GUIDE 71

Guidelines for standards developers to address the needs of older persons and persons with disabilities

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

Draft Guides adopted by the responsible Committee or Group are circulated to national bodies for voting. Publication as a Guide requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this Guide may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC Guide 71 was prepared by an ad hoc TAG (Technical Advisory Group) based on the preliminary work undertaken by a COPOLCO (Committee on Consumer Policy) Working Group, at the request of the ISO/TMB Secretariat.

0 Introduction

0.1 It is an important goal for the whole of society that all people have access to products, services, workplaces and environments. The issue of accessibility to and usability of products and services has become more critical with the increasing percentage of older persons in the world's population. While not all older persons have disabilities, the prevalence of disability or limitations is highest among this demographic group.

0.2 The needs and abilities of people change as they advance from childhood to old age and the abilities of individuals in any particular age group vary substantially. It is important to recognize that functional and cognitive limitations vary from comparatively minor, such as mild hearing loss or use of spectacles only to read, to blindness, deafness or the inability to move part or all of one's body. It should be noted that although some limitations may be minor in nature, in combination, as is the case in ageing, these can pose a significant problem.

0.3 For many years, standards bodies at the national and international level have addressed the needs of persons with disabilities in the development of specific standards in the area of assistive technology and accessible building design. However, the needs of older persons and persons with disabilities are not being adequately addressed when other relevant standards for everyday products and services are written or revised. Standards bodies are starting to address ageing and disability issues and will, increasingly, develop and implement policies and programmes in their products and services to include the needs of older persons and persons with disabilities. It is important to ensure the representation of interests of older persons and persons with disabilities in the development of these solutions.

0.4 This Guide is intended to be part of the overall framework that standards bodies can use in their efforts to support the need for more accessible products and services. The ISO/IEC Policy Statement 2000 — *Addressing the Needs of Older Persons and People with Disabilities in Standardization Work* sets out the principles for ensuring that the needs of older persons and persons with disabilities[1)] are incorporated in the standards-making process, providing justification on humanitarian and economic grounds. This Guide supplements the ISO/IEC Policy Statement by identifying problem areas which need to be considered when drafting standards, recognizing the constraint that standards should normally not be design-restrictive. It is intended for those involved in the preparation and revision of International Standards but also contains information which may be useful for others such as manufacturers, designers, service providers and educators.

0.5 Of necessity, guidance provided in this Guide is general. Usability issues for people with impairments are identified without specific solutions. It is recognized that additional sector-related guides need to be developed for specific product or service sectors.

1) Developments in the field of accessibility have resulted in the creation and use of a wide variety of terms and definitions, related to older persons and disability, which differ throughout the world. For example, some people prefer to use the term "people with disabilities" and others prefer "disabled people". Overall, terms have evolved to become more precise and descriptive, rather than negative or stigmatizing. As no universal practice exists, the terms used in this Guide reflect the language generally used by international agencies such as the United Nations Organization and the World Health Organization.

Guidelines for standards developers to address the needs of older persons and persons with disabilities

1 Scope

1.1 This Guide provides guidance to writers of relevant International Standards on how to take into account the needs of older persons and persons with disabilities. Whilst recognizing that some people with very extensive and complex disabilities may have requirements beyond the level addressed in this Guide, a very large number of people have minor impairments which can be easily addressed by relatively small changes of approach in standards, thereby increasing the market for the product or service.

This Guide aims

a) to inform, increase understanding and raise awareness about how human abilities impact on the usability of products, services and environments,

b) to outline the relationship between the requirements in standards and the accessibility and usability of products and services, and

c) to raise awareness about the benefits of adopting accessible design principles in terms of a wider market.

1.2 This Guide applies to products, services and environments encountered in all aspects of daily life and intended for the consumer market and the workplace. For the purposes of this document, the term 'products and services' is used to reflect all these purposes.

1.3 This Guide

a) describes a process by which the needs of older persons and persons with disabilities may be considered in the development of standards,

b) provides tables to enable standards developers to relate the relevant clauses of a standard to the factors which should be considered to ensure that all abilities are addressed,

c) offers descriptions of body functions or human abilities and the practical implications of impairment,

d) offers a list of sources that standards developers can use to investigate more detailed and specific guidance materials.

1.4 This Guide provides general guidance. Consideration should be given to the development of additional guides for specific product or service sectors.

1.5 While it is recognized that accessibility and usability are important for both products amd services, international work on services standards is at the preliminary stage. At present, this Guide contains considerably more guidance on products than on services.

2 References

ISO/IEC Guide 37:1995, *Instructions for use of products of consumer interest*

ISO/IEC Guide 50:—[2)], *Safety aspects — Guidelines for child safety*

ISO/IEC Guide 51:1999, *Safety aspects — Guidelines for their inclusion in standards*

ISO/IEC Policy Statement, 2000, *Addressing the needs of older persons and people with disabilities in standardization work*

World Health Organization, *International Classification of Functioning and Disability*, ICIDH-2 Beta-2

3 Terms and definitions

For the purposes of this Guide, the following terms and definitions apply.

NOTE This clause is designed to provide clarification of some of the terms used in the fields of ergonomics, accessibility and standardization. It does not provide descriptions of body functions and impairments. This information is provided in clause 9. (See also Introduction, footnote 1, page v.)

3.1
ergonomics
human factors
that branch of science and technology that includes what is known and theorized about human behavioural and biological characteristics that can be validly applied to the specification, design, evaluation, operation and maintenance of products and systems, to enhance safety, and effective and satisfying use by individuals, groups and organizations

3.2
accessible design
design focussed on principles of extending standard design to people with some type of performance limitation to maximize the number of potential customers who can readily use a product, building or service which may be achieved by

— designing products, services and environments that are readily usable by most users without any modification,

— by making products or services adaptable to different users (adapting user interfaces), and

— by having standardized interfaces to be compatible with special products for persons with disabilities.

NOTE 1 Terms such as design for all, barrier-free design, inclusive design and transgenerational design are used similarly but in different contexts.

NOTE 2 Accessible design is a subset of universal design where products and environments are usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

3.3
assistive technology
assistive device
piece of equipment, product system, hardware, software or service that is used to increase, maintain or improve functional capabilities of individuals with disabilities

NOTE This can be acquired commercially off-the-shelf, modified or customized. The term includes technical aids for persons with disabilities. Assistive devices do not eliminate an impairment but may lessen the difficulty an individual has in carrying out a task or activity in specific environments.

2) To be published. (Revision of ISO/IEC Guide 50:1987.)