CEA Standards Update

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Recently Published CEA Standards

- CEA-885 R200X, *Remote Starter Safety* (ANSI public review completed 1/29/07)
- CEA-803 R200X, *Mobile Electronics Wiring Designations for Audio and Vehicle Security* (ANSI public review completed 2/5/07)
- CEA-766-B, *U.S. and Canadian Region Rating Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information using ATSC A/65-A Program and System Information Protocol (PSIP)* (ANSI public review completed 2/5/07)
- CEA-2020, *Other VBI Waveforms* (ANSI public review completed 2/5/07)
- CEA-2013-A, *Digital STB Background Power Consumption* (ANSI public review completed 2/12/07)
- CEA-2022, *Digital STB Active Power Consumption Measurement* (ANSI public review comments due 3/5/07)
- CEA-2015, *Mobile Electronics Cabling Standard* (ANSI public review comments due 4/16/07)

Publications Nearing Completion

- CEA-761-B, *DTV Remodulator Specification with Enhanced OSD Capability* (approved 7/27/06, in final editorial review)
- CEA-608-D, *Line 21 Data Service* (approved 11/9/06, in final editorial review)
- CEA-770.2-D, *Standard Definition TV Analog Component Video Interface* (approved 11/9/06, in final editorial review)
- CEA-CEB5-B, *Recommended Practice for DTV Receiver "Monitor" Mode Capability* (approved 11/9/06, in final editorial review)
- CEA-852-B, *Tunneling Component Network Protocols Over Internet Protocol Channels* (approved 12/7/06, in final editorial review)
- Erratum for CEA-2031, *Testing and Measurement Methods for Mobile Loudspeaker Systems* (approved 1/25/07, in final editorial review)
- CEA-2017, *Common Interconnection for Portable Media Players* (approved 2/28/07, in final editorial review)

Publications Pending CEA Vote

- CEA-931-C, *Remote Control Command Pass-through Standard for Home Networking* (letter ballot closed 2/9/07, "no with comments" votes being resolved)
- CEA-2033, *OpenEPG™ - A Specification for Electronic Program Guide Data Interchange* (letter ballot closed 1/11/07, "no with comments" votes being resolved)

Ongoing Work

- Revision to CEA-708-C, *Digital Television (DTV) Closed Captioning*
- Revision to CEA-775-B, *DTV 1394 Interface Specification*
- CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channels*
- Revision to CEA-909, *Antenna Control Interface*
- Revision to CEA-2014, *Web-Based Protocol and Framework for Remote User Interface on UPnP™ Networks and the Internet (Web4CE)*
- CEA-2017.1, *Serial Communication Protocol for Portable Electronic Devices*
- CEA-2019, *Testing and Measurement Methods for Audio Amplifiers*
- CEA-2027-B, *A User Interface Specification for Home Networks Using Web-based Protocols*
- Revision to CEA-CEB11, *NTSC/ATSC Loudness Matching*
- CEA-CEB19, *Recommended Loudspeaker Safety Practices*
- Possible consumer guidelines for using indoor TV antennas

New Projects

- ANSI/CEA-936-B, *USB Carkit Specificiation* (Reactivated R6 WG9 met 2/15/07, project may be canceled due to lack of support.)
- CEA-2006-B, *Testing & Measurement Methods for Mobile Audio Amplifiers* (first conference call of reactivated R6 WG10 not yet scheduled)
- CEA-2034, *Standard Method of Measurement for In-Home Loudspeakers*

Summary of Projects by CEA Product Division

Accessories

"Smart" Antenna Interface

The Video Systems Committee is currently working on a revision to CEA-909, *Antenna Control Interface,* that would enable "smart" DTV antennas to be connected to smart antenna-capable DTV sets with a single coaxial cable. The existing standard requires another control cable in addition to the coaxial cable. The smart antenna interface can enable consumers to use indoor (or outdoor) antennas with their TV sets and receive different local over-the-air signals without having to manually adjust the orientation of their antennas. Interested? Join R4 WG4.

