



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Digital Video Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 214-3 2015

**MPEG DASH for IP-Based Cable Services
Part 3: DASH/FF Profile**

NOTICE

The Society of Cable Telecommunications Engineers (SCTE) Standards and Recommended Practices (hereafter called documents) are intended to serve the public interest by providing specifications, test methods and procedures that promote uniformity of product, interchangeability, best practices and ultimately the long term reliability of broadband communications facilities. These documents shall not in any way preclude any member or non-member of SCTE from manufacturing or selling products not conforming to such documents, nor shall the existence of such standards preclude their voluntary use by those other than SCTE members, whether used domestically or internationally.

SCTE assumes no obligations or liability whatsoever to any party who may adopt the documents. Such adopting party assumes all risks associated with adoption of these documents, and accepts full responsibility for any damage and/or claims arising from the adoption of such Standards.

Attention is called to the possibility that implementation of this document may require the use of subject matter covered by patent rights. By publication of this document, no position is taken with respect to the existence or validity of any patent rights in connection therewith. SCTE shall not be responsible for identifying patents for which a license may be required or for conducting inquiries into the legal validity or scope of those patents that are brought to its attention.

Patent holders who believe that they hold patents which are essential to the implementation of this document have been requested to provide information about those patents and any related licensing terms and conditions. Any such declarations made before or after publication of this document are available on the SCTE web site at <http://www.scte.org>.

All Rights Reserved

© Society of Cable Telecommunications Engineers, Inc. 2015
140 Philips Road
Exton, PA 19341

Table of Contents

Title	Page Number
NOTICE	2
1. Scope	4
2. Normative References	4
2.1. SCTE References	4
2.2. Standards from other Organizations	4
3. Informative References	5
4. Compliance Notation	6
5. Abbreviations and Definitions	7
5.1. Abbreviations	7
5.2. Notation	7
6. Restrictions on MPD	8
6.1. General	8
6.2. MPD Element	8
6.3. Period Element	8
6.4. AdaptationSet Element	8
7. Restrictions on media segments	9
7.1. General	9
7.2. Video	9
7.3. Inband events	9
7.3.1. General	9
7.3.2. Carriage of SCTE 35 cue messages	9
8. Accessibility Features	11
8.1. Associated Audio Services	11
8.2. Closed Captions	11
9. Content protection	12
9.1. General	12

ANSI/SCTE 214-3 2015

1. Scope

This standard is part of a suite documenting use of MPEG DASH in cable networks.

This part of the standard defines a profile of MPEG DASH which is based on the ISO BMFF Common Profile. It also defines inband carriage of information typically present in cable systems – such as closed captioning and cue messages – in DASH ISO-BMFF media segments. This profile is a combination of generic restrictions in SCTE 214-1 and restrictions specific to ISO-BMFF specified in this standard.

2. Normative References

No informative references are applicable

2.1. SCTE References

- [1] SCTE 214-1 2015, MPEG DASH for IP-Based Cable Services, Part 1: MPD Constraints and Extensions
- [2] ANSI/SCTE 35 2014, Digital Program Insertion Cueing Message for Cable
- [3] ANSI/SCTE 128-1 2013, AVC Video Constraints for Cable Television: Part 1 – Coding
- [4] ANSI/SCTE 128-2 2013, AVC Video Constraints for Cable Television Part 2 – Transport
- [5] SCTE 215-1 2015, HEVC Video Constraints for Cable Television, Part 1 – Coding
- [6] SCTE 215-2 2015, HEVC Video Constraints for Cable Television, Part 2 – Transport

2.2. Standards from other Organizations

- [7] ISO/IEC 23009-1:2014 2nd Ed., Information technology -- Dynamic adaptive streaming over HTTP (DASH) -- Part 1: Media presentation description and segment formats (incl. ISO/IEC 23009-1:2014 COR1:2015 and ISO/IEC 23009-1:2014 AMD1:2015).
- [8] ITU-T Recommendation H.264 (01/2012): "Advanced video coding for generic audio-visual services" | ISO/IEC 14496-10:2010: "Information technology – Coding of audio-visual objects – Part 10: Advanced Video Coding".
- [9] ISO/IEC 14496-12:2014 Information technology -- Coding of audio-visual objects -- Part 12: ISO base media file format.
- [10] ISO/IEC 14496-15:2014: Information technology -- Coding of audio-visual objects -- Part 15: Carriage of network abstraction layer (NAL) unit structured video in ISO base media file format.
- [11] ITU-T Recommendation H.265 (07/2013): "Advanced video coding for generic audio-visual services" | ISO/IEC 23008-2:2013: " High Efficiency Coding and Media Delivery in Heterogeneous Environments – Part 2: High Efficiency Video Coding"
- [12] ISO/IEC 23001-7:2015 3rd Ed.: "Information technology -- MPEG systems technologies -- Part 7: Common encryption in ISO base media file format files".
- [13] ANSI/CEA-608-E, Line 21 Data Services, April 2008
- [14] ANSI/CEA-708-E, Digital Television (DTV) Closed Captioning, August 2013