

ANEC POCKET GUIDE

**ANEC Guidance on the use of ISO/IEC Guide 71:2014 and CEN/CENELEC Guide 6:2014
"Guide for addressing accessibility in standards"**



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Disclaimer: this pocket guide is intended for ANEC membership only and ANEC representatives in particular and can be shared outside the ANEC network after consultation with the ANEC Secretariat.

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INTRODUCTION

The initial design and ongoing modification of mainstream products, services and built environments affects their ability to be used successfully and easily by end users. Many people, not just those with acknowledged disabilities, require the interface to products and services to operate in ways that may not be the obvious choice of the designer. Members of standards committees have an important role to play in ensuring the standards they write enable the product or service to be accessible and useable by as many people as possible. ANEC representatives have a particular duty to ensure accessibility by as many consumers as possible.



"The new Guide will help those involved in the standards development process to consider accessibility issues when developing or revising standards, particularly in areas where they have not been addressed before. It will also be useful for manufacturers, designers, service providers, and educators with a special interest in accessibility."¹

ISO/IEC Guide 71:2014 is a freely² available guide, by using this guide ANEC representatives on standards technical committees can assist in the process to ensure that standards do not discriminate against any user including older people and people with disabilities. This will involve ANEC representatives in persuading their colleagues on the committee of:

- The wide range of user abilities, skills and requirements.
- The range of solutions that exist to enable accessible and useable products, services and built environments to be created.

ISO/IEC Guide 71:2014 is an updated version of ISO/IEC Guide 71:2001, Guidelines for standards developers to address the needs of older persons and persons with disabilities, as such it takes an inclusive approach to the potential accessibility needs of all people. It

¹ http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1911

² http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=57385

addresses the changes in both the political climate with respect to the needs of older persons and persons with disabilities and the increased number of accessibility solutions. This Guide is one tool that standards bodies can use in their efforts to support the development of systems that suit the needs of diverse users. The guide can be used for writing and revising standards and as a tool for communication of need for standards to support accessibility.

Notes

- 1) CEN-CENELEC Guide 6:2014 is the same as ISO/IEC Guide 71:2014.
- 2) An ISO guide is a document designed to provide guidance to technical committees for the preparation of standards.
- 3) The CEN-CENELEC Guides are reference documents which give orientation, advice or recommendations on standardization principles and policies and guidance to standards writers.



WHY AND WHEN TO USE ISO/IEC GUIDE 71:2014

This Guide contains information on how to write standards to ensure that any product, service or element of the built environment which a person interacts with can be used successfully by the widest number of people. The Guide refers to accessibility as the "extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of characteristics and capabilities to achieve a specified goal in a specified context of use".

Approximately 15% of Europe's population have an impairment or long term condition which can affect their ability to perceive information, process information or carry out manual tasks. Approximately 80% of the impairments were acquired after the age of 16 with many acquired as part of the aging process. The division of people into those with a disability who require specialist systems, products and services and those without a disability who do not, whilst easy to comprehend is not practically useful. This division fails to acknowledge the wide and varied reasons that cause a person to

have specific requirements with respect to how they interact with products, services and elements of the built environment (with respect to the accessibility of the item). These reasons include temporary conditions such as pregnancy or the temporary after effects of an accident; alternatively factors such as location or weather may make interacting with an item require a different approach. Many people who could be described as disabled do not consider themselves to be so, even if they have specific accessibility requirements.

The majority of products, services and elements in the built environments that are used by people with specific accessibility requirements will be exactly the same as the products, services and elements used by everybody else. Many committee members will not be familiar with the wide range of user requirements and will require support and encouragement to consider people who have different requirements from themselves. Whilst designers of specialist equipment designed for people with disabilities will have knowledge of the requirements of the target group for their system they may have little knowledge of the additional accessibility requirements of the end users of their systems.

In addition to standardisers ISO/IEC Guide 71:2014 provides useful information for anybody interested in the accessible design of mainstream products, services and elements of the built environment which do not discriminate against any potential users.