Indoor Antenna Guidelines for Consumers

The Antennas Committee is considering the development of guidelines or recommendations for consumers who are using indoor TV antennas. The computer prediction models that it developed for www.antennaweb.org only apply to outdoor antennas. Interested? Join R5.

Audio

Loudspeaker Performance

An Audio Systems Committee working group is currently developing CEA-2034, *Standard Method of Measurement for In-Home Loudspeakers,* which it hopes will describe a method for measuring and reporting frequency response and perhaps other loudspeaker characteristics in a manner that will be easy for non-technical consumers to understand. Interested? Join R3 WG1.

Amplifier Performance

Another Audio Systems Committee working group is attempting to write an amplifier measurement standard aimed mainly at home theater in-a-box systems, but which would include some other audio amplifiers as well. There is hope that this standard, and perhaps an accompanying CEA logo program, may help ensure consumers' ability to make apples-to-apples comparisons among these types of products. The new standard would be called CEA-2019, *Testing and Measurement Methods for Audio Amplifiers.* Interested? Join R3 WG8.

Loudspeaker Safety

CEA-CEB19, *Recommended Loudspeaker Safety Practices,* is still under development. It will include guidelines that manufacturers may use, in conjunction with their own safety specifications, to ensure that loudspeakers are safe. Interested? Join R1 WG10.

Mobile Electronics

Standard Connector for Portable Devices

CEA-2017, *Common Interconnection for Portable Media Players,* defines electrical and mechanical properties for a connector that will pass audio, video and associated metadata signals, control signals, and power between portable electronic devices and in-home and in-vehicle audio/video systems. It was adopted by the Mobile Electronics Committee on 2/28/07, and will be published once final editorial review is complete.

Also, CEA-2017.1, *Serial Communication Protocol for Portable Electronic Devices,* is under development. This standard is meant to accompany CEA-2017, and describes a serial communication protocol that enables command and control communication between portable electronic devices and accessories attached to those devices. Interested? Join R6 WG15 TG1.

Mobile Electronics Cables

The Mobile Electronics Committee adopted CEA-2015, *Mobile Electronics Cabling Standard,* on 12/14/06. It defines size and performance requirements for power and speaker cabling used in mobile electronics applications. It was created to address the problem of "undergauging," where a supplier provides a cable that is ostensibly of a particular thickness, but in reality contains less copper than expected. The document was published in February, and is currently undergoing ANSI public review.

Remote Starter Safety

CEA-885 R200X, *Remote Starter Safety,* defines safety requirements for automobile accessories that allow vehicles with automatic transmissions to be started while the operator is away from the vehicle. The ANSI public review period closed on 1/29/07, with no comments received.

Audio and Security Wiring in Vehicles

CEA-803 R200X, *Mobile Electronics Wiring Designations for Audio and Vehicle Security,* has been reaffirmed by the Mobile Electronics Committee. It defines the terms used in

the sale and installation of aftermarket audio and security equipment for vehicles, and is meant ensure consistency among the installation instructions for mobile electronics. The ANSI public review period closed on 2/5/07 with no comments received.

Mobile Loudspeakers

When CEA-2031, *Testing and Measurement Methods for Mobile Loudspeaker Systems*, was approved last year there was a typographical error in section 11.2. The reference to IEC 60268-5 (2003), Clause 17.3 should have been a reference to IEC 60268-5 (2003), Clause 17.2. The error affected the way peak power measurements were described. This was fixed with the adoption of an erratum on 1/25/07. This erratum will be sent to purchasers of CEA-2031, and it will be included with copies sold in the future.

Cell Phone Car Kit

The Mobile Systems Committee is about to begin reviewing and revising ANSI/CEA-936-A, *USB Carkit Specification.* This standard defines a method for routing audio and Universal Asynchronous Receiver Transmitter (UART) signals through a USB receptacle on a phone to a USB analog carkit and to other accessories such as chargers and RS232 devices. Interested? Join R6 WG9.

