

# SMPTE STANDARD

## Material Exchange Format (MXF) — File Format Specification — Amendment 1



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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, Engineering Guidelines and Registered Disclosure Documents, 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 Part XIII of its Administrative Practices.

SMPTE Amendment 1 to SMPTE ST 377-1:2011 was prepared by Technology Committee 31FS.

## 1 Scope

The purpose of this amendment is to address a request from 21DC to enhance SMPTE ST 377-1:2011 by incorporating the “Channel IDs” and “Mono Source Track IDs” properties found in SMPTE ST 382:2007.

## 2 Source Descriptor Properties

### 2.1 In Annex B.23 (Source Clip (Sound)) on page 126, extend the table with the items “Channel IDs” and “Mono Source Track IDs”

Change from:

	Item Name	Type	Len	Local Tag	Item UL	Req ?	Meaning	Default
☒	Source Clip	Set Key	16		As defined in 9.6 (see Table 17)	Req	Defines the Source Clip Set	
↔	Length	BER Length	var			Req	Set length (see 9.3)	
	All items in B.10 except the Key or Group UL and Length, if present	See B.10	See B.10	See B.10	See B.10	See B.10	See B.10	

To:

	Item Name	Type	Len	Local Tag	Item UL	Req ?	Meaning	Default
☒	Source Clip	Set Key	16		As defined in 9.6 (see Table 17)	Req	Defines the Source Clip Set	
↔	Length	BER Length	var			Req	Set length (see 9.3)	
	All items in B.10 except the Key or Group UL and Length, if present	See B.10	See B.10	See B.10	See B.10	See B.10	See B.10	
	Channel IDs	Array of Uint32	8+ 4n	1103	06.0E.2B.34. 01.01.01.07. 06.01.01.03. 07.00.00.00	Opt	Ordered Array of Channel ID referenced by this Source Clip. [RP210 Specifies an ordered array of channels within the referenced precursor]	
	Mono Source Track IDs	Array of Uint32	8+ 4n	1104	06.0E.2B.34. 01.01.01.08. 06.01.01.03. 08.00.00.00	Opt	Ordered Array of Track IDs referenced by this Source Clip. [RP210 Specifies an ordered array of tracks within the referenced precursor]	

### 2.2 Append the following text to Annex B.23 (Source Clip (Sound)) on page 126

The optional Channel IDs and Mono Source Track IDs properties may be used when a package references a lower-level package such that the reference:

- extracts one or two channels of audio from an N-channel lower-level package
- combines mono tracks from the lower-level package to form a multi-channel package

These properties are not intended to be used either for a generalized N-channel to M-channel mapping mechanism or as global identifiers. Their scope is limited to a single track within a top-level file package, as identified by the Source Track ID and Package ID properties in the case of a Source Clip (see Section B.10.)

A Source Clip shall not simultaneously contain both a Channel IDs property and a Mono Source Track IDs property.

### **B.23.1 Optional Mapping of Subchannels of Sound Elements to Material Package**

If present, the Channel IDs property shall reference one or two channels out of N-channel essence described by a top-level file package. This is used to break out a single track of multi-channel sound into individual mono sound tracks, or to identify a stereo sound pair within a multi-channel essence container.

Each essence container specification that uses this mechanism shall define any specific semantics of Channel ID for that essence..

Note: In the case of sound compressed and mapped into AES pairs according to SMPTE ST 337, each AES pair can contain multiple SMPTE ST 337 streams and hence channels.

### **B.23.2 Optional combination of Source Package Tracks**

If present, the optional Mono Source Track IDs property shall identify the single channel tracks of lower-level source packages which were combined to form a multi-channel track.

When the Mono Source Track IDs property is present, the value of the Source Track ID property of the Source Clip (see Section B.10) shall be ignored.

Note: The Mono Source Track IDs property is used on a top-level file package to describe the transfer of several individual single-channel inputs from a source device into a multi-channel essence container.