The Advanced Television Systems Committee, Inc. is an international, non-profit organization developing voluntary standards and recommended practices for broadcast television and multimedia data distribution. ATSC member organizations represent the broadcast, professional equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries. ATSC also develops implementation strategies and supports educational activities on ATSC standards. ATSC was formed in 1983 by the member organizations of the Joint Committee on Inter-society Coordination (JCIC): the Consumer Technology Association (CTA), the Institute of Electrical and Electronics Engineers (IEEE), the National Association of Broadcasters (NAB), the Internet & Television Association (NCTA), and the Society of Motion Picture and Television Engineers (SMPTE). For more information visit [www.atsc.org](http://www.atsc.org).

*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/](https://www.atsc.org/feedback/).

**Revision History**

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
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<td>Amendment approved</td>
<td>7 September 2022</td>
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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 corrects and clarifies two issues identified with A/341. The first clarifies the
location of Chroma samples relative to Luma samples in a 4:2:0 video representation. These
samples are positioned differently for legacy vs “UHD” video. The second clarifies spec language
regarding the use of Active Format Description (AFD) and Bar Data.

1.3 Rationale for Changes
The changes described in this document are being proposed to explicitly align the A/341
specification text with industry understanding and implementation.

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. While earlier versions of A/341 were not clearly incorrect, some
found the specification language imprecise enough to warrant these proposed revisions.

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
[Enter changes to the Normative Reference section, if any.]

2.2 Informative References

_Add the following reference._


2.3 Acronyms and Abbreviations
[Enter changes to the Acronyms and Abbreviations section, if any.]
2.4 Terms
[Enter changes to the Terms section, if any.]

2.5 Change Instructions

2.5.1 Chroma Location

Add the following bullet at the end of Section 6.2.1

- If the chroma_loc_info_present_flag is set equal to ‘1’, then both chroma_sample_loc_type_top_field and chroma_sample_loc_type_bottom_field shall be set equal to ‘0’. If chroma_loc_info_present_flag is set equal to ‘0’, chroma_sample_loc_type_top_field and chroma_sample_loc_type_bottom_field shall be inferred to be equal to ‘0’.

Add the following bullet at the end of Section 6.2.2

- If the chroma_loc_info_present_flag is set equal to ‘1’, then both chroma_sample_loc_type_top_field and chroma_sample_loc_type_bottom_field shall be set equal to ‘0’. If chroma_loc_info_present_flag is set equal to ‘0’, chroma_sample_loc_type_top_field and chroma_sample_loc_type_bottom_field shall be inferred to be equal to ‘0’.

2.5.2 AFD and Bar Data

Revise Section 5, first paragraph as shown:

5. ACTIVE FORMAT DESCRIPTION
When the active image area of the emitted video signal does not fill the entire encoded video frame (e.g., when the video is letterboxed or pillarboxed), Active Format Description (AFD) and Bar Data information, or both (as appropriate) should be present in the original source video signal in accordance with SMPTE ST 2016-1 [6] and should be present in the emitted video signal. AFD information and Bar Data are used by receivers to optimize the display of images that do not fill the coded frame. Bar Data values, when used, shall reflect the resolution, line and pixel counts of the original source pictures in the emitted video.

– End of Document –