HOW TO USE ISO/IEC GUIDE 71:2014



The Guide is structured to enable a user to identify firstly if their standard lies within the scope of the Guide and then practical information on how to apply it to a wide range of standards. The Guide offers two complementary approaches to identify requirements to be used to incorporate accessibility into the standards development process, these two approaches can be used either separately or together. The two approaches are as follows:

- an accessibility goals approach (Clause 6 of the Guide), which can be used to identify user accessibility needs that can, in turn,

be used to identify accessibility requirements and recommendations for a standard;

- a human abilities and characteristics approach (Clause 7 of the Guide), which can be used to identify design considerations that can, in turn, also be used to identify accessibility requirements and recommendations for a standard.

The extent to which either approach is used can vary with the scope and context of use of the particular standard being developed. The two approaches are similar to social and medical model of disability (where the accessibility goals approach relates to the social model and the human abilities and characteristics approach relates to the medical model).

The final section of the Guide offers methods and strategies for incorporating the requirements identified into the standard being developed.

THE ACCESSIBILITY GOAL APPROACH

This approach is task based and requires the standardisers to consider the aim or aims of the product, service or built environment element being standardised, from this information the relevant accessibility goals can be created. The accessibility goals being the required condition to ensure accessibility. The practical nature of this approach can be seen by the suggested questions to ask when creating the goals, the suggested goals include the following:

- Which potential users, if any, might be excluded by the requirements and recommendations in this deliverable?
- What are all the contexts of use in which systems that relate to this deliverable could be used?

It is assumed that by focusing on the system being standardised and how to ensure its accessibility the standardisers can identify the best possible accessibility considerations for this standard. The focus of the goals will be to ensure:

- Suitability for the widest range of users
- Conformity with user expectations
- Support for individualization

- Approachability
- Perceivability
- Understandability
- Controllability
- Usability
- Error tolerance
- Equitable use
- Compatibility with other systems



This approach is easiest to use when standardising complex systems which could function in a number of different ways. By focusing on the end goals of the system and ensuring the accessibility of that goal the system will meet the needs of the users. Standards which are best addressed by this approach include any focusing on a complete system where information is needed to be transmitted to and from the user to ensure successful operation. Standards on the design of laundry machines, virtual learning environments, elevator controls or public information systems are all examples of systems which are best addressed by this approach.

HUMAN ABILITIES AND CHARACTERISTICS APPROACH

This approach is based on a consideration of the abilities and characteristics of the people who will be using the item. Clause 7 provides information on human abilities and characteristics as well as associated design considerations. Standards developers can approach accessibility for system users by identifying the required user activities and the related human abilities and characteristics.

The design considerations can inform the requirements and recommendations in standards. The information on abilities and characteristics is organized according to the human body structures, human body functions, associated impairments and the consequences for overall functioning in terms of activity limitations and participation restrictions.

This approach therefore starts by considering the potential end user of the item being standardised and considers their:

- Sensory abilities and characteristics (seeing functions, hearing functions, touch functions and taste and smell functions).
- Immunological system functions
- Physical abilities and characteristics (body size, upper and lower body movement, strength and endurance and voice and speech functions).
- Cognitive abilities

This approach can be used for parts of a complex system where consideration can be made to the need for the design of a particular element to take into account the needs of the users, for instance by looking at the design of a switch to maximise ease of use. By focusing on the design of individual elements this approach can be used in conjunction with the previous approach or (more rarely) on its own for writing standards for individual items.

STRATEGIES FOR ADDRESSING USER ACCESSIBILITY NEEDS AND DESIGN CONSIDERATIONS IN STANDARDS

Standards developers should consider and select the strategy or strategies that can best be applied to transform the needs and considerations into requirements and recommendations given the context and particulars of the standard they are developing. This will involve them in ensuring that the resultant standard:

- Provides multiple means of information presentation and user interaction
- Sets fixed parameters to accommodate the widest range of users
- Sets adjustable parameters to accommodate the widest range of users
- Minimizes unnecessary complexity
- Provides individualized access to a?
- Eliminates unnecessary limits or constraints on user interactions with a system



- Provides compatibility with assistive products and assistive technology
- Provides alternative versions of a system



ANEC in Brief

ANEC is the European consumer voice in standardisation, representing and defending consumer interests in the development of technical standards, in the application of conformity assessment schemes to standards, and in the creation or revision of legislation on products and services. ANEC receives funding from the European Commission and the EFTA Secretariat.

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