SMPTE RECOMMENDED PRACTICE

Digital Object Identifier (DOI) Name and Entertainment ID Registry (EIDR) Identifier Representations

Table of Contents **Page**

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Foreword

SMPTE (the Society of Motion Picture and Television Engineers) is an internationally-recognized standards developing organization. Headquartered and incorporated in the United States of America, SMPTE has members in over 80 countries on six continents. SMPTE's Engineering Documents, including Standards, Recommended Practices, and Engineering Guidelines, are prepared by SMPTE's Technology Committees. Participation in these Committees is open to all with a bona fide interest in their work. SMPTE cooperates closely with other standards-developing organizations, including ISO, IEC and ITU.

SMPTE Engineering Documents are drafted in accordance with the rules given in its Operations Manual.

SMPTE RP 2079 was prepared by Technology Committee 30MR.

Introduction

This section is entirely informative and does not form an integral part of this Engineering Document.

The digital object identifier (DOI) system specified in ISO/IEC 26324 provides an infrastructure for persistent unique identification of objects in the form of a DOI name. An Entertainment ID Registry (EIDR) Identifier is a particular kind of a DOI name used for global unique identification of movie and TV content. It is desirable to facilitate interchange of DOI names and EIDR Identifiers in MXF and other SMPTE engineering documents by unambiguously specifying their representation.

1 Scope

This specification defines specific text and binary representations for digital object identifier (DOI) names and Entertainment ID Registry (EIDR) Identifiers. It also defines dictionary entries, e.g. types and elements, for use in MXF and other KLV-based applications.

2 Conformance Notation

Normative text is text that describes elements of the design that are indispensable or contains the conformance language keywords: "shall", "should", or "may". Informative text is text that is potentially helpful to the user, but not indispensable, and can be removed, changed, or added editorially without affecting interoperability. Informative text does not contain any conformance keywords.

All text in this document is, by default, normative, except: the Introduction, any section explicitly labeled as "Informative" or individual paragraphs that start with "Note:"

The keywords "shall" and "shall not" indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.

The keywords, "should" and "should not" indicate that, among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others; or that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited.

The keywords "may" and "need not" indicate courses of action permissible within the limits of the document.

The keyword “reserved” indicates a provision that is not defined at this time, shall not be used, and may be defined in the future. The keyword “forbidden” indicates “reserved” and in addition indicates that the provision will never be defined in the future.

A conformant implementation according to this document is one that includes all mandatory provisions ("shall") and, if implemented, all recommended provisions ("should") as described. A conformant implementation need not implement optional provisions ("may") and need not implement them as described.

Unless otherwise specified, the order of precedence of the types of normative information in this document shall be as follows: Normative prose shall be the authoritative definition; Tables shall be next; followed by formal languages; then figures; and then any other language forms.

3 Normative References

The following standards contain provisions that, through reference in this text, constitute provisions of this recommended practice. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this recommended practice are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

ISO/IEC 7064:2003 Information Technology — Security Techniques — Check Character Systems

ISO/IEC 26324:2012, Information and Documentation — Digital Object Identifier System

SMPTE ST 335:2012, Metadata Element Dictionary Structure

SMPTE ST 2003:2012, Types Dictionary Structure

Internet Engineering Task Force (IETF) (January 2008). RFC 5234, Augmented BNF for Syntax Specifications: ABNF

Internet Engineering Task Force (IETF) (September 2016). RFC 7972, Entertainment Identifier Registry (EIDR) URN Namespace Definition

4 Canonical DOI Name

A Canonical DOI Name is defined as a DOI name string as specified in Section 4.1 of ISO/IEC 26324.

Example: `10.1000/123456` is a Canonical DOI Name with the DOI prefix `10.1000` and the DOI suffix `123456`.

Note: A DOI name can be resolved at https://doi.org/ .

5 Canonical EIDR Identifier

A Canonical EIDR Identifier shall be a DOI name string as specified in ISO/IEC 26324, conforming to the `EIDR-IDENTIFIER` syntax specified below (using ABNF as specified in IETF RFC 5234):

```
EIDR-IDENTIFIER = EIDR-PREFIX "/" EIDR-SUFFIX
EIDR-PREFIX  = "10.5240"
EIDR-SUFFIX  = 5*5(4*4HEXDIG "-") CHECK


DIGIT        = %x30-39                                    ; 0-9
HEXDIG       = DIGIT / "A" / "B" / "C" / "D" / "E" / "F"
ALPHA        = %x41-5A / %x61-7A                          ; A-Z / a-z
CHECK        = DIGIT / ALPHA
```

`CHECK` shall be the Mod 37,36 check character as specified in ISO/IEC 7064, computed over the 20 hexadecimal digits `HEXDIG` of `EIDR-SUFFIX`.

EIDR Identifiers shall be case insensitive.

Example: `10.5240/5FD4-FEE1-22F5-583E-FECC-O` and `10.5240/5fd4-FEE1-22F5-583E-fecc-o` correspond to the same EIDR Identifier.

Note: The check character is computed over the DOI suffix alone: if the prefix is not `10.5240`, the DOI name is not an EIDR Identifier.

6 Canonical DOI Name Type

The Canonical DOI Name Type registry entry, as defined in SMPTE ST 2003, shall be as specified in Table 1.

An instance of the Canonical DOI Name Type shall be a Canonical DOI Name as specified in Section 4.