

**INTERNATIONAL
STANDARD**

**IEC
61937-7**

Second edition
2004-11

**Digital audio –
Interface for non-linear PCM encoded
audio bitstreams applying IEC 60958 –**

**Part 7:
Non-linear PCM bitstreams according to
the ATRAC, ATRAC2/3 and ATRAC-X formats**



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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms, definitions and abbreviations	5
3.1 Definitions	5
3.2 Abbreviations	5
4 Mapping of the audio bitstream on to IEC 61937	6
4.1 General.....	6
4.2 ATRAC, ATRAC2/3 and ATRAC-X burst-info	6
5 Format of ATRAC, ATRAC2/3 and ATRAC-X data-bursts	6
5.1 General.....	6
5.2 Audio data-bursts	7
5.2.1 The data ATRAC	7
5.2.2 Latency of ATRAC decoding	8
5.2.3 The data ATRAC2/3	8
5.2.4 Latency of ATRAC2/3 decoding	9
5.2.5 The data ATRAC-X	10
5.2.6 Latency of ATRAC-X decoding	11
Bibliography.....	12
Figure 1 – ATRAC data-burst.....	7
Figure 2 – Latency of ATRAC decoding	8
Figure 3 – ATRAC2/3 data-burst.....	9
Figure 4 – Latency of ATRAC2/3 decoding.....	10
Figure 5 – ATRAC-X data-burst	10
Table 1 – Fields of burst-info	6
Table 2 – Data-type-dependent information for data-type ATRAC	7
Table 3 – Data-type-dependent information for data-type ATRAC2/3	9
Table 4 – Data-type-dependent information for data-type ATRAC-X.....	11

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIGITAL AUDIO –
INTERFACE FOR NON-LINEAR PCM ENCODED
AUDIO BITSTREAMS APPLYING IEC 60958 –****Part 7: Non-linear PCM bitstreams according to
the ATRAC, ATRAC2/3 and ATRAC-X formats**

FOREWORD

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International Standard IEC 61937-7 has been prepared by Technical Area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2002. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) In this edition, a new audio data-type of ATRAC-X is added to ATRAC and ATRAC2/3.
- b) Specific properties such as reference points, repetition period, the method of filling stream gaps, and decoding latency are specified for data-type of ATRAC-X.

The text of this standard is based on the following documents:

CDV	Report on voting
100/752/CDV	100/834/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61937 consists of the following parts, under the general title *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958*:

Part 1: General

Part 2: Burst-info

Part 3: Non-linear PCM bitstreams according to the AC-3 format

Part 4: Non-linear PCM bitstreams according to the MPEG audio formats

Part 5: Non-linear PCM bitstreams according to the DTS (Digital Theater Systems) format(s)

Part 6: Non-linear PCM bitstreams according to the MPEG-2 AAC format

Part 7: Non-linear PCM bitstreams according to the ATRAC, ATRAC2/3 and ATRAC-X formats (TA4)

Part 8: Non-linear PCM bitstreams according to the Windows Media Audio Professional (TA4)¹

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this standard may be issued at a later date.

¹ Under consideration.

DIGITAL AUDIO – INTERFACE FOR NON-LINEAR PCM ENCODED AUDIO BITSTREAMS APPLYING IEC 60958 –

Part 7: Non-linear PCM bitstreams according to the ATRAC, ATRAC2/3 and ATRAC-X formats

1 Scope

This part of IEC 61937 specifies the method for the digital audio interface specified in IEC 60958 to convey non-linear PCM bitstreams encoded in accordance with the ATRAC, ATRAC2/3 and ATRAC-X formats.

2 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.

IEC 60958-1, *Digital audio interface – Part 1: General*

IEC 60958-3, *Digital audio interface – Part 3: Consumer applications*

IEC 61937-1, *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 1: General*

IEC 61937-2, *Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 2: Burst-info*

3 Terms, definitions and abbreviations

3.1 Definitions

For the purposes of this document, the definitions given in IEC 61937-1 and IEC 61937-2, as well as the following, apply.

3.1.1

latency

delay time of an external audio decoder to decode an ATRAC, ATRAC2/3 and ATRAC-X data-burst, defined as the sum of two values of the receiving delay time and the decoding delay time

3.2 Abbreviations

ATRAC	Adaptive TRansform Acoustic Coding
ATRAC2	Adaptive TRansform Acoustic Coding 2
ATRAC3	Adaptive TRansform Acoustic Coding 3
ATRAC2/3	ATRAC2 and/or ATRAC3
ATRAC-X	Adaptive TRansform Acoustic Coding-X