INTERNATIONAL STANDARD

ISO/IEC 30122-1

First edition
2016-08-01

Information technology — User interfaces — Voice commands —

Part 1: Framework and general guidance

Technologies de l'information — Interfaces utilisateur — Commande vocale —

Partie 1: Cadre et conseils généraux

Reference number
ISO/IEC 30122-1:2016(E)

© ISO/IEC 2016



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Conformance **1**
3 Normative references **1**
4 Terms and definitions **1**
5 Requirements and recommendations **2**
5.1 Overview 2
5.1.1 General 2
5.1.2 Attributes 2
5.1.3 Start and end signals of voice command 4
5.1.4 Uniqueness 4
5.1.5 Feedback of acceptance 4
5.2 Database of voice commands 5
5.2.1 Registration of voice commands 5
5.2.2 Language of voice commands to be registered in database 5
5.2.3 Contents of database 5
5.2.4 Management of database 6
Bibliography **7**

© ISO/IEC 2016 – All rights reserved

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).

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).

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

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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

ISO/IEC 30122 consists of the following parts, under the general title *Information technology — User interfaces — Voice commands*:

— *Part 1: Framework and general guidance*

— *Part 2: Constructing and testing*

— *Part 3: Translation and localization*

— *Part 4: Management of voice command registration*

© ISO/IEC 2016 – All rights reserved

Introduction

Voice command is used for controlling ICT devices with the voice and in the language of the user. This technology is based on speech recognition, with some consideration for language tolerance (different accents or speech impairment while using a given language). It is also beneficial to people who are operating the ICT device when/where they cannot use hands or fingers to operate it.

This document defines the principal standardized voice commands that will be commonly used in various ICT devices.

© ISO/IEC 2016 – All rights reserved

Information technology — User interfaces — Voice commands —

Part 1: Framework and general guidance

1 Scope

This part of ISO/IEC 30122 defines a framework and general guidance for essential voice commands.

This part of ISO/IEC 30122 provides a limited number of commands which could be memorized to facilitate the use of the information/communication technology (ICT) devices including computers, personal digital assistants (PDAs), tablets, mobile devices, car navigation systems and business machines.

This part of ISO/IEC 30122 does not include the natural sentence recognition by using natural language processing technology.

2 Conformance

A voice command is conformant to ISO/IEC 30122-1 if it meets all requirements of Clause 5.

3 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 639-2, *Codes for the representation of names of languages — Part 2: Alpha-3 code*

ISO 639-3, *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

ISO/IEC 30122-2, *Information technology — User interfaces — Voice commands — Part 2: Constructing and testing*

ISO/IEC 30122-3, *Information technology — User interfaces — Voice commands — Part 3: Translation and localization*

ISO/IEC 30122-4, *Information technology — User interfaces — Voice commands — Part 4: Management of voice command registration*

4 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

© ISO/IEC 2016 – All rights reserved

4.1
voice command
spoken instruction to control ICT system

5 Requirements and recommendations

5.1 Overview

5.1.1 General

ISO/IEC 30122 consists of four parts.

ISO/IEC 30122-1 provides a framework and general guidance for essential voice commands. Basic and common requirements and recommendations for voice commands are provided.

ISO/IEC 30122-2 provides the technical criteria and test methods for voice commands and a speech recognition system. A voice command is the instruction spoken by the user to control an ICT device. The ICT device recognizes and identifies the spoken instruction using speech recognition technology. Thus, in order to determine the appropriateness of a voice command, the specification of the speech recognition technology that is used in ICT devices should be taken into account as well as the acoustical properties of the voice command.

ISO/IEC 30122-3 provides the linguistic requirements to translate and localize voice commands and the procedure to decide the words or phrases for voice commands from a linguistic point of view. A voice command is used in any language. Inter-language issues of voice commands should be taken into account for the translation and localization of voice commands.

ISO/IEC 30122-4 defines supplementary procedural information, requirements and criteria that apply to a collection of voice commands published as a web-accessible voice command database. They are based on Annex SL of the IEC Supplement to ISO/IEC Directives. ISO/IEC 30122-4 also defines the method for adding, changing or withdrawing voice commands in an electronic database of standard voice commands.

A developer of system/application that will use voice commands shall follow the defined procedure.

— Identify needed commands.

— Check the database of voice commands to find voice commands that meet these needs.

— Where standard voice commands exist, use them.

— Where standard voice commands do not exist, create missing voice commands in accordance with guidance in this document and ISO/IEC 30122-2.

— For all voice commands, comply with ISO/IEC 30122-3 for inter-language issues and localization.

— If desired, submit the new commands to the standardization procedure (defined in ISO/IEC 30122-3).

5.1.2 Attributes

Each voice command in this part of ISO/IEC 30122 has the following attributes.

NOTE In EXAMPLEs of a) to j), the example data of attributes are expressed in English.

© ISO/IEC 2016 – All rights reserved