THE OLDER GENERATION AND THE EUROPEAN INFORMATION SOCIETY: ACCESS TO THE INFORMATION SOCIETY

FIRST PROJECT REPORT

The Current Barriers for Older People in Accessing the Information Society

Rosemarie Gilligan with

Penny Campbell, Josephine Dries and Nina Obermaier

A joint research project of the European Institute for the Media, Düsseldorf and the Netherlands Platform Older People and Europe, Utrecht

Table of contents

1 Project Description

The information society is the dawning of a multimedia world (sound, text and image) representing a radical change which some commentators have compared to the first industrial revolution[1]. It has been argued that this "digital revolution" will lead eventually to a knowledge-based economy[2]. In a practical sense, the term information society can be understood to "describe the increasing importance and involvement of computers and telecommunications in our daily lives[3]. ICT applications involve new services such as the Internet and electronic mail, as well as other services based on telecommunications networks such as home-banking and electronic banking, which will become available to all in the future. It also covers other services such as information kiosks and self-service terminals (for example, to purchase travel tickets).

What seems certain is that the information society, through the development of information and communication technologies (ICTs) and ICT-based services, has the potential to profoundly change the daily and professional life and leisure time of everyone. It can promote new forms of urban and rural development and improve education and health systems. It may potentially improve the quality of life of all Europeans. However, the accelerated diffusion of new technologies may also give rise to rejection and isolation.

The European Commission's Green Paper on Living and Working in the Information Society (COM(96) 389) supported an information society for all citizens and stated that: "The information society should be about people and it should be used for people and by people to unlock the power of information, not to create new or reinforce existing inequalities between the information rich and the information poor"[4].

It is against this background that the Older Generation and the European Information Society: Access to Information Society (AOP-IS) project with the financial support of the European Commission's Information Society Project Office (ISPO) and the Dutch Government, is examining the current situation regarding older people and access to the information society in Europe. Within the course of the project, which runs until July 1999, three reports will be published and this first report covers the current barriers for older people in accessing the information society in Europe. The report focuses principally on the group of "well" older people aged over 50. A number of other projects at European level have addressed and are addressing older people with disabilities and the information society and it was felt that this project could most usefully contribute in this area by focusing on a different target group. This report also distinguishes between those under 65 (and so possibly economically active) and retired older people aged over 65, in a way as to highlight the different barriers experienced by both groups. Income is one of the biggest barriers in accessing the evolving information society for older people and this affects in particular the age group of over 65 years.

1 Handbook of the European Union by Nicholas Moussis, 3rd revised edition pg.216, 1996
2 Source: Background information on the G-7 Information Society Conference, http://www.ispo.cec.be/g7/
3 PROMISE project. This is a project which aims at encouraging the inclusion of older people and disabled people in the emerging information society in Europe. It is funded under the European Commission's Information Society Project Office (ISPO). The project home page can be found at http://www.stakes.fi.
4 European Commission, Living and Working in the Information Society: People First, Bulletin of the European Union, Supplement 3/96, p. 23

Six countries were selected for this project: Germany, the Netherlands, France, the UK, Spain and Finland. Germany and the Netherlands were chosen as the project partners - the EIM (European Institute for the Media) and the NPOE (Netherlands Platform for Older People and Europe) - are based in these countries. France was considered interesting due to its experience with Minitel and the UK for its history in the field of telecommunications. Both Spain and Finland were selected as it was believed necessary to compare northern and southern European countries. A correspondent was appointed in each country, who produced a country report focusing upon the current barriers for older people in accessing the information society in their country. A copy of each of these country reports may be found on the project website[5].

The country correspondents form part of an Advisory Council that has been established to guide the work of the project. The Advisory Council also includes representatives of the two project partners and of the PROMISE project[6] (see Annex III for full list.).

This report has been based on the findings of the six country reports and additional research has been carried out in order to provide a comparative statistical analysis of the different countries. The purpose of this report is to;

- give an overview of the demographic changes currently being experienced in the countries studied,
- describe the main developments of the information society in Europe and the participation of older people in this changing society,
- examine the technical infrastructures available in each of the countries and the general costs and special tariffs for older people in accessing these infra-structures,
- focus on the media and computer literacy levels of older people and other barriers encountered in accessing the information society,
- outline new services being offered to older people in the area of ICT,
- summarise the main conclusions and results of the study.

5 http://www.eim.de/aop-is/aop-is.htm
6 see footnote 3

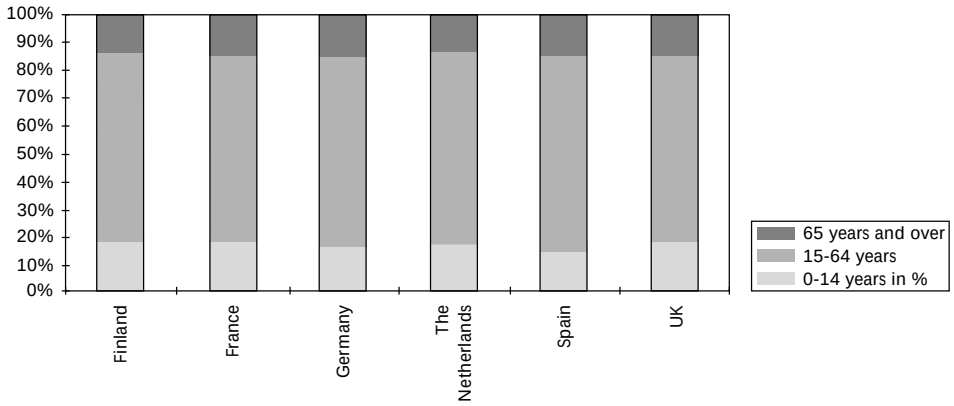
2 Background

2.1 OVERVIEW OF DEMOGRAPHIC CHANGE IN EUROPE

All countries reported a significant number of older people. For example in the UK almost 20% of the 58 million UK citizens are of pensionable age, that is women over 60 and men over 65 years old[7]. While this overall proportion is expected to remain fairly stable, the number of very old people (over 75s and over 90s) is projected to double and triple respectively, by the middle of the next century.[8] According to latest Population Census in Spain in 1991, there were 5,370,252 Spaniards aged 65 or over, who if added to another 6,320,177 aged 50 to 64, make up a total of 11,690,429 people. The figure below shows the general age structure of the populations of all six countries in 1997.

figure 1

Age Structure

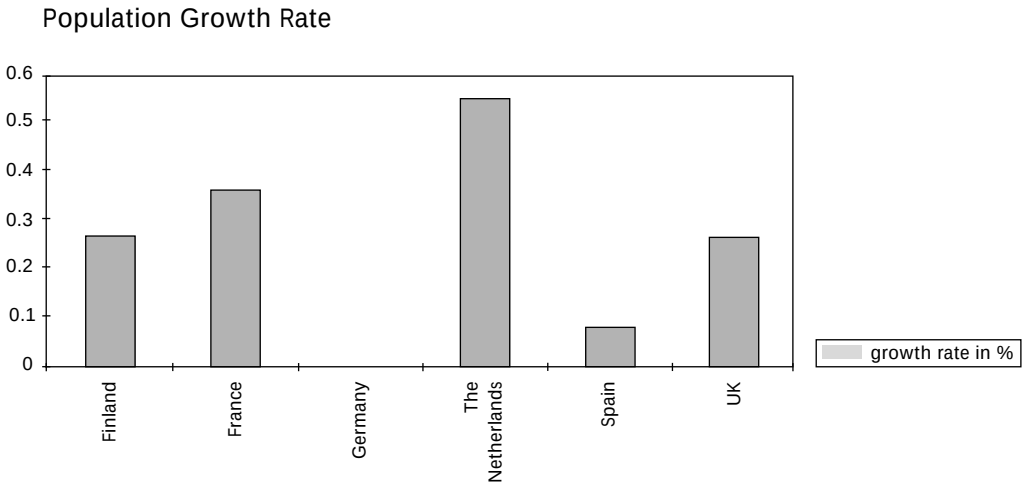


Source: CIA World Fact Book 1997

Of all the countries studied the Netherlands, with a population currently consisting of 15,6 million people has the highest growth rate as can be seen in figure 2. Of the current population 4,6 million are over 50 years old and over 2 million are over 65 years old. This group will be growing to 2,1 million (13,6%) in the year 2000 and approaching 2,5 million people (14,9%) in 2010[9].

7 UK Population Trends, summer 97, table 6
8 1994-based UK Population Projections
9 CBS (1998) *Statistisch Jaarboek 1998.*

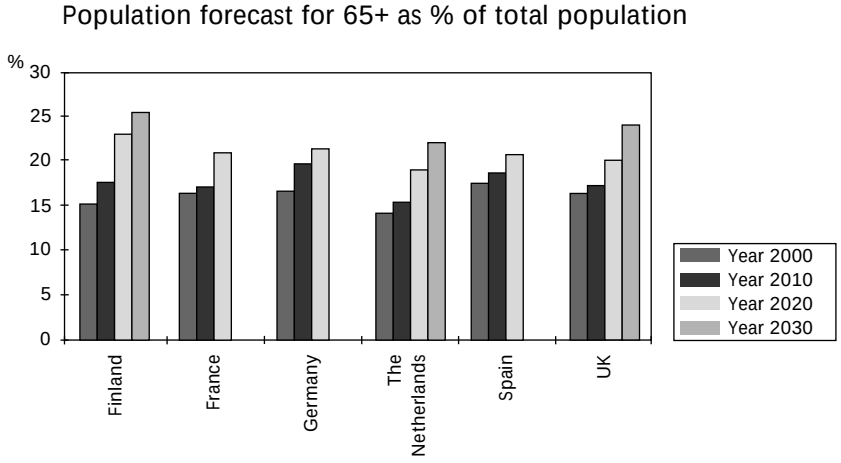
figure 2



Source: CIA World Fact Book 1997 (est. 1997)

In addition the Netherlands has the highest population density of the six countries[10]. Europe is experiencing a profound demographic change and all countries involved in the project reported that the population is ageing, as can be seen in figure 3. For example in France by the year 2010, 37% of the population will be over 50 years old.

figure 3



Source: European Marketing Pocket Book

In a highly populated country such as Germany where the total population is 81.8 million[11], more than 23,250,000 Germans are more than 50 years old, and from this age upwards female citizens are in the majority[12]. In 1995, 39 out of 1000

10 Please refer to the country profiles in Annex I
11 Statistisches Jahrbuch 1997, pp 46/47, fig. 3.1.1. and 3.2
12 Globus, 11.12. 1997, fig. Ua 4548

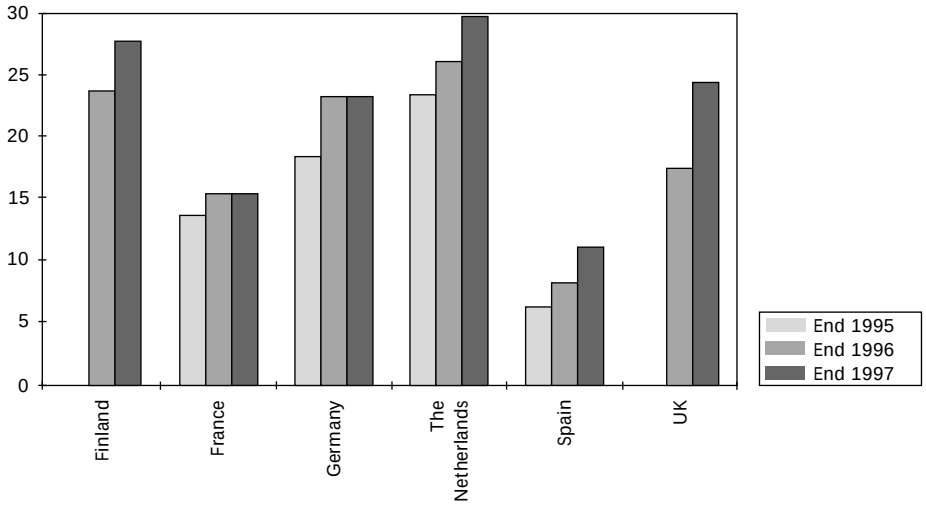
Germans were more than 80 years old, and 115 out of 1000 were more than 65 years old. According to forecasts[13] this proportion will grow to 74 out of 1000 and 201 out of 1000 respectively by the year 2040. Even among the smaller countries in Europe such as Finland, where the population currently consists of 5,1 million people, 1,6 million of them are over 50 years old. More than 752,000 people were over 65 years of age at the end of 1997. This represents 14,7 per cent of the population. It is estimated that in 2030 approximately 26 per cent of the population in Finland will be over 65 years of age.

2.2 OVERVIEW OF DEVELOPMENT OF THE INFORMATION SOCIETY IN EUROPE

The main developments within the information society in Europe have been within the area of computer and Internet usage, as demonstrated in figures 4 and 5.

figure 4

Total number of PCs per 100 inhabitants - Evolution
1995 - 1997

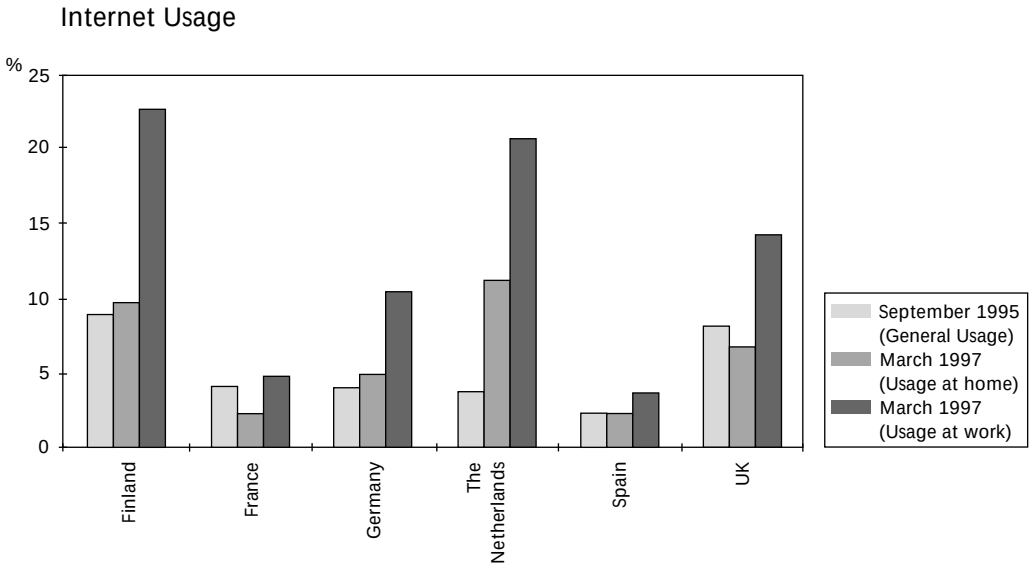


Source: ESIS-ISPO

Although there has been a huge increase in Internet usage in recent years as shown in figure 5, the profile of an Internet user is still very unrepresentative of the population as a whole; UK Internet users are usually male, 15-44 years of age and belong to the professional social class. In Finland a typical surfer is a man aged under 30 years living in the Helsinki region.

