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Digital Video Subcommittee

SCTE STANDARD

ANSI/SCTE 172 2024

**Constraints on NAL Structured Video Coding for
Digital Program Insertion**

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Document Tags

☒ Specification	☐ Checklist	☒ Facility
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☐ Architecture or Framework	☒ Cloud	☐ Customer Premises
☒ Procedure, Process or Method		

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Note: Standards that are released multiple times in the same year use: a, b, c, etc. to indicate normative balloted updates and/or r1, r2, r3, etc. to indicate editorial changes to a released document after the year.

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1. Introduction

1.1. Executive Summary

This document defines additional video coding and transport constraints for Digital Program Insertion applications using SCTE 35 messaging.

1.2. Scope

This document defines additional video coding and transport constraints on [SCTE 128-1] and [SCTE 128-2] (which constrains ITU-T H.264/ ISO/IEC [14496-10] (“AVC”) video compression [14496-10] or on [SCTE 215-1], and [SCTE 215-2] (which constrains ITU-T H.265/ISO/IEC [23008-2] (“HEVC”) video compression [23008-2]) or on [SCTE 281-1] and [SCTE 281-2] (which constrains ITU-T H.266/ ISO/IEC [23090-3] (“VVC”) video compression [23090-3]) for Digital Program Insertion applications using SCTE 35 messaging [SCTE 35]. AVC, HEVC, VVC video uses a network abstraction layer structure to carry video and in this document “NAL structured video” will collectively refer to AVC, HEVC, and VVC Video.

Note: This standard applies only when both the insertion content and the network both use AVC video coding, or both use HEVC video coding, or both use VVC video coding.

1.3. Benefits

By applying these video coding constraints, video streams with Digital Program Insertion applications using SCTE 35 messaging can create a playable video streaming experience.

1.4. Intended Audience

This specification is intended for use by product/system designers for encoders or other downstream devices that can condition video streams for Digital Program Insertion operations.

1.5. Areas for Further Investigation or to be Added in Future Versions

This specification will need to add future versions as next generation video codecs are introduced into the video streaming environment.

2. Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this document. The editions indicated were valid at the time of subcommittee approval. All documents are subject to revision and, while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below, they are reminded that newer editions of those documents might not be compatible with the referenced version.

2.1. SCTE References

[SCTE 35] ANSI/SCTE 35-202x, Digital Program Insertion Cueing Message

[SCTE 128-1] ANSI/SCTE 128-1 2020, AVC Video Constraints for Cable Television Part 1- Coding