

# CEA Standards Update

## T&S Forum Hotel Cutoff is April 17

The hotel room block for the 2009 Technology and Standards Spring Forum expires on April 17, so make your reservations now. Also, please submit your event registration form to Catrina Akers ([cakers@CE.org](mailto:cakers@CE.org)) by April 30. For details about the Forum please visit: <http://www.ce.org/Events/default.asp>.

## R6 WG16 Addressing Fixed and Mobile Alerting Devices

A new Portable, Handheld & In-Vehicle Electronics Committee working group is addressing fixed and mobile alerting devices. The new group is chaired by Matthew Straeb, Global Security Systems, and will work to develop technical documents aimed at allowing compatible Common Alert Protocol (CAP) usage among various consumer electronics devices that process CAP-encoded data, independent of delivery method. Such documents may include guidelines for filtering and device response. The working group's next teleconference is scheduled for April 6, 2009. For more information, contact [standards@CE.org](mailto:standards@CE.org).

## New Projects

- ✚ CEA-23-B, *Measurement Procedures for Determining Compliance with FCC Rules for "Cable-Ready Consumer Electronics Equipment"*
- ✚ CEA-544-C, *Low Frequency Immunity of Tuners in a Cable System*

## Recently Published ANSI Standards

- ✚ ANSI/CEA-774-B, *TV Receiving Antenna Performance Presentation and Measurement* (published February 2009)
- ✚ ANSI/CEA-2028-A, *Color Codes for Outdoor TV Receiving Antennas* (published February 2009)
- ✚ ANSI/CEA-2032-A, *Indoor TV Receiving Antenna Performance Standard* (published February 2009)

## Recently Published CEA Standards

- ✚ CEA-542-C, *Cable Television Channel Identification Plan* (published February 2009)

- ✚ CEA-762-B, *DTV Remodulator Specification* (published November 2008, ANSI public review closed 1/5/09)
- ✚ CEA-851.1-A, *IP-Based Digital Telephony for the Versatile Home Network* (published February 2009)
- ✚ CEA-2006-B, *Testing and Measurement Methods for Mobile Audio Amplifiers* (published February 2009, ANSI public review closes 4/13/2009)
- ✚ CEA/CEDIA-CEB22, *Home Theater Recommended Practice: Audio Design* (published March 2009)

## Recently Withdrawn CEA Standards

- ✚ CEA-9, *Standard Method of Measurement for Phonograph Cartridges Used in Analog Disc Playback Equipment* (withdrawn January 2009)
- ✚ CEA-636, *Recommended Loudspeaker Safety Practices*, (withdrawn January 2009)

## Publications Nearing CEA Completion

- ✚ CEA-516 R-2008, *Joint EIA/CVCC Recommended Practice for Teletext: North American Basic Teletext Specification (NABTS)* (reaffirmation approved 2/4/09)
- ✚ CEA-852-B, *Tunneling Component Network Protocols Over Internet Protocol Channels* (approved 12/7/06, in final editorial review, awaiting completion of CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channel*)
- ✚ CEA-861-E Errata, *A DTV Profile for Uncompressed High Speed Digital Interfaces* (approved 12/12/08, in final editorial review)
- ✚ CEA-2002-A, *Test Procedure for Powerline Carrier Technology* (approved 10/23/08, in final editorial review)
- ✚ CEA-2035 (aka J-STD-070), *Emergency Alert Signaling for the Home Network* (pre-vote comment period closed 9/3/08, comments being addressed)
- ✚ CEA-CEB11-A, *NTSC/ATSC Loudness Matching* (recirculation ballot closes 4/2/09)
- ✚ CEA-CEB15, *CRT X-Radiation Compliance Training Manual* (approved for withdrawal 2/4/09)
- ✚ CEA-CEB20, *A/V Synchronization Processing* (pre-vote comments due 4/9/09)
- ✚ CEA-CPEB6-A, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products* (proposed for withdrawal, pre-vote comment period closed 1/7/09)

