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**Information technology — Accessibility  
considerations for people with  
disabilities —**

**Part 1:  
User needs summary**

*Technologies de l'information — Considérations d'accessibilité pour les  
personnes infirmes —*

*Partie 1: Résumé des besoins de l'utilisateur*

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

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

ISO/IEC TR 29138-1, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

ISO/IEC TR 29138 consists of the following parts, under the general title *Information technology — Accessibility considerations for people with disabilities*:

- *Part 1: User needs summary*
- *Part 2: Standards inventory*
- *Part 3: Guidance on user needs mapping*

## Introduction

ISO/IEC JTC 1 believes that the work in the area of Information Communication Technology (ICT) standardization for accessibility is a major undertaking, encompassing many global, regional and local interests. Additionally, there are significant standards efforts taking place in ISO, IEC, ITU and the national and regional standards bodies as well as various consortia/fora and user groups.

ISO/IEC JTC 1 established a Special Working Group on Accessibility (SWG-A) in 2005. The SWG-A is an open forum where everyone can participate. Standardization organizations, organizations of and for people with disabilities, industry associations and individual experts in ICT accessibility participated in the development of this part of ISO/IEC TR 29138. This part of ISO/IEC TR 29138 was developed from the original user needs summary submitted by the Trace R&D Center of the University of Wisconsin-Madison.

This part of ISO/IEC TR 29138:

- discusses accessibility barriers which people with different disabilities encounter when interacting with ICT systems;
- gathers accessibility needs of ICT users, including those with the widest range of capabilities; and
- can be used to analyze whether or not an ICT accessibility standard fully takes into account the user needs.

The number of people using ICT products and services, which combine hardware, software, and network technologies, is increasing, as is the variety of ICT products and services. Our everyday lives are filled with such products and services. Currently available ICT products and services, however, are not always accessible. Typically, the people most excluded by poor accessibility of products and services are those with disabilities and those with limitations due to age. However, they are not the only ones who experience difficulty in operating ICT products, such as personal computers (PCs). It is essential to improve ICT accessibility, so that people with special needs can have access to ICT products and services. The improvement of accessibility of products and services benefits all users, not only people with such special needs, leading to an inclusive e-society.

By providing appropriate ICT accessibility standards, the market of accessible ICT products and services will develop more efficiently and effectively. Standardization encourages organizations to address the needs of the people with disabilities and people with limitations due to age and triggers development of ICT products and services with built in accessibility.

Standardization bodies are starting to address disability and age-related issues and will, increasingly, develop and implement policies and programs in their standards development to include the needs of both people with disabilities and people with limitations due to age. Individuals have different access needs because of their different levels of capabilities and disabilities. Particularly people with multiple disabilities have distinct needs. The great variety and distinctiveness of individual differences make it difficult to gather the needs which address the widest range of capabilities and disabilities.

Some standards cover limited domains and in such cases some user needs will not apply. For example, visual accessibility needs are generally not relevant to standards addressing the ability to exert force. Standardization organizations can selectively use the user needs summary for their own purposes.

ISO/IEC JTC1 encourages standardization organizations to utilize this part of ISO/IEC TR 29138 in a variety of ways, including developing and improving the coverage of accessibility issues in their ICT standards. JTC1 SWG-A would appreciate feedback from standardization organizations on how they have used this part of ISO/IEC TR 29138, their findings in general and new work initiated as a result.

# Information technology — Accessibility considerations for people with disabilities —

## Part 1: User needs summary

### 1 Scope

This part of ISO/IEC TR 29138 identifies a collection of user needs of people with disabilities for standards developers to take into consideration when developing or revising their standards. These user needs are also useful for developers of information technology products and services and for accessibility advocates to consider.

In addition to identifying user needs, this part of ISO/IEC TR 29138 identifies problems that people with disabilities experience with information technologies that lead to these user needs and identifies the relationship of these user needs with the accessibility factors for standards developers to consider found in ISO/IEC Guide 71: *Guidelines to address the needs of older persons and people with disabilities* when developing standards.

### 2 Terms and definitions

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

#### 2.1

##### **assistive technology**

hardware or software that is added to or incorporated within an ICT system that increases accessibility for an individual

NOTE Adapted from ISO 9241-171, definition 3.4.

#### 2.2

##### **alternative format**

different presentation which may make products and services accessible by the use of another movement or sensory ability

[ISO/IEC Guide 71 definition 3.6]

#### 2.3

##### **ICT**

##### **information/communication technology**

technology for gathering, storing, retrieving, processing, analysing and transmitting information

[ISO 9241-20, definition 3.4]