13 (Source: Globus, 16.3.1998)

figure 5



Source: Flash Eurobarometer 49 (1995), Eurobarometer 47.0

Other developments in the information society, such as the introduction of digital television in France or the dramatic increase in the use of mobile phones in Finland and the growth of ISDN lines in Germany, will be discussed in more detail in the following chapter.

2.3 THE EVOLVING INFORMATION SOCIETY AND NATIONAL AND EUROPEAN INITIATIVES

Information and communications services and equipment are increasingly becoming a crucial part of social and economic life, and older people are no exception to this. However, with particular regard to older people, the information society presents new opportunities but also potential new threats. On the one hand, there is a variety of more or less advanced applications such as alarm services, telemedicine, telecare, etc which can be vital for enabling independent living in the community and opening up new opportunities for access, participation and socio-economic integration. On the other hand, current services and equipment still tend to aim at ”the average user”. It is, however, crucial that the evolving information society becomes accessible to all citizens, and this includes of course the older ones. For instance, to utilise information and services potentially available, older people must be able to select those which are relevant for their own purposes. Further, they must be able to access and then to use them. If they have any difficulties in fulfilling one of these requirements, they need to be supported in order to prevent being excluded from the emerging information society. This refers to both their personal abilities and their economic situation.

The image of older people and ICT varies between the different countries, for example in France[14], two conceptions of older people (at least) seem to come up against each other, and influence the French vision of "technology and ageing" in quite different ways:

- a consumerist vision, identifying older people as a strongly emerging market, whose specificity and purchasing behaviour need to be better understood. This vision is very recent in France.
- a 'solidarity-based' vision, identifying older people as an increasingly fragile social group: this vision has been, in the last 20 years, the most influential in terms of the structuring of service supply, notably due to the influence of the public authorities.

To achieve successful integration and active participation of older people in the development of the information society, IT programmes have to be organised at a national and European level. National government initiatives such as "IT for All"[15] in the UK and European programmes including COST A5 and TIDE[16] that have begun to indicate some behavioural tendencies of older people in relation to ICT, will be examined in detail in the second report of this project. When the third International Congress of TIDE (Technology Initiative for the Integration of Disabled and Elderly People) took place in Helsinki at the end of June 1998, it was organised around three main themes: Accessibility and Design for All, Users' empowerment and involvement and Assistive Technology research and technological development. Mr. Jan Ekberg, the Research Professor of the projects Cost 219 bis, Include, Promise and Telematics in the use by older people, underlined at the congress the necessity of avoiding a division between those in the information society who have access to the new possibilities and are comfortable using them and those who are excluded from fully enjoying their benefits. Public access is an important means of bringing the information society to every citizen.

2.4 MOST POPULAR FORM OF MEDIA

All members of society including older people use media for a number of purposes, i.e. to obtain information, for entertainment etc. However, as revealed in the country reports traditional media remains the most popular amongst older people. The television is the most popular source of information for older people in all countries and its popularity increases with age. For example in Germany 93% of people over 69 years of age receive most of their information via television, followed by newspapers (65%), radio (42%), chatting with others (15%) and magazines (8%)[17]. However there are no particular TV or radio programmes for older people and national newspapers do not have a special page for older people in Germany.

14 Source: French country report pg. 5

15 see http://www.itforall.gov.uk

16 COST A5 (Scientific and technical co-operation, Ageing and Technology) is a European network of exchanges and research on ageing and technology which France joined in 1991 through the Ministry of Research. It brings together in particular the National Fund of Old Age Insurance (CNAV), the National Foundation of Gerontology (FNG) and the Research Mission of the Ministry of Social Affairs (MIRE). TIDE (Technology Initiative for the Disabled and the Older people) is a European programme of research piloted by DG XIII, whose third European congress took place in Finland at the end of June 98.

17 Source: Mediaperspektiven 4/98, p.190

The same goes for France with reference to TV programmes even though some broadcasts have a high proportion of older people in their audience, like the 19/20 evening broadcast on FR3, or the afternoon broadcasts of FR2 and TF1. It should be noted that some French communes possess local television channels, on a town or village basis. It seems that the smaller the scale of broadcast and of proximity with the inhabitants, the bigger the audience of older people. In France there is one radio station targeted at older people and it is "Radio Blue", broadcast on medium wave by Radio France, a public broadcaster. In the UK there are no dedicated TV channels targeted at older people or offering special services of relevance to older people now, but digital satellite television will offer a number of interactive services which will bring home shopping, home banking, electronic mail and public services to every connected TV set from the end of 1998.

The reasons why older people prefer traditional types of media and are less active in the emerging information society will now be examined by looking at the various barriers experienced by older people in accessing the information society in their respective countries. First of all it is necessary to look carefully at technical infrastructures as these are the backbone of the information society. Available equipment and costs incurred by older people also need to be taken into consideration. Other aspects including media and computer literacy will also be examined to determine why traditional forms of media are much more popular with older people.

2.5 POTENTIAL BENEFITS OF ICT

One of the main aims of this project is to find out what the potential benefits of ICT for older people could be. For example one possible benefit of the Internet for older people could be that it provides a new type of social world that helps to reduce loneliness, experienced by older people living alone. It may also compensate for the reduced social contact experienced by older people following retirement from the working world.

Other services, such as home security and social or medical support, can make older people feel more secure at home and support independent living in the community. ICT offers the opportunity to access an increasing amount of information without any regard to location and time. With reference to information content, older people may be interested in the same information such as news, sports etc. as other people and also in information of specific relevance to their own concerns e.g. accessibility of buildings and special transport services.

However before older people start to use ICT applications, they must be informed of the possible benefits which can be gained from these new information and communications services.

3 Technical access

The technical infrastructure is a key element in gaining access to the new applications of information and communication technology. There are a number of developments in the telecommunications world which will largely determine the extent to which older people will have access to the emerging information society. This concerns for instance key areas such as telecommunications infrastructure, regulation, tariffing and standardisation. Technical access to telecommunications infrastructure is a crucial precondition for participating in the developing information society, and with reference to older people access from home is of vital importance.

This chapter looks at the current spread of the technical infrastructure in the six countries of study and presents the penetration and usage rates among the older age groups. As the country reports contained very different statistical information, representing different age groups and coming from different sources, it was decided to use the Eurobarometer surveys and ESIS (European Survey of Information Society) for comparative purposes. However, these statistics are based on a survey of 1,000 or less inhabitants per country, so are not necessarily more accurate. Relevant data from the country reports has also been included. The country correspondents responsible for writing the reports commented on the difficulty of finding data relating specifically to ICT and older people in their countries as very little research has been carried out in this area to date, implying the need for more systematic data collection in the future.

3.1 AVAILABILITY, PENETRATION AND USAGE RATES OF THE FOLLOWING INFRASTRUCTURES

Telecommunications networks

The world of telecommunications offers an enormous potential for older people with communications barriers, which can be broken down by means of the adequate technological devices. In addition, telecommunications have an impact on this group's integration into an interrelated society. Of the countries covered in the report, Finland's telecoms market is the most developed in Europe with a telephone penetration rate of 96%[18].

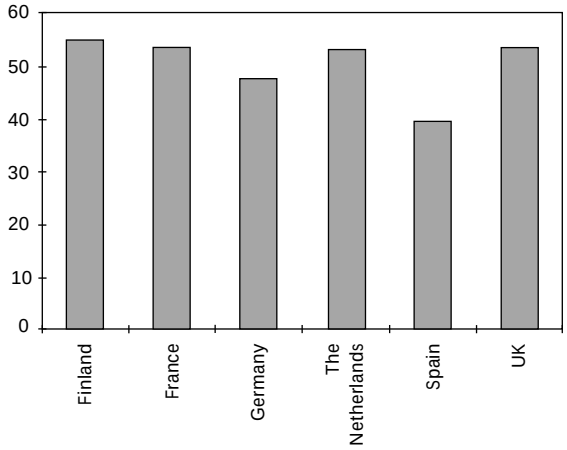
However the penetration of fixed telephony remains very high in all countries as can be seen in figure no. 6. With regard to older people the telephone remains very important, in particular for those living alone, to ensure regular social contact with relatives and friends.

The telecommunications network is proving to be a key element in the development of the overall information highway. With reference to Spain and its information technologies and older people, a special mention must be made of telecommunications, since the most widely spread services and those most largely within older people's reach are the services related to the telephone network[19].

18 Source: Statistics Finland
19 Source: Spanish country report pg. 29

figure 6

Total number of conventional lines
per 100 inhabitants - End 1997



Source: ESIS-ISPO

Table 1 shows the telecommunications network in Spain in more detail.

table 1

Telecommunications networks in Spain

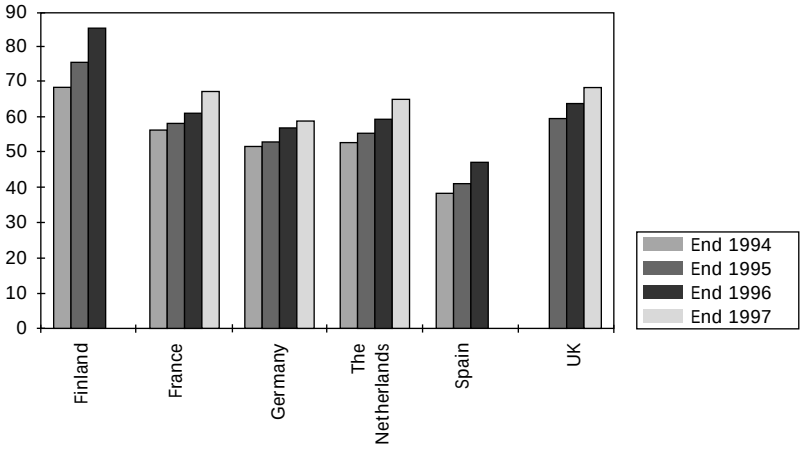
	1994	**1996**	**1997**
Conventional lines Number	14,685,400	15,4112,800	-
ISDN lines	5,392	96,040	-
Mobile phone lines	375,456	2,997,212	3,940,902
T.No.lines/100 Inha	38.4	47.2	-
% of ISDN	0.04	0.52	
%mobile phone l.	2.5	16.2	

Sources: Spanish Private TV operators. ASTRA Marketing Ibérica

Telecommunications networks are developing in all countries as can be seen in figure 7. With reference to ISDN connections there has been a significant growth in recent years and in particular in Germany. The German telecoms operator, Deutsche Telekom, has encouraged and subsidised the change over from analogue telephone connections to ISDN.

figure 7

Total number of lines (conventional, ISDN, mobile per 100 inhabitants - Evolution 1994 - 1997



Source: ESIS - ISPO

Since no specific data on the connection of older people to ISDN lines is available, we can only make assumptions. In most countries, ISDN lines are installed first of all in the business sector and secondly in the domestic sector for Internet purposes. Since most of the intensive Internet users are still within the 20-35 age group it may be assumed that very few of the currently installed ISDN lines are connected to older people's households. With the emergence of Euro-ISDN and the introduction of broadband communications services based on ATM (asynchronous transfer mode) more diversified basic services for electronic mail, video conferencing and multimedia services can be provided[20].

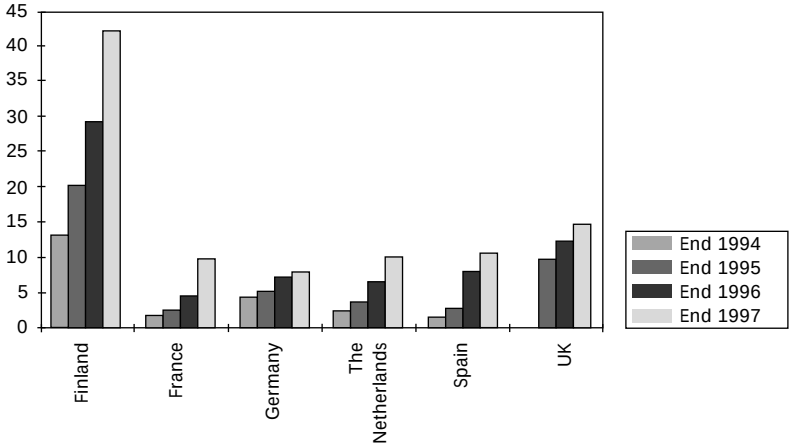
Mobile Telephony

All countries have experienced an increase in the use of mobile telephony in recent years, as can be seen in figure 8. No data on the penetration of mobile telephony among older people is available. However a three year survey carried out at an International Technology Exhibition by empirica GmbH in 1995, revealed that half of the respondents who were over 50 years old already used a mobile telephone. It is evident that this is a very select group, most probably business people, that is not a true representation of the general group of older people. In the Scandinavian countries and in Finland mobile telephony is much more integrated than in the rest of Europe. In Finland in 1997, 42 out of every 100 inhabitants owned a mobile phone!

20 Source: http://www.ispo.cec.be/g7/

figure 8

Total number of mobile phone lines
per 100 inhabitants - Evolution 1994 - 1997



Source: ESIS - ISPO

Minitel

The Minitel was first experimented with in France from 1982-83 and it was designed to address a large number of the French people and notably those isolated by geography or by age: free distribution via the network of the Agences France Télécom, an ergonomy close to that of the simplicity of the telephone[21] and a magnifier function for the visually impaired. There were 16.8 million users of the Minitel in 1996[22] using principally the services of local and administrative, transport, banking, mail order and weather information. Minitel services most strongly used by older people include home banking, administrative services, public service information and mail order.

If the Minitel remains the most widespread tool of access to ICT in France, representing in 1995 two times more households connected on-line than in the United States, the absence of a real industrial and marketing strategy has heavily penalised this experience. The opening to more advanced technologies such as the Internet and digital television will take place, in France, at the price of a progressive abandonment of the Minitel.

