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Identification card system - Guidance on design for accessible card-activated devices

Système d'identification des cartes - Guide sur les motifs pour l'accessibilité aux terminaux à cartes

Identifikationskartensysteme - Leitfaden zur Gestaltung erreichbarer kartenaktivierter Geräte

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Contents

Page

Foreword 4

Introduction 5

1 Scope 7

2 Normative references 7

3 Terms, definitions and abbreviations 7
3.1 Definitions 8
3.2 Abbreviations 9

4 General principles for ease of access and use 10
4.1 Approaches to ease of access and use 10
4.2 General principles 10

5 Access and location 11
5.1 Location site 11
5.2 Location signs and visual indications 11
5.3 Alternative methods for locating terminals 12
5.4 Lighting 13
5.5 Accessible route 13
5.6 Space in front of card-activated devices 13
5.7 Vestibules 14

6 Location and layout of operating features 15
6.1 Introduction 15
6.2 High level design principles 15
6.3 Reach and vision 16
6.4 Approach to the terminal for wheelchair users 16
6.5 Position and angle of keyboard and display 17
6.6 Parallax 17
6.7 Ambient noise 18
6.8 Speech input/audio output 18

7 Operating instructions and feedback 18
7.1 Introduction 18
7.2 General requirements 18
7.3 Insertion and retrieval 20
7.4 Audible signals and messages 21
7.5 Tactile feedback 21
7.6 Braille 21
7.7 Speech output 21
7.8 Task lighting 23

8 Screen design 23
8.1 Introduction 23
8.2 Text 23
8.3 Graphics 24
8.4 Foreground and background colour 24
8.5 Touch screens 24
8.6 Scrolling and screen change 24

9 Keys, keypads and function keys 25

10 Card handling 25
10.1 Introduction 25

10.2 General guidance 25
10.3 Card swiping 25

11 Outputs 26
11.1 Introduction 26
11.2 General printed outputs 26
11.3 Receptacle 26
11.4 Timing of outputs 26

12 Security and privacy 26

13 Access from vehicles 27
13.1 Introduction 27
13.2 Drive up card reading devices 27
13.3 Special applications 28
13.4 Location of ticket machines 28

14 Hand held devices 28
14.1 Introduction 28
14.2 General 28
14.3 Communication links 28
14.4 Use of the HHD to locate equipment 29

15 Contactless cards 29
15.1 Description and explanation 29
15.2 Contactless cards: factors to consider: 29

16 Adoptions to user preferences 30
16.1 Introduction 30
16.2 Setting and resetting user preferences 30
16.3 Card holder control 30

17 Installation and maintenance 30
17.1 General 30
17.2 Installation 30
17.3 Maintenance 30

Annex A (informative) About disability (CAE UK Guidelines for ATMS) 32

Annex B (informative) Checklist for design of card reading devices and terminals 34

Annex C (Informative) Wheel chair and user sizes 37

Annex D (informative) Requirements for access and location 39

Annex E (informative) Letters and numerals that are commonly confused when presented visually 52

Annex F (informative) Access from vehicles 53

Bibliography 55

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Foreword

This Technical Specification (CEN/TS 15291:2006) has been prepared by Technical Committee CEN/TC 224 “Machine-readable cards, related device interfaces and operations”, the secretariat of which is held by AFNOR.

This Technical Specification is based on the results of a CEN TC 224 WG 6 Project team commissioned to perform the necessary research.

It is intended that this Technical Specification will complement, but not be a part of, the series EN 1332, “*Identification card systems – Man-machine interface”*. The EN 1332 series includes the following parts:

— Part 1: Design principles for the user interface;

— Part 2: Dimensions and location of a tactile identifier for ID-1 cards;

— Part 3: Key pads;

— Part 4: Coding of user requirements for people with special needs;

— Part 5: Raised tactile symbols for differentiation of application on ID-1 cards.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

Machine-readable cards facilitate the provision of a growing variety of services across Europe. The purpose of this document is to increase the accessibility of these services for the benefit of consumers. This will be achieved by facilitating the inter-sector and cross-border interoperability of machine-readable cards and to do so with the maximum possible degree of user-friendliness.