## Ongoing Work

- ✚ 5-year review of CEA-11, *Turntable Measurement Standard*
- ✚ CEA-109-E, *Intermediate Frequencies for Entertainment Receivers*
- ✚ 5-year review of ANSI/CEA-633.31 R-2000, *Power Line Physical Layer Conformance Specification*
- ✚ 5-year review of ANSI/CEA-633.32 R-2004, *Twisted Pair Physical Layer Conformance*
- ✚ CEA-633.34 *Infrared Physical Layer Conformance*
- ✚ 5-year review of ANSI/CEA-633.81, *CAL Conformance Specification*
- ✚ CEA-709.1-C, *Control Network Protocol Specification*
- ✚ CEA-709.2-B, *Control Network Power Line (PL) Channel Specification*
- ✚ 5-year review of CEA-775.1, *Web Enhanced DTV 1394 Interface Specification*
- ✚ 5-year review of ANSI/CEA 776.1, *CEBus-EIB Router Communication Protocol - Description of the CEBus-EIB Router*
- ✚ 5-year review of ANSI/CEA-776.2, *CEBus-EIB Router Communications Protocol – CEBus-EIB Router Medium Access Control Sublayer*
- ✚ 5-year review of ANSI/CEA-776.3, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Logical Link Control Sublayer*
- ✚ 5-year review of ANSI/CEA-776.4, *CEBus-EIB Router Communication Protocol – CEBus-EIB Router Network Layer*
- ✚ 5-year review of ANSI/CEA-776.5, *CEBus-EIB Router Communications Protocol-The EIB Communications Protocol*
- ✚ CEA-851.2-A, *Security Services for the Versatile Home Network*
- ✚ CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channels*
- ✚ 5-year review of CEA-2007, *QOS Priority Groupings for 802.1Q*
- ✚ 5-year review of CEA-2008, *Digital Entertainment Network*
- ✚ CEA-2014-B, *Web-based Protocol and Framework for Remote User Interface on UPnP™ Networks and the Internet (Web4CE)*
- ✚ CEA-2017-A, *Common Interconnection for Portable Media Players*
- ✚ CEA-2021, *Auto Discovery & Self-configuring Home Control Networks*
- ✚ CEA-2030-A, *Multi-Room Audio Cabling Standard*
- ✚ CEA-2034, *Standard Method of Measurement for In-Home Loudspeakers*
- ✚ CEA-2036, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products*
- ✚ CEA-CEB12-A, *PSIP Recommended Practice*, five year review

- ✚ CEA-CEB21, *Recommended DTV Audio Metadata Normalization Practices*

## Summary of Projects by CEA Product Division

### Accessories

#### ✚ Smart Antenna Performance

CEA's Antennas Committee published ANSI/CEA-774-B, *TV Receiving Antenna Performance Presentation and Measurement*, ANSI/CEA-2028-A, *Color Codes for Outdoor TV Receiving Antennas*, and ANSI/CEA-2032-A, *Indoor TV Receiving Antenna Performance Standard* in February 2009. ANSI/CEA-774-B was updated to include test procedures for smart antennas, and ANSI/CEA-2028-A and ANSI/CEA-2032-A were updated to include performance requirements for outdoor and indoor smart antennas, respectively. Smart antennas automatically steer themselves, usually by adjusting the positions of nulls or lobes in their patterns. They enable consumers to enjoy free over-the-air television without having to manually adjust their antennas every time they change channels.

### Audio

#### ✚ Standard Audio Levels

The Audio Systems Committee is considering withdrawal of CEA-CPEB6-A, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products*. This bulletin defines preferred voltage and impedance values for inputs and outputs of generally available, mass produced, audio products and accessories. By following these guidelines manufacturers can facilitate the interconnection of products from different manufacturers and permit the addition of other products or accessories to integrated systems. The Audio Systems Committee has begun a new project that will result in a standard (CEA-2036) to replace CEA-CPEB6-A. The pre-vote comment period on the proposed withdrawal of CEA-CPEB6-A closed 1/7/09. Interested? [Join R3 WG9](#).

#### ✚ Phonograph Cartridges

The Audio Systems Committee approved the withdrawal of CEA-9, *Standard Method of Measurement for Phonograph Cartridges Used in Analog Disc Playback Equipment* at its 10/21/08 meeting. This standard describes standard test conditions and procedures for testing an electromechanical phonograph cartridge transducer. It also defines a method for reporting test results.