Cable networks

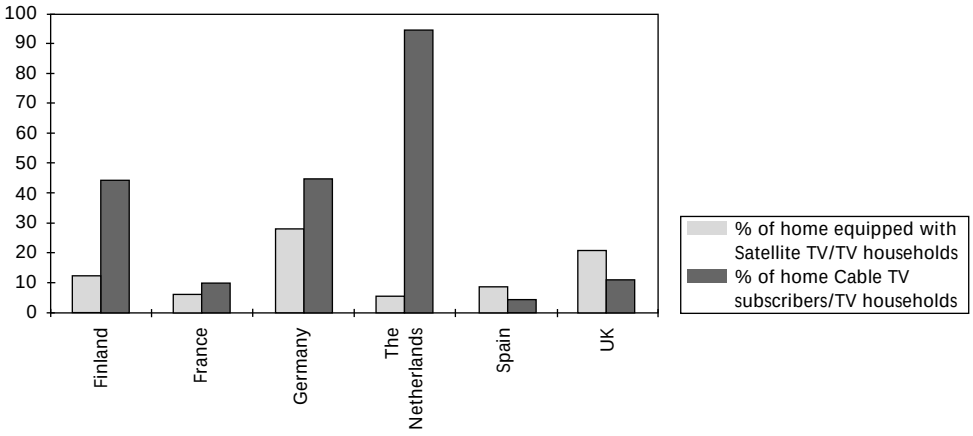
The highest penetration of cable connections is found in the Netherlands with a level of 94% as can be seen in figure 9. Germany has a penetration rate of 44%. With reference to older people in the 55+ age group within the six countries, the highest number of users of cable networks is in Germany, where this age group comprises 32.1%[23] of the total German usage of cable networks at home. However it is interesting to note that the 55+ age group in Germany also represents the highest number of users of cable networks at home for the whole country[24]. Spain has the lowest penetration level of cable networks out of the six countries with 3.6%, and

21 The Minitel keyboard was from the beginning alphabetical and not of the 'AZERTY' type, to facilitate access for people who had never used a typewriter.
22 Baromètre Minitel/Audiotel Télécom 1996.
23 Please refer to Eurobarometer 47.0, March 1997 in Annex II
24 Source: Eurobarometer 47.0, March 1997

18.0% of users of cable networks at home are over the age of 55 years. France has the lowest number of home users of cable networks amongst the 55+ age group with 15.5% of the total personal usage of cable networks in France.

figure 9

Cable and Satellite Television



Source: ESIS - ISPO

Satellite networks

The highest penetration of satellite networks is found in Germany with 27.6% and the lowest penetration is in the Netherlands with 4.7%, as presented in the figure 9 above. With reference to personal usage amongst older people in the six countries, Germany has the highest number of home users of satellite networks over 55 years, with 30.6%[25] of the total home usage of satellite networks in Germany. In comparison to other age groups in Germany, the 55+ age group in East Germany represent the highest number of users with 33.4%[26] of the total usage of satellite dishes in East Germany. The same age group represents 27.8%[27] of the total number of home users of satellite networks in West Germany. Of all the countries, Spain has the lowest level of home users of satellite networks amongst the 55+ age group with 12.7% of the total Spanish personal usage of satellite networks.

VCR/Teletext

Out of all the six countries, the highest number of older people over 55 years using a VCR at home is in the UK, with 24.3%[28] of the total number of home VCR users in the UK. The lowest level of VCR home users over 55 years is found in France with only 16.8% of the French national total of 74.3%. Both Finland and Germany have the highest number of teletext users at home in the older people age group with 26%[29] each. Spain and France have the lowest level of teletext for personal use among the over 55 age group with 15.1% and 14.3% respectively. The EU average for teletext users at home in the 55+ age group is 38%.

25 Please refer to Eurobarometer 47.0, March 1997 in Annex II
26 Source: Eurobarometer 47.0, March 1997
27 Source: Eurobarometer 47.0, March 1997
28 Please refer to Eurobarometer 47.0, March 1997 in Annex II
29 Please refer to Eurobarometer 47.0, March 1997 in Annex II

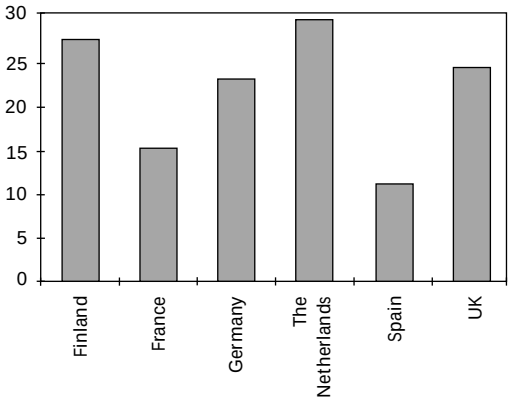
3.2 AVAILABILITY AND USAGE RATES OF THE FOLLOWING TYPES OF TERMINAL EQUIPMENT:

Computers

As mentioned earlier in the report, all countries have experienced a significant growth in the number of PCs. Latest figures show that the Netherlands has the highest number of PCs with a total of 29.5 per 100 inhabitants as can be seen in figure 10.

figure 10

Total number of PCs per 100 inhabitants - End 1997



Source: ESIS-ISPO

With reference to all six countries, PC usage at home is the highest in the Netherlands with a national average of 53.4%[30]. However with reference to the over 55 years age group, the highest level of personal PC usage is found in the UK with 12.2%[31] of the total UK PC usage at home. Germany and the Netherlands represent 11.4% and 10.3% respectively, for the 55+ age group of PC usage at home in each of their countries. France has the lowest level of computer usage at home amongst older people with 7.5% of the total French PC usage at home. The EU average for the 55+ age group is 11.6%.
Table 2 below shows PC usage in the UK among the different age groups according to the IT for All survey.

table 2

PC Usage in the UK

USAGE OF COMPUTERS ACROSS AGE GROUPS - 1996			
	ever used	used at work	have at home
45-54	40%	23%	31%
55-64	28%	6%	19%
65+	15%	0	14%
USAGE OF COMPUTERS ACROSS AGE GROUPS - 1997			
45-64	49%	24%	38%
65+	18%	1%	15%

source: IT For All survey 1998 (http://www.itforall.gov.uk)

30 Please refer to Eurobarometer 47.0, March 1997 in Annex II
31 Please refer to Eurobarometer 47.0, March 1997 in Annex II

The "IT for All" report in the UK highlights that over half of the 35-44 group shares their home computer with a child - an important driver of IT purchase - and so do 15% of the 45-64 computer owners. Also, working status is a crucial driver of access and interest in new technologies. The economically inactive older people who do not have much contact with children and younger generations are therefore the most difficult group to reach and interest in new technologies: the 65+ are least aware of the benefits of new technology (20% thought it is useful in their daily life), followed however by the 44-55 group (42%). These two groups also exhibited the lowest degree of interest in finding out more about new technology: 50% and 65% respectively. Clearly, fear of technology, which intensifies with age, also plays a strong part.

Televisions and other equipment

Televisions are present in almost all households with the highest national average of 99.3% in Spain and the lowest national average of 94.6% in France[32]. The penetration rates for older people are similar to the general population with for example in the UK 98.5% for the over 55 age group.

In the UK the following table compares ownership of telephone and television equipment for different age groups. Interestingly, this table shows that very young households are even less likely than older households to own a telephone. However, this is largely due to the fact that the youngest households tend to have no established credit history, move houses more often and therefore are less likely to own durable goods altogether.

table 3

PC Usage in the UK

Ownership of telephone and television equipment in the UK

% of households with...	**all**	under 30	30-50	50-65	65-75	75+
telephone	**93**	83	94	95	95	95
mobile phone	**16**	17	24	16	5	2
cable/satellite TV	**19**	17	27	18	9	6
television	**98**	97	99	99	99	98

source: Office for National Statistics, A report on the 1996-97 Family Expenditure Survey

According to results in the Netherlands from the CINOP study as can be seen in table 4, it also appears that the more traditional technical equipment like the television and the telephone are even more present in older households than in younger ones whereas it is clearly the opposite for the newer technical applications like the VCR, a CD player and the Personal Computer.

32 Source: European Marketing Pocket Book 1998, country reports

table 4

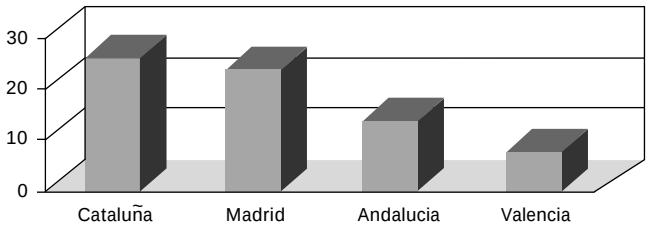
Electronic equipment in the household, by age group (%) in the Netherlands					
	<50	**50-56**	**57-63**	**64-70**	**18-70**
Audio/video					
TV with remote control	89	95	93	95	**91**
CD-player	92	87	76	67	**88**
TV with Teletext	76	89	82	82	**79**
Cassette player	85	82	72	68	**82**
VCR	79	82	67	55	**76**
digital radio/tuner	71	68	54	54	**67**
ICT					
PC	53	46	27	18	**47**
answering machine	26	20	12	7	**23**
electronic diary	12	11	5	5	**10**
Other equipment					
digital alarm clock	77	74	61	49	**73**
microwave	67	76	60	45	**65**
Size of sample	461	192	147	124	**924**

Source: CINOP 1997

3.3 ACCESS TO INTERNET SERVICE PROVIDERS

As mentioned already in the report, Internet usage has increased dramatically in Finland and the Netherlands in the last two years[33] and in particular in its usage at work. The Internet is the fastest growing of all ICT applications and is shaping the future of the information society. Finland has the largest number of Internet connections per capita in the world and Internet users, as a percentage of the total Finnish population, grew from 20.4% in November 1997 to 35% in May 1998[34]. Figure 12 shows the general penetration rates of the Internet in the six countries in December 1997. To date the lowest Internet penetration rates are found in Spain and figure 11 shows the percentage of Internet users in Spain by autonomous communities.

figure 11

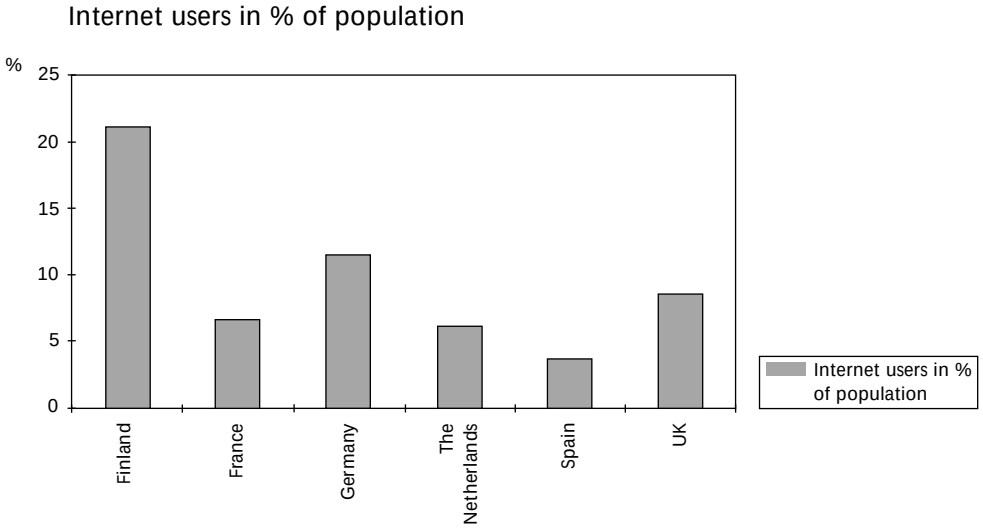


Source: EGM (http://www.arroba.es/aimc/html/inter/3i.html)

33 Please refer to figure 5 in chapter 2
34 Source: Nua Internet Surveys, Dublin, Ireland, http://www.nua.ie/surveys/

Cataluña is the Spanish autonomous community with the largest number of people who have access to and are users of the Internet. It is also a pioneering region regarding training in computer applications and the provision of telematics services for older people.

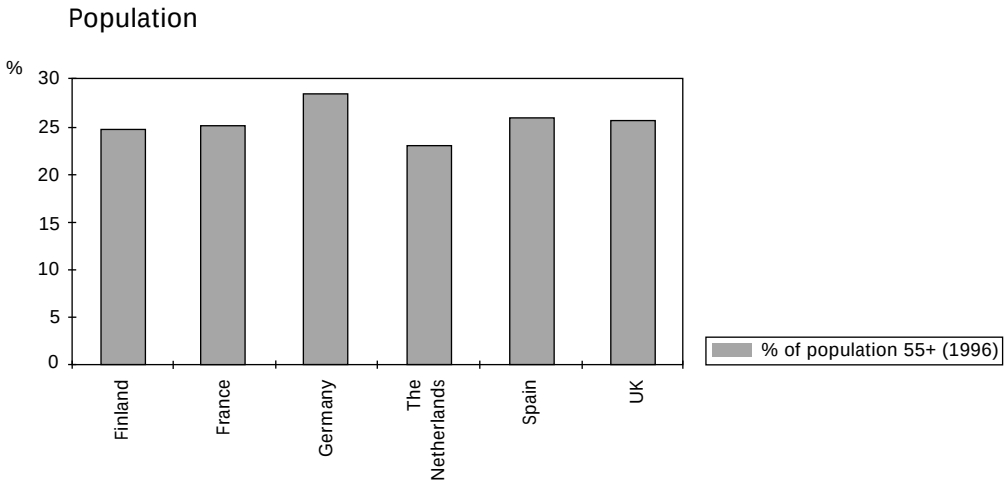
figure 12



Source: Gallup Media, NOP Research, GfK Gruppe, AIMC, NIPO. Compiled by Nua Internet Surveys (France, Germany, UK: Dec. 1997, Finland, The Netherlands, Spain: estimations for the same date)

However the majority of Internet users are young people and older people represent the minority in all countries. Therefore it is interesting to examine older people's access to the Internet in comparison to general Internet usage and to their representation in the whole population. In 1996, Germany had the highest number of people in the 55+ age group, with 28.4% of the total population, as can be seen in figure 13 below.