Mobile Audio Amplifiers

The Mobile Systems Committee is also about to begin reviewing and revising CEA-2006-A, *Testing & Measurement Methods for Mobile Audio Amplifiers.* This standard describes a method for testing the performance of mobile audio amplifiers and reporting the results. Interested? Join R6 WG10.

TechHome

IP Tunneling

The Home Systems Control Subcommittee approved CEA-852-B, *Tunneling Component Network Protocols Over Internet Protocol Channels* on 12/7/06. This standard specifies a communications method that allows networked data acquisition and control devices to communicate with each other over the Internet. It is currently under final editorial review and will be published soon.

The subcommittee is also working on CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channels.* This standard will address limitations in the CEA-852-B protocol and provide improvements in performance, scalability, and robustness. Some of the provisions in CEA-852.1 might not be backward compatible with earlier versions of CEA-852. Interested? Join R7.1 WG2.

Open EPG

The Home Networks Committee is working on CEA-2033, *OpenEPG™ - A Specification for Electronic Program Guide Data Interchange*. This standard enables home entertainment devices to access program guide information using messages that are based on standard Internet protocols. It was balloted and a negative vote was received with comments. Efforts to resolve the comments accompanying the negative vote are currently underway.

Remote Control Commands over Home Networks

The Home Networks Committee is also working on CEA-931-C, *Remote Control Command Pass-through Standard for Home Networking.* This standard defines methods for communicating basic remote control functions between devices on a home network. It was balloted and a negative vote was received with comments. Efforts to resolve the comments accompanying the negative vote are currently underway.

Standard User Interface for Home Networks

The Home Networks Committee is working on CEA-2027-B, *A User Interface Specification for Home Networks Using Web-based Protocols.* This standard defines methods for A/V devices to use Web and Internet protocols to display status and control information on a PC, DTV, or other device used to control a home network.

Remote User Interface for UPnP™ Devices

The Home Networks Committee is also developing a revision of CEA-2014, *Web-Based Protocol and Framework for Remote User Interface on UPnP™ Networks and the Internet (Web4CE)*, which defines how to produce remote user interfaces for UPnP™ devices. Interested? Join R7 WG9.

Video

Digital STB Power Consumption (Sleep Mode)

The Video Systems Committee approved CEA-2013-A, *Digital STB Background Power Consumption*, which sets maximum “sleep” mode energy consumption at 15 watts for cable and satellite set-top boxes and 2 watts for set-top boxes used to receive terrestrial DTV signals. The standard also defines how to measure set-top box energy consumption. The ANSI public review period closed on 2/12/07 and no comments were received.

Digital STB Power Consumption (On Mode)

The Video Systems Committee has also approved CEA-2022, *Digital STB Active Power Consumption Measurement,* which specifies how to measure the power consumption of a digital set-top box when it is on (*i.e.*, delivering video to a TV set or other device). It does not set limits on power consumption. CEA-2022 is now a CEA standard, and under review by ANSI for approval as an ANSI/CEA standard. Public comments are due by 3/5/07.

Nielsen and Gemstar/TV Guide Waveforms

CEA-2020, *Other VBI Waveforms,* was approved by the Television Data Systems Subcommittee. It defines four vertical blanking interval waveforms carried on analog TV signals – two used by Nielsen Media Research, and two used by Gemstar/TV Guide. The electrical characteristics of the waveforms are defined, but the meaning of the data that is transported via the waveforms is not. The ANSI public review period closed on 2/5/07 and no comments were received.

Parental Guidance

Another standard approved by the Television Data Systems Subcommittee is CEA-766-B, *U.S. and Canadian Region Rating Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information using ATSC A/65-A Program and System Information Protocol (PSIP).* This standard is one of several that, together, define how TV systems can enable parents to control their children's access to TV programming. CEA-766-B defines the format of the codes that transmit this data. The ANSI public review period closed on 2/5/07 and no comments were received.

