



ATSC

ADVANCED TELEVISION
SYSTEMS COMMITTEE

ATSC Candidate Standard: A/360:2019 Amendment No. 3, cbcs

Doc. S36-314r5
15 June 2021

Advanced Television Systems Committee
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Revision History

| Version | Date |
|--------------------|------|
| Amendment approved | Date |

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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 adds the CENC encryption mode ‘cbcs’ to the allowable content encryption methods.

1.3 Rationale for Changes

The current A/360 text references a no-longer-current version of the CENC standard, and only allows use of two encryption modes: CTR (‘cenc’) and CBC (‘cbc1’). There is significant interest in allowing the use of CBCS (‘cbcs’) – which is a likely mode common to most services (ATSC and otherwise).

1.4 Compatibility Considerations

There are significant compatibility issues with this change. Of the existing receivers, some may and some may not be able to support CBCS (‘cbcs’), which has not been used to date in ATSC. For those receivers which are unable to decode CBCS, they will be unable to present any content encrypted using CBCS. Thus, this amendment adds a non-backwards compatible mode.

2. CHANGE INSTRUCTIONS

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 Add ‘cbcs’ Mode

Revise Sec. 5.7.2 as shown:

5.7.2 CENC and EME Support

ATSC 3.0 service and content may be protected using common encryption and one or more DRM systems. Multiple licenses to a single service or content may be available through multiple DRM systems simultaneously.

A DRM-protected ATSC 3.0 service or content shall be encrypted according to the Common Encryption standard [2] using the AES-128 algorithm in ~~either~~ the CTR (‘cenc’), ~~or~~ the CBC (‘cbc1’), ~~or the CBCS (‘cbcs’) mode.~~

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