figure 13

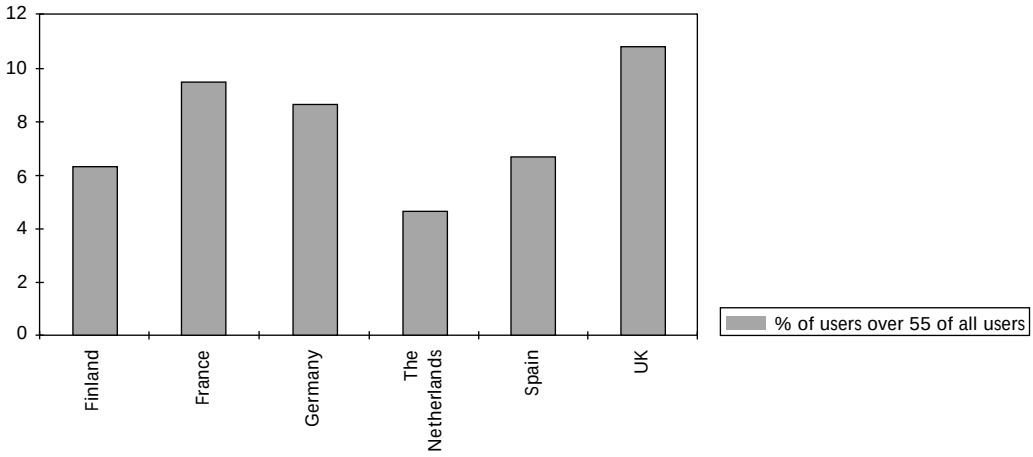


Source: The European Advertising and Media Handboek 1998

Internet usage at home for the age group 55+ has been selected for the statistics, as most older people do not work or use the Internet at work. The UK has the highest number of Internet users at home as can be seen in figure 14, with the over 55 age group representing 10.9% of all Internet users.

figure 14

Internet users over 55 in % of total users



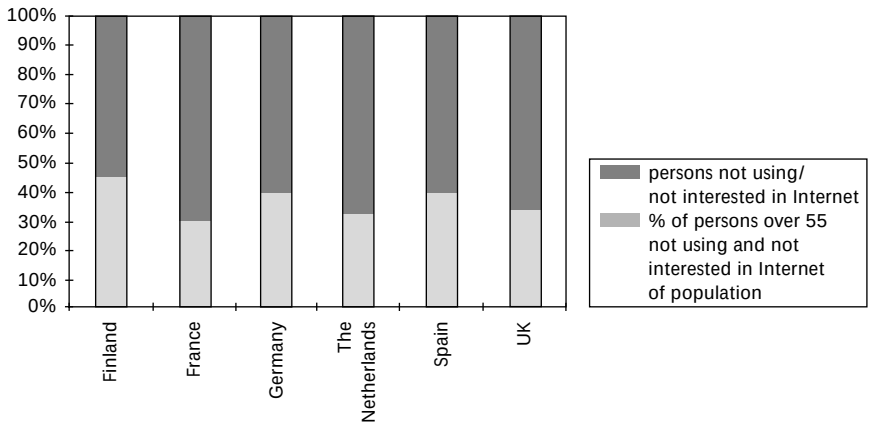
Source: Eurobarometer 47.0

Both the Netherlands and Finland have a lower percentage of Internet users at home in the over 55 age group in comparison to the other countries as is demonstrated in figure 14. However the methodology used in the Eurobarometer survey and the number of respondents who took part in the survey, must be taken into consideration when interpreting these results.

It must also be mentioned that the vast majority of older people who do not use the Internet are not interested in learning about it as can be seen from figure 15 below.

figure 15

% of persons over 55 not using and not interested in Internet



Source: Eurobarometer 47.0

Ironically it is in Finland, the world's leader in Internet connections per capita, that older people who do not use the Internet are the least interested in learning about it. Finally it is obvious that older people represent a minority of Internet users and will continue to do so in the future, unless they are better informed about the advantages of an Internet connection and how they can use it to help them in their daily lives. For example in Finland the primary reason for Finns to use the web is to gather information and the same goes for Spain as can be seen in the table below.

table 5

Services used in Spain

	x 1000	**%**
World wide web	862	77.7
Electronic mail	735	66.2
File transfer	426	38.4
Others	321	28.9

Source: http://www.el-mundo.es/navegante/diario/98

In the UK e-mail appears to be the most popular service among all age groups, as can be seen in the table below.

table 6

Internet usage by age, gender in the UK

	all	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**male**	**female**
e-mail	**23**	38	31	31	23	13	5	28	18
internet	**18**	38	24	23	14	12	2	24	12

source: NOP survey for IBM, 1997

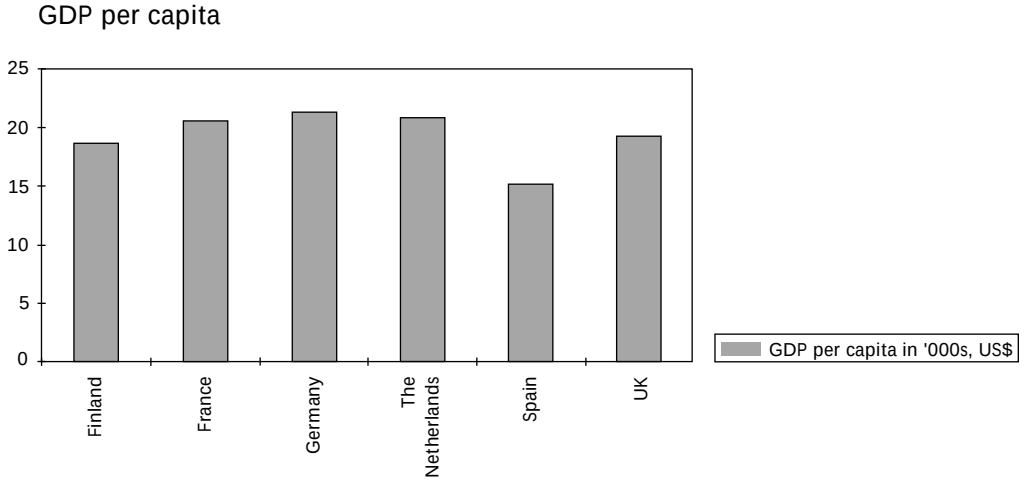
4 Cost barriers

4.1 FINANCIAL SITUATION OF OLDER PEOPLE

As this report focuses on people over 50 years of age, it is necessary to emphasise that there is a difference between active older people who are still working and in a position to buy ICTs due to their affluency, and older people who are over 65 years and after retirement are relying on state pensions to meet their daily financial needs.

The level of income of older people in Europe is very different. For many years in most countries retirement has meant a step back in income. Nowadays several developments have improved the financial position of many older people and has established a large group of well off older people. However at the same time there still remains a substantial group of older people, often older women, who live by themselves on an income level which can be described as close to poverty. As research[35] by Oftel and the Policy Studies Institute in the UK showed income is by far the single most significant barrier to ownership of information and communications technologies, it is important that the financial situation of older people is taken into account when examining the current barriers experienced in accessing the information society in Europe. Figure 16 below shows the GDP per capita for each of the six countries, and this gives a brief outline of the economic situation in each of the six countries. For more detailed information, please refer to the country profiles in Annex I.

figure 16



Source: European Marketing Pocket Book 1998

Retired people living on state pensions tend to be one of the poorest groups in society in some countries, for example in the UK. They spend the greatest part of their income on accommodation and food as is the case in the UK and Germany. The following are a few examples of state pensions received in the various

35 Oftel Market Research (1994). *Households without a telephone,* London.
Policy Studies Institute (1995). *To telephone ownership.*

countries and how there exist inequalities based on age and gender. Retired Britons who live on the very basic state pension in 1998 get ECU 101-110 (£68.80 - £75.00) a week; roughly 20% of the UK average weekly earnings[36]. In Finland there are continuing differences in living standards among pensioners, and the primary inequalities are based on age and gender and, naturally, the interaction between the two. On the one hand there are inequalities in income between the recently retired and older age groups. On the other hand women are more likely to live longer and are less likely to have full pension contribution records in employment and therefore, they are more likely than men to be poor in old age. In Spain the legal retirement age is 65 both for men and women and over half of retired Spanish people earn ECU 327.9 (55,000 PTA)/month[37] or less. As they get older, their income is reduced and there are striking differences according to gender, with women being in the lowest income levels[38].

In Germany older people who are not employed usually get their income through a pension, and individual pension-rates differ considerably. In 1996, approximately one third of all pensioners had a monthly pension at the level of ECU 1,065 (DM 2100). It is interesting to note that women tend to get somewhat lower pensions than men[39]. The average pension (calculated for an average earner who has paid his or her fee to the public insurance scheme for 45 years) in 1997 was at the level of ECU 1,001 (DM 1,975) in West Germany and ECU 853.1 (DM 1,683) in East Germany. Thus, East German pensioners receive on average approximately 85% of the income which is available to a West German pensioner.

4.2 COST OF EQUIPMENT

Computers

The cost factor is therefore recognised in all countries as a major barrier for older people in accessing new information and communication technologies. Before purchasing or using a new application older people will have to be well informed about the benefits that they will derive from it. For instance for an Internet connection; even though the costs in particular for the hardware, a computer and modem, have decreased considerably in the last ten years, the upgrading of PCs and the adding on of innovative applications has made the price of an up-to-date PC remain at around ECU 1,500. The evaluation of a series of Internet courses for older people in Rotterdam (TOER) identified the costs of hardware, telephone and on-line account as an important reason for not buying an Internet PC.

In response to this problem, Seniorweb in the Netherlands has offered for some time a special PC package for older people. The PC was at a reasonable price and included delivery and installation at home. A customer service contract was included to cover the first year after purchase. This type of offer overcomes the barrier of actually having to go to a computer outlet, where marketing and services are mainly aimed at younger people. However, in spite of the large interest raised by the Seniorweb offer it was discontinued because of fast changes in computer prices.

The ageing organisation Age Concern Liverpool in the UK has received funding through the National Lottery to develop an Active Age Centre[40]. The lottery grant is for ECU 874,739 (£592,000) and the centre will feature a Friendly

36 Labour Market Trends, May 1997, table 5.6
37 data relative to 1993
38 Fundación Caja de Madrid
39 see Globus, 27.10.1997, fig. Nc 4457
40 Source: UK country report pg. 26

Information Technology Suite with 15 computers where older people can gain computer skills in a friendly atmosphere. The centre will also benefit from other funding and from an in-kind donation of land from the city council.

Lack of sufficient information

As already mentioned there is a growing number of well off older people. In many cases this specific group could afford to buy new equipment, but are often hesitant about doing so, as is shown by a recent CINOP[41] study in the Netherlands. The results found that 10% of people who indicated not wanting to use a computer in the future did this for cost reasons which was the third highest deterrent to computer use. (First was knowing no application of use 43%, second was for reasons of difficulty in use 19%).

Therefore it is not only the cost of the equipment but also a lack of information when purchasing new equipment, that presents a barrier to older people in accessing the information society. Older people need to be well informed about the advantages of new services for example an Internet connection. Then if older people recognise the benefits and learn to value the services, then the price that has to be paid for access becomes comparatively low.

In comparison, in the United States far more older people have obtained an Internet connection than in Europe. Microsoft[42] estimates that about 18% of people over 55 now use the Internet and this is mainly due to the e-mail application. The rapid growth of e-mail among the younger generation has also given older people an insight into this new tool for very efficient and cheap communications. Research into older people and the information society in the USA will be carried out during the course of this project, and the results will be published in a later report.

4.3 COSTS FOR ACCESS TO TECHNICAL INFRASTRUCTURE AND SPECIAL TARIFFS FOR OLDER PEOPLE

Telecommunications

There are only a few opportunities for older people to get special tariffs in accessing information and communication technology, and they are all in the area of telecommunications. Some of these offers are not particularly aimed at older people but usage studies then show that in reality many older people make use of them.

The telecommunications market in Europe has been officially liberalised in full since 1 January 1998, and this should be an advantage to the consumer in the future, with a reduction in telecommunications prices anticipated. As the MART study states: “Reductions in telecommunications, terminal and service prices can all be significant forces in driving the market”[43] and here they are referring to special reductions for older and disabled people.

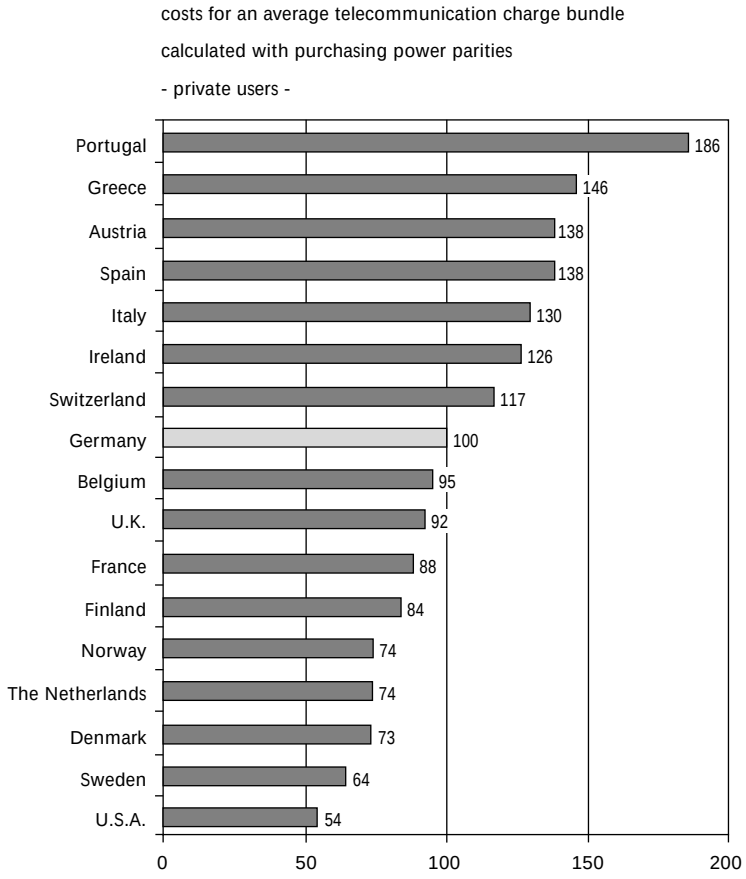
Figure 17 shows telephone costs for private users where a price index for an average telecommunications charge bundle (calculated with purchasing power parities) has been calculated for different countries. Germany has been given an index value of 100. Although in Spain Telefónica offers the lowest rates in Europe for local calls, its international calls are much more expensive and as a result its

41 Doets, C. & Huisman, T. (1997). Digitale vaardigheden. De stand van zaken in Nederland. CINOP; ’s Hertogenbosch.
42 Microsoft survey 1997
43 MART, report 4.1 pg.46

telecommunications services for private users are among the most expensive in Europe. Telecommunications prices in Finland are considerably below the average for industrialised countries, as can be seen in figure 17. Finally in the Netherlands private users can access telecommunications services at the lowest price out of all the six countries.

figure 17

Telephone costs for private users



Source: Globus, 19.1.1998

The UK and the Netherlands offer special tariffs for older people and Germany offers social tariffs which are of benefit to older people. For example Deutsche Telekom has introduced a 'Social Tariff' which gives people from the lowest income range a telephone connection for only 40% of the normal monthly rate of ECU 12 (DM 24,50).

