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SERIES E: OVERALL NETWORK OPERATION,
TELEPHONE SERVICE, SERVICE OPERATION AND
HUMAN FACTORS

International operation – General provisions concerning
users

**Human factors aspects of public telephones to
improve their usability for older people**

ITU-T Recommendation E.138

ITU-T E-SERIES RECOMMENDATIONS

OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

INTERNATIONAL OPERATION	
Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139
Operation of international telephone services	E.140–E.159
Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.189
Numbering plan of the international telephone service	E.190–E.199
Maritime mobile service and public land mobile service	E.200–E.229
OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE	
Charging in the international telephone service	E.230–E.249
Measuring and recording call durations for accounting purposes	E.260–E.269
UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS	
General	E.300–E.319
Phototelegraphy	E.320–E.329
ISDN PROVISIONS CONCERNING USERS	E.330–E.349
INTERNATIONAL ROUTING PLAN	E.350–E.399
NETWORK MANAGEMENT	
International service statistics	E.400–E.409
International network management	E.410–E.419
Checking the quality of the international telephone service	E.420–E.489
TRAFFIC ENGINEERING	
Measurement and recording of traffic	E.490–E.505
Forecasting of traffic	E.506–E.509
Determination of the number of circuits in manual operation	E.510–E.519
Determination of the number of circuits in automatic and semi-automatic operation	E.520–E.539
Grade of service	E.540–E.599
Definitions	E.600–E.649
Traffic engineering for IP-networks	E.650–E.699
ISDN traffic engineering	E.700–E.749
Mobile network traffic engineering	E.750–E.799
QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING	
Terms and definitions related to the quality of telecommunication services	E.800–E.809
Models for telecommunication services	E.810–E.844
Objectives for quality of service and related concepts of telecommunication services	E.845–E.859
Use of quality of service objectives for planning of telecommunication networks	E.860–E.879
Field data collection and evaluation on the performance of equipment, networks and services	E.880–E.899

For further details, please refer to the list of ITU-T Recommendations.

ITU-T Recommendation E.138

Human factors aspects of public telephones to improve their usability for older people

Summary

This Recommendation contains guidelines for the design of public telephone terminals for voice communication to make them more usable for older people, whose sensory, cognitive and motor functions may have deteriorated. "Public telephones" include all telephones that are not in private offices or households, but that are generally accessible to many people. These guidelines are derived from the requirements of older people that can be identified for each of the steps connected to using a public telecommunication terminal: locating it; initiating a call; providing payment; identifying oneself and the communication counterpart; actually communicating; possibly setting up a further call; terminating the communication.

Source

ITU-T Recommendation E.138 was prepared by ITU-T Study Group 2 (2001-2004) and approved under the WTSA Resolution 1 procedure on 29 June 2002.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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CONTENTS

Page

1	Scope	1
2	References.....	1
3	Terms and definitions	2
4	Abbreviations.....	2
5	Characteristics of older people	3
6	Organization of this Recommendation	5
7	Locating and accessing a telephone: Visual requirements	6
7.1	Terminal identification signs	6
7.2	Lighting	6
7.3	Operating instructions	6
7.4	Information displays and visual indicators.....	8
8	Locating and accessing a telephone: Hearing requirements.....	9
9	Locating and accessing a telephone: Strength, mobility and dexterity requirements...	9
9.1	Space surrounding the telephone.....	9
9.2	Area immediately around the telephone.....	9
10	Initialization step: Call set-up: Visual, tactile and dexterity requirements.....	10
10.1	Keypads	10
11	Initialization step – Call set-up: Hearing requirements	11
12	Initialization step – Call set-up: Cognitive requirements	12
13	Initialization step – Call set-up: Mobility requirements	12
14	Initialization step – Payment: Visual requirements	12
14.1	Cards.....	12
15	Initialization step – Payment: Hearing requirements.....	13
16	Initialization step – Payment: Tactile, strength, mobility and dexterity requirements	13
16.1	Location of coin, card and token slots.....	13
16.2	Cards to be inserted	13
16.3	Cards to be swiped.....	13
17	Communication step: Tactile, strength, mobility and dexterity requirements	13
17.1	The cord connecting handset and terminal.....	13
17.2	The handset: location, weight and shape	14

