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Information Technology – Survey of icons and symbols that provide access to functions and facilities to improve the use of IT products by the elderly and persons with disabilities.

Élément introductif — Élément central — Élément complémentaire

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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.

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— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

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ISO/IEC TR 19765, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, Information Technology, Sub Committee SC 35, User Interfaces.
Introduction

Advances in information technology have promoted the use of information technology products as a necessary element of an individual's daily life. It is therefore very important to make this technology accessible to everyone, especially to disabled and elderly people. These consumers need specific icons and symbols to enable them to access special facilities and functions to compensate for their disabilities and give them confidence to use the various services made available through ICT product development.

Increasing numbers of people, especially elderly and disabled have problems using personal computers and the Internet for services, e.g. postal and banking services. It is essential to make the producers of these services aware of this and to record and provide existing symbols and icons especially configured for use by disabled and elderly people.

Please be aware that this is a survey and that ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) do not in any way endorse, recommend or dissuade the use of any of the icons and symbols presented in this Technical Report.

NOTE: At the time of this ballot the icons and symbols contained within this draft are subject to parallel approval and verification by the source owners. Any of these icons or symbols which are not subsequently approved for publication will be removed from future drafts of this Technical Report.
Information technology – Survey of icons and symbols that provide access to functions and facilities to improve the use of IT products by the elderly and persons with disabilities.

1 Scope

Different users of information technology products possess different sets of abilities. Some abilities may not ever be present in a user as they may have been born without them. Some abilities are acquired, developed, or deteriorate over time due to education, maturity, injury, illness, or age. Just as it is possible that a user possesses a combination of abilities, it is also possible that they may lack a combination of abilities.

This Technical Report results from a survey of icons and symbols currently used to provide access to facilities and tools to support the needs of disabled users of Information Technology products, and may form the basis of a future International Standard which would provide a recommended collection of icons and symbols.

These icons and symbols have been collected from a variety of sources including other standards, contemporary software products, web sites and hardware devices. Those sources are cross-referenced and listed in the Bibliography.

The icons and symbols presented here are categorised by modality and method of use.

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) do not in any way endorse, recommend or dissuade the use of any of the icons and symbols presented in this surveying Technical Report.

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2 Definitions

2.1 closed captioning

displays the dialogue, narration and sound effects of a video program as words on a television screen, similar to subtitles in a movie (see also 2.7).

NOTE Unlike subtitled movies, closed captioning allows the viewer to select whether or not to display the captions that are transmitted within the broadcast signal in encoded (or closed) form. A decoder built into or attached to a television set is used to "open" the captions and display the words on the TV screen.

[National Captioning Institute [7]]

2.2 electrical coupling

transmission of information from one device to another through a direct electrical connection.

[ETSI EN 301 462 v1.1.1 (2000-03)[1]]

2.3 filter key

logical setting that enables brief or repeated key strokes to be ignored or slows the keystroke input repeat rate

2.4 inductive coupling

loop

transmission of information from one device to another via a wire less connection

2.5 mouse

commonly used pointing device that contains one or more buttons with which a user can interact with a computer system.
EXAMPLE Using a mouse button, a user can select objects or choices, initiate actions, or directly manipulate objects.

2.6 numeric keypad
physical grouping of keys, containing numbers, in a block on a computer keyboard.

NOTE The numeric keypad typically contains cursor control keys and is located on the right side of a computer keyboard.

2.7 open captioning
displays the dialogue, narration and sound effects of a video program as words on a television screen, similar to subtitles in a movie (see also 2.1).

NOTE Similar to subtitled movies, open captioning constantly presents text information to the viewer.

2.8 pointer icon
icon that is logically attached to a physical input device, and that the user manipulates to interact with other screen elements.

[ISO/IEC 11581-1:2000]

NOTE For further information on pointer icons see ISO/IEC 11581-3:2000

2.9 serial key device
device used to input data in sequential order

EXAMPLE A computer keyboard

2.10 sign
"words" of a sign language produced by actions of the hands, arms, torso, face and head that produce signals perceived visually.

NOTE 1 Sign languages are not universal; they have developed spontaneously and independently within communities of Deaf users all over the world.

NOTE 2 For Deaf-blind singers, a sign language is perceived through touch.

2.11 signing
convention of gestures ("signs") used instead of speaking to convey information.