Oftel, the telecommunications regulatory body in the UK, has encouraged telecom operators in Britain, to introduce policies to keep low income users on their networks, and this often includes older people. British Telecom (BT) in the UK offers a number of special service and discounts for disabled people and households with payment difficulties. Older people in the UK are also likely to benefit from these services. For instance, a low cost 'incoming call only' connection would

cost only ECU 14 for the connection fee and ECU 13.6 for quarterly rentals, and could save people from giving up their connection to save money. Apart from this there is a *light user scheme* for people who call for less than ECU 16 per quarter. Users of text phones get a reduction of 60% off their call charges. Especially for older and disabled customers BT runs a *Protected Services* scheme where participants are not disadvantaged when unpaid bills are due because of, for example, a prolonged hospital stay.

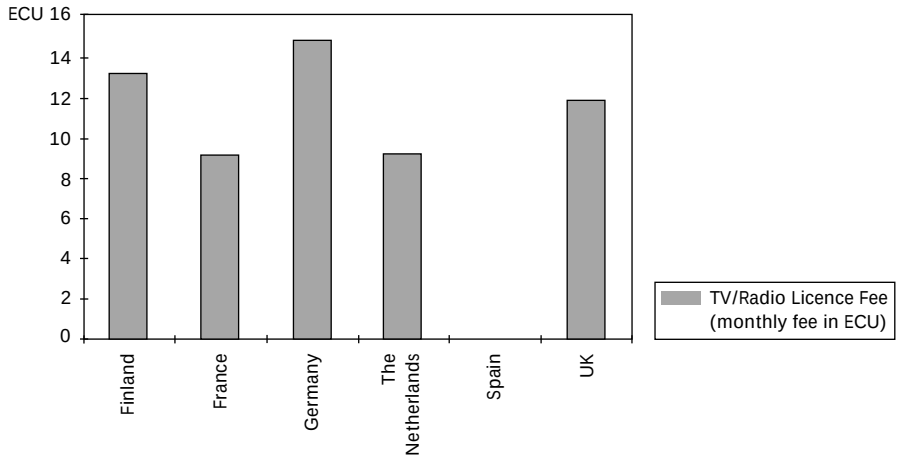
In the Netherlands the subscription costs for telephone connections are divided into three categories. Older people who keep their telephone connection and who will be contacted mainly by others, may opt for the possibility where the monthly subscription fee is low whereas the units are a little more expensive. In this way older people can save money.

Television and Radio

There are no special tariffs for older people in reference to television and radio licence fees, except in Spain where there are no licence fees at all, as can be seen in the figure 18 below.

figure 18

Costs for access to TV/Radio



Source: European Marketing Pocket Book 1998,

Spain does not have licence fees for public radio and television

Out of all the six countries Germany has the most expensive television and radio licence fees.

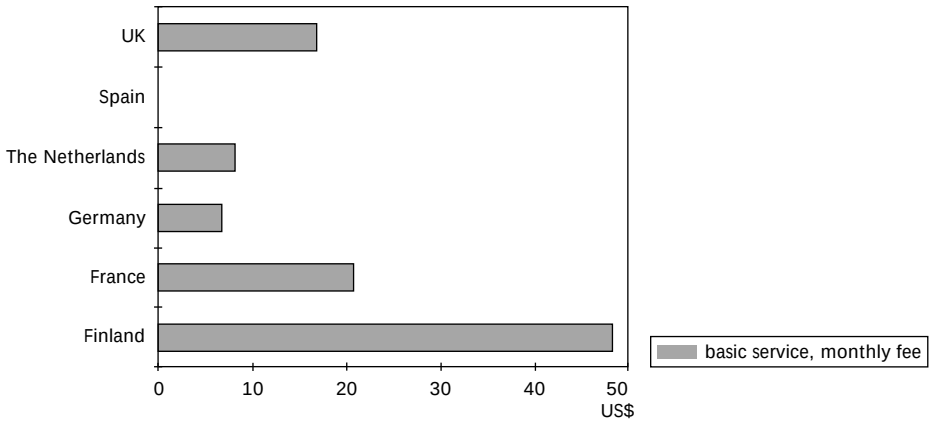
Cable Television

Figure 19 presents the cable television pricing for basic services in the six countries. Germany provides the cheapest services with US$ 7.44 per month and Finland is the most expensive for a cable television subscriber. However in Finland the prices range from US$ 23.1 to US$ 82.5 for a basic service per month[44] for connected households, depending on the amount of individual households connected and whether it is in an apartment building.

44 Source: OECD Communications Outlook 1997, pg. 130

figure 19

Cable television pricing, 1995



Source: OECD, Communications Outlook 1997, Data for Spain not available

Digital Television

In France, Germany and Spain digital television has already been introduced and in the United Kingdom it is expected to happen in the near future. The costs involved in digital television are however considerable and are a real barrier for older people. The price of a digital TV set in the UK will be over ECU 1500 and the alternative of a set top box would be some ECU 300. In addition, there is the subscription fee to the service package which in France is between ECU 15 and 23 per month depending on the package of channels you select, and it is possible to rent the decoder which costs ECU 8 per month. In the UK prices for digital services have not been formally announced, but they are expected to be around ECU 264.7 a year in subscription fees. In the UK special interest groups are already actively campaigning to ensure that the possibilities of digital television are used to improve access for older people, for example in choosing a font type for subtitling that can be easily read by those with poor vision. However when taking the financial requirements into consideration, it means that access for the majority of older people will be very limited.

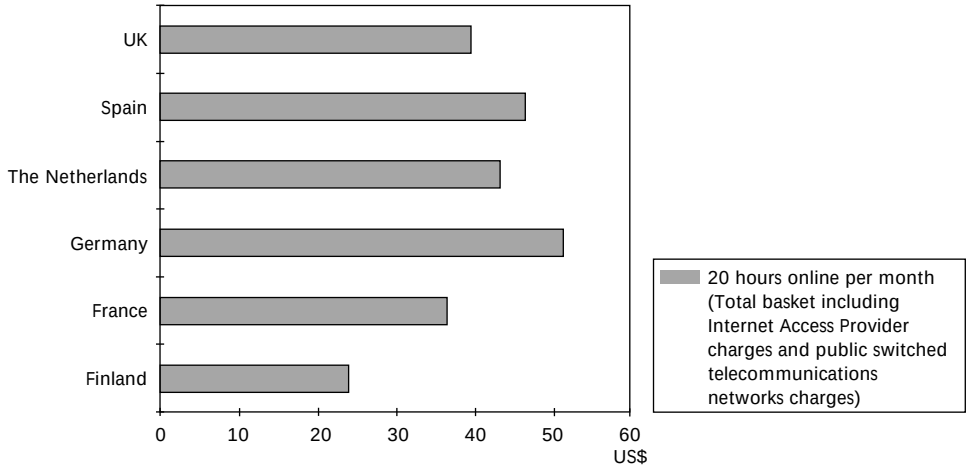
Internet subscription

Internet subscriptions vary between the countries and depend on the telecom company or the cable operator in question. However there are no special tariffs for Internet subscriptions for older people. Figure 20 shows the off-peak Internet access basket for the six countries with Finland offering the lowest rates with US$ 26.13 for 20 hours access per month. In reference to the UK, Videotron, a cable communications company, allows its customers to call other Videotron subscribers, which include a number of IAPs (Internet Access Providers) at no charge during off-peak hours[45]. However Videotron is not included in the OECD average for the UK in figure 20 below.

45 Source: OECD Communications Outlook 1997, pg. 116

figure 20

Off-peak rate Internet access basket, August 1996



Source: OECD, Communications Outlook 1997

The following are a few examples of Internet subscription fees amongst the various countries. In Finland the costs of providing the Internet connection vary a lot depending on the telecom company used. PersonalEunet represents the standard fees in Finland, with a subscription fee of ECU 41.3 (FIM 249) and the monthly payment is ECU 6.07 (FIM 36,60). In the UK most Internet providers charge a flat fee for unlimited access, which can be as low as ECU 17.36 (£11.75) plus call charges (Demon Internet), others charge a usage fee and a monthly fee, such as ECU 7.39 (£5) per month plus usage fee (BT Internet). In most cases in Spain there is no fee to register with Internet service providers, otherwise rates charged range from ECU 11.9 - ECU 29.8 (PTA 2,000 - 5,000) which include a month's service with no time limit. In the Netherlands a fixed rate for access to the Internet through the local cable operator costs around ECU 45 per month, including e-mail address and WWW access. Because Internet access through cable does not need a telephone connection this can mean a considerable cost saving to frequent Internet users.

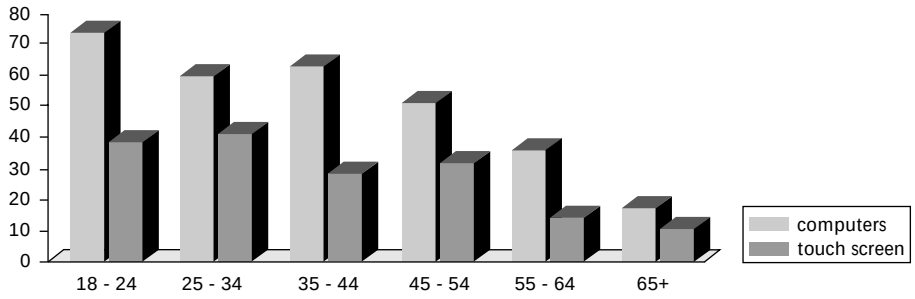
However when referring to Internet access, it must be remembered that it is not just the fees to the Internet providers that have to be paid. One of the main cost barriers to the Internet is the purchase of an Internet capable computer, which once again is out of reach for many older people.

Information kiosks

All electronic information kiosks offered to the public to date are free of charge. Most of the initiatives that include the installation of electronic information kiosks are on an experimental basis as a new way of delivering information. In the UK public kiosks (also known as touch screen terminals) are particularly common in the transport and travel industry. Despite their ease of use and inexpensive nature (they are usually publicly-owned), awareness and usage of touch screen terminals is even less common than computers' across all ages in the UK as can be seen in figure 21.

figure 21

Usage of ICT by age group in the UK



Source: NOP survey for IBM, June 1997

In Amsterdam, the local authorities, together with several business partners, have installed outdoor public Internet terminals in several central squares in the city. By inserting the regular telephone card access is given to the World Wide Web and e-mail can be sent. However, there are no statistics available on how many older people use these terminals.

5 Media/computer literacy

Access to the information society for older people is not just inhibited by cost barriers. Media and computer literacy are key factors in determining the access of older people to the evolving information society. This chapter will present the problems that older people face in relation to ICT and the solutions that have been developed so far in order to overcome these obstacles.

5.1 EDUCATIONAL BACKGROUND

As can be seen already from the report, older people's access to information and communications technologies is very much based on their economic and social environment. General education varies greatly among older people, not only depending on their age but also on the country in which they live. For example in Spain there is a substantial percentage of older Spanish people who have never learned to read or write. A large proportion of this group has never completed primary education and women make up the largest part of this illiterate population[46], thus reinforcing the gender problem. For this group computer literacy is even further away, as learning how to read and write is their first priority. On the other hand, in such a situation multimedia computers are used to help illiterate people with reading and writing programmes.

5.2 LANGUAGE BARRIER

Language is a very important barrier to access to ICT, and in fact this counts not only for older people. Particularly in Germany, France and Spain, the general knowledge of English is not sufficient to feel at ease with the software and hardware vocabulary, the Internet general language and the jargon that is practically all in English. For example in Spain, regarding language used in Internet documents, only 1.78% of them are written in Spanish, while two thirds are in English and almost one third is in German. Software that has been translated into different European languages still uses terminology taken directly from English.

5.3 ATTITUDES OF OLDER PEOPLE TO ICT

There have been three interesting research studies into the current awareness and literacy of older people and ICT, in the UK, in the Netherlands and in France.

In the UK, the IT for All initiative[47] found that attitudes to new technologies vary considerably according to age and sex, and segmented the sample according to their approach to ICT. Five different categories were created:

Enthusiasts	17%
Acceptors	25%
Unconvinced	23%
Concerned	17%
Alienated	18%

46 INE: Census 1991
47 Source: UK country report pg. 5

The Concerned and Alienated clusters are mainly made up of older people (45+) and are predominantly female. Where the Concerned still keep a desire to remain up-to-date and are worried about being left behind, the Alienated are very little aware of IT and its use, and show little interest in becoming more involved. The latter group have the oldest age profile.

In the Netherlands, the CINOP survey[48] asked people not owning a certain device if they would have liked to buy it but did not do so, because the purchase and / or use of it would be too complicated. Fourteen percent of the respondents replied that this was the case for a PC and 9% found the VCR too complicated. Even though many people already own a PC or VCR, around 23% and 12% respectively never use it because it is too complicated for them. The CINOP research also reported that in the Netherlands almost half of the population has difficulty working with a PC. Among the young age groups, this is just more than a third, but for the oldest age group (64-70 years) this was over 80%.

The CINOP study[49] in the Netherlands also highlighted the fact that not only do many people not know how to use ICT applications like a PC, Internet, a VCR or a cash withdrawal machine, but that they think that being able to use this application is important. In this sense one could speak of a 'shortcoming' in this field. The figures presented were quite astonishing: 60% of the respondents experience some or large shortcomings with the PC and more older than younger people experience this shortcoming. For the VCR, 25% find it important to be able to use a VCR but did not have the skills to do so. In this case there was almost no difference between young and old.

Other research in the Netherlands has shown that the age of 70 is a turning point for having an interest in ICT. This group has less interest, a lower level of education and a substantially lower income than their younger counterparts. All respondents in this research complained about the lack of information, training, user-friendliness and the costs and content of ICT applications.

A consumer survey by CREDOC[50] in France shows that among older people there is a potential interest in multimedia and its applications. Interest in new possibilities for communications, education, leisure activities and home shopping were recognised in particular as can be seen in table 7. On the other hand the survey showed that only a few older people acknowledged the usefulness of the Internet in these services and in fact the largest percentage, over 18%, of these people said they did not know of what benefit the Internet could be to them.

