CEA Standards Update

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New Projects

- 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* (proposed for withdrawal)
- 5-year review of ANSI/CEA-633.32 R-2004, *Twisted Pair Physical Layer Conformance* (proposed for withdrawal)
- CEA-633.34 *Infrared Physical Layer Conformance* (pre-vote comment period closed 12/18/08)
- 5-year review of ANSI/CEA-633.81, *CAL Conformance Specification* (proposed for withdrawal)
- 5-year review of CEA-775.1, *Web Enhanced DTV 1394 Interface Specification* (pre-vote comment period closed 12/18/08)
- 5-year review of ANSI/CEA 776.1, *CEBus-EIB Router Communication Protocol - Description of the CEBus-EIB Router* (proposed for withdrawal)
- 5-year review of ANSI/CEA-776.2, *CEBus-EIB Router Communications Protocol – CEBus-EIB Router Medium Access Control Sublayer* (proposed for withdrawal)
- 5-year review of ANSI/CEA-776.3, *CEBus-EIB Router Communications Protocol - CEBus-EIB Router Logical Link Control Sublayer* (proposed for withdrawal)
- 5-year review of ANSI/CEA-776.4, *CEBus-EIB Router Communication Protocol – CEBus-EIB Router Network Layer* (proposed for withdrawal)
- 5-year review of ANSI/CEA-776.5, *CEBus-EIB Router Communications Protocol-The EIB Communications Protocol* (proposed for withdrawal)
- 5-year review of CEA-2007, *QOS Priority Groupings for 802.1Q* (proposed for withdrawal, pre-vote comment period closed 12/18/08)
- 5-year review of CEA-2008, *Digital Entertainment Network* (proposed for withdrawal, pre-vote comments due 1/7/09)
- CEA-2036, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products*

Recently Published ANSI Standards

- ANSI/CEA-805-D, *Data Services on the Component Video Interfaces* (published November 2008)

Recently Published CEA Standards

- CEA-490-A R-2008, *Standard Test Methods of Measurement for Audio Amplifiers* (published December 2008)
- CEA-762-B, *DTV Remodulator Specification* (published November 2008, ANSI public review closed 1/5/09)
- CEA-774-B, *TV Receiving Antenna Performance Presentation and Measurement* (published December 2008, ANSI public review closes 2/2/09)
- CEA-2028-A, *Color Codes for Outdoor TV Receiving Antennas* (published December 2008, ANSI public review closes 2/2/09)
- CEA-2032-A, *Indoor TV Receiving Antenna Performance Standard* (published December 2008, ANSI public review closes 2/2/09)

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)
- CEA-819-A, *Cable Compatibility Requirements for Two-Way Digital Cable TV Systems* (withdrawn December 2008)

Publications Nearing CEA Completion

- CEA-516 R-2008, *Joint EIA/CVCC Recommended Practice for Teletext: North American Basic Teletext Specification (NABTS)* (vote scheduled for 2/4/09)
- CEA-542-C, *Cable Television Channel Identification Plan* (approved 10/23/08, in final editorial review, will be sent to ANSI for public review)
- CEA-851.1-A, *IP-Based Digital Telephony for the Versatile Home Network* (approved 10/23/08, in final editorial review)
- CEA-851.2, *Security Services for the Versatile Home Network* (proposed for reaffirmation, pre-vote comment period closed 12/11/08)

- 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* (ballot closed 12/12/08)
- CEA-2002-A, *Test Procedure for Powerline Carrier Technology* (approved 10/23/08, in final editorial review)
- CEA-2006-B, *Testing and Measurement Methods for Mobile Audio Amplifiers* (approved 10/20/08, in final editorial review, will be sent to ANSI for public 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* (vote scheduled for 2/4/09)
- CEA-CEB15, *CRT X-Radiation Compliance Training Manual* (proposed for withdrawal, vote scheduled for 2/4/09)
- CEA/CEDIA-CEB22, *Home Theater Recommended Practice: Audio Design* (approved 2/2/09, in final editorial review)
- CEA-CPEB6-A, *Preferred Voltage and Impedance Values for the Interconnection of Audio Products* (proposed for withdrawal, pre-vote comments due 1/7/09)