2.12 sticky key
logical setting that enables sequentially pressed keyboard keystrokes combined as a single input

2.13 telecommunications terminal
point at which data can either enter or leave a system or communications network

NOTE In data communications, a device, usually equipped with a keyboard and display device, capable of sending and receiving information.
3 Collection of icons and symbols

NOTE: The Secretariat of ISO/IEC JTC 1/SC 35 is currently obtaining the approval of the publishers of these icons for inclusion in this standard.

3.1 Presentation of icons and symbols

Throughout this clause, and where appropriate, the icons and symbols are displayed upon a squared grid (icons) or upon a matrix (standardized symbols). In addition, the icons are also displayed approximately actual size alongside the enlarged (and gridded) version.

3.2 General icons and symbols

3.2.1 Accessibility options – Software

Primary domain: IT software & hardware

Function: Provides access to a suite of functions and utilities which enable the customization of the software and hardware to best support the abilities of the disabled user.

Graphics:


NOTE These are examples of icons currently in use and not ISO/IEC recommendations
3.2.2 Facility for disabled users - ICTA International Symbol of Access

Function: Identifies a facility with special provisions available for disabled users

Graphic:

![Symbol of Access]

Source: International Commission on Technology and Accessibility. [5]

NOTE: This symbol is registered with ISO

3.2.3 General facilities for deaf and hard of hearing

Primary domain: Hardware, Telecommunications

Function: To enable access to general facilities and functions

Graphics:

![Symbol of Deafness]


NOTE 1: This symbol is considered to be culturally unacceptable, due to the negative connotations of the diagonal "prohibition" line across an ear. The use of symbols that indicate specific access services in a positive manner are encouraged. A good example is the TTY symbol (3.4.1.2), as opposed to misusing the symbol shown above to represent various distinct accommodations (e.g. Inductive coupling, electrical coupling, etc.).

NOTE 2: These are examples of symbols currently in use and not ISO/IEC recommendations
3.3 Input methods

3.3.1 General

3.3.1.1 Input languages and methods

Primary domain: Hardware

Function: Enables the setting of alternative input methods: Handwriting recognition, keyboard input or voice recognition.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.2 Keyboard

3.3.2.1 Keyboard input

Primary domain: Hardware

Function: Enables the user to select the keyboard method to input text.

Graphic:

NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.2.2 Serial key devices

Primary domain: Hardware

Primary function: Enables the user to select alternative access to the keyboard and mouse features.

Graphic:

Sources: Left, Microsoft Windows 2000®. [3], right, Apple Mac OS X.

NOTE These are examples of icons currently in use and not ISO/IEC recommendations.

3.3.2.3 Stickykeys

Primary domain: Hardware

Function: Combines sequentially pressed keyboard keystrokes as single input.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.2.4  **ToggleKeys**

**Primary domain:** Hardware

**Function:** Enables the user to hear tones when pressing Caps Lock, Num Lock and Scroll Lock.

**Graphic:**

![Graphic](image_url)

**Source:** Microsoft Windows 98®. [3]

**NOTE**  This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.2.5  **Filter keys**

**Primary domain:** Hardware

**Function:** Ignores brief or repeated key strokes or slows the keystroke input repeat rate.

**Graphic:**

![Graphic](image_url)

**Source:** Microsoft Windows 2000®. [3]

**NOTE**  This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.2.6 Character repeat delay

**Primary domain:** Hardware

**Function:** Enables the user to set the keyboard input repeat character input delay (Settings: variable, long to short).

**Graphic:**

![Character Repeat Delay Icon](image)

**Source:** Microsoft Windows 2000®. [3]

*NOTE* This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.2.7 Character repeat rate

**Primary domain:** Hardware or Software?

**Function:** Enables the user to set the repeat character input rate (Settings: variable, slow to fast).

**Graphic:**

![Character Repeat Rate Icon](image)

**Source:** Microsoft Windows 2000®. [3]

*NOTE* This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.2.8 On-screen keyboard

**Primary domain:** Software interface

**Function:** Provides mobility-impaired users with basic keyboard functions via a touch screen interface.

**Graphics:**

![On-screen keyboard graphic]

