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Ease of operation of everyday products —

Part 1:

Design requirements for context of use and user characteristics

Facilité d'emploi des produits quotidiens —

Partie 1: Exigences de conception pour le contexte d'utilisation et pour les caractéristiques de l'utilisateur



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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

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

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

ISO 20282-1 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 1, *Ergonomic guiding principles*.

ISO 20282 consists of the following parts, under the general title *Ease of operation of everyday products*:

- *Part 1: Design requirements for context of use and user characteristics*
- *Part 2: Test method* [Technical Specification]

The following parts are under preparation:

- *Part 3: Test methods for consumer products* [Publicly Available Specification]
- *Part 4: Test methods for the installation of consumer products* [Publicly Available Specification]

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Introduction

An increasing number of everyday products include computer technology, making them more complex. Users need to understand how to operate products in order to benefit from the functionality they offer, so usability is a key factor in determining a product's success. As product complexity increases, the challenge for the user in understanding how to use the various functions of the product also increases, and for the producer it can be harder to design sufficiently usable products.

Products with low usability often require the assistance of other people in order to be used, and this can result in frustrated users as well as in extra costs for the producer and vendor. Many companies have realized the importance of the usability of their products and employ usability specialists in usability laboratories. Many test organisations include usability in their evaluation procedures.

ISO 20282 is based on ISO 9241-11, which provides guidance on the specification and measurement of usability in general. ISO 20282 applies ISO 9241-11 to the user interfaces of everyday products. The focus on everyday products reflects the fact that many of the products we see around us on a regular basis still suffer from fundamental usability problems. The focus on user interfaces reflects the situation that while there are many factors that may have important effects on usability, all interactive products will have a user interface whose quality can have significant positive or negative effects that facilitate or hamper the usage of the product.

Everyday products include consumer products and walk-up-and-use products. For everyday products it is particularly critical to ensure that the interface enables the user to achieve their main goal(s). The focus on the main goal(s) reflects the outcomes that all users, or a large majority of them, wish to achieve, e.g. to use a telephone to make or receive a phone call, to use a ticket machine to buy a train ticket, or to use a television set to watch a television programme. The term "ease of operation" refers to this subset of the concept of usability and the specific measures used to support users in achieving their main goal(s).

Everyday products are designed for an intended user population, which in general ought to be assumed to include people with a wide range of user characteristics. This part of ISO 20282 describes the user characteristics to be accounted for in the design of an everyday product. In recognizing that the population of older persons of the world is increasing, it takes into account the needs of those users¹⁾.

ISO 9241-11 states that usability is concerned with the extent to which the users of products are able to use them effectively, efficiently, and with satisfaction. As tasks performed with everyday products are generally fast and of low complexity, the most important usability measure is effectiveness.

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 part of ISO 20282 reflect the language generally used by international agencies such as the United Nations Organization and the World Health Organization.