

SMPTE STANDARD

VC-3 Type Data Stream
Mapping over SDTI



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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 Part XIII of its Administrative Practices.

SMPTE Standard 2019-3 was prepared by Technology Committee N26.

1 Scope

This document specifies the mapping of the VC-3 type compressed picture data stream into the SMPTE 305M SDTI payload area. The VC-3 type compressed picture data stream mapping is defined for source coded progressive 1080P picture rates of 25/P and 30/1.001/P, 720P picture rates of 50/P and 60/1.001/P, and for interlaced 1080I picture rates of 50/I and 60/1.001/I. VC-3 compression rates supported with this mapping are limited to the payload capacity of the 270 Mb/s SDTI and are listed in Table 4.

For the transmission of compressed picture data coded at source picture rates of 25/P, 50/P and 50/I, the SDTI operates at a frame rate of 25Hz. For the transmission of compressed picture data coded at source picture rates of 30/1.001/P, 60/1.001/P, and 60/1.001/I, the SDTI operates at a frame rate of 30/1.001 Hz.

2 Conformance Notation

Documents consist of normative text and, optionally, informative text. Normative text is 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 labelled as "Informative" or individual paragraphs that start with "Note:"

Normative references are external documents referenced in normative text that are indispensable to the user. Bibliographic references are references made in informative text or are those otherwise not indispensable to the user. Normative references shall conform to the types and procedures specified in the Engineering Administrative Practices.

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.

3 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were 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 standards indicated below.

SMPTE 272M-2004, Television — Formatting AES/EBU Audio and Auxiliary Data into Digital Video Ancillary Data Space