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SMPTE STANDARD

for Television — Material Exchange Format (MXF) — Operational Pattern 1b (Single Item, Ganged Packages)



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1 Scope

This standard defines operational pattern 1b for the exchange of a MXF file with a single item contained in multiple, synchronized, playable essence containers, each comprising either a single essence element or interleaved essence elements. It defines the operating restrictions, structural metadata objects and individual attributes that shall be applied to the MXF file format specification to achieve interoperability when exchanging an MXF file as a single, continuously playable item comprising a set of synchronized essence containers.

Operational pattern 1b is intended to meet the requirements of acquisition, storage and interchange applications where more than one essence component is required and it is wished to carry these in two or more essence containers. Operational pattern 1b does require the use of body partitions for internal essence containers. Subdivision of each essence container by using body partitions is optional.

2 Normative references

The following standard contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

SMPTE 377M-2004, Television — Material Exchange Format (MXF) — File Format Specification

3 Glossary of acronyms, terms and data types

The full glossary of acronyms, terms and data types used in the MXF specification is given in the MXF file format specification. It is not repeated here to avoid any divergence of meaning.

Essence element: An essence container may contain many essence elements interleaved together. An essence element in this standard corresponds to a separable part of the interleave which is described by an MXF essence track, such as a picture track, a sound track or a data track.

4 Introduction

This standard defines MXF operational pattern 1b. In SMPTE 377M, the properties of the generalized operational patterns are defined. In the MXF engineering guideline (SMPTE EG 41), the concepts of operational patterns and the general conditions for audio-visual material interchange and interoperability are described in outline form. The introductory sections of these documents are not repeated here.

4.1 Operational pattern 1b overview

Generalized MXF operational patterns are defined as a combination of the two dimensions as defined SMPTE 377M. This operational pattern shall be defined as follows:

4.1.1 Item complexity

Single item: The file contains only one item which is made up from two or more ganged essence elements from two or more essence containers. Each material package SourceClip shall have an identical duration which shall be the same duration as each of the top-level file package(s).

4.1.2 Package complexity

Ganged packages: The material package references multiple top-level file packages that are “played” together against a common output timeline. The “ganged” essence streams can be regarded as a single stream that represents a continuous recording as indicated in figure 2. These two dimensions are broadly illustrated in informative figure 1.

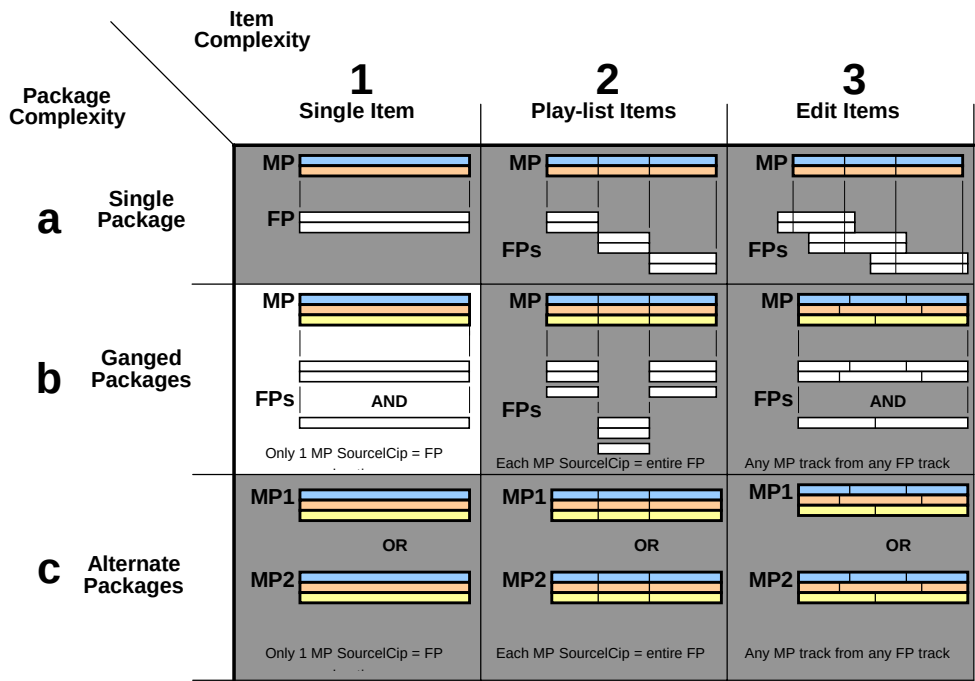


Figure 1 (informative) – Item and package complexity