TECHNICAL REPORT

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Information technology — User interface icons —

Part 1:
Introduction to and overview of icon standards

Technologies de l'information — Icônes d'interface utilisateur —

Partie 1: Normes d'icônes, introduction et généralités

Reference number
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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, 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), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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 or all such patent rights.

ISO/IEC TR 11581-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

ISO/IEC 11581 consists of the following parts, under the general title *Information technology — User interface icons*:

⎯ *Part 1: Introduction to and overview of icon standards* [Technical Report]

⎯ *Part 2: Object icons*

⎯ *Part 3: Pointer icons*

⎯ *Part 5: Tool icons*

⎯ *Part 6: Action icons*

⎯ *Part 10: Framework and general guidance*

⎯ *Part 40: Management of icon registration*

⎯ *Part 41: Data structure to be used by the ISO/IEC JTC 1/SC 35 icon database* [Technical Report]

Introduction

Icons are used on Information and Communications Technology (ICT) products to facilitate interaction with their users. Icons can provide a language-independent means of communicating information to the user. They can facilitate the user's ability to learn, understand, and remember functional elements of the system, and aid in the manipulation of these elements. They are especially suitable for elements that are frequently used and where the meaning of the icon can be easily understood.

Typically, icons draw on a user's environment to provide a metaphorical representation of the user's tasks, objects, actions, and attributes. A metaphor provides an analogy to concepts already familiar to the user, from which the user can deduce the system's use and behaviour. Icons can express the metaphor directly, as graphical representations of the metaphorical objects. They may also directly represent a physical object.

Icons are distinguished from other user interface symbols by the fact that they represent underlying system functions. Icons represent the objects, pointers, controls and tools making up the domain of an application that users manipulate in doing their jobs. They can also represent status indicators used by the computer system to give information to the user and to mediate user interactions with software applications.

While the most common form of icons is as a graphical icon, icons can also be rendered in auditory or tactile modalities.

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Information technology — User interface icons —

Part 1:
Introduction to and overview of icon standards

1   Scope

This part of ISO/IEC 11581 introduces the ISO/IEC 11581 series and provides developers and other icon standards users with an overview of currently available and future anticipated icon standards.

This part of ISO/IEC 11581:

⎯ describes the structure of parts that will be used to encompass all present and future icon standards;

⎯ introduces currently existing icon standards, whether they are parts of ISO/IEC 11581 or they have their own separate numbers;

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⎯ recognizes that currently existing standards will eventually be replaced by new parts;
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NOTE   This part of ISO/IEC 11581 will be revised as new parts of ISO/IEC 11581 become available, adding to or replacing the set of existing parts.
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2   Terms and definitions

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

2.1
icon
user interface symbol representing an object and/or function of the computer system

NOTE 1   Within this part of ISO/IEC 11581, "icon" is also used to refer to the function or object represented by the user interface symbol. An icon, which is generally rendered using an identifiable user interface symbol, is much more than just a user interface symbol, it also includes functionality (either as the object it represents or as the function that it represents).

NOTE 2   The concept of a symbol is used in the most generic of senses and can be rendered in various modalities. Some renderings of these user interface symbols include: visual (graphical) icons, auditory icons, and tactile icons.

[ISO/IEC 11581-10, definition 3.4]

3   Applicability of icons

Icons can be used to represent user interface objects, actions, and/or attributes. While icons are often graphically (visually) presented in a user interface, they can also be presented aurally or tactiley.

The use of icons is most applicable to common user interface objects, actions, and/or attributes that are used repeatedly within an application and across multiple applications.

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Icons can be used to:

— aid in immediate recognition of the user interface object, action, and/or attributes;

— save presentation space or time;

— provide representation of the user interface object, actions, and/or attributes that is culturally and linguistically independent and thus accessible to the widest possible range of users.

The ISO/IEC 11581 series of standards deals with icons that are generally applicable to a wide range of applications.

4   Overview of current icon standards

4.1   ISO/IEC 11581-2 Object icons

ISO/IEC 11581-2 addresses only object icons, which are icons that represent functions by association with an object and that can be moved and opened.

Specific icons in ISO/IEC 11581-2 include:

— Document

— Folder

— Filing cabinet

— Mail

— Printer

— Telephone

— Facsimile

— Diskette

— Wastepaper can

— Calendar

— Calculator

— Clock

— Display

— Keyboard

— Mouse

— Network

— Audio device

4.2 ISO/IEC 11581-3 Pointer icons

ISO/IEC 11581-3 addresses pointer icons that are logically attached to a physical input device, and that the user manipulates to interact with other screen elements. It describes user interaction with and appearance of pointer icons on the screen. It also specifies how pointer icons on a screen change appearance to give users feedback.

Specific icons in ISO/IEC 11581-3 include:

— Text pointer

— Border control pointer

— Cross hair pointer

— Busy indicator (actually a Busy pointer)

4.3 ISO/IEC 11581-5 Tool icons

ISO/IEC 11581-5 addresses tool icons that represent functions by association with real life tools. ISO/IEC 11581-5 describes user interaction with and appearance of tools on the screen. It also specifies the relationship between tools and pointers.

Specific icons in ISO/IEC 11581-5 include:

— Text input

— Straight Line Draw

— Freehand Draw

— Arc draw

— Circle draw

— Rectangle draw

— Polygon draw

— Flood fill

— Color pick-up

— Erase

— Brush paint

— Gradation fill

— Spray Paint

— Rectangular area select

— Irregular area select

— Rotate