ATSC Standard: A/332:2025-02 Amendment No. 1, "MPEG-H Audio"

Doc. A/332:2025-02 Amend. No. 1
27 October 2025

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Revision History

Version	Date
Amendment approved	27 October 2025

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1. OVERVIEW

1.1 Definition

An Amendment is generated to document an enhancement, an addition or a deletion of functionality to previously agreed technical provisions in an existing ATSC document. Amendments shall be published as attachments to the original ATSC document. Distribution by ATSC of existing documents shall include any approved Amendments.

1.2 Scope

This document describes additions of capability codes and related information to accommodate use of a new MPEG-H 3D Audio profile specified in a recent amendment to the MPEG-H audio standard. This amendment is in response to New Project Proposal N-082, "Aligning ATSC's MPEG-H Audio to Brazil TV 3.0."

1.3 Rationale for Changes

The changes described in this document are being proposed because the MPEG-H 3D Audio system has been updated by MPEG to provide additional, backward compatible operating modes, and it is desired by new adopters of ATSC 3.0 to be able to make use of the new modes of operation. The changes will enable adoption by implementers of ATSC 3.0 of the latest version of the MPEG audio coding system when they desire to do so.

1.4 Compatibility Considerations

The changes described in this document are backward-compatible relative to the currently published version of the standard to which this Amendment pertains and any previously approved Amendments for that standard. Since the A/332 document is about service announcements and capability codes related to various aspects of higher layer elements of the broadcast signal and since the tables in A/332 were designed from the start for extensibility, the changes described herein will permit the addition of new signaling states without interference with signaling of earlier-defined states included in such signaling.

2. LIST OF CHANGES

Change instructions are given below in *italics*. Unless otherwise noted, inserted text, tables, and drawings are shown in blue; deletions of existing text are shown in ~~red strikeout~~. The text "[ref]" indicates that a cross reference to a cited referenced document should be inserted.

2.1 Normative References

[11] ATSC: "ATSC Standard: MPEG-H System," Doc. A/342-3:~~2024-04~~2025-XX, Advanced Television Systems Committee, Washington, DC, ~~3 April 2024~~<Date>.

2.2 Informative References

2.3 Acronyms and Abbreviations

BL – Baseline

LC – Low Complexity

2.4 Terms

2.5 Change Instructions

In Table 5.12, make the indicated changes and additions:

Table 5.12 Capability Codes

capability_code	Meaning	Reference	Required (See Note 1)	Supported (See Note 2)
0x0000	Forbidden		n/a	n/a
Capability Category: Download Protocols				
0x0100-0x01FF	Reserved for future ATSC use.			
Capability Category: FEC Algorithms				
0x0200	AL FEC Repair-only	Section 5.3.8	X	X
0x0201	STAGGERCAST	A/331 Sections 7.1.5.1 and 7.2.3.3 [2]		X
0x0202-0x02FF	Reserved for future ATSC use.			
Capability Category: Wrapper/Archive Formats				
0x0300-0x03FF	Reserved for future ATSC use.			
Capability Category: Compression Algorithms				
0x0400-0x04FF	Reserved for future ATSC use.			
Capability Category: Media Types (RMP – See Note 3)				
0x0500	[Reserved for AVC standard definition video]	Section 5.3.1		
0x0501	[Reserved for AVC high definition video]	Section 5.3.1		
0x0502	AC-3 audio	A/103 Section A.2.10 [12]		
0x0503	E-AC-3 audio	A/103 Section A.2.11 [12]		
0x0504	DTS-HD audio	A/103 Section A.2.18 [12]		
0x0505	HE AAC v2 with MPEG Surround	A/103 Section A.2.21 [12]		
0x0506	HE AAC v2 Level 6 audio	A/103 Section A.2.22 [12]		
0x0507	Frame-compatible 3D video (Side-by-Side)	A/103 Section A.2.23 [12]		
0x0508	Frame-compatible 3D video (Top-and-Bottom)	A/103 Section A.2.24 [12]		
0x0509	ATSC 3.0 HEVC Video	Section 5.3.3	X	X
0x050A	ATSC 3.0 HDR Video	Section 5.3.4	X	X
0x050B	Dolby® AC4 Audio	A/342 Part 2 [10]	X	X
0x050C	MPEG-H Audio LC Profile	A/342 Part 3 Section 5.1.2 [11]	X	X
0x050D	IMSC1 Text Profile	A/343 [13]	X	X
0x050E	IMSC1 Image Profile	A/343 [13]	X	X
0x050F	4K Resolution	A/341 [9]		X