## **Turntable Measurement**

The Audio Systems Committee agreed to start a new project to reaffirm CEA-11, *Turntable Measurement Standard*. This standard provides the common basis for specification and measurement of performance of record playing equipment. It defines both primary and secondary performance specifications together with practical and simple methods of measuring these specifications. Interested? [Join R3](#).

## **Loudspeaker Safety**

The Audio Systems Committee approved the withdrawal of CEA-636, *Recommended Loudspeaker Safety Practices* at its 10/21/08 meeting. This standard was superseded by CEA-CEB19, *Recommended Loudspeaker Safety Practices*. Both documents describe recommended practices for producing loudspeakers that do not pose safety hazards.

## **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](#).

## **Portable, Handheld & In-Vehicle Electronics**

### **Mobile Audio Amplifiers**

The Mobile Electronics Committee published CEA-2006-B, *Testing and Measurement Methods for Mobile Audio Amplifiers* in February 2009. This standard describes a method for testing the performance of mobile audio amplifiers and reporting the results. ANSI public review for this document closes on 4/13/09.

### **PDMI Connector**

The Mobile Electronics Committee is working on a proposed “digital overlay” for the portable digital media interface (PDMI) connector. It is mapping the pins on the PDMI connector to accommodate additional digital signals. These digital signals, including USB 3.0 and/or HD video, would be supported in addition to the analog signals that have already been accommodated. However, in order to make this work the “digital version” of the connector would sacrifice some analog functionality. For example, the connector likely would not support serial connectivity or analog audio in/out at the same time as USB v3.0 or HD

video. This would not mean that serial connectivity or analog audio in/out would be removed from the connector, only that they would not be supported simultaneously with USB v3.0 or HD video.

PDMI connectors comply with CEA-2017, *Common Interconnection for Portable Media Players*, which was approved as an American National Standard in July 2007. It is hoped that this connector will eventually become a standard feature on vehicle dashboards, making it easy for consumers to plug their portable media devices into their vehicle power supplies and audio/video systems. Interested? Join [R6 WG15](#).

## **Home Networks**

### **CEBus**

The Home Networks Committee is considering the withdrawal of ANSI/CEA-633.31 R-2000, *Power Line Physical Layer Conformance Specification*. This portion of the CEBus conformance standard specifies tests to determine conformance of a node's power line physical layer to IS-60. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA-633.32 R-2004, *Twisted Pair Physical Layer Conformance*. This standard specifies tests to determine conformance of a device's Twisted Pair Physical Layer to CEA-600. Interested? [Join R7](#). The Home Networks Committee is considering the withdrawal of CEA-633.34 *Infrared Physical Layer Conformance*. This standard specifies tests to determine conformance of an infrared physical layer to IS-60. Pre-vote comments were due by 12/18/08.

The Home Networks Committee is considering the withdrawal of ANSI/CEA-633.81, *CAL Conformance Specification*. This portion of the CEBus conformance standard specifies tests to determine conformance of a node's CAL to CEA-600.81. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA 776.1, *CEBus-EIB Router Communication Protocol - Description of the CEBus-EIB Router*. This standard describes the operation of a CEBus-EIB Router. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA-776.2, *CEBus-EIB Router Communications Protocol – CEBus-EIB Router Medium Access Control Sublayer*. This standard specifies a sublayer that is almost identical to the CEBus or EIB Node MAC Sublayer corresponding to the “CEBus side” or the “EIB side” of the router. The differences are in the way the

Router does address matching on a received packet and on the information exchanged in some of the service primitives. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA-776.3, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Logical Link Control Sublayer*. This standard specifies the CEBus-EIB Router Logical Link Control Sublayer interfaces to the Router Network Layer and to the Layer System Management. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA-776.4, *CEBus-EIB Router Communication Protocol – CEBus-EIB Router Network Layer*. This standard defines interfaces between elements of the CEBus-EIB Router Network Layer. Interested? [Join R7](#).