**Source:** Microsoft Windows 2000® and Windows XP®. [3]

**NOTE** These are examples of icons currently in use and not ISO/IEC recommendations.

3.3.3 Pointing device

3.3.3.1 Mouse Properties

**Primary domain:** Hardware

**Function:** Enables the user to set their personal preferences for the operation of the mouse.

**Graphic:**

![Mouse Properties graphic]

**Source:** Microsoft Windows 2000®. [3]

**NOTE** This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.3.2 Mouse Keys

Primary domain: Hardware

Function: Enables the pointer icon to be controlled by the numeric keypad on the keyboard.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.3.3 Select pointer speed ("Motion")

Primary domain: Software interface

Function: Enables the user to set the speed and acceleration of the pointer icon.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.3.4 Automatically move pointer to default button ("Snap to")

**Primary domain:** Software interface

**Function:** When set by the user, automatically moves the pointer icon to the default button within a dialogue box.

**Graphic:**

![Graphic of pointer movement](image)

**Source:** Microsoft Windows XP®. [3]

NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.3.5 Display pointer trails

**Primary domain:** Software interface

**Function:** When set by the user, will display the trail of the pointer icon.

**Graphic:**

![Graphic of pointer trails](image)

**Source:** Microsoft Windows XP®. [3]

NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.3.6 Show location of pointer

**Primary domain:** Software interface

**Function:** When set by the user, shows the location of the pointer icon.

**Graphic:**

![Graphic](image)

**Source:** Microsoft Windows XP®. [3]

**NOTE** This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.4 Handwriting

3.3.4.1 Handwriting recognition

**Primary domain:** Hardware

**Function:** Enables the user to select the handwriting method to input text.

**Graphic:**

![Graphic](image)

**Source:** Microsoft Windows 2000®. [3]

**NOTE** This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.3.5 Audio

3.3.5.1 Speech properties

Primary domain: Software

Function: Enables the user to adjust settings and select options for both speech input and output

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.3.5.2 Speech

Primary domain: Hardware and software

Function: Enables the user to adjust settings and select options for speech input via a microphone.

Graphics:

NOTE These are examples of icons currently in use and not ISO/IEC recommendations.
3.4 Output methods

3.4.1 Audio

3.4.1.1 Sound

Primary domain: Hardware

Function: To enable the user to adjust the sound settings.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.4.1.2 "Narrator"

Primary domain: Software

Function: Enables people to have contents of the screen read aloud to them.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.4.1.3 Text to speech settings

**Primary domain:** Software

**Function:** Enables the user to adjust settings and select options for text output as speech via a sound speaker.

**Graphic:**

![Image of a microphone and speaker icon](image)

**Source:** Microsoft Windows 2000®. [3]

**NOTE** This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.4.1.4 Audio description for TV, video, film, etc

**Primary domain:** Entertainment.

**Function:** Indicates the availability of a audio description of key visual elements in a video or multimedia product.

**Graphic:**

![Audio Description Icon](image)

**Sources:** Left, National Disability Arts Form (US), typically used on American television [4]. Centre, typically used for the theatre [6], right Voiceprint Canada [9].

**NOTE** These are examples of symbols currently in use and not ISO/IEC recommendations.
3.4.1.5 Assistive listening systems

Graphic:


NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.4.1.6 Captioning

Primary domain: Entertainment

Function: Denotes that "captioning" facilities are available.

Graphic:

Source: (US) National Captioning Institute. [7]

NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.
3.4.1.6.1 Closed captioning

Primary domain: Entertainment

Function: Denotes that "closed captioning" facilities are available

Graphic:


NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.4.1.6.2 Open captioning

Primary domain: Entertainment

Function: Denotes that "open captioning" facilities are available

Graphic:

Source: Kerasotes Theatres [8]

NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.
3.4.2 Visual

3.4.2.1 General

Primary domain: Hardware and software

Function: To identify facilities for vision impaired people

Graphic:

Source: BS 8501:2002, registration number BS 8501.6025 [10]

NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.4.2.2 "Sound Sentry"

Primary domain: Hardware

Function: Generates visual warnings when the system makes a sound.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.4.2.3 "Show sounds"

Primary domain: Hardware

Function: Displays captions for the speech and the sounds that applications make.

Graphic:


NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.
3.4.2.4  Magnifying glass/Screen magnifier

**Primary domain:** Software Interface

**Function:** Activates the screen the magnification function, and enables setting of magnification values. An additional window shows enlarged text and images in proximity of the pointer icon.

