ATSC Standard:
A/343:2018 Amendment No. 1, Safe Area

Doc. A/343:2018 Amend. No. 1
8 February 2021
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*Note:* The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to the validity of this claim or of any patent rights in connection therewith. One or more patent holders have, however, filed a statement regarding the terms on which such patent holder(s) may be willing to grant a license under these rights to individuals or entities desiring to obtain such a license. Details may be obtained from the ATSC Secretary and the patent holder.

Implementers with feedback, comments, or potential bug reports relating to this document may contact ATSC at https://www.atsc.org/feedback/.

**Revision History**

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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 provisions for the handling of “safe area”.

1.3 Rationale for Changes
The current A/343 text is silent about safe area. For proper interoperability, it must be decided which of the encoder or decoder is responsible. SMPTE IMF, EBU and DVB put this responsibility on the encoder. Also, compatibility with ingested IMF content requires adoption of the same model. This proposes similar provisions. Safe area may be a government regulatory issue (as it is in the U.S.).

1.4 Compatibility Considerations
The changes described in this amendment are backwards compatible on a technical level since current encoder practice roughly follows the proposed guidance in most cases. However, the topic has no coverage today and equipment behavior may vary. Failing to conform to these new provisions may impact regulatory compliance.

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.

Update the following normative references (unrelated to this contribution):


All text below is new. It is not colored blue for better readability.

Add normative references:
Add Section 5.3 as follows:

5.3 Safe Title Area

IMSC1 content shall comply with the safe title area provisions of SMPTE ST 2046-1 [ref1]. SMPTE ST 2046-1 describes the safe title area as the middle 90% of the display (both horizontally and vertically). Thus, IMSC1 content is prohibited from containing content displayed outside of the area with tts:origin at (5% 5%) and tts:extent of (90% 90%).

Since the default values of ittp:activeArea conflict with those defined here, IMSC1 content shall include the IMSC1 metadata attribute, ittp:activeArea, on the tt element indicating the actual area protected. The active area may be smaller than the values defined in SMPTE ST 2046-1 but shall not exceed them.

Receivers are expected to conform to SMPTE ST 2067-2 Sec. 5.4.7 [ref2]. In order to enable Receivers to conform, IMSC1 content shall not use itp:aspectRatio. Signaling of the authoring aspect ratio is done according to section 7.1 and A/331 [4].

Nothing in this section is intended to preclude conformance to government regulatory provisions related to safe area.

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