## INTERNATIONAL STANDARD



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# Graphical symbols — Creation and design of public information symbols — Requirements

Symboles graphiques — Création et conception des symboles destinés à l'information du public — Exigences

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Reference number ISO 22727:2007(E)

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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 22727 was prepared by Technical Committee ISO/TC 145, *Graphical symbols*, Subcommittee SC 1, *Public information symbols*.

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#### Introduction

A graphical symbol is defined as a visually perceptible figure used to transmit information independently of language. Public information symbols are used to convey specific messages, the understanding of which is independent of specialist or occupational training. Consistency in the design of such symbols for use in a particular situation or in similar situations is important, as is comprehensibility. Thus, there is a need to standardize the principles for creating and designing public information symbols to ensure visual clarity, to maintain consistency and thereby to improve recognition.

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## Graphical symbols — Creation and design of public information symbols — Requirements

#### 1 Scope

This International Standard specifies requirements for the creation and design of public information symbols. It specifies requirements for the design of public information symbols for submission for registration as approved public information symbols, including line width, the use of graphical symbol elements and how to indicate negation. It also specifies templates to be used in the design of public information symbols.

It is for use by all those involved in the commissioning and the creation and design of public information symbols.

This International Standard is not applicable to safety signs, including fire safety signs, or to traffic signs for use on the public highway.

Examples are given for illustrative purposes only and do not constitute requirements for particular public information symbols.

NOTE 1 Safety signs, including fire safety signs, are covered by ISO 7010.

NOTE 2 Existing public information symbols are specified in ISO 7001.

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NOTE 3 The illustrations in this International Standard are as accurate as possible within the limitations of the printing process.

NOTE 4 Recommendations on colour and file format are given in Annex A, additional design guidelines are given in Annex B, Annex C and Annex D, and a checklist for designers is given in Annex E.

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7001, Graphical symbols — Public information symbols

ISO 17724, Graphical symbols — Vocabulary

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17724 and the following apply.

#### 3.1

#### graphical symbol

visually perceptible figure with a particular meaning used to transmit information independently of language

#### 3.2

#### public information symbol

graphical symbol intended to give information to the general public, the understanding of which is independent of specialist or occupational training

#### 3.3

#### safety sign

sign giving a general safety message, obtained by a combination of a colour and geometric shape and which, by the addition of a graphical symbol, gives a particular safety message

[ISO 7010:2003, 3.7]

#### 3.4

#### negation

indication of the absence or opposite of something actual or positive

#### 3.5

#### graphical symbol element

part of a graphical symbol with a particular meaning

#### 3.6

#### negation element

graphical symbol element intended to negate a graphical symbol's original intended meaning

#### 3.7

#### meaning iTeh STANDARD PREVIEW message that a public information symbol is intended to convey (standards.iteh.ai)

#### 3.8

#### function

written description of the purpose of the information to be conveyed by a graphical symbol

#### 3.9

#### image content

written description of the elements of a graphical symbol

#### 4 Creation procedure

#### 4.1 Preliminary phase

Before design of a new public information symbol is undertaken, the following procedure shall be carried out:

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- a) verification that what is required is a public information symbol and not a safety sign (see 3.2 and 3.3);
- b) identification of the required meaning of the public information symbol;
- c) identification of the need for a new public information symbol by determination of whether a public information symbol with the required meaning is given in ISO 7001;
- d) assignment of a meaning and a function to the public information symbol in accordance with Clause 5.

#### 4.2 Creation phase

During the design of a new public information symbol, the following procedure shall be carried out:

a) consideration of existing graphical symbol elements with similar meanings which might be used, adapted or combined to form the new public information symbol;

An analysis should also be carried out of the expected characteristics of the intended user population of the new public information symbol and the context in which it is expected to be used. Factors to be considered are given in Annex E.

b) design of the new symbol in accordance with Clause 6 using the relevant template specified in Clause 7.

After design of the new symbol, it is strongly recommended that an evaluation be carried out of the comprehensibility of the symbol in the context in which it is to be used, in accordance with ISO 9186-1. The public information symbol should then be modified if necessary. This is particularly important if it is intended to submit the public information symbol to ISO/TC 145/SC 1 for registration as an approved public information symbol <sup>1</sup>).

The registration procedure for a public information symbol requires a drawing submitted in the relevant template (see Clause 7) together with a size reduction to 25 %.

