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**Information technology — MPEG  
audio technologies —**

**Part 6:  
Unified speech and audio coding  
reference software**

*Technologies de l'information — Technologies audio MPEG —*

*Partie 6: Logiciel de référence pour le codage unifié parole et audio*

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# Contents

|   | Page     |
|---|----------|
| Foreword.....   | iv       |
| <b>1 Scope.....</b>   | <b>1</b> |
| <b>2 Normative references.....</b>                            | <b>1</b> |
| <b>3 Terms and definitions.....</b>                           | <b>1</b> |
| <b>4 Reference software structure.....</b>                    | <b>1</b> |
| 4.1 General.....  | 1        |
| 4.2 Copyright disclaimer for software modules.....            | 2        |
| <b>5 Bitstream decoding software.....</b>                     | <b>3</b> |
| 5.1 General.....  | 3        |
| 5.2 USAC decoding software.....                               | 3        |
| <b>Annex A (informative) Bitstream encoding software.....</b> | <b>4</b> |
| <b>Annex B (informative) Additional utility software.....</b> | <b>5</b> |

## 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.

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](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

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](http://www.iso.org/patents)) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

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

For an explanation of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

A list of all parts in the ISO/IEC 23003 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).

# Information technology — MPEG audio technologies —

## Part 6:

### Unified speech and audio coding reference software

#### 1 Scope

This document contains simulation software for the Unified speech and audio coding standard as defined in ISO/IEC 23003-3.

#### 2 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/IEC 23003-3, *Information technology — MPEG audio technologies — Part 3: Unified speech and audio coding*

#### 3 Terms and definitions

No terms and definitions are listed in this document.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 4 Reference software structure

##### 4.1 General

This software has been derived from reference models used in the process of developing of ISO/IEC 23003-3.

Reference software is normative in the sense that it correctly implements the USAC decoding processes described in ISO/IEC 23003-3. Complying ISO/IEC 23003-3 implementations are not expected to follow the algorithms or the programming techniques used by the reference software. Although the decoding software is considered normative, it cannot add anything to the textual technical description of USAC included in ISO/IEC 23003-3.

The software contained in this document is divided into several categories:

- Bitstream decoding software** is catalogued in [Clause 5](#). This software accepts bitstreams encoded according to the normative specification in ISO/IEC 23003-3 and decodes the streams into the audio signals associated with each bitstream. While this software appears in the normative part of this specification, attention is drawn to the fact that the implementation techniques used in this software are not considered normative – several different implementations could produce the same result – but the software is considered normative in that it correctly implements the USAC decoding processes described in ISO/IEC 23003-3. The decoder software implementation is provided at <https://standards.iso.org/iso-iec/23003/-6/ed-1/en>.