TECHNICAL SPECIFICATION

ISO/IEC TS 20071-15

First edition
2017-12

Information technology — User interface component accessibility —

Part 15: Guidance on scanning visual information for presentation as text in various modalities

Technologies de l'information — Accessibilité du composant interface utilisateur —

Partie 15: Recommandations relatives à la numérisation des informations visuelles en vue d'une présentation sous forme de texte selon différentes modalités

Reference number
ISO/IEC TS 20071-15:2017(E)

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

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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 ISO documents 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).

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

A list of all parts in the ISO/IEC 20071 series can be found on the ISO website.

Introduction

There are a wide variety of visual objects in a user's environment that provide information that could be scanned and processed to output text-based information about or related to the object. Providing text-based information can provide accessibility to diverse users in various contexts of use, including:

— persons who cannot see the information (due to vision or environmental limitations);

— persons who cannot approach the information closely enough to see it (due to physical or environmental limitations);

— people who cannot understand the information (due to cognitive or linguistic limitations);

— where the information is provided in a format that human cannot directly understand (e.g. barcodes, QR codes);

— where information content, beyond what is in the scanned image, can be obtained through additional processing.

This document provides guidance on various aspects of the user interface of applications that scan visual information. This includes selecting the types of information that are of interest to the user, helping the user locate visual objects of interest, helping the user position the object or device used for scanning, scanning the information, processing the scanned image, and outputting textual information in various modalities.

The guidance contained in this document can be applied to a wide range of devices, applications, and contexts of use.

Information technology — User interface component accessibility —

Part 15: Guidance on scanning visual information for presentation as text in various modalities

1 Scope

This document provides guidance on various aspects of the user interface of applications that scan visual information that are used directly by humans, including:

— initiating the scanning application;

— setting user's preferences and configuring the scanning application;

— identifying the types of information currently of interest to the user;

— locating visual objects of interest to the user;

— creating a static image via scanning the visual object;

— identifying the information content provided by the visual object;

— processing scanned information and outputting the results to the user.

This document provides increased accessibility by addressing the user accessibility needs of diverse users in diverse contexts.

This document contains guidance that can be applied to a variety of devices, including:

— specialized devices that are dedicated to scanning and processing visual information;

— mobile devices (such as smartphones and tablets);

— general purpose computers with camera capabilities;

— office machines with scanning functions.

This document contains guidance that can be applied to various types of software, including:

— stand-alone scanning applications;

— applications including scanning functionalities;

— (scanning) applications that interoperate with other applications.

This document contains guidance that can be used for outputting scanned information in various modalities, including:

— audio outputs;

— visual outputs;

— tactile outputs;

— storing information for future use within the application performing the scanning;

— electronic outputs (to other applications, systems, or devices including those directly connected and those connected via the Internet).

This document does not:

— apply to fully automated scanning that is not under direct human control;

— apply to applications that scan visual information for editing an image or just displaying it;

— provide guidance on the design of specific hardware devices involved in scanning;

— provide guidance on the specific objects that can be recognized or the specific software used to recognize these objects;

— provide guidance on the internal functioning of software that recognizes specific types of objects.

This document is intended for use by developers of applications that include user controlled scanning functionalities. It does not expect that an application includes all of these functionalities. It can be used for those functionalities that an application does provide.

2 Normative references

There are no normative references in this document.