## 5 Assignment of meaning, function and image content to the public information symbol

**5.1** Consideration should be given to the category to which the public information symbol belongs, in accordance with ISO 7001, as follows:

- a) public facilities;
- b) transport facilities; iTeh STANDARD PREVIEW
- c) tourism, culture and heritage; (standards.iteh.ai)
- d) sporting activities;

#### ISO 22727:2007

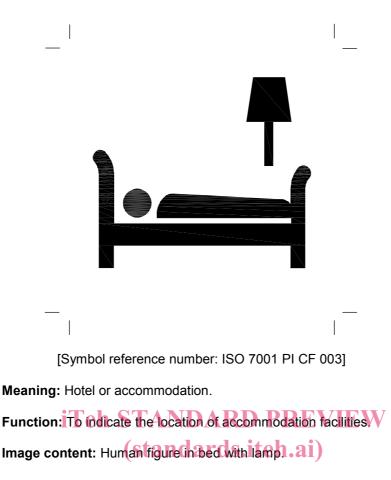
- e) commercial facilities;//standards.iteh.ai/catalog/standards/sist/a5c48d18-f9d7-4f80-bbb2-
- 06fba4a0e9fc/iso-22727-2007
- f) behaviour of the public (excluding public safety).

**5.2** Each public information symbol should normally be used to convey only one public information message, and should normally be placed in one category only.

NOTE For the convenience of users, the public information symbols in ISO 7001 have been grouped according to the areas where they are normally expected to be used. However, these groupings are not intended to be exclusive and the use of the public information symbols in other areas, where this is considered appropriate, is encouraged.

**5.3** The new public information symbol shall be assigned a meaning and a function. Once the public information symbol is complete, the image content shall be identified (see Figure 1). The assigned meaning and function should be unambiguous.

<sup>1)</sup> Details of the registration procedure and an application form, which gives required file formats, can be obtained from <a href="http://www.iso.org/tc145/sc1">http://www.iso.org/tc145/sc1</a>.



#### ISO 22727:2007

Figure 1 — Example of assignment of meaning, function and image content to a public information 06ba symbol -22727-2007

#### 6 Design of the graphical symbol

#### 6.1 General

- **6.1.1** The graphical symbol shall be designed in accordance with 6.2 to 6.8.
- **6.1.2** The design of a graphical symbol should:
- a) be comprehendible (see ISO 9186-1);
- b) be readily associated with its intended meaning;
- c) be based on objects, activities, etc., or a combination of these, which are reliably identifiable by the target audience;
- d) be easily distinguishable from other graphical symbols;
- e) contain only those details that contribute to understanding;
- f) retain these characteristics when reduced to 25 % of the template height and width (see Figure 2).

**6.1.3** When designing a graphical symbol, the possibility of negation should be born in mind (see 6.8).

**6.1.4** The additional design guidelines given in Annex B, Annex C and Annex D should also be followed, as applicable.

#### 6.2 Use of template

The graphical symbol shall be designed within the relevant template given in Clause 7.

The graphical symbol preferably should not extend into the margins within the template, as indicated on the template, but should make full use of the area within the margins of the template.

#### 6.3 Line width

Lines used in a graphical symbol shall be a minimum of 2 mm thick within the relevant template given in Clause 7, except where it is absolutely necessary for lines to be thinner to accurately represent the object, in which case the minimum width can be reduced to 0,5 mm. The spacing between lines shall take into account visual clarity and be a minimum of 1 mm (see Figure 2).



[Symbol reference number: ISO 7001 PI TF 013]

Meaning: Chair lift.

Function: To indicate the location of lifts.

**Image content:** Side view of human figure seated on a chair suspended from an inclined cable.

Figure 2 — Example of the use of line width and line spacing in a graphical symbol and example of size reduction of a graphical symbol to 25 % of height and width

#### 6.4 Image content

Elements in the graphical symbol shall have minimum dimensions of 2,5 mm  $\times$  2 mm within the relevant template given in Clause 7 (see Figure 3).



#### Figure 3 — Example of use of elements

#### 6.5 Combination of graphical symbols or graphical symbol elements

If two or more graphical symbols or graphical symbol elements are combined to form a new graphical symbol, the meaning assigned to the new graphical symbol shall be consistent with the meanings of the individual graphical symbols or graphical symbol elements used (see Figure 4).

The new graphical symbol should consist of as few components as possible, while maintaining comprehensibility.

Public information symbols in which two or more graphical symbols or graphical symbol elements have been combined to produce a new graphical symbol shall be considered as new public information symbols.