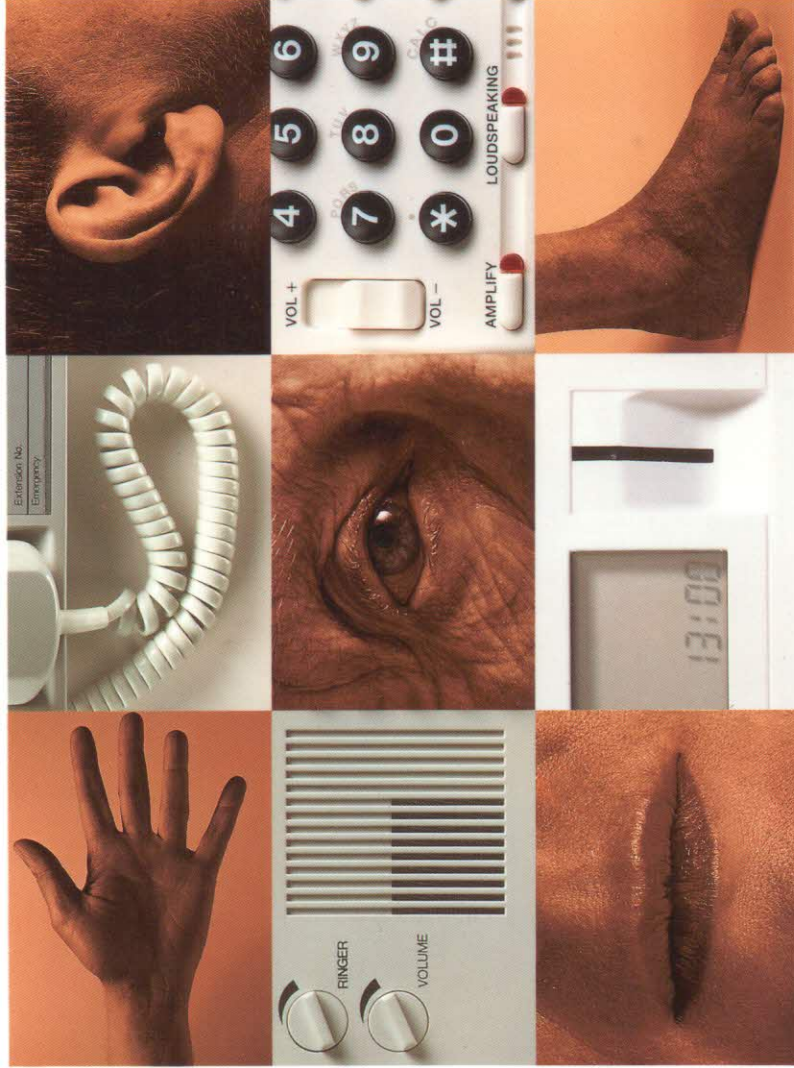


# THE FORGOTTEN MILLIONS



Access to  
telecommunications  
for people with  
disabilities

## Preface

Elderly and disabled people form a very significant proportion of the telecommunications market, yet the industry has largely ignored their needs. By the year 2020, a quarter of the population of Europe will be over the age of 60 and many will face some degree of difficulty in using conventional telecommunications equipment. At the same time, they will have increasing disposable income.

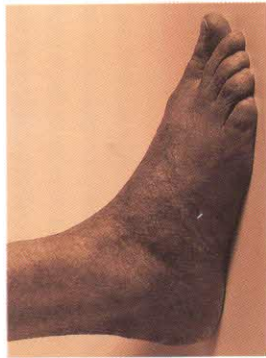
There is a range of solutions just as there is a range of needs. In some cases only the most advanced technology can help; in others, simple and inexpensive modifications will revolutionize a person's lifestyle. Many of the most simple adaptations will benefit all users, not only customers with specific disabilities.



