

CEA Bulletin

Active Format Description (AFD) & Bar Data Recommended Practice

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(Formulated under the cognizance of the CEA **R4 Video Systems Committee.**)

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FOREWORD

This bulletin was developed under the auspices of the Consumer Electronics Association (CEA) R4 Video Systems Committee. This bulletin was developed after consideration of similar work by the Digital TV Group and Intellect in the U.K. titled, *Recommended Receiver Reaction to Aspect Ratio Signaling in Digital Video Broadcasting*, parts of which were used where appropriate.

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Active Format Description (AFD) & Bar Data Recommended Practice

1 Scope

This bulletin, CEA-CEB16-A, provides guidance for the development and implementation of consumer devices that process information related to aspect ratio signaling, Active Format Description (AFD) and bar data. Such devices may respond to this signaling by creating an optimum (or more desirable) display, by passing this signaling through to an analog or digital output, or in preparation of a digital recording. CEA-CEB16-A reviews the standardized methods for representing AFD, aspect ratio information, and bar data on various analog and digital Standard Definition (SD) and High Definition (HD) interfaces. For each of various transmitted display formats, CEA-CEB16-A provides recommendations for output signaling and display appearance, taking into account possible decoder capabilities, scaling options and user preferences regarding display format.

2 Informative References

The following references contain provisions, which, through reference in this text, constitute informative provisions of this standard. At the time of publication, the editions indicated below were valid. All documents are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

2.1 Informative Reference List

1. ATSC Digital Television Standard (A/53)
2. CEA-608-E Line 21 Data Services, April 2008
3. CEA-770.2-D, Standard Definition TV Analog Component Video Interface, April, 2007
4. CEA-770.3-D, High Definition TV Analog Component Video Interface, February, 2008
5. CEA-805-D Data Services on the Component Video Interfaces, January 2010
6. CEA-861-E A DTV Profile for Uncompressed High Speed Digital Interfaces, July, 2011
7. High-Definition Multimedia Interface (HDMI) Specification
8. JEITA CPR-1204 Transfer Method of Video Identification Information (525 line system), March 1997
9. ETSI TS 101 154 v1.10.1 Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream, July 2011
10. IEC 61880 Video Systems (525/60) – video and accompanied data using the vertical blanking interval—Analogue interface, 1998
11. SMPTE RP 202-2008, Video Alignment for MPEG-2 Coding, April 2008

2.2 Informative Reference Acquisition

ATSC Standards:

- Advanced Television Systems Committee, 1776 K Street N.W., Suite 200, Washington, DC 20006; Phone 202-872-9160; Internet <http://www.atsc.org/>

CEA Standards and Bulletins:

- Global Engineering Documents, World Headquarters, 15 Inverness Way East, Englewood, CO 80112-5776; Phone 800-854-7179; Internet <http://global.ihs.com>; Email global@ihs.com

HDMI

- HDMI Licensing, LLC, 1060 E. Arques Avenue, Suite 100, Sunnyvale, CA 94085; URL <http://www.hdmi.org>

EIAJ Standards:

- Available from Japan Electronics and Information Technology Industries Association (JEITA). Internet <http://www.jeita.or.jp/eiaj/english/>

IEC Standards:

- International Electrotechnical Commission. E-mail: inmail@iec.ch. Internet <http://www.iec.ch/>

DVB Standards:

- Available from European Telecommunications Standards Institute. Internet: <http://www.etsi.org/>