**Graphics:**

![Magnifying glass and Screen magnifier graphics]

**Sources:** Top row: Microsoft Windows 2000® & XP®, [3], bottom row: IBM ThinkPad® (spacebar) [12].

**NOTE**  These are examples of icons and a symbol currently in use and not ISO/IEC recommendations.
3.4.2.5 High Contrast

**Primary domain:** Software interface

**Function:** To set the screen colours and typefonts designed for easy reading

**Graphic:**

![High Contrast Graphic](image1)

**Source:** Microsoft Windows 2000®. [3]

NOTE This is an example of an icon currently in use and not an ISO/IEC recommendation.

3.4.2.6 Sign language availability

**Primary domain:** Software, World Wide Web interfaces

**Function:** Indicates the availability of sign language as an alternative to text.

**Graphic:**

![Sign Language Graphic](image2)

**Source:** CEN Workshop Agreement CWA 14835 (September 2003) - Proposal. [2]

NOTE This is an example of a proposed icon and not an ISO/IEC recommendation.
3.4.2.7  Sign language interpretation

Primary domain: Entertainment and education

Function: Indicates the availability of sign language interpretation of spoken text.

Graphic:


NOTE 1  This symbol is based upon American Sign Language and is too culturally-specific for international use.

NOTE 2  This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.4.2.8  Access to low vision

Primary domain: Entertainment and education

Function: Indicates the availability of access to low vision facilities.

Graphic:


NOTE  This is an example of a symbol currently in use and not an ISO/IEC recommendation.
3.4.2.9 Accessible print

Primary domain: Entertainment and education.

Function: Indicates the availability of information (e.g. books and periodicals) in large text.

Graphic:

Large
Print


NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.4.2.10 Braille symbol

Primary domain: Entertainment, education and way finding.

Function: Indicates the availability of information and instructions in Braille format.

Graphic:

Braille


NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.
3.5 Telephony

3.5.1 Input & output

3.5.1.1 General

Primary domain: Hardware, Telecommunications

Function: Indicates the availability of a video-telephony facility with unspecified capabilities.

Graphic:


NOTE This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.5.1.2 Text telephony/Telephone typewriter (TTY)

Primary domain: Hardware, Telecommunications

Function: Indicates the availability of a text telephone facility.

Graphic:


NOTE This is an example of symbols currently in use and not an ISO/IEC recommendation.
3.5.1.3 Video telephone for signing and lip-reading.

**Primary domain:** Hardware, Telecommunications

**Function:** Indicates the availability of a video-telephone facility for signing and lip-reading.

**Graphic:**

![Graphic of video telephone for signing and lip-reading](image)

**Source:** ETSI EN 301 462 v1.1.1 (2000-03). Graphical symbol number 16. [1]

**NOTE** This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.5.2 Output - Audio

3.5.2.1 Telephone amplification/Volume control telephone

**Primary domain:** Hardware, Telecommunications

**Function:** Enables the user to control and amplify incoming speech.

**Graphic:**

![Graphic of telephone amplification/Volume control telephone](image)


**NOTE** This is an example of symbols currently in use and not an ISO/IEC recommendation.
3.5.2.2 Inductive coupling

**Primary domain:** Hardware, Telecommunications

**Function:** Indicates the availability of the facility to allow a hearing aid or another device for hard of hearing people to be inductively coupled to a telecommunications terminal.

**Graphic image:**

![Graphic Image](image)

**Source:** ETSI EN 301 462 v1.1.1 (2000-03). Graphical symbol number 10. [1]

**NOTE** This is an example of a symbol currently in use and not an ISO/IEC recommendation.

3.5.2.3 Electrical coupling

**Primary domain:** Hardware, Telecommunications

**Function:** Indicates the availability of the facility to allow a hearing aid or another device for hard of hearing people to be electrically coupled to a telecommunications terminal.

**Graphic:**

![Graphic Image](image)

**Source:** ETSI EN 301 462 v1.1.1 (2000-03). Graphical symbol number 11. [1]

**NOTE** This is an example of a symbol currently in use and not an ISO/IEC recommendation.
Bibliography


[6] Design proposals for Symbols for Media Access Services at www.ndaf.org/access.html NOTE: This is included for reference only, since the design and selection process for these symbols is still underway.


[12] IBM Corporation