48 Source: the Netherlands country report pg. 15
49 Source: the Netherlands country report pg. 16
50 Source: French country report pg. 14

table 7

What consumers think they can do more often at home in the coming years with computers and their new applications in France

possible uses.....	Multi-media			Internet		
	55-64 years	over 65 years	**total pop.**	55-64 years	over 65 years	**total pop.**
communication	21.7	4	**27.5**	4.4	3.2	**8.3**
information	6.9	7.6	**9.1**	2.2	3	**5**
telecommuting	12.4	11.6	**22.9**	2.8	2	**5.6**
home purchase	37.7	39.5	**39.4**	7	2	**5.6**
reserving transport	10.7	0	**7.4**	0	0	**0.5**
don't know	11.3	14.5	**6.5**	18.7	18.4	**11.9**
working at home	7.8	4	**4.4**	N/A	N/A	**N/A**
training	14.3	22.9	**23.1**	N/A	N/A	**N/A**
entertainment	26	11.6	**19**	N/A	N/A	**N/A**
everything	0	0	**1.8**	N/A	N/A	**N/A**
learning computing	N/A	N/A	**N/A**	0	0	**0.3**
following sport	N/A	N/A	**N/A**	2.4	1.2	**3.5**
self cultivation	N/A	N/A	**N/A**	5.1	6.1	**7.1**

Source: CREDOC, consumer survey 1996

In France CREDOC also concluded that practices relating to the use of ICT are much more linked to generation than to age. Thus older people use primarily the media of information that they discovered when they became adults, for example mail is the media preferred by older people in distance purchasing. Older people feel a certain apprehension in relation to the new technologies, notably those which are the most publicised (Internet for example), but they know how to make use of equipment corresponding to their real needs, like television remote controls.

5.4 TECHNICAL BARRIERS

There are some technical barriers which hinder the access of older people to ICT. Many older people are physically disabled in one form or another and require equipment which is designed according to their specific needs. Availability of suitable equipment is a crucial factor in making the information society accessible to all citizens. In this context, application of the "design for all" principle on the part of the telecommunications industry can make mainstream equipment accessible to a larger number of people, and thus increase the market for new services. In the UK[51] the needs of those with hearing and vision difficulties have been recently brought to general attention by pressure group such as DIEL (the Advisory Committee on Telecommunications for Disabled and Elderly People) and COST219 (an EU pressure group involving Age Concern in Britain), who are concerned that these needs are addressed during the design phase of new terminal equipment and interfaces such as touch screen terminals, digital TV sets, Electronic Programme Guides and so on. These groups point out that better design of general services can minimise the need (and cost to society) for special equipment.

51 Source: UK country report pg.8

5.5 GENDER ISSUE

Not only do older women have a lower educational level and a lower level of financial resources, they also have less interest in ICT in comparison to their male counterparts. Men have had more opportunities and more support in getting to know about new technology whereas women are less confident and more sceptical towards it. This is mainly due to the history of the current generation of older people where men have often worked outside the home and therefore learned more about technological development and IT, whereas women have taken care of the household and family. However, at the same time women are more prepared to learn from others such as through a course, which would explain the higher number of female participants in most of the PC courses for older people so far. Men prefer to try to work their way through something new by themselves and in fact ICT allows this self-teaching method.

It would be interesting to research which older people overcome the barriers to access ICT nowadays. This group may already have a wide social contact and a fairly large input of information and is thus seeking to reinforce it's current position. Or on the other hand the motivation for overcoming the barrier may come from a group that seeks to compensate for a certain lack of information input and social contact.

5.6 LACK OF INFORMATION

In the case of older people, a general lack of knowledge concerning the use of new technologies appears to be a major reason for avoiding use of ICT. In turn, older people tend to have prejudices against new media and often do not see the necessity of getting in contact with new services.[52]

To some extent there are reservations on the part of older people referring to ethical aspects related to new media. Many older people refuse to get in contact with new services because they claim that they contain ethically dubious information, e.g. pornography[53]. As mentioned in chapter two of this report, television, radio and newspapers are the most popular forms of media among older people. Therefore it is more difficult for older people to believe what they read on the Internet, when they have had a lifetime experience with their highly reliable traditional media sources.

5.7 RAISING AWARENESS AND TRAINING

At present it is not yet clear to many older people what ICT precisely is, even though most of the time they are facing and using it every day. First of all, older people need to be informed about the development of the information society in Europe and about the benefits of the new ICT services and applications which are being developed to their daily lives. Then older people need to be trained to use IT efficiently so as to achieve its maximum potential.

52 see Neufeld 1998, German country report pg. 20
53 see Trautwein 1998, German country report pg. 29

An example of such an approach is the 'IT for All' campaign[54] which was started in the UK in 1996. The initiative aims to promote awareness of ICT and increased usage among the general public. In co-operation with the private sector and voluntary organisations, it sets up several "gateways" for people to be introduced to ICT.

Raising awareness is however not a task which has to be taken up solely by an institutionalised structure such as through a government educational campaign or through the national education system. A very important part of this educational work will in fact be carried out by the social community around older people, such as their children and grandchildren, and above all by the pioneers in their peer groups, who have already introduced ICT into their lives. Without any real research carried out in this field many older people who are now for instance connected to the Internet indicate that it was their grandchildren that stimulated and showed them the first steps. The training programmes that have been organised so far for instance in Finland (Stakes) and the Netherlands (Seniorweb) have shown that education by peers, and other enthusiastic older people, is the most successful way of passing knowledge onwards.

Finally, a remarkable but possibly quite effective way of raising interest in ICT was put into practice in the BBC soap series "Eastenders". The oldest character in the series becomes a frequent user of the Internet and uses it to discover some uncomfortable truths about her son.

5.8 INITIATIVES TO IMPROVE ICT LITERACY

In many countries the concept of Life Long Learning is slowly being integrated into the educational policies and it is hoped to include training courses in the use of ICT by older people in the future. It seems to be important to develop new learning strategies, e.g. according to the concept of life-long learning, in order to win over older people as users of new information and communication technology[55].

Furthermore, study and use of the Internet offers an excellent antidote against dementia and helps to maintain mental skills.

In all countries of study apart from France, there have been several opportunities for older people to learn about ICT. However these initiatives have been taking place on a very small scale and are very fragmented with regards to time and place. The next section focuses on a few examples of courses especially designed to introduce older people to ICT in the different countries.

In the Netherlands several courses have been set up for older people to learn how to deal with new technological devices in general including PCs and the Internet. A very successful initiative was the start of a technological practice centre in Rotterdam (TOER)[56] where training is given in TV/VCR/hi-fi, microwave, PC (Windows and Internet), electronic payment and telecommunications (telephone programming and answering machine). All courses are booked well in advance and are positively evaluated by its participants. However it is true these type of courses are still quite rare, and hardly ever have a long term financially secure position to guarantee continuity.

54 Source: UK country report pg. 5
55 see Stadelhofer 1998, German country report pg. 29
56 Source: Netherlands country report pg.17

Seniorweb in the Netherlands has set up and trained a network of 250 voluntary 'ambassadors' to set up courses in their own local environment. Together with local sponsoring and facilities offered by libraries, schools and other welfare organisations it looks as if Seniorweb has found the ideal infrastructure for setting up such courses, locally integrated and co-ordinated on a national level.

In Germany since the beginning of this year a non-profit organisation (Verein Senioren und Seniorinnen in der Wissensgesellschaft e.V) supported by the Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie (Federal Ministry of Research) and various private companies has run a mobile Internet café which is available on request for demonstration and training purposes. This initiative is specifically aimed at older people, and the computer equipment has been installed within the so called Senior-Info-Mobil[57] (a two-level omnibus). Additionally, a further computer network is available which can be used inside buildings. Interested communities and ageing organisations can request the equipment together with training staff for a week's stay.

Another example of the increasing number of private initiatives in Germany which aim at supporting people in using computer technology in an honorary capacity, is Peter's Senior Page[58]. This is a private home page providing information to older people on how to use a computer in general and how to utilise the Internet in particular.

In the UK, apart from courses and initiatives by the National Initiative for Adult Continuous Education, the BBC has engaged itself in a campaign entitled "Computers don't bite"[59]. Although the campaign is not aimed at older people in particular, the BBC has identified them as a core group to involve, and is promoting the initiative with indents close to programmes targeted to an older audience. Some 20% of the total number of people that called the information number featured in the promotion were over 55 years old. Through familiar celebrities, some of them over 55, information is offered to the target audience about events in their neighbourhood that can introduce them to ICT, - so called "taster sessions". In several corners of the country special taster sessions buses were visiting outlying villages and regional centres to reach people who could not normally experience IT in their daily lives.

As a follow up to the initiative taken by the Finnish organisation STAKES[60] to start a computer course for older people, the national association -Enter ry- was founded to speak up for older people in the information society and to make sure their voice is heard in further developments and decision taking.

In Finland the general computer course is more institutionalised since the introduction of the Finnish Computer Drivers Licence[61]. Approximately 10% of the FCDL holders are over 50 years of age. Currently this Computer Drivers Licence is being translated for implementation in many other European countries with the assistance of the European Commission.

57 Source: German Country report pg. 18
58 http://www.albnet.de/~pk1/senioren2.htm
59 Source: UK country report pg. 24
60 http://www.stakes.fi
61 Source: Finnish country report pg.19

In Spain in 1997, Fundació "La Caixa"[62] initiated introduction courses to Informatics and Internet for retired people in collaboration with Universitat Oberta de Catalunya, UOC (Catalonia's Open University). At present, the Fundació has 27 informatics classrooms scattered all over Spain. It was expected that by June 1998 about 3,000 people would have attended courses through these classrooms.

62 http://www.lacaixa.es/fundacio

6 Content of new services

In general there appear to be few services particularly for older people in the area of ICT. However the question also is, are special services really necessary for older people? There has been very little research on the opinion of older people regarding the content offered by ICT, probably because there are only very few older people active in ICT to date.

It is however likely that offering special content for older people may help them to overcome the initial barrier of gaining access and "having a place to go" or "feeling at home / among their peers" in the beginning. As soon as they are more at ease with the application they will become users like any other user; using ICT as a tool to enlarge their own interests and hobbies and to communicate in this new way.

In 1996 in the Netherlands the research bureau Willems and van Wildenberg[63] carried out a study on the interests of older people regarding the content of ICT. The research showed that the interest of older people in the "electronic highway" is mainly in services with a relationship to the "real world". Virtual services such as games were in fact described as being a negative result of the digital revolution. Apart from this, local content came out as being much more appealing than global or national content.

6.1 SPECIAL SERVICES FOR OLDER PEOPLE

In all countries some services have been especially targeted at older people. The following are some examples from the different countries of new and existing services which assist older people in coping with everyday life.

Seniorweb

New services based on the Internet include Seniorweb which was launched in the Netherlands in 1996 and in Germany in 1997.

Seniorweb[64] in the Netherlands was established by the Netherlands Platform for Older People and Europe, the National Committee of the Day of Older People and the Netherlands Institute of Gerontology. Its aim is to improve the social participation of older people by using information and communication technology. Part of their on-line activities is the maintenance of a website by and for older people. Off line Seniorweb is involved in establishing courses for older people on the use of the computer and the Internet. It offers *shopping pages* (Winkelweb) and several types of news on older people's issues and Seniorweb itself. In addition "*Webcontact*", is a facility to get in contact with others using Seniorweb. E-mail discussion lists, links to other relevant websites, leisure activities and much more are offered on Seniorweb. The popularity of Seniorweb was highlighted by the total number of visits which exceeded 50,000 during the trade fair for 50+ people in September 1997. This made the Seniorweb site the most popular site of all Dutch NGOs.

63 Willems & van den Wildenberg bv (1996). *Haalbaarheidsstudie 'Ouderen en de elektronische snelweg'.*
64 http://www.seniorweb.nl

In Germany Seniorweb[65] is a non-profit service which is supported by the Bundesministerium für Familie, Senioren, Frauen und Jugend (Ministry of Family Matters, Senior Citizens, Women and Youth). It is closely related to BAGSO (Bundesarbeitsgemeinschaft Seniorenorganisationen / National Working Group of Senior Organisations). It offers chat groups, TV tips and book reviews. It presents other services to older people such as travel services, timetables for events and offers support services, for example in the area of further education. It also gives links to many other important information sources.

TURTLE Project

In the area of teletext an interesting project know as the TURTLE project[66] has been implemented in the north eastern city of Newcastle in the UK, and has been very effective in the area of transport information technologies over the past nine years. The TURTLE concept, as developed by a consortium of public and private bodies, aimed to demonstrate the viability of affordable, real-time public transport information for the widest possible cross-section of the community, both in the home and in the street. Their task was made easier by the changes to broadcasting regulation that occurred during this period. Technological infrastructure became available because of the award of Newcastle's first cable franchise in 1989, giving the area possibly 70 extra teletext channels. The first trials of the service were carried out using the teletext format, chosen mostly for its popularity and large installed base, but the success of the Internet led to an additional service being run on kiosks and the world wide web.

At all stages consultation was encouraged with the relevant parties, including older and disabled people, who contributed significantly to the development of designs and interfaces. Users were extremely satisfied with the results: 91% said that they would use TURTLE on teletext again in the future, while 89% felt confident in using it on kiosks in the future. TURTLE has provided a model for public service provision utilising new technology which is now being tested for other services.

HÁBITAT Project

In Spain one of the very few projects identified which envisages the use of the new technologies in order to improve the living conditions of older people is the HÁBITAT Project[67]. The project is still in progress; at present they are carrying out the fieldwork, therefore the results cannot be anticipated yet.

The HÁBITAT Project is part of the PITER Project, *Proyecto Integrado en Tecnologías de la Rehabilitación* (Integrated Project on Rehabilitation Technologies), within the III R&D National Plan. The project is sponsored by different organisations and companies, and implies a qualitative, technological and service-related leap which goes beyond the present conception of distance care. The project's aim is to integrate different telematics systems now available on the market (digital telephony, mobile telephony, video conference, remote detection, cable services etc.) in order to provide a number of services (basic services: advanced distance care, environment control, the administration at home; and complementary services: telecatering, distance leisure activities, teleshopping etc.) with a view to improving the living conditions of disabled people and older people, by meeting their needs easily and at affordable prices. Likewise, the project is open to the new technologies and services which are gradually appearing on the market. Therefore this project is a model of integration in the information society and a service which goes beyond and extends the concept of distance care.