capability_code	Meaning	Reference	Required (See Note 1)	Supported (See Note 2)
0x0510	ATSC 3.0 HDR with ST 2094-10	Section 5.3.6		X
0x0511	ATSC 3.0 SDR with SL-HDR1 SEI	Section 5.3.7		X
0x0512	ATSC 3.0 SHVC Video	Section 5.3.9		X
0x0513	HFR with one temporal sub-layer	Section 5.3.10		X
0x0514	HFR with unfiltered temporal sub-layers	Section 5.3.11		X
0x0515	HFR with filtered temporal sub-layers	Section 5.3.12		X
0x0516	ATSC 3.0 Fixed/Mobile 3D HEVC	Section 5.3.13		X
0x0517	ATSC 3.0 Fixed/Mobile 3D SHVC	Section 5.3.14		X
0x0518	ATSC 3.0 Wide Color Gamut	Section 5.3.15		X
0x0519	ATSC 3.0 HD Progressive Video	Section 5.3.16		X
0x051A	ATSC 3.0 Personalization Selection	Section 5.3.17		X
0x051B	ATSC 3.0 Dialog Enhancement	Section 5.3.18		X
0x051C	ATSC 3.0 Video Descriptive Services	Section 5.3.19		X
0x051D	ATSC 3.0 SD Progressive Video	Section 5.3.20		X
0x051E	ATSC 3.0 Legacy SD Video	A/341 Section 6.2.1 [9]		X
0x051F	ATSC 3.0 Interlaced HD Video	A/341 Section 6.2.2 [9]		X
0x0520	ATSC 3.0 VVC Video	Section 5.3.21	X	X
0x0521	ATSC 3.0 VVC HDR Video	Section 5.3.22	X	X
0x0522	ATSC 3.0 VVC HDR with ST 2094-10	Section 5.3.23		X
0x0523	ATSC 3.0 VVC SDR with SL-HDR1 SEI	Section 5.3.24		X
0x0524	ATSC 3.0 Multilayer VVC Video	Section 5.3.25		X
0x0525	ATSC 3.0 HFR VVC Video	Section 5.3.26		X
0x0526	ATSC 3.0 4K VVC Video	Section 5.3.27		X
0x0527	ATSC 3.0 3D VVC Video	Section 5.3.28		X
0x0528	MPEG-H Audio BL Profile	A/342 Part 3 Section 5.1.1 [11]	X	X
0x0529~~0528~~-0x057F	Reserved for future ATSC use.			
Capability Category: Media Types (AMP – See Note 4)				
0x0580	[Reserved for AVC standard definition video]	Section 5.3.1		
0x0581	[Reserved for AVC high definition video]	Section 5.3.1		
0x0582	AC-3 audio	A/103 Section A.2.10 [12]		
0x0583	E-AC-3 audio	A/103 Section A.2.11 [12]		
0x0584	DTS-HD audio	A/103 Section A.2.18 [12]		
0x0585	HE AAC v2 with MPEG Surround	A/103 Section A.2.21 [12]		
0x0586	HE AAC v2 Level 6 audio	A/103 Section A.2.22 [12]		
0x0587	Frame-compatible 3D video (Side-by-Side)	A/103 Section A.2.23 [12]		
0x0588	Frame-compatible 3D video (Top-and-Bottom)	A/103 Section A.2.24 [12]		
0x0589	ATSC 3.0 HEVC Video	Section 5.3.3	X	X