DTV Remodulator

The DTV Interface Subcommittee has approved CEA-761-B, *DTV Remodulator Specification with Enhanced OSD Capability.* This standard enables devices like set-top boxes, DVRs, etc. to feed their output signals into the over-the-air antenna input jack of any ATSC-compliant DTV receiver that supports "monitor mode." The DVR or other device remodulates the incoming signal onto a fixed output frequency (which has commonly been channel 3 or 4 in similar analog devices). "OSD" is on-screen display, and refers to the ability of the DTV receivers to display graphics and text from the set-top box, DVR, etc. CEA-761-B was approved by the DTV Interface Subcommittee on July 27, and is being prepared for final publication.

"Monitor mode" is a DTV receiver mode in which the consumer can tune directly to a specific RF channel, such as the one that a set-top box is feeding to the TV. It is necessary to have this special mode because DTV signals are broadcast on different RF channels than their analog counterparts (*e.g.*, the DTV RF signal for NBC4 in Washington is on channel 48), so DTV sets are designed to automatically display the appropriate DTV signal when the consumer selects the analog channel number that the broadcaster has associated with the DTV signal. That is, NBC4 in DC sends a code along with its DTV signal on channel 48 to tell DTV receivers that they should automatically tune to the DTV signal on channel 48 when the consumer directs the DTV to tune to channel 4. This automatic tuning feature becomes a problem in cases where the consumer needs to tune directly to a specific RF channel. For example, if an HD DVR is connected to the TV set and sending its signal to the set on channel 4. To enable consumers to get their sets to look for a DTV signal on channel 4, a special receiver mode is needed. Otherwise, when the consumer tunes the set to channel 4 (in the DC case) the set will likely look for a DTV signal on RF channel 48. This special mode is called "monitor mode," and recommendations for how DTV sets should behave in this mode are spelled out in CEA-CEB5-B, *Recommended Practice for DTV Receiver "Monitor" Mode Capability,* which was approved by the DTV Interface Subcommittee on 11/9/06 and is currently undergoing final editorial review.

Loudness Matching between Analog/Digital TV

The Video Systems Committee is beginning work on a review of CEA-CEB11, *NTSC/ATSC Loudness Matching*. This bulletin provides guidance to TV set makers on how to maintain uniform audio loudness between analog NTSC programs and digital ATSC programs. It assumes that NTSC broadcasters follow accepted North American broadcast practices for audio levels, and that ATSC broadcasters have encoded their signals with the correct "dialnorm" value, a number that corresponds to the actual dialog level of the program material. Interested? Join R4 WG8.

DTV Closed Captioning

The Television Data Systems Subcommittee is working on a revision to CEA-708-C, *Digital Television (DTV) Closed Captioning,* that will coordinate the standard with related Advanced Television Systems Committee (ATSC) and Society of Motion Picture and Television Engineers (SMPTE) standards. Interested? Join R4.3 WG1.

Analog Closed Captioning

On 11/9/06 the Television Data Systems Subcommittee approved CEA-608-D, *Line 21 Data Service.* This updated standard explains how to provide or use closed captioning and other data services embedded in line 21 of the vertical blanking interval of an NTSC video signal. It is currently under final editorial review and will be published soon.

DTV 1394 Interface

The DTV Interface Subcommittee is working on a revision to CEA-775-B, *DTV 1394 Interface Specification,* which defines a method by which set-top boxes, DVRs and other similar devices may send MPEG video to a DTV set for decoding using a 1394 interface. This group works to keep CEA-775 up to date with the latest standards developed by the 1394 Trade Association. Interested? Join R4.8 WG1.

HDMI and DVI Interfaces

The DTV Interface Subcommittee has also begun work on a revision to CEA-861-D, *A DTV Profile for Uncompressed High Speed Digital Interfaces,* which applies to a variety of DTV-related high-speed interfaces such as the Digital Visual Interface (DVI) and the High Definition Multimedia Interface (HDMI). Interested? Join R4.8 WG7.

Analog Component Interface

The DTV Interface Subcommittee has completed CEA-770.2-D, *Standard Definition TV Analog Component Video Interface.* It defines a three-cable method for sending standard definition analog video signals between products in both 4:3 and 16:9 aspect ratios. The document was approved on 11/9/06 and is now in final editorial review.