65 http://www-ispi.psychologie.uni-bonn.de/bagso/bagso.htm
66 Source: UK country report pg. 27
67 Source: Spanish country report pg. 44

Minitel Services

As already mentioned in chapter three of this report, the Minitel remains the most widespread tool of access to ICT in France. Three minitel sites are targeted at older people and are as follows[68]:

- 3615 PAST, a site created by the National Syndicate of Gerontology, which offers legal, tax and social information to older people;
- 3615 3X20 ANS, a fairly complete directory of retirement homes and clubs for older people;
- 3615 BLEU BONHEUR, a site for home shopping operated by a mail order enterprise specialised in older people.

Grannie's Corner project

In Finland a project known as Grannie's Corner (Mummon kammari)[69], has become the leading recruiter of volunteer workers in the social and health sectors in the city of Tampere over the last nine years. In 1995, the Grannie's Corner´s help exchange provided services for 4,000 people in need of assistance in private households. With this background Grannie´s Corner started its courses on computing skills for older people. Grandpa's Net Garage takes place on Fridays, and the success has been huge. As a result of the courses older people, most of whom are over 60 years of age, started their own on-line magazine with the help and support of the local media company Aamulehti[70].

University of the Third Age

The University of the Third Age deserves special mention as it encourages learning in later life and offers new services to older people. For example in Finland, the University of the Third Age, Ikäihmisten yliopisto or Ikääntyneiden yliopisto[71], is a learning co-operative of older people which enables members to share many educational, creative, social and recreational activities. At the moment there are nine universities offering education for older people in over 30 municipalities. Recently the University of the Third Age of Helsinki started IKIS Internet, a series of courses on Internet services, which have proved to be very popular.

LILL network

In Germany the European network LILL[72] (Learning in later life) is a co-operation of universities, continuing education institutions, universities of the third age and other institutions from 18 European countries which deal with science-orientated training for older people. It was initiated by the ZAWiW (Zentrum für Allgemeine Wissenschaftliche Weiterbildung / Centre for General Scientific Continuing Education) at Ulm university. It provides an overview of relevant addresses and offers relevant studies from different European countries as well as information on new publications and relevant meetings. A working group called "Seniorinnen / Senioren im Internet" (Seniors in the Internet) has been initiated.

68 Source: French country report pg. 8
69 Source: Finnish country report pg. 17
70 http://www.aamulehti.fi/mummonkammari/lehdet/uusi
71 Source: Finnish country report pg. 18
72 http://www.uni-ulm.de/LiLL

7 Conclusions

Very little research has been done in the area of older people and ICT in all the countries, mainly because the whole concept of the information society has only become a topic of debate in recent years and younger people have been much more interested and active in this area. However as all countries are experiencing an ageing population, it is obvious that older people and ICT is an area that needs to be further researched in the future, so that concrete results can draw more public support to this debate.

Economic, social and cultural differences among the six countries affect not only older people's attitude towards ICT, but also their access to the emerging information society. Even regional differences within the same country, for example in Spain, where Cataluña and Madrid are much more advanced in the development of ICT than the rest of the country, act as a barrier for all people in accessing the information society.

In the UK, income is by far the most important barrier to ownership of information and communication technologies, however in other countries such as the Netherlands, the lack of insight into the usefulness of new applications seems to be a greater barrier to purchase. In Germany the 55+ age group represents the highest number of users of cable networks at home for the whole country, thus proving that the income level of older people is not always the main barrier to ICT applications. Telecommunications is the only area where older people get special tariffs in accessing ICT, and the UK offers a number of services in this area.

Technical infrastructure is still very different among the six countries. However a few basics are definitely within reach of older people, such as televisions and fixed telephony, which have a very high penetration in older households. The convergence of the Internet with the television would lead to a considerable improvement in the Internet literacy of older people. However the introduction of WebTV in Europe has not taken place yet and in the meantime the practical use of a television is very different to that of a PC. Very few older people possess a PC and even in the Netherlands, where there exists a high penetration rate of computers, 50% of the over 55 age group who do not use a computer at home or in their leisure time are not interested in learning how to use a PC.

General literacy, especially in Spain, is a barrier that older people must first overcome before computer literacy can be achieved. In addition language is a major barrier in France, Spain and Germany, as the majority of Internet documents and computer jargon is in English. The design of terminal equipment and interfaces, proves to be a barrier in particular for older people who are physically disabled.

Gender is also an issue, as older men have a higher level of education, a higher level of financial resources and are more interested in new ICT applications in comparison to their female counterparts. Therefore special attention needs to be paid to older women in order to ensure equal access to all in the older age groups.

The attitude of older people to ICT is an important factor to take into consideration when examining their access to the information society. Most older people are not interested in new ICT services as they do not know the benefits that

these services will bring to them. Therefore there is an urgent need to raise awareness of the usefulness and practice of ICT applications among the older age groups, as the information society will profoundly change the daily lives of everyone in society, including older people.

Training programmes for older people appear to be more successful when they are tailor made for that particular audience, for example taking their background, learning speed and social context into account when designing a course. In all countries apart from France training courses have been introduced however, all current practice is on an ad hoc basis, with temporary financing. Therefore an infrastructure is required where the expertise gained from existing courses for older people and ICT is used to assist in the organisation of new courses so that similar mistakes are avoided, for example through the establishment of a national co-ordinating body.

The public authorities have always had a strong influence on ICT in France, with the introduction of the Minitel in the early 1980s. However they have a specific vision of older people and have pushed the supply of services towards fulfilling the needs of assistance and dependence much more than those of personal consumption and interactivity.

Finally even in Finland, which has one of the most developed telecoms market in Europe, technological advances and international competitive capacity have been the priority before the special needs of older people or the contents of services.

Europe is experiencing a demographic change and the population is ageing. Society has to recognise this fact and take appropriate measures in order to ensure that this sector of the community is not isolated through the development of the information society. Older people are capable of learning new ICT applications. However the various barriers as described in this report would first of all have to be overcome, before older people's participation in the information society will reflect their percentage of the total population.

In order to ensure that older people participate actively in the European information society, it is important that more research is carried out in order to determine the needs of older people and the content of services offered by ICT, that could be of particular interest to older age groups. There is also a lack of knowledge among older people concerning the use of new technologies, and this sector of society needs to be better informed of the possible benefits of the information society.

Telecom companies, cable operators and Internet providers should be encouraged to take older people into consideration when deciding their policies regarding costs for access to their technical infrastructure. There is also a lack of statistical information regarding older people's usage of ICT in all of the countries studied, and this is an area that needs to be further researched in the future. Furthermore, more research needs to be carried out into the design of equipment in the ICT industry in Europe.

Until now many non-governmental initiatives have been established regarding the training of older people and ICT. However there is a need for more support at national and European level. What are the policies and initiatives of the different governments on developing the information society within their own countries? Are older people taken into consideration when new policy is being formulated? Are older people represented in practical governmental initiatives? Are initiatives at EU level designed to ensure equal access for all to the information society? To what extent will policy and legislation help to overcome the access barriers for older people identified in this report?

The above mentioned questions will be examined in the second phase of this project, and the results will be published in the following project report.

Bibliography

- Abellan, A. (Coord.): *Envejecer en España. Manual estadístico sobre el envejecimiento de la población*. Madrid: Fundación Caja de Madrid, 1996.
- Aberson, D. (1997). *Eindrapportage Project Feedbackgroepen*. Seniorweb; Utrecht (not published).
- Ackermans, M. (1997). *Digitaal voor late beginners. Kennismaking met computers en nieuwe media.* Boom;Amsterdam.
- Anunci de Teleline (del grupo Telefónica) intentant trencar el mercat dels ISPs. *Revista WEB.* Marzo 1998.
- Babayou, P. La consommation en 1997, vers le cyber consommateur. *Cahiers de Recherche* CREDOC, May 1997, no. 99.
- Baromètre Minitel / Audiotel 1996 (most recent available), France Télécom.
- Bouchayer, Françoise & Rozenkrier, Alain. Les implications réciproques du vieillisement de la population et des évolutions technologiques. *Revue Française des Affaires Sociales*. special edition October 1997.
- Bouchayer, Françoise & Rozenkrier, Alain. Technologies, vieillissement et vie quotidienne: l'émergence d'un nouveau champ de recherche. *Gérontologie et société*, no. 79, 1996.
- Brouns, M.L.M. (1998). Leeftijd en sekse in een digitale wereld. *Facta, 1*, p.6-8.
- BT *The BT Guide for Disabled People* 1998 / 99.
- Bundesministerium für Wirtschaft (Hrsg.): *BMWI Report: die Informations-gesellschaft*, Bonn 1997.
- Caradec, Vincent. Usage des technologies et vieillissement. In: Programme évolutions technologiques, dynamique des ages et vieillisement de la population, premiers résultats *Cahiers de recherche de la MIRE*, no. 1, April 1998.
- CBS (1998) *Statistisch Jaarboek 1998.*
- Colectivo IOE / IMSERSO / CIS: *Cuidados en la vejez. El apoyo informal.* Madrid: Ministerio de Trabajo y Asuntos Sociales. Instituto de Migraciones y Servicios Sociales, 1995.
- Collerie de Borely, A. L'innovation technologique commence à séduire les seniors., "Consommation et Modes de vie", number 124, CREDOC, February 28, 1998
- Cornella, Alfons "¿Incrementa Internet la productividad?". *(ExtraNet)*. Marzo 1998.
- Cornella, Alfons "Economia de la información: pero ¿Cuántos somos en España?". *(ExtraNet)*. Enero 1998.
- *Cursusboek. Ouderen achter de PC.* Unie KBO (1997).
- *Cursusboek. Ouderen en Internet.* Unie KBO (1997).
- Deibel, R.G. (1997). *Ouderen gaan Europees. Lijnen van Nederland naar Europa over ouderenbelangen en ouderenbeleid.* Nederlands Platform Ouderen en Europa;Utrecht.
- Department for Trade and Industry and Information Society Initiative "*Read all about IT*" December 1996.
- Department for Trade and Industry and Information Society Initiative "*The Latest Findings Concerning Attitudes Towards IT*" January 1998.
- Deutscher Bundestag (Hrsg.): Medienkompetenz im Informationszeitalter. Enquete-Kommission "Zukunft der Medien in Wirtschaft und Gesellschaft. Deutschlands Weg in die Informationsgesellschaft." Bonn 1997.
- Developing a Finnish Information Society. Decision in principle (1995) Council of State, Finland. Painatuskeskus. Helsinki.

- Developments in Education 1992-1994. Finland (1994) International Conference on Education. Forty-fourth session, Geneva, 1994. National report from Finland by the Ministry of Education. Painatuskeskus. Helsinki.
- DIEL (The Advisory Committee on Telecommunications for Disabled and Elderly People) *Information Pack* 1998.
- Doets, C. & Huisman, T. (1997). *Digitale vaardigheden. De stand van zaken in Nederland.* CINOP's Hertogenbosch.
- El número de usuarios en Internet se ha triplicado desde 1996, según la AIMC". *Diario El Mundo.* Febrero 1998
- Empirica gmbh: Trends in the use of mobile communications – implications for personal mobile telecommunications. First results from a three-year survey at a major international technology fair, Bonn 1995.
- Encuesta Internet. *EGM/AIMC*. Noviembre 1997.
- *Entrevista a Florenci Bach:* "La llamada local subirá pero luego bajará". Revista WEB. Marzo 1998
- Epinay, Bénédicte. Les seniors, un marché, pas un eldorado. *Les Echos* June 27, 1997.
- España es el duodécimo país del mundo en usuarios de Internet. *Diario El Mundo.* Enero 1998.
- Estado de las T.I. en España. *Revista PC World.* 1998.
- European Information Technology Observatory (EITO) 98, Frankfurt / Main 1998.
- Finland in Figures (1997) Statistics Finland. Oy Edita Ab. Helsinki.
- Finland´s Way to the Information Society. The National Strategy and its Implementation (1996). Ministry of Finance. Oy Edita Ab. Helsinki.
- Freitas, Diamantino & Gjöderum, John: Mobile Telephony. In: Roe, Patrick R.W. (ed.): Telecommunications for all. Cost 219, Luxembourg 1995, pp. 137-157.
- Fundació "La Caixa": *Servicio de Información para Personas Mayores. Libro de bolsillo de Punto Azul.* Barcelona: Fundació "La Caixa", 1998.
- Gascon, P. Los mayores en Internet. *60 y MÁS,* Nº 153, enero 98, pag. 24 a 28. Madrid. Ministerio de Trabajo y Asuntos Sociales. Instituto de Migraciones y Servicios Sociales. 1998.
- Globus Kartendienst GmbH, 1997-1998, Hamburg.
- Grajczyk, Andreas, Klingler, Walter & Zöllner, Oliver: Fernsehverhalten älterer Menschen. Daten zur Fernsehnutzung 1997 der ab 50jährigen, in: Mediaperspektiven 4 / 98, S. 190-205.
- Hakala, Juha (ed.)(1996): State-of-the-Art of Information Technologies in Finnish Libraries. Automation Unit of Finnish Research Libraries. Helsinki University Library.
- Heinonen, Olli-Pekka (1995): The Role of Education and the Research in the Future in Finland. In: Lehtisalo, Liekki (ed.): Sivistyksessä Suomen tulevaisuus. Culture and Education - the Future of Finland. Ministry of Education. Helsinki.
- IBM UK "*The Net Result: Social Inclusion in the Information Superhighway*", 1997
- IP. (1997) *Television 97 European Key Facts.*
- Jokitalo, Päivi (1996): Tiedot talot. Internetin käyttöönotto Suomen yleisissä kirjastoissa 1995. Suomen Kirjastoseura. BTJ Kirjastopalvelu Oy. Gummerus. Saarijärvi.
- Joven, soltero, calvo e informado: así es el internauta español, según el EGM". *Diario El Mundo.* Febrero 1998.
- Kamp. M. van der & Scheeren, J. (1996). *Functionele taal- en rekenvaarigheden*