The Home Networks Committee is considering the withdrawal of ANSI/CEA-776.5, *CEBus-EIB Router Communications Protocol-The EIB Communications Protocol*. The European Installation Bus (EIB) is a control system for related applications in homes and buildings. Interested? [Join R7](#).

#### **LonTalk®-based Control Network Protocol**

The Home Systems Control Subcommittee is working on CEA-709.1-C, *Control Network Protocol Specification*. This standard describes a control network protocol that can be used over different physical links. This protocol is suitable for implementing both peer-to-peer and master-slave system strategies. Interested? [Join R7.1](#).

#### **Web Enhanced 1394 Interface**

The Home Networks Committee is considering the withdrawal of CEA-775.1, *Web Enhanced DTV 1394 Interface Specification*. This standard describes a method for allowing a TV or other video display to present graphics associated with the remote control of an associated source of MPEG video, such as a set-top box or digital video recorder. Pre-vote comments were due 12/18/08. Interested? [Join R7](#).

#### **VOIP for Versatile Home Network**

The Home Networks Committee published CEA-851.1-A, *IP-Based Digital Telephony for the Versatile Home Network* in February 2009. This standard defines IP-based telephony for the Versatile Home Network.

#### **Security Services for Versatile Home Network**

The Home Networks Committee is revising CEA-851.2, *Security Services for the Versatile Home Network*. This standard defines security services for the home network defined in ANSI/CEA-851-A, *Versatile Home Network*. It assumes a VHN that is digital and IP-based, and that uses web tools like HTTP for device control. Interested? [Join R7](#).

#### **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 after CEA-852.1, which it references, is completed.

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](#).

#### **Powerline Carrier Test Procedure**

The Home Networks Committee published CEA-2002-A, *Test Procedure for Powerline Carrier Technology* in February 2009. This standard defines a test procedure that can be used to validate key aspects of power line carrier systems.

#### **Quality of Service for 802.1Q**

The Home Networks Committee is considering the withdrawal of CEA-2007, *QoS Priority Groupings for 802.1Q*. This standard describes how to use the priority field in IEEE 802.1Q Ethernet packets to allow internet protocols (IP) on Ethernet networks to concurrently support different quality of service (QoS) implementations. Pre-vote comments were due 12/18/08. Interested? [Join R7](#).

#### **Digital Entertainment Network**

The Home Networks Committee is considering the withdrawal of CEA-2008, *Digital Entertainment Network*. This standard defines a home entertainment network by referencing existing standards and specifying how they should work together. Its purpose is to make

interoperability between different manufacturers' audio, video, and imaging products possible using Ethernet and Internet Protocol (IP) as the common network connection. Pre-vote comments are due 1/7/09.

### **Remote User Interface for UPnP™ Devices**

The Home Networks Committee is working on a revision to CEA-2014-A, *Web-Based Protocol and Framework for Remote User Interface on UPnP™ Networks and the Internet (Web4CE)*. This revision is expected to extend the functionality of the standard while preserving existing functionality and maintaining backward compatibility. It is expected to add new functionality in the following general areas: remote user interface access to the underlying platform resources, the level of security available within the remote user interface and protocol framework, and the remote user interface experience. Interested? [Join R7 WG9](#).

### **Power Line Carrier**

The Home Control Systems 1 Subcommittee is working on CEA-709.2-B, *Control Network Power Line (PL) Channel Specification*. This standard describes the physical characteristics of a communications network that uses power lines to collect and distribute information. Interested? [Join R7.1](#).

The Home Control Systems 1 Subcommittee is also working on CEA-2021, *Auto Discovery & Self-configuring Home Control Networks*. This standard is expected to define a method for devices on a home control network to automatically discover each other and exchange data. It will facilitate the development of future home automation devices that may be installed by CE installers, electricians, or do-it-yourself homeowners. It will provide a set of standard application-layer services for the ANSI/CEA-709.1 protocol, thus enabling devices and appliances from different manufacturers to work together in a home network. Interested? [Join R7.1](#).