capability_code	Meaning	Reference	Required (See Note 1)	Supported (See Note 2)
0x058A	ATSC 3.0 HDR Video	Section 5.3.4	X	X
0x058B	Dolby® AC4 Audio	A/342 Part 2 [10]	X	X
0x058C	MPEG-H Audio LC profile	A/342 Part 3 Section 5.1.2 ~~[10]~~ [11]	X	X
0x058D	IMSC1 Text Profile	A/343 [13]	X	X
0x058E	IMSC1 Image Profile	A/343 [13]	X	X
0x058F	4K Resolution	A/341 [9]		X
0x0590	ATSC 3.0 HDR with ST 2094-10	Section 5.3.6		X
0x0591	ATSC 3.0 SDR with SL-HDR1 SEI	Section 5.3.7		X
0x0592	ATSC 3.0 SHVC Video	Section 5.3.9		X
0x0593	HFR with one temporal sub-layer	Section 5.3.10		X
0x0594	HFR with unfiltered temporal sub-layers	Section 5.3.11		X
0x0595	HFR with filtered temporal sub-layers	Section 5.3.12		X
0x0596	ATSC 3.0 Fixed/Mobile 3D HEVC	Section 5.3.13		X
0x0597	ATSC 3.0 Fixed/Mobile 3D SHVC	Section 5.3.14		X
0x0598	ATSC 3.0 Wide Color Gamut	Section 5.3.15		X
0x0599	ATSC 3.0 HD Progressive Video	Section 5.3.16		X
0x059A	ATSC 3.0 Personalization Selection	Section 5.3.17		X
0x059B	ATSC 3.0 Dialog Enhancement	Section 5.3.18		X
0x059C	ATSC 3.0 Video Descriptive Services	Section 5.3.19		X
0x059D	ATSC 3.0 SD Progressive Video	Section 5.3.20		X
0x059E	ATSC 3.0 Legacy SD Video	A/341 Section 6.2.1 [9]		X
0x059F	ATSC 3.0 Interlaced HD Video	A/341 Section 6.2.2 [9]		X
0x05A0	ATSC 3.0 VVC Video	Section 5.3.21	X	X
0x05A1	ATSC 3.0 VVC HDR Video	Section 5.3.22	X	X
0x05A2	ATSC 3.0 VVC HDR with ST 2094-10	Section 5.3.23		X
0x05A3	ATSC 3.0 VVC SDR with SL-HDR1 SEI	Section 5.3.24		X
0x05A4	ATSC 3.0 Multilayer VVC Video	Section 5.3.25		X
0x05A5	ATSC 3.0 HFR VVC Video	Section 5.3.26		X
0x05A6	ATSC 3.0 4K VVC Video	Section 5.3.27		X
0x05A7	ATSC 3.0 3D VVC Video	Section 5.3.28		X
0x05A8	MPEG-H Audio BL Profile	A/342 Part 3 Section 5.1.1 [11]	X	X
0x05A9~~05A8~~-0x05FF	Reserved for future ATSC use.			
Capability Category: Internet Link				
0x0600	Internet link, downward rate 56,000 bps or better	A/103 Section A.2.25 [12]		
0x0601	Internet link, downward rate 512,000 bps or better	A/103 Section A.2.26 [12]		
0x0602	Internet link, downward rate 2,000,000 bps or better	A/103 Section A.2.27 [12]		
0x0603	Internet link, downward rate 10,000,000 bps or better	A/103 Section A.2.28 [12]		
0x0604-0x06FF	Reserved for future ATSC use.			

capability_code	Meaning	Reference	Required (See Note 1)	Supported (See Note 2)
Capability Category: Interactive				
0x0700	Interactive Content Environment	A/344 [15] (all)	X	X
0x0701	*WSPath*/atscVid	A/344 [15] 8.2.1	X	X
0x0702	*WSPath*/atscAud	A/344 [15] 8.2.1	X	X
0x0703	*WSPath*/atscCap	A/344 [15] 8.2.1	X	X
0x0704	*WSPath*/atscCD	A/344 [15] 8.2.1	X	X
0x0705-0x07FF	Reserved for future ATSC use.			
Capability Category: Other				
0x0800	DRM	Section 5.3.21.1	X	X
0x0801	Companion Device	Section 5.3.21.2	X	X
0x0802-0x08FF	Reserved for future ATSC use.			
ATSC Reserved				
0x001-0x00FF, 0x0900-0xFFFF	Reserved for future ATSC use.			

Note 1 - Codes marked with an “X” in this column are those codes that have use when signaling “capabilities and capability groups required in the receiver to be able to create a meaningful presentation of the content” (as described in Section 5.2.2.3.3.1 above).
Note 2 - Codes marked with an “X” in this column are those codes that have use when signaling the capabilities of receivers to HTTP servers (A/331 [2] Section 7.1.2.4) and A/344 Applications (A/344 [15] Section 9.13).
Note 3 – Required or supported without using an interactive environment; e.g., the real RMP only.
Note 4 – Required or supported using the interactive environment; e.g., the real RMP, HTML5 media stack, etc.

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