This document complements the EN 1332 series. EN 1332 addresses the needs of all users, including people with special needs, not overlooking first time users, minors, those not conversant with the local language.

EN 1332 specifies:

a) the design principles for the user interface (including functions to be represented by symbols) to be incorporated into the design of card operated equipment, but not the machine operations associated with the selection and delivery of goods or services;

b) a tactile identifier to be incorporated into the design of machine readable cards;

c) a standard layout for the keypads of card operated equipment;

d) coding of user requirements for people with special needs.

The contents of the EN 1332 series are generically based, not sector specific, and cover card- operated equipment. It is recognised that the equipment may also be operated by other means, such as the insertion of notes and coins, but the scope of this document has been, as indicated, narrowly defined.

Issues relating to such consumer concerns at the man-machine interface as PIN presentation is dealt with in a separate standard, see ISO 9564.

The information society is moving from a “service” society to a “self service" society and the key to accessing many of these services will be via the use of a machine readable card. It is essential that all users are able to achieve access in order to avoid a two-tier society.

The purpose of this document is to increase the accessibility of these services for the benefit of all stakeholders and to explain the design requirements for equipment, services and the environment in which they are used.

According to CEN Guide 6:2002, 3.2, accessible design is focused on principles of extending standard design to people with some type of performance limitation to maximize the number of potential customers who can readily use a product, building or service which may be achieved by:

e) designing products, services and environments that are readily usable by most users without any modification,

f) making products or services adaptable to different users (adapting user interfaces) and

g) having standardized interfaces to be compatible with special products for persons with disabilities.

NOTE 1 Terms such as design for all, barrier-free design, inclusive design and trans-generational design are used similarly but in different contexts.

NOTE 2 Accessible design is a subset of universal design where products and environments are usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

There are a wide range of application areas where card readers might be employed (public, e.g. ATMs and personal, e.g. mobile phone). This is likely to expand enormously in the future.

This document is written in the form of a set of informative clauses covering various aspects of location, access, user space, lighting, interface layout and interface design etc., to which compliance is necessary in order for a device to be regarded as “accessible”, i.e. enables inserting or swiping the card. It should be noted that all components of the total design are equally important. If one part is missing or inadequate it may not be possible to use the card-activated device at all.

This document is based on a review of published literature, supplemented by limited research, practice and expert judgment.

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1 Scope

This document provides guidance for the design and location of card-activated devices and the immediate environment, to facilitate access for the widest possible range of users (all / most members of the community), subject to conditions of adequate privacy and security.

The contents of this document are generically based, not sector specific, and cover “card-activated device” , the generic term used in this document to encompass:

a) terminals (device with card reader and other components such as keyboard and displays);

b) standalone card readers (access control for building, public transport);

c) hand held devices (e.g. mobile phone when used to access other card-activated devices).

Card-activated devices may be used either by pedestrians or car drivers.

This document may also be applied to devices that are not card-activated, e.g. they may be activated by notes, coins, tickets, tokens, touch or other interaction with the user.

(Context of use includes: unattended, public and home use, handheld).

This document addresses the card-activated device and its immediate vicinity. It does not address the entire building / locality in which the card-activated device is located. (The reader is referred to appropriate ISO, CEN and national standards for guidance on designing accessible built environments. It should be noted that national legislation, standards and guidance have different requirements).

The term “wheelchair” in this document refers to manually propelled wheelchairs, not power driven ones, which are often of different dimensions in relation to manually propelled wheelchairs.

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.

EN 1332-1, *Identification card systems – Man-machine interface – Part 1: Design principles for the user interface*

ISO 7010, *Graphical symbols - Safety colours and safety signs – Safety signs used in workplaces and public areas*

ISO/IEC 7810, *Identification cards –Physical characteristics*

ISO 14443, *Identification cards - Contactless integrated circuit(s) cards – Proximity cards*

3 Terms, definitions and abbreviations

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

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