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Part 3: Virtual keyboards interactions

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Partie 3: Modes d'interactions des claviers virtuels

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Foreword

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

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Introduction

The use of virtual keyboards is becoming a widespread means of input. Due to their virtual nature, they offer unlimited possibilities to interact through different ways. This can potentially generate inconvenience on the user side because from one device to another, and even in the same device, users can be faced with different practices. However, virtual keyboards are also an opportunity for users with disabilities to get a keyboard adapted for their specific needs. There is also the opportunity for all users to use a keyboard that is adapted to be more efficient for a particular application or environment.

A virtual keyboard can be adapted to a specific user (e.g. with visual, motor, cognitive, tactile or hearing constraints), a specific technical context (no physical keyboard available, on a large or a tiny tactile device as a phone, or a large one as a kiosk, or on a TV, etc.), a specific task (e.g. editing big documents, or editing occasionally a password) or a specific context of use (in a hurry, walking, driving, switching between several languages, etc.).

This document provides guidelines for the design of specific keyboards dedicated to specific interaction modes.

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1 Scope

This document provides guidelines on assistive technologies and functionalities that are to be included in accessible virtual keyboards. This document underlines which kinds of interaction modes can be embedded, which kinds of assistive technologies can be easily bound to virtual keyboards, and which kinds of functionalities are to be taken into account within virtual keyboards.

This document does not apply to physical keyboards that use real physical keys or adaptable keys, which can be customized to user needs, for example with LCD display.

2 Normative references

ISO/IEC 9995-1, *Information technology — Keyboard layouts for text and office systems — Part 1: General principles governing keyboard layouts*

ISO/IEC 9995-9, *Information technology — Keyboard layouts for text and office systems — Part 9: Groups and mechanisms for multilingual and multiscript input*

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[2] ISO/IEC 10741-1, *Information technology — User system interfaces — Dialogue interaction — Part 1: Cursor control for text editing*

[3] ISO/IEC 11581-3:2000, *Information technology — User system interfaces and symbols — Icon symbols and functions — Part 3: Pointer icons*

[4] ISO/IEC 14754:1999, *Information technology — Pen-Based Interfaces — Common gestures for Text Editing with Pen-Based Systems*

[5] ISO/IEC TR 15440, *Information technology — Future keyboards and other input devices and entry methods*

[6] ISO/IEC 22121-2:2023, *Information technology — Virtual keyboards user interfaces — Part 2: On-screen keyboards with direct touch interface*

[7] ISO/IEC 29138-1, *Information technology — User interface accessibility — Part 1: User accessibility needs*

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