van oudere volwassenen in Nederland. Max Goote Kenniscentrum;Amsterdam.
- Kirjastojen tietotekninen tulevaisuusskenaario 1997-2006 (1997) Helsingin yliopiston kirjasto. BTJ Kirjastopalvelu Oy. Gummerus. Saarijärvi.
- Kuluttajat ja multimediapalvelut (1997) Digitaalisen median raportti 1 / 97. Teknologian kehittämiskeskus. Paino-Center Oy. Sipoo.
- Kuntapuntari 3 / 97 (1997) Tietoyhteiskunta. Tilastokeskus, International Business Center. Oy Edita Ab. Helsinki.
- Kuntapuntari 4 / 95 (1995) Liikenne ja tietoliikenne. Tilastokeskus, Lähialuepalvelut. Painatuskeskus. Helsinki.
- La PYME española se acerca poco a INTERNET. *Revista PC World.* 1998
- Lehtisalo, Liekki (ed.)(1995): Sivistyksessä Suomen tulevaisuus. Culture and Education - the Future of Finland. Ministry of Education. Helsinki.
- Les enjeux du multimedia. *Futurible,* no. 191, October 1994,.
- Llistat de proveïdors internet, amb preus / velocitats / serveis. *Revista WEB.* Marzo 1998.
- LUNTZ RESEARCH. "The Digital Citizen". *Revista Wired*. 1998.
- Malbosc, F., Dost, F., Blancher, P. 1994. Innovation technologique et émergence d'un nouveau service urbain: la téléassistance. Economie et humanisme research.
- Maña, F. *"L'ús i els usuaris de la informació electrònica a Catalunya: Una aproximació a l'estat de la qüestió"*. Barcelona: Institut Català de Tecnologia, 1997.
- Mart 1.2: Final report on: Telecommunications Requirements of Assistive Technology Applications. Dublin: Work Research Centre 1995a.
- Mart 2.2: Final report on: The Existing and Emerging Telecommunications Situation in Europe of Importance for Assistive Technology Applications. Dublin: Work Research Centre 1995b.
- Mart 3.1: Final report on: Social Policy - Issues of Importance for the Telecommunications-based Assistive Technology Marketplace and Strategic Options for the Future. Dublin: Work Research Centre 1995c
- Mart 4.1: Final synthesis report: Prospects for a European Market for Telecommunications-based Applications of Assistive Technology. Dublin: Work Research Centre 1996.
- Megy, Corinne. Le vrai visage des seniors. *Pleine Vie* / Editions Taitbout Communications, Paris, 1997.
- Meyer, Sibylle & Schulze, Eva: Sind Technik und ältere Menschen "kompatibel" oder: was wollen eigentlich die Nutzer? In: Erkert / Salomon (Hrsg): Seniorinnen und Senioren in der Wissensgesellschaft, Bielefeld 1998.
- Meyer, Sibylle & Schulze, Eva: Technikfolgen für Familien, Berlin 1993.
- Meyer, Sibylle; Schulze, Eva & Müller, Petra: Das intelligente Haus – selbständige Lebensführung im Alter, Frankfurt / New York 1997.
- Ministerio de Trabajo y Asuntos Sociales. Instituto de Migraciones y Servicios Sociales: *Centro Estatal de Autonomia Personal y Ayudas Técnicas* (CEAPAT). Madrid (folleto): Ministerio de Trabajo y Asuntos Sociales, 1998.
- Mollenkopf, Heidrun: Soziale Akzeptanz, in: Erkert / Salomon (Hrsg): Seniorinnen und Senioren in der Wissensgesellschaft, Bielefeld 1998.
- Moussis, N. *Handbook of the European Union*, 3rd revised edition, 1996.
- Neufeld, Hildegard: "Lebenslanges Lernen" aus Sicht einer Seniorin, in: Erkert / Salomon (Hrsg): Seniorinnen und Senioren in der Wissensgesellschaft, Bielefeld 1998.
- NOP Solutions *Electronic Government - UK* unpublished NOP fieldwork for Charles Barker Plc UK.

- Nurmela, Juha (1997): Suomalaiset ja uusi tietotekniikka. Katsauksia 1997 / 7. Tilastokeskus. Yliopistopaino. Helsinki.
- Office for National Statistics "*British Households are Getting Connected*." November 1997.
- Office for National Statistics "*Family Spending; a report on the 1996-1997 Family Expenditure Survey*." London 1997.
- Oftel *Telecommunication Services for People with Disability: a Consumer Guide* 1997.
- On the Road to the Finnish Information Society (1997) Statistics Finland. Painocenter. Helsinki.
- Poquet, Guy. Le pouvoir et le role économique des plus de cinquante ans. *CRE DOC*, November 1996.
- Resolución de 26 de marzo de 1.998 de la Secretaria General Técnica. *Boletín Oficial del Estado nº 97*. 23 de abril de 1998.
- Rijsselt, R.J.T. van & Weijers, T.C.M. (1997). *Ouderen en de informatie-samenleving. Een verkenning van opvattingen over aansluiting en uitsluiting.* Den Haag;Rathenau Instituut.
- Rijsselt, R.J.T. van & Weijers, T.C.M.(1997). *Uitsluiting van ouderen - de dreiging verkend -. Evaluatie van de hoorzittingen.* Den Haag;Rathenau Instituut.
- Rochefort, Robert. Revenus et consommation des retraités. *Gérontologie et société*, no. 76, Le marché des seniors, 1996.
- Rodrigues, P. (coord.): *Teleasistencia Domiciliaria. Evaluación del Programa IMSERSO/FEMP*. Madrid: Ministerio de Trabajo y Asuntos Sociales. Instituto de Migraciones y Servicios Sociales, 1996.
- Sólo el 1,78% de los documentos que hay en Internet están escritos en español. *Diario El Mundo*. Enero 1998.
- Spérandio, Jean Claude et al. Impact du vieillissement des persons handicapées ou non sur l'utilisation d'objets techniques. In: Programme évolutions technologiques, dynamique des ages et vieillisement de la population, premiers résultats *Cahiers de recherche de la MIRE*, no. 1, April 1998.
- Stadelhofer, Carmen: Neue Kommunikationstechnologien und ältere Menschen, in: Erkert / Salomon (Hrsg): Seniorinnen und Senioren in der Wissensgesellschaft, Bielefeld 1998.
- Statistisches Jahrbuch für die Bundesrepublik Deutschland 1997, Stuttgart.
- Suomen tilastollinen vuosikirja 1997 - Statistical Yearbook of Finland 1997 (1997) Statistics Finland. Volume 92 (new series). Karisto. Hämeenlinna.
- Target Group Gmbh: Mc online monitor 1995 und 1996, Nürnberg 1996.
- Technologie au quotidien, Actes de l'Atelier COST A5 Paris, February 8 and 9, 1995. *Gérontologie et société,* no. 75, 1995,
- The Ageing Population and Technology: Challenges and Opportunities", ETAN Working paper, DG XII / AS-RTD actions, February 1998.
- The Information Society in Finland. The Information Strategies of the Ministry of Education and Their Implementation (1997) Erweko Painotuote. Helsinki.
- Trautwein, Reinhardt: Schöne neue Welt – eine gute Welt?, in: Erkert / Salomon (Hrsg): Seniorinnen und Senioren in der Wissensgesellschaft, Bielefeld 1998.
- Tuominen, Kirsti (1997): Children, Libraries and Information Technology. Results of User Need Analyses. The Association of Finnish Local and Regional Authorities. Kuntaliiton painatuskeskus. Helsinki.
- Työssä käyvän aikuisväestön tietotekniikan perusvalmiudet ja koulutustarve (1993) Tietotekniikan kehittämiskeskus ry. Tietotekniikan liitto. Helsinki.

• Un marché économique et politique, les systèmes de sécurité pour personnes agées. Economie et humanisme research, 1990.
• Warnik, J. & Kanters, E. (1998). *Ouderen en het Internet. Verslag van de expertmeeting 6 maart 1998).* TOER;Rotterdam.
• Willems & van den Wildenberg bv (1996). *Haalbaarheidsstudie 'Ouderen en de elektronische snelweg'.*
• Worldwide Way to Wisdom. Developing information networks in Finland (1997) Ministry of Transport and Communications Finland, Information Network Unit. Lönnberg Oy. Finland.

Statistics

All statistics are compiled by the EIM based on the following sources:

CIA World Fact Book 1997
European Marketing Pocket book 1998
Flash Eurobarometer 49 (1995)
Eurobarometer 47.0 (1997)
ESIS-ISPO
The European Advertising and Media Handbook 1998
Nua Internet Surveys
OECD, Communications Outlook 1997

Annexes

ANNEX I: *Country profiles*

	Finland	France	Germany	The Netherlands	Spain	UK
Area in sq.km.	338,145	543,965	356,974	41,526	504,750	244,100
Pop. in million	5.132	58.495	81.34	15.566	39.27	58.39
Pop. per sq.km	16.8	107.5	229.2	457	77.8	240.9
Capital	Helsinki	Paris	Berlin	Amsterdam	Madrid	London
Pop. of Capital	516 000	2.2 million	3.5 million	742,000	3.0 million	7.0 million
Regions	6	9	7	5	8	9
Population by region	South 26.0% South West 25.2% South East 14.4% West: 13.8% East: 9.6% North: 10.9%	Region Parisienne: 17,3% Nord-Picardie: 12.9% Champagne-Alsace: 9.5% Normandie-Bretagne: 8.5% Touraine-Charentes: 10.7% Bourgogne-Auvergne: 8.3% Alpes-Jura: 9.7% Provence-Languedoc: 13.6% Pyreness-Aquitaine: 9.5%	Hamburg/Bremen/Schleswig-Holstein/Niedersachsen: 15.8% Nordrhein-Westfalen: 21.9% Hessen/Rheinland-Pfalz/Saarland: 13.6% Baden-Württemberg: 12.6% Bayern: 14.7% Berlin: 4.3% Mecklenburg-Vorpommern/Brandenburg/Sachsen-Anhalt: 8.7% Thüringen/Sachsen: 8.7%	Amsterdam/Rotterdam/The Hague & Surrounds: 14.8% Noord Holland/Zuid Holland/Utrecht (West): 29.5% Groningen/Friesland/Drenthe (North): 10.5 Overijssel/Gelderland/Flevoland (East): 20.7% Zeeland/Noord Brabant/Limburg (South): 24.5%	Barcelona Metropolitan: 9.8% North East: 11.4% East: 14.1% South: 20.4% Madrid Metropolitan: 12.7% Center: 9.6% North West: 11.5% North: 10.5%	London: 22.0% Anglia: 6.5% Southern: 8.1% Wales/West & Westward: 10.2% Midlands: 15.1% Lancashire: 13.3% Yorkshire: 10.7% Tyne Tees: 5.0% Scotland: 9.0%
GDP (ECU billion)	112.22	1,409.32	2,149.03	358.38	533.61	1,033.19
Per capita income (ECU/year)	16,567	18,388	19,819	17,750	13,017	17,750

Source: The Media Map of Western Europe 1997, European Marketing Pocket Book 1998

ANNEX II:

Home/leisure usage of ICT in the 55+ age group and the national average usage (%)

Home/Leisure age of	EU average (55+)	**Finland** average 55+		**France** average 55+		**Germany** average 55+		**The Netherlands** average 55+		**Spain** average 55+		**UK** average 55+	
Cable	23.6	28.9	21.5	7.9	15.5	57.2	32.1	92.2	24.6	5.6	18.0	11.5	21.1
Satellite	13.0	20.5	15.7	4.8	24.5	35.0	30.6	4.8	21.3	7.2	12.7	20.8	14.5
VCR	54.9	69.1	20.2	74.3	16.8	66.7	23.8	75.4	18.9	74.0	19.8	87.6	24.3
Teletext	38.0	62.4	26.0	7.9	14.3	56.7	26.0	74.5	24.3	40.0	15.1	65.1	22.3
Internet	1.5	9.5	6.3	2.0	9.5	4.4	8.7	10.7	4.7	1.8	6.7	5.9	10.8
Computer	11.6	33.6	9.0	19.4	7.5	26.2	11.4	53.4	10.3	23.9	8.5	37.6	12.2

Source: Eurobarometer 47.0, March 1997

ANNEX III:
Members of the advisory council

1. Country correspondents

Finland:	Eija Mäkinen, Helsinki
France:	Cyril Kretzschmar, Economie et Humanisme, Lyon
Germany:	Lutz Kubitschke, empirica Gesellschaft für Kommunikations-und Technologieforschung mbH, Bonn
The Netherlands:	Prof. Herman Bouma, Scientific Director, Institute for Gerontechnology, Eindhoven
Spain:	Lluisa Marrugat, c/o Fundacio CIREM, Barcelona
UK:	Cristina Murroni, Programme Director, Media and Communication Institute for Public Policy Research (IPPR), London

All of the above correspondents wrote the reports for their own countries, except for the Netherlands where the country report was written by Josephine Dries (NPOE).

2. Project partner representatives

EIM (European Institute for the Media)

Penny Campbell:	Project co-ordinator, researcher
Rosemarie Gilligan:	Researcher

NPOE (Netherlands Platform for Older People and Europe)

Josephine Dries:	Project co-ordinator, researcher
Ger Tielen:	Project advisor

3. PROMISE project representatives

Kevin Cullen:	Work Research Centre, Dublin Co-ordinator of the PROMISE project
Christine Marking:	Eurolink Age, Brussels Member of the PROMISE project consortium

4. Other Representatives

Heidrun Mollenkopf:	Deutsches Zentrum für Alternforschung (DZFA), Heidelberg

ANNEX IV:
Useful Links

General
http: / / www.eurolinkage.org / euro
http: / / www.eurosenior.org
http: / / www.seniors.com
http: / / www.seniornet.org
http: / / www.seniornet.se
http: / / www.seniors.yahoo.com
http: / / www.eurag.org
http: / / www.ThirdAge.com

UK
http: / / www.ace.org.uk
http: / / www.communities.org.uk

Germany
http: / / www.seniorweb.de
http: / / www.uni-ulm.de / uni / fak / zawiw
http: / / www.seniorennet.de
http: / / www.uni-ulm.de / LiLL

The Netherlands
http: / / www.seniorweb.nl

France
www.senior-planet.com
www.burgundy.net / ji /
www.55net.com
www.poivresel.collegebdeb.qc.ca

Spain
http: / / www.seg-social.es / imserso / discapacidad / docs / i-discea.html
http: / / www.personal.redestb.es / jo.tor / index.htm
http: / / www.lacaixa.es / fundacio
http: / / www.once.es
http: / / www.pangea / fcesplai / pla
http: / / www.gero.net /
http: / / www.cambrecat.es / secot

Finland
http: / / www.helia.fi / plaza / apc-seniorit /
http: / / www.stakes.fi / apc-seniorit /
http: / / www.tieke.fi / tieke / ajokortti / eng / english.htm
http: / / www.stakes.fi / cost219 /
http: / / www.vn.fi / vn / vm / tyk / english.htm
http: / / www.lib.hel.fi / tiedontalo / english /
http: / / www.reg.fi / epere / english / mummo.htm