 states.

³¹ See work of Liff et al for further discussion, above at p. 57.

³² Good examples include the Estonian “Tigrituur” roadshow and the Bulgarian 3-day Fiesta.

³³ See <http://www.partnerships.org.uk>

³⁴ See paper by Risto Koivisto, above at p. 83.

³⁵ A long list could be drawn up of many other equally good examples.

³⁶ See <http://cap.ic.gc.ca>

³⁷ See paper by Bernard Vergnes, above at p. 107.

³⁸ See <http://www.soros.org>

³⁹ Council of Europe Committee of Ministers: Recommendation number (99)14 on universal community service concerning new communications and information services, with Explanatory Memorandum. Adopted at the 678th meeting of the Ministers' Deputies on 9 September 1999. Reproduced above at p. 17.

⁴⁰ See report e-commerce@its.best.uk, September 1999, available at <http://www.cabinet-office.gov.uk>

⁴¹ The Royal Decree of June 22, 1998 ratifying the management contract between the Belgian State and Belgacom, requires Belgacom to provide "1 lines" (dedicated to internet access) at subsidised prices to schools, libraries, and hospitals. Available at <http://www.belgacom.be>

⁴² Social inclusion and the digital divide, 1999 paper by Barry Quirk, Chief Executive of the London Borough of Lewisham, circulated informally.

⁴³ Quotation from "Little engines that did": case histories from the global telecentre movement, by Richard Fuchs, online at <http://www.idrc.ca/acacia/engine>

⁴⁴ Sending your government a message: e-mail communications between citizens and government. Neu, R C, Anderson, RH, Bikson, T K. Rand 1999.

⁴⁵ This does not however imply that there is no problem. The book goes on to consider how internet access can itself be provided at subsidised rates without undermining the competitive market.

⁴⁶ Community Technology Centers' Network, with over 300 members. See <http://www.ctcnet.org>.

⁴⁷ A foundation promoting the constructive and socially responsible use of new information and communication technologies. See <http://www.benton.org>.

⁴⁸ In part through a large industry-funded subsidy programme providing cut-price connections for schools, libraries etc ("the e-rate discount"), but also through many other channels including direct government funding at different levels.

⁴⁹ See for example Structuring access: the role of public access centers in the "Digital Divide" by B Lentz, J Straubhaar, A LaPastina, S Main and J Taylor, University of Texas at Austin, 2000, at <http://www.utexas.edu/research/tipi/reports/full.htm>

⁵⁰ Well documented at <http://cap.ic.gc.ca>.

⁵¹ Defined as settlements under 50,000 population.

⁵² See for example <http://www.itu.int/ITU-D-UniversalAccess>, <http://www.bica99.org>.

⁵³ See <http://www.cyberiacafe.net/cyberia/guide>

⁵⁴ See <http://www.stockholm.se>, <http://www.antwerpen.be>, <http://www.halle.de>. Also worth a visit in this category is the municipally funded <http://pleven.dir.bg> (Pleven, Bulgaria).

⁵⁵ For more information, see <http://samson.bibtils.no/eng/info.htm>

⁵⁶ Notably Helsinki (see work of Liff et al., above at p. 57).

⁵⁷ Many other terms are in use to describe this and closely related concepts. “Telecottage” is popular and appears below.

⁵⁸ See for example <http://www.partnerships.org.uk>, <http://www.tca.org.uk>, <http://www.idrc.ca/acacia>, <http://arla.rsn.hk-r.se/~engvall/ctsc.html>.

⁵⁹ For example, the experiences gained in rural Wales are well-documented at <http://www.telecentres.com>.

⁶⁰ Manchester’s Electronic Village Halls are one of the best-established examples in the UK. The community telecentre model is likely to be adopted more widely in the UK – see Closing the digital divide - ICTs in deprived areas, a report by Policy Action Team 15, UK Department of Trade and Industry, March 2000 (available at <http://www.pat15.org.uk>).

⁶¹ Netpoint, operating in Greece, advertises its presence through the Internet café guidewebsite.

⁶² See <http://www.infocid.pt>. More examples, mostly from the USA, are provided in Kiosk implementation: the New York city perspective gains worldwide converts, by Adam Parker, Metronet Communications Inc, in Information, Advice and Public Service (the 1997 report of the UK Exchanging Information with the Public programme). A thoughtful assessment of the scope for kiosks appears in New services for London: the telematics programme, kiosks, one-stops and service models by Angus Doulton in the same report. The EIP Programme reports are available from CDW and Associates Ltd, email angusdoulton@compuserve.com

⁶³ See articles on Touchpoint in the EIP 1997 and 1998 reports (footnote 62). Further information kindly supplied by Roger Wilson, editor of Inside Cable and Telecoms News Service (<http://www.inside-cable.co.uk>).

⁶⁴ Based on Canadian experience.