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Secretariat of ISO/IEC JTC 1/SC 35 AFNOR — Philippe Magnabosco
11 rue Francis de Pressensé 93571 - La Plaine Cedex Saint-Denis - France
Telephone: +33 1 41 62 85 02; Facsimile: 33 1 49 17 90 00;
e-mail: philippe.magnabosco@afnor.org

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CD Voice command 1

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Secretariat: AFNOR

Information technology — User interfaces — Voice command — Part 1: Framework and general guidance

Technologies de l'information — Interfaces utilisateur —Commande de voix — Partie 1: Cadre et conseils généraux

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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.

This part of ISO/IEC Principal voice commands was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User Interfaces*.

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

— *Part 1: Framework and general guidance*

— *Part 2: Procedures for constructing and testing*

— *Part 3: Translation issues and inter-language issues for voice command*

— *Part 4: Management of voice command registration*

Introduction

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

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

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Information technology — User interfaces — Voice command — Part 1: Framework and general guidance

1 Scope

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

This International Standard will propose a limited number of commands which could be memorized to facilitate the use of the information/communication technology (ICT) devices including computers, PDA's, tablets, mobile devices, car navigation systems, and business machines.

2 Conformity

The voice command is conformant to ISO/IEC Principal voice commands if it meets all requirements of Clause 5.

3 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.

ISO 639-2:1998 Codes for the representation of names of languages -- Part 2: Alpha-3 code

ISO/IEC 2382-29:1999: Information technology -- Vocabulary -- Part 29: Artificial intelligence -- Speech recognition and synthesis

ISO/IEC 24786: 2009: Information technology – User interfaces – Accessible user interface for accessibility settings

4 Terms and definitions

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

3.1
voice command
spoken instruction to control ICT devices.

3.2
voice operation
function that allows users to operate a computer with voice commands through a microphone (e.g. the voice command "Switch to Mail" activates the email application) [ISO/IEC 24786:2009]

NOTE The voice commands usually follow an activation keyword (e.g. "Computer!") in order to be distinguished from other speech that is not intended as a voice command.

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5 Requirements and recommendations

5.1 Overview

5.1.1 General

This clause provides a framework for use in the analysis, design, and implementation of voice commands.

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5.1.2 Attributes

Each of voice commands in series of this standard has the following attributes.

a) Title

Title is a name of this voice command. The title should be a noun or a noun phrase. Title shall be unique (see 5.1.4). If there is a need for more than one title, the titles shall be separated with the punctuation mark semicolon.

NOTE Title is not the word or phrase to be spoken by user as voice command.

EXAMPLE 1 “Confirmation of operation”

EXAMPLE 2 “Answer; Confirmation”

b) Phrase of command

Phrase of command is to be spoken by user to control ICT devices. Phrase of command shall be unique (see 5.1.4).

EXAMPLE 1 “Yes”

EXAMPLE 2 “I agree”

c) Description of function

Description of function gives the purpose of the voice command, or actual action when the voice command is given. Description of function starts with *infinitive,* i.e. "To *verb* …"

EXAMPLE 1 “To confirm the operation that the system requires the user to allow to do.”

EXAMPLE 2 “To agree the reaction of ICT device.”

d) Note

Note is additional explanation. If there is nothing to describe in Note, it can be blank.

EXAMPLE “See also the voice command 'OK'.”

e) Keywords

Keywords is used by user to search the voice command on the database described in Clause 5.2. If there is no keyword, this can be blank.

EXAMPLE “OK, agree, confirmation”

f) Date of release

Date of release is the date when the resent data a)-i) is updated. The date shall be UTC.

EXAMPLE “2012-01-01”

g) Version

Version is a number of revision. This must start with 1.0. The number increases by 1.0 in the case of major revision, and by 0.1 in the case of minor revision.

EXAMPLE “1.2”

h) History

History is a record of revisions. History can include past versions, and dates of release of past revisions. If there is no past revision, History can be blank.

EXAMPLE “Ver. 1.0: 2011-01-01, Ver. 1.1: 2011-07-01”

i) Relevant TCs/SCs and publications

Relevant TCs/SCs is TCs/SCs of ISO, IEC, or other standardize organization who standardize the voice command, or is/are interested by it. The publication is the published standard that provides the voice command.

EXAMPLE "JTC1/SC35, ISO/IEC 00000:2012."

5.1.3 Start and end signals of voice command

The start signal enables the acceptance of voice commands.

The end signal disables the acceptance of voice commands.

NOTE 1 The starting signal enables the system to distinguish whether the word or phrase spoken by the user is the voice command or just a general utterance.

NOTE 2 The signal is not always given by a voice. The signal includes making sounds, pushing buttons, or gestures.

EXAMPLE 1 Saying “Computer!” is the signal of start of voice command.

EXAMPLE 2 Clapping hands three times is the signal of start of voice command.

EXAMPLE 3 Saying “Over.” is the signal of end of voice command.

EXAMPLE 4 ICT device receives the voice command only in 8 s after the signal of start of voice command.

5.1.4 Uniqueness

Any two voice commands that have different functions shall not have the same Title.

Any two voice commands that have different functions shall not have the same Phrase of command.

5.1.5 Feedback of acceptance

The ICT device shall return feedback of acceptance to user in accessible manner. The feedback shall not leak the privacy information.

5.2 Database of voice commands

5.2.1 Registration of voice commands

The standardized voice commands shall be registered according to the procedure given in Part 4 of this international standard.

5.2.2 Language of voice commands to be registered in database

Voice commands shall be registered in the database in at least one, ideally two, of the official languages of ISO and IEC. Provision shall be included in registration for adding as many equivalents in other languages as needed.

NOTE 1 In order to register a standardized voice command to the database, registration of a phrase in an official language of ISO/IEC is mandatory. The database shall be able to register as many other language equivalents (Chinese, English, French, German, Italian, Japanese, Korean, Russian, etc.) as needed.

NOTE 2 Translation and inter-language issues are described in Part 3 of this international standard.

5.2.3 Contents of database

The database shall contain the following contents.

lc is Alpha-3 codes for the representation of names of languages. [ISO 639-3:2007]

NOTE Where Alpha-2 code exists, they can optionally be stored as secondary information.

Title, Phrase of command, Function, Note, and Keyword are functions as language code *lc*. These functions shall give value when *lc* = "eng" i.e. English. Non-English languages are optional.

EXAMPLE The English of Phrase of command = "Yes", The French of Phrase of command = "Oui", The German of Phrase of command = "Ja", The Japanese of Phrase of command = "Hai", The Korean of Phrase of command = "Ye", and the Chinese of Phrase of command = "Dui"

a) Index number

Index number is a serial unique number of the voice command.

b) ID number

ID number is a classified unique number if the voice command.

c) Title(*lc*)

d) Phrase of command(*lc*)

e) Function(*lc*)

f) Note(*lc*)

g) Keywords(*lc*)

h) Date of release

i) Version

j) Histroy

k) Relevant TCs/SCs and publications

NOTE Neither pronunciation nor duration of word or phrase is registered in database.

5.2.4 Management of database

Procedures of management of the database shall conform to Part 4 of this international standard.

Annex A
(informative)
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