

ST SMPTE STANDARD

Mapping VC-3 Coding Units into
the MXF Generic Container –
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, 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 Standards Operations Manual. This SMPTE Engineering Document was prepared by Technology Committee 31FS.

Intellectual Property

At the time of publication no notice had been received by SMPTE claiming patent rights essential to the implementation of this Engineering Document. However, attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. SMPTE shall not be held responsible for identifying any or all such patent rights.

1 Scope

This Amendment to ST 2019-4:2016 aligns ST 2019-4:2016 to the changes introduced in SMPTE ST 2019-1: Amendment 1 and corrects one faulty provision.

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 clause 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; then formal languages; then figures; and then any other language forms.

3 Normative References

In Clause 3, page 4, add the following reference immediately below the normative reference to SMPTE ST 2019-1:2016, VC-3 Picture Compression and Data Stream Format:

SMPTE ST 2019-1:2016 Amd 1:2024 Mapping VC-3 Coding Units into the MXF Generic Container – Amendment 1

4 Essence Descriptors for VC-3

In Clause 9, page 10, Table 5 (Generic Picture Essence Descriptor Values)

- For “Video Line Map/Legal values”

Replace

RI:{0,0}

with

RI: Use the corresponding signal standard (e.g., SD, HD, UHD, UHD2) where applicable.

- **Remove:** Transfer Characteristic item

In Clause 9, page 10, Table 6 (CDCI Picture Essence Descriptor Values)

- For “Component Depth/Source of derived data”

Replace

*SMPTE ST 2019-1
Section 7.2.3: SBD*

with

Component Depth of encoded signal. Shall not be less than the value specified in SMPTE ST 2019-1:2016, Clause 7.2.3: SBD

- For “Alpha Sample Depth/Legal values”

Replace

*HD:-
RI: 8, 10, 12
Shall match Component Depth*

with

HD: Do not define for HVN < 4

Otherwise: 8, 10, 12 (shall match Component Depth)

In Clause 9, page 11, Table 7 (RGBA Picture Essence Descriptor Values)

- For “Alpha Max Ref./Legal values”

Replace

HD: prohibited

RI: 1023,4095

with

HD: Prohibited for HVN < 4

Otherwise: 1023,4095

- For “Alpha Min Ref./Legal values”

Replace

HD: prohibited

RI: 0

with

HD: Prohibited for HVN < 4

Otherwise: 0