		Page
	17.3 Hands-free operation	14
18	Communication phase	14
	18.1 Mildly hard of hearing (some high frequency loss)	14
	18.2 Moderately hard of hearing (significant loss of high frequencies and some loss of middle frequencies).....	14
	18.3 Severe hearing loss (significant loss of high and middle frequencies)	15
	18.4 Profoundly deaf (cannot use hearing for any form of verbal communication).....	15
19	Next call (follow-on call): Visual, tactile, strength, mobility and dexterity requirements	15
	19.1 Redial.....	16
	19.2 New number call.....	16
20	Terminate call: Visual requirements.....	16
	20.1 Receipts	16
21	Terminate call: Hearing requirements	16
22	Terminate call: Tactile, strength, mobility and dexterity requirements.....	16
	22.1 Retrieving remaining coins.....	16
	22.2 Card retrieval	16
23	Bibliography	17

Introduction

Throughout the Western world, as well as in parts of Asia, life expectancy has changed significantly during the 20th century [Dall, 1992]; [Collins *et al.*, 1992]. Not only are more people getting older, they also tend to be better educated and in better health than their forbears, which means that they lead much longer active lives. This activity includes the use of telecommunication facilities. But, many older people find it difficult to use many of today's telephones, and other telecommunication terminals. This is because sensory, cognitive and motor faculties deteriorate with advancing age. Such reductions in severe cases lead to impairments or even disabilities, but it would be misleading to equate older people with disabled people – although this is often done. In fact, provided that proper measures are taken, the majority of older users of telecommunications need not experience serious hindrances. It is important to society as a whole to enable older people to remain active as long as possible, and to participate in activities such as travelling and to communicate via public telecommunication terminals [Collins *et al.*, 1992]. This means that available data on changes in human faculties with progressing age must be taken into account. Missing information in this field must be compiled through appropriate research [Garbe *et al.*, 1992]. It should be realized that any adaptations of public telephones that increase their usability for older people, such as larger font size and higher contrast on visual displays, will normally also benefit younger users [Blaich, 1992].

ITU-T Recommendation E.138

Human factors aspects of public telephones to improve their usability for older people

1 Scope

This Recommendation proposes guidelines for the design of public telephone terminals for voice communication to make them simpler to use for older people whose sight, hearing, information processing and motor functions have deteriorated. This Recommendation provides information on the requirements of older people and how telephones can be adapted for their use. This Recommendation addresses manufacturers, designers, procurers, network operators, regulatory authorities, and those who deploy telecommunication terminals intended for general (public) use. In this Recommendation the term '*public telephone*' shall include all telephones that are not in private offices or households, but that are generally accessible to many people, for instance, public pay-phones, telephones for general use in hotels, airports, hospitals, shopping malls, universities, schools, official agencies, etc.

This Recommendation is regarded as necessary, next to the already-existing ITU-T Rec. E.135: Human factors aspects of public telecommunication terminals for people with disabilities, because:

- i) although older people are frequently associated with the disabled in literature and general opinion, this is incorrect and misleading in terms of specific user requirements;
- ii) by ITU-T Rec. E.138's restriction to public telephones, as opposed to public terminals, its scope in this respect may seem to be narrower than that of ITU-T Rec. E.135, but on the other hand is wider because all types of 'public places' such as hotels, airports, hospitals and shopping malls are included, with the available telephones that are there.

It is of interest to everybody involved in the telecommunication business to be informed about the relation between their products and the needs of an ever-increasing proportion of their customers, i.e., older people.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- ITU-T Recommendation E.121 (1996), *Pictograms, symbols and icons to assist users of the telephone*.
- ITU-T Recommendation E.134 (1993), *Human factors aspects of public terminals: Generic operating procedures*.
- ITU-T Recommendation E.135 (1995), *Human factors aspects of public telecommunication terminals for people with disabilities*.
- ITU-T Recommendation E.136 (1997), *Specification of a tactile identifier for use with telecommunication cards*.
- ITU-T Recommendation E.137 (1997), *User instructions for payphones*.