
**Information technology — Virtual
keyboards user interfaces —**

**Part 2:
On-screen keyboards with direct
touch interface**

*Technologies de l'information — Interfaces utilisateurs des claviers
virtuels —*

Partie 2: Claviers sur écran dotés d'interface tactile





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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

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

A list of all parts in the ISO/IEC 22121 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

Virtual keyboards can be difficult for users as different types of keyboards and functionalities exist, and they are spreading exponentially; with the rise of tactile mobile phones and devices, most users in the world will have to use such interfaces for communication, work or leisure.

The most widespread type of virtual keyboard is found on devices that use both a screen to display the virtual keyboard (on-screen keyboard) and a built-in, direct touch interface to operate it.

Devices that use an on-screen keyboard with a direct touch interface include at least one touchpad screen that allows both the display of the keyboard interface and the interaction with the user. These features are mostly found in handheld devices such as mobile phones, tablets and connected watches, but can also be seen in other devices such as laptop computers, kiosks, automated teller machine (ATM) whiteboards, or other touchpad devices used for presentation and demonstration purposes.

The main purpose of this document is to provide a reliable, harmonized and easy-to-use interface for all on-screen keyboards with a direct touch interface across the various devices that might be using it, especially mobile and connected devices. It considers a wide range of user needs such as changing keyboard layouts for multilingual users, customization, responding to accessibility, or adapting the available keys depending on the context of use, to allow faster typing.

The ISO/IEC 22121 series specifies the requirements and recommendations for all types of virtual keyboards. This document specifies the requirements and provides further recommendations for on-screen keyboards with direct touch interface. This document is harmonized with ISO/IEC 24757, which describes any type of keyboard.

Information technology — Virtual keyboards user interfaces —

Part 2: On-screen keyboards with direct touch interface

1 Scope

This document specifies the design and specification of on-screen keyboards (keyboards that are displayed on a screen) with direct touch interface, including those with some audio feedback.

This document specifies keyboard layouts designed for on-screen keyboards with direct touch interface and ways for interaction with them.

It is not applicable to virtual keyboards that are not displayed on a screen, and on-screen keyboards that do not provide a direct touchscreen interface such as on-screen keyboards relying on an accessory unit like a trackpad or a remote control for interactions with the user.

It is not applicable to physical keyboards that use real or adaptable keys, which can be customized to user needs, for example, with LCD display.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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/IEC 9995-1, *Information technology — Keyboard layouts for text and office systems — Part 1: General principles governing keyboard layouts*

ISO/IEC 9995-7:2009, *Information technology — Keyboard layouts for text and office systems — Part 7: Symbols used to represent functions*