Ongoing Work

- CEA-709.1-C, *Control Network Protocol Specification*
- CEA-709.2-B, *Control Network Power Line (PL) Channel Specification*
- CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channels*
- 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-CEB12-A, *PSIP Recommended Practice*, five year review
- CEA-CEB20, *A/V Synchronization Processing*
- CEA-CEB21, *Recommended DTV Audio Metadata Normalization Practices*

Summary of Projects by CEA Product Division

Accessories

Smart Antenna Performance

CEA's Antennas Committee published CEA-774-B, *TV Receiving Antenna Performance Presentation and Measurement*, CEA-2028-A, *Color Codes for Outdoor TV Receiving Antennas*, and CEA-2032-A, *Indoor TV Receiving Antenna Performance Standard* in December 2008. CEA-774-B was updated to include test procedures for smart antennas, and CEA-2028-A and 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. ANSI public review for all three standards closes on 2/2/09.

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. Pre-vote comments on the proposed withdrawal of CEA-CPEB6-A are due 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.

Audio Amplifier Measurement

The Audio Systems Committee reaffirmed CEA-490-A, *Standard Test Methods of Measurement for Audio Amplifiers* on 10/21/08. This standard describes a measurement procedure for measuring various characteristics of multi-channel audio amplifiers.

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.

Mobile Electronics

Mobile Audio Amplifiers

The Mobile Electronics Committee approved CEA-2006-B, *Testing and Measurement Methods for Mobile Audio Amplifiers* on 10/20/08. This standard describes a method for testing the performance of mobile audio amplifiers and reporting the results. The revised document is in final editorial review and will be published soon. It will also be sent to ANSI for public review.

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 approved CEA-851.1-A, *IP-Based Digital Telephony for the Versatile Home Network* on 10/23/08. This standard defines IP-based telephony for the Versatile Home Network. It is in final editorial review and will be published soon.

Security Services for Versatile Home Network

The Home Networks Committee is considering reaffirmation of 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. The pre-vote comment period closed 12/11/08. 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 approved CEA-2002-A, *Test Procedure for Powerline Carrier Technology* on 10/23/08. This standard defines a test procedure that can be used to validate key aspects of power line carrier systems. It is in final editorial review and will be published soon.

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 approved CEA/CEDIA-CEB22, *Home Theater Recommended Practice: Audio Design* on 2/2/09. The document is now undergoing final editorial review. It 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

The Video Systems Committee has begun work 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 is considering reaffirmation of CEA-516, *Joint EIA/CVCC Recommended Practice for Teletext: North American Basic Teletext Specification (NABTS).* 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. A vote is scheduled for 2/4/09. Interested? Join R4.3.

Cable Channel Numbering

The Cable Compatibility Committee approved CEA-542-C, *Cable Television Channel Identification Plan* on 10/23/08. 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. This standard is

now in final editorial review. After publication it will be sent to ANSI for public review. 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.

Data Over Component Video Interface

The DTV Interface Subcommittee published ANSI/CEA-805-D, *Data Services on the Component Video Interfaces* in November 2008. This standard describes how to transmit data over the analog component video interfaces (CVI) described in CEA-770.2-C and CEA-770.3-D, and it covers all CE devices carrying data on the CVI vertical blanking interval (VBI).

Two-Way Cable Systems

The Cable Compatibility Committee withdrew CEA-819-A, *Cable Compatibility Requirements for Two-Way Digital Cable TV Systems* in December 2008. This standard defines minimum requirements for two-way digital cable TV systems and two-way digital TV receivers whose RF inputs and outputs connect directly to these cable systems. These systems permit the viewing of analog and digital TV programs, as well as additional features such as impulse pay-per-view purchases, interactive shopping and audience opinion polling.

HDMI Reference Standard

The DTV Interface Subcommittee has drafted an errata that will clarify 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 schemed used by the Society of Motion Picture and Television Engineers (SMPTE). The email ballot on this document closed on 12/12/08. Interested? Join R4.8 WG7.

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 is nearing completion of CEA-CEB11-A, *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. A vote is scheduled for 2/4/09. 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 has begun work 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. Interested? Join R4 WG15.

X-Radiation Compliance

The Video Systems Committee is considering the withdrawal of CEA-CEB15, *CRT X-Radiation Compliance Training Manual.* This document provides guidance to TV manufacturers on how to test CRT products for X-radiation compliance. A vote is scheduled for 2/4/09. Interested? Join R4.