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Digital Video Subcommittee

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**Next Generation Audio Carriage for Cable Systems:
Part 4 – DTS-UHD Audio Carriage Constraints**

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Document Types and Tags

Document Type: Specification

Document Tags:

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| ☐ Test or Measurement | ☐ Checklist | ☒ Facility |
| ☐ Architecture or Framework | ☐ Metric | ☐ Access Network |
| ☒ Procedure, Process or Method | ☐ Cloud | ☐ Customer Premises |

Document Release History

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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 standard is part of a suite documenting carriage constraints of Next Generation Audio (NGA) codecs in MPEG-2 transport systems and in MPEG DASH. It is intended to be used in conjunction with the specific audio technologies described in subsequent Parts of this standard (see [SCTE 243-1]).

1.2 Scope

This document is part four of a multi-part standard that specifies carriage constraints of Next Generation Audio (NGA) codecs in MPEG-2 Transport Stream and in MPEG ISO-BMFF media segments. In conjunction with [SCTE 243-1] this document defines the carriage of DTS-UHD audio in MPEG-2 Transport Stream and MPEG DASH using ISO BMFF media segments.

1.3 Benefits

The Next Generation Audio (NGA) system audio system provides immersive and personalizable sound for television.

Note that NGA is not compatible with the audio system used in [SCTE 54]-era service.

2 Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. 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 243-1] SCTE 243-1 202x, Next Generation Audio Carriage Constraints for Cable Systems: Part 1 – Common Transport Signaling
- [SCTE 242-1] SCTE 242-1 202x, Next Generation Audio Coding Constraints for Cable Systems: Part 1 – Introduction and Common Constraints
- [SCTE 242-4] SCTE 242-4 202x, Next Generation Audio Coding Constraints for Cable Systems: Part 4 – DTS-UHD Audio Coding Constraints

2.2 Standards from Other Organizations

- [ISO 13818-1] ISO/IEC 13818-1:2015, Information Technology – Generic coding of moving pictures and associated audio information: Systems
- [A342-1] ATSC A/342-1:2021, Part 1: Audio Common Elements
- [ISO 14496-12] ISO/IEC 14496-12:2015, Information technology - Coding of audio-visual objects - Part 12: ISO Base Media File Format

- [TS 103-491] ETSI TS 103 491 V1.1.1 (2017-04), DTS-UHD Audio Format; Delivery of Channels, Objects and Ambisonic Sound Fields
- [TS 103-584] ETSI TS 103 584 V1.1.1 (2018-01), DTS-UHD Point Source Renderer
- [EN 300-468] ETSI EN 300 468 v 1.16.1 (2019-08) Specification for Service Information (SI) in DVB systems
- [RFC 6381] IETF RFC 6381 The 'Codecs' and 'Profiles' Parameters for "Bucket" Media Types
- [IOP] DASH IF: “Guidelines for Implementation: DASH-IF Interoperability Points for ATSC 3.0, Version 1.0,” DASH Interoperability Forum, January 31, 2016.
<http://dashif.org/wp-content/uploads/2017/02/DASH-IF-IOP-for-ATSC3-0-v1.0.pdf>

2.3 Other Published Materials

No normative references are applicable.

3 Informative References

The following documents might provide valuable information to the reader but are not required when complying with this document.

3.1 SCTE References

- [SCTE 54] ANSI/SCTE 54 2020, Digital Video Service Multiplex and Transport System Standard for Cable Television

3.2 Standards from Other Organizations

- [RFC 4151] IETF RFC 4151 The ‘tag’ URI Scheme

3.3 Other Published Materials

No normative references are applicable.