## **Residential Systems**

### **Multi-room Audio Cabling**

The Residential Systems Committee is working on an addition to CEA-2030, *Multi-Room Audio Cabling Standard*, which defines how to configure cabling and connectors in order to distribute analog and digital audio throughout a home. The new addition will explain how to document distributed audio systems installed in homes. Interested? [Join R10 WG2](#). Note: This project was transferred from R3 WG7.

### **Home Theater Audio Design**

The Residential Systems Committee published CEA/CEDIA-CEB22, *Home Theater Recommended Practice: Audio Design* in March 2009. This document provides baseline recommendations for the design and installation of home theater and multi-channel music playback audio systems in residential spaces. This was the first project started by the new Residential Systems Committee, a committee formed jointly by CEA and CEDIA.

## **Video**

### **Testing “Cable Readiness”**

The Cable Compatibility Committee has begun work on CEA-23-B, *Measurement Procedures for Determining Compliance with FCC Rules for “Cable-Ready Consumer Electronics Equipment.”* This revision to CEA-23-A will define the measurement procedures for determining compliance with FCC rules for "cable ready consumer electronics equipment," under 47 C.F.R. §15.118(c). Interested? [Join R8 WG3](#).

### **Intermediate Frequencies**

The Video Systems Committee is working on CEA-109-E, *Intermediate Frequencies for Entertainment Receivers*. This standard defines intermediate frequencies to be used by AM, FM and TV broadcast receivers. Interested? [Join R4](#).

### **North American Teletext**

The Television Data Systems Subcommittee approved reaffirmation of CEA-516, *Joint EIA/CVCC Recommended Practice for Teletext: North American Basic Teletext Specification (NABTS)* on 2/4/09. This standard describes the transmission technique, coding language, and user interface for one-way broadcast teletext service applications in North America using NTSC television signals.

### **Cable Channel Numbering**

The Cable Compatibility Committee published CEA-542-C, *Cable Television Channel Identification Plan* in February 2009. This standard defines 6 MHz channel allocations for 158 channels up to 1002 MHz, and includes a method for specifying higher channels. It does not preclude channel mapping in cable systems. It applies to channels carrying analog or digital signals, though it does not specify a numbering plan for the tuning of digitally multiplexed services within one or more RF channels.

## **Cable Tuner Immunity**

The Cable Compatibility Committee is working on a revision to CEA-544-B, *Low Frequency Immunity of Tuners in a Cable System*. This standard describes how to measure the low frequency (5-54 MHz) immunity of tuners in a cable system, based on requirements in FCC regulations that define the assumed levels of the desired signal, low frequency interference and the required receiver immunity. Interested? [Join R8 WG3](#).

## **DTV Remodulator Specification**

The DTV Interface Subcommittee published CEA-762-B, *DTV Remodulator Specification*, in November 2008. This standard defines minimum specifications for a one-way data path utilizing an 8-VSB trellis remodulator that complies with ATSC Standard A/53B, Annex D. This standard applies to any device used to connect to an ATSC compliant digital television (DTV) receiver. Devices meeting this standard should interoperate with any ATSC compliant receiver that also supports “monitor mode.” This standard has been submitted to ANSI for public review, and the public review comment period closes 1/5/09.

## **HDMI Reference Standard**

The DTV Interface Subcommittee approved an errata for CEA-861-E on 12/12/08. It clarifies the relationship between the automatic format descriptor (AFD) line numbering scheme used in CEA-861-E, *A DTV Profile for Uncompressed High Speed Digital Interfaces*, and a slightly different line numbering scheme used by the Society of Motion Picture and Television Engineers (SMPTE). The document is in final editorial review and will be published soon.

## **XML Schema for Emergency Alert Information**

The Cable Compatibility Committee is working on CEA-2035, *Emergency Alert Signaling for the Home Network*. This new standard will define an XML Schema to signal emergency alert information from home network servers to home network client devices, in harmony with existing standards (CAP v1.1, ANSI J-042-A, and ATIS 0800012). The pre-vote comment period closed on 9/3/08 and comments are now being addressed. Interested? [Join R8 WG5](#).