Pekka Tarjanne  
*Secretary-General*  
*International Telecommunication Union*

## The Forgotten Millions

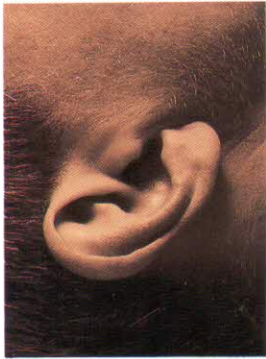
In Europe there are about 100 million elderly people and 50 million who are disabled. There are also those who suffer from dyslexia, learning difficulties or some degree of intellectual impairment, as well as the 0.5% of the population who are temporarily disabled through illness or accidents. Many suffer from more than one disability. The prevalence of most forms of impairment increases considerably with age and so the disabled population grows disproportionately as life expectancy rises. Disabled people are a significant part of the telecommunications market.



### Mobility impaired

Reduced function of legs and feet means depending on a wheelchair or other artificial aid to walking. In addition to people who are born with disability, this group includes a very large number whose condition is caused by age or accidents.

**Wheelchair user** 2,800,000  
**Cannot walk without aid** 45,000,000



### Hearing impaired

Hearing impairment can affect the whole range or only part of the auditory spectrum which, for speech perception, the important region is between 250 and 4,000 Hz. The term deaf is used to describe people with profound hearing loss, while hard of hearing is used for those with mild to severe hearing loss.

**Profoundly deaf** 1,100,000  
**Hard of hearing** 80,000,000



### Visually impaired

Blindness implies a total or near total loss of the ability to perceive form. Low vision implies an ability to utilize some aspects of visual perception, but with a great dependency on information received from other sources as well.

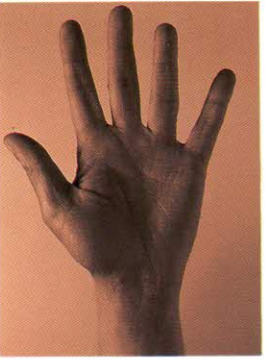
**Blind** 1,100,000  
**Low vision** 11,500,000



### Speech and language impaired

Speech impairment may influence speech in a general way, or only certain aspects of it, such as fluency or voice volume. Language impairment may be associated with a more general intellectual impairment.

**Speech** 2,300,000  
**Language** 5,600,000  
**Dyslexia** 25,000,000  
**Intellectually impaired** 30,000,000



### Dexterity impaired

Reduced function of arms and hands makes activities related to moving, turning or pressing objects difficult or impossible. This does not influence speech communication itself but makes it hard to make a phone call or use a wide range of other telecommunication equipment.

**Cannot use fingers** 1,100,000  
**Cannot use one arm** 1,100,000  
**Reduced strength** 22,500,000  
**Reduced co-ordination** 11,500,000



## Introduction

**A**ccess to telecommunications offers disabled users improved independence, mobility and quality of life. For many, it means the opportunity to work. The telecommunications industry has made enormous progress over recent years. Unfortunately, more advanced equipment often makes greater demands of the user and so people who were already experiencing difficulty can actually be further isolated by technical advances. Anyone who cannot use telecommunication services will find it hard to gather information, make arrangements, maintain social contacts or even call the emergency services.

There are also intrinsic problems in the nature of the new technology. As products change rapidly, shrinking in size and cramming more and more features into the software, engineers have difficulty in getting inside the chip or the software to make modifications while the product is being developed. Devices for people with special needs tend to be obsolete, non-competitive and difficult to maintain.

### Right of access

Apart from any technical difficulties, cost and lack of awareness have probably both been factors in the poor provision made for disabled groups. However, the climate of opinion is now changing in many parts of the world. Governments are legislating for equal access, special interest groups are increasingly active and effective, while service providers are becoming more alert to the importance of this section of their market.

There is a growing awareness that elderly and disabled people have the right to expect the same standard of service and access as every other member of the public. Meeting these expectations is not only a matter of equipment, it also implies a dialogue with user groups to gather information about specific needs and to spread information about the equipment and services available. If these are to be used as fully as possible, resources must be made available for publicity and training purposes.



**Good design for elderly and disabled people is often good design for everybody. A better understanding of the groups concerned and their needs will lead to better design, and fairer pricing of equipment and services.**



**Anyone who cannot use telecommunication equipment and services will find it hard to get work, gather information, make arrangements, maintain social contacts or even call the emergency services.**



**As products change rapidly, shrinking in size and cramming more and more features into the software, engineers have difficulty in getting inside the chip or the software to make modifications while the product is being developed.**

*Modern telecommunications have the potential to open up society to people with disabilities.*

*The market is very large and economically attractive.*

