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Information technology — Interoperability with assistive technology (AT)

Part 6: Java accessibility application programming interface (API)

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National foreword

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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.

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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

ISO/IEC 13066 consists of the following parts, under the general title *Information technology — Interoperability with assistive technology (AT)*:

— *Part 1: Requirements and recommendations for interoperability*

— *Part 2: Windows accessibility application programming interface (API)*

— *Part 3: IAccessible2 accessibility application programming interface (API)*

— *Part 4: Linux/UNIX graphical environments accessibility application programming interface (API)*

— *Part 6: Java accessibility application programming interface (API)*

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Introduction

Assistive technology (AT) is specialized information technology (IT) hardware or software that is added to or incorporated within a system that increases accessibility for an individual. In other words, it is special purpose IT that interoperates with another IT product enabling a person with a disability to use the IT product.

Interoperability involves the ability to add or replace Assistive Technology (AT) to existing components of Information Technology (IT) systems. Interoperability between AT and IT is best facilitated via the use of standardized, public interfaces for all IT components.

This part of ISO/IEC 13066 describes the Java accessibility API that can be used as a framework to support software to software IT-AT interoperability on the multiple computing platforms. It also describes the Java Access Bridge for Windows – for enabling AT on Windows to interoperate with accessible Java applications on the Microsoft Windows platform – and the Java Access Bridge for GNOME – for enabling AT on UNIX and GNU/Linux platforms running the GNOME graphical desktop to interoperate with accessible Java applications on UNIX and GNU/Linux environments.

NOTE 1 GNOME is both a common and accessible graphical desktop for Linux / UNIX graphical environments, as well as an open source project delivering a collection of software libraries and applications. It was formerly an acronym meaning “GNU Network Object Model Environment”.

NOTE 2 The code examples contained in this document are illustrative in nature. With rare exception, they do not include error checking or exception handling, and should be treated more like pseudo-code than as cookbook templates that can use directly in applications or assistive technologies.

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Information technology — Interoperability with assistive technology (AT) —

Part 6:
Java accessibility application programming interface (API)

1 Scope

This part of ISO/IEC 13066 provides an overview to the structure and terminology of the Java accessibility API

It will provide:

— A description of the overall architecture and terminology of the API;

— Further introductory explanations regarding the content and use of the API beyond those found in Annex A of ISO/IEC 13066-1;

— An overview of the main properties, including of:

  — user interface elements;

  — how to get and set focus;

  — of communication mechanisms in the API;

  — a discussion of design considerations for the API (e.g. pointers to external sources of information on accessibility guidance related to using the API);

  — information on extending the API (and where this is appropriate);

  — an introduction to the programming interface of the API (including pointers to external sources of information).

  — an introduction to the Java Access Bridge for Windows and the Java Access Bridge for GNOME

It will provide this information as an introduction to the Java API to assist:

— IT system level developers who create custom controls and/or interface to them;

— AT developers involved in programming "hardware to software" and "software to software" interactions

2 Terms and Definitions

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

2.1
accessible object
a part of the user interface that is accessible by and exposes the Java accessibility API

Note 1 to entry An accessible object is represented by an object of the “AccessibleContext” Java class

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