## **Loudness Matching Between Analog/Digital TV**

The Video Systems Committee held an initial vote on CEA-CEB11-A, *NTSC/ATSC Loudness Matching* on 2/4/09. A recirculation ballot is being prepared to address

some comments that were received during the vote. 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 WG10](#).

## **PSIP Recommended Practice**

The Television Data Systems Subcommittee is conducting its five year review of CEA-CEB12-A, *PSIP Recommended Practice*. This bulletin provides guidance for designing DTV receivers, cable TV receivers, video recorders and other consumer products that make use of the Advanced Television Systems Committee’s (ATSC) Program and System Information Protocol (PSIP). It provides recommendations and suggestions for device functionality. Interested? [Join R4.3](#).

## **DTV Audio Metadata**

The Television Data Systems Subcommittee is working on CEA-CEB21, *Recommended DTV Audio Metadata Normalization Practices*, a recommended practice that will give guidance to receiver manufacturers on how to parse the relevant portions of an ATSC audio stream, particularly in situations where the broadcaster is sending audio in multiple languages. It is considering what practices might be followed in order to help consumers most easily find the audio streams that they are looking for. Interested? [Join R4.3 WG12](#).

## **DTV Receiver Audio/Video Synchronization**

The Video Systems Committee is working on CEA-CEB20, *A/V Synchronization Processing*, a bulletin that will recommend methods for synchronizing audio and video content at the receiver using time stamps in MPEG-2 transport streams. Pre-vote comments on the draft document are due by 4/9/09. Interested? [Join R4 WG15](#).

## **X-Radiation Compliance**

The Video Systems Committee approved the withdrawal of CEA-CEB15, *CRT X-Radiation Compliance Training Manual* on 2/4/09. This document provides guidance to TV manufacturers on how to test CRT products for X-radiation compliance.

## Five-Year Reviews Due in Next 12 Months

Five-year reviews of the following documents must be completed by the date indicated. Documents highlighted in red are overdue.

### R3 Audio Systems Committee

#### Due by December 2008:

- CEA-CPEB06-A R-2004, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products*

#### Due by January 2009:

- CEA-11, *Turntable Measurement Standard*

#### Due by January 2010:

- CEA-560-R-2005, *Standard Method of Measurement for Compact Disc Players*

#### Due by March 2010:

- ANSI/CEA-863-A, *Connection Color Codes for Home Theater Systems*
- ANSI/CEA-2009-A, *Receiver Performance Specification for Public Alert Receivers*

### R4 Video Systems Committee

#### Due by August 2003:

- CEA-CEB03, *Recommended Practice for Camcorder Specifications*
- CEA-CEB04, *Recommended Practice for VCR Specifications*

#### Due by May 2007:

- CEA-CEB11, *NTSC/ATSC Loudness Matching*

#### Due by December 2007:

- CEA-896-A, *Standard Method of Measurement for Digital Versatile Disc - Video Players*
- CEA-897, *F-Connector Color Coding for Home Television Systems*

#### Due by September 2008:

- CEA-639, *Consumer Camcorder or Video Camera Low Light Performance*

#### Due by May 2009:

- CEA-CEB15, *CRT X-Radiation Compliance Training Manual*

#### Due by November 2009:

- CEA-109-D, *Intermediate Frequencies for Entertainment Receivers*

#### Due by January 2010:

- CEA-TVSB5-R2005, *Multi-Channel TV Sound System BTSC System Recommended Practices*

### R4.3 TV Data Systems Subcommittee

#### Due by October 2008:

- CEA-CEB12-A, *PSIP Recommended Practice*

### R4.8 DTV Interface Subcommittee

None.

### R5 Antennas Committee

None.

