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Television METADATA –

Part 2:
Data encoding protocol using key-length-value



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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TELEVISION METADATA –

Part 2: Data encoding protocol using key-length-value

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International Standard IEC 62261-2 has been prepared by Technical Area 6: Higher data rate storage media, data structures and equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment

This standard cancels and replaces IEC/PAS 62261 published in 2001.

This first edition constitutes a technical revision.

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

CDV	Report on voting
100/854/CDV	100/955/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 62261 consists of the following parts, under the general title *Television metadata*:

Part 1: Metadata dictionary structure

Part 2: Data encoding protocol using key-length-value

Part 3: Universal labels for unique identification of digital data

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- withdrawn;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 publication may be issued at a later date.

TELEVISION METADATA –

Part 2: Data encoding protocol using key-length-value

1 Scope

This part of IEC 62261 defines an octet-level data encoding protocol for representing data items and data groups. This protocol defines a data structure which is independent of the application or transportation method used.

The standard defines a key-length-value (KLV) triplet as a data interchange protocol for data items where the key identifies the data, the length specifies the length of the data, and the value is the data itself. The KLV protocol provides a common interchange for all compliant applications irrespective of the method of implementation or transport.

The standard also provides methods for combining associated KLV triplets in data sets where the set of KLV triplets is itself coded with KLV data coding protocol. Such sets can be coded in either full form (universal sets) or in one of four increasingly bit-efficient forms (global sets, local sets, variable-length packs, and fixed-length packs). The standard provides a definition of each of these data constructs. The encoding octet range (length of the payload) specified in this standard may generate unusually large volumes of data. Consequently, a specific application of KLV encoding is capable of only a limited operating data range and those details shall be defined in a relevant application document.

Of necessity, keys and other reference data have to be globally unique if clashes are to be avoided. The IEC will therefore, from time to time, designate other bodies to act as its registration authority and agent in this respect; it is important to note that, as a result of this, registrations will always contain the designator of the registration authority acting at the time of registration and not that of the IEC (unless the IEC was acting directly as its own registration authority). A mixture of registration authority designators is therefore to be expected.

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.

ISO/IEC 8825-1:2002, (ITU-T X.690), *Information Technology – ASN.1 Encoding Rules – Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER), and Distinguished Encoding Rules (DER)*

ANSI/SMPTE 298M:1997, *Television – Universal Labels for Unique Identification of Digital Data*

3 KLV protocol

3.1 General

Table 1 and Figure 1 present an introductory view of the KLV protocol for encoding data. The data encoded may be a single data item or a data group. The coding of data items is described in Clause 4 while the coding of data groups is described in Clause 5 of this standard.