### R6 Mobile Electronics Committee

#### Due by December 2009:

- CEA-2011, *OTG Transceiver Specification*

### R7 Home Networks Committee

#### Due by March 2005:

- CEA-775.1, *Web Enhanced DTV 1394 Interface Specification*

#### Due by December 2007:

- CEA-851.1, *IP-Based Digital Telephony for the Versatile Home Network*
- CEA-851.2, *Security Services for the Versatile Home Network*

#### Due by November 2008:

- CEA-2007, *QOS Priority Groupings for 802.1Q*

#### Due by July 2008:

- CEA-2008, *Digital Entertainment Network*

#### Due by April 2009:

- ANSI/CEA-600.31-R-2004, *Power Line Physical Layer and Medium Specification*
- ANSI/CEA-600.32-R-2004, *Twisted Pair Physical Layer & Medium Specification*
- ANSI/CEA-600.33-R-2004, *Coax Cable Physical Layer & Medium Specification*
- ANSI/CEA-600.34-R-2004, *IR Physical Layer & Medium Specification*
- ANSI/CEA-600.35-R-2004, *RF Physical Layer & Medium Specification*
- ANSI/CEA-600.37-R-2004, *Symbol-Encoding Sublayer*

- ANSI/CEA-600.38-R-2004, *Power Line/Radio Frequency Symbol Encoding Sublayer*
- ANSI/CEA-600.41-R-2004, *Description of the Data Link Layer*
- ANSI/CEA-600.42-R-2004, *Node Medium Access Control Sublayer*
- ANSI/CEA-600.43-R-2004, *Node Logical Link Control Sublayer*
- ANSI/CEA-600.81-R-2004, *Common Application Language (CAL) Specification*
- ANSI/CEA-600.82-R-2004, *CAL Context Description*
- ANSI/CEA-633.32-R-2004, *Twisted Pair Physical Layer Conformance*
- ANSI/CEA-633.37-R-2004, *Symbol Encoding Sublayer Physical Layer Conformance*
- ANSI/CEA-633.38-R-2004, *PL and RF Symbol Encoding Physical Layer Conformance*
- ANSI/CEA-721.1-R-2004, *Generic Common Application Language (Generic CAL) Specification*
- ANSI/CEA-721.2-R-2004, *Generic CAL Context Description*
- ANSI/CEA-721.3-R-2004, *Node Application Layer Specification*
- ANSI/CEA-721.4-R-2004, *Generic Common Application Language Quality of Service*

Due by May 2009:

- ANSI/CEA-600.10-R-2004, *Introduction to the CEBus Standard*
- CEA-600.46-R-2004, *Node Application Layer Specification*
- CEA-633.10-R-2004, *Introduction to EIA-600 Conformance Specification*
- ANSI/CEA-633.31-R-2004, *Power Line Physical Layer Conformance Specification*
- ANSI/CEA-633.34, *Infrared Physical Layer Conformance*
- CEA-633.46-R-2004, *Node Application Layer Conformance Specification*
- ANSI/CEA-633.81-R-2004, *CAL Conformance Specification*
- ANSI/CEA-776.1-R-2004, *CEBus-EIB Router Communication Protocol - Description of the CEBus-EIB Router*
- ANSI/CEA-776.2-R-2004, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Medium Access Control Sublayer*
- ANSI/CEA-776.3-R-2004, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Logical Link Control Sublayer*
- ANSI/CEA-776.4-R-2004, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Network Layer*

- ANSI/CEA-776.5-R-2004, *CEBus-EIB Router Communications Protocol - The EIB Communications Protocol*

Due by January 2010:

- CEA-600.45-R-2005, *Node Network Layer Specification*

**R7.1 Home Control Systems Subcommittee**

Due August 2005:

- ANSI/CEA-709.4, *Fiber-Optic Channel Specification*

Due September 2007:

- ANSI/CEA-709.1-B, *Control Network Protocol Specification*

Due December 2007:

- CEA-860-A, *Device Plug-In Interface to EIA/CEA-709.1 Network Tools*

Due by April 2009:

- ANSI/CEA-709.3-R-2004, *Free-Topology Twisted-Pair Channel Specification*

Due by August 2009:

- CEA-852-A, *Tunneling Component Network Protocols Over Internet Protocol Channels*

**R8 Cable Compatibility Committee**

Due by November 2009:

- CEA-544-B, *Low Frequency Immunity of Tuners in A Cable System*

Due by December 2009:

- CEA-23-A, *RF Interface Specification for Television Receiving and Cable Television Systems*

**R10 Residential Systems**

Due by March 2010:

- ANSI/CEA-2030, *Multi-Room Audio Cabling Standard*