CEA Standards Update

Looking for IP Proffers

Intellectual property (IP) proffers that have been submitted for published CEA standards are available online at http://www.CE.org/Standards/2502.asp. Click on the standard you are interested in, and, if any IP proffers have been submitted for that standard, you will be able to view them along with other information about the standard.

If you know of any intellectual property needed to implement a CEA standard that is not covered by an existing IP proffer for that standard please bring it to the attention of CEA staff. This applies even if the IP in question belongs to someone other than you or your company. If you do not know who the appropriate staff person is for the standard in question you may submit the information to the general email box at standards@CE.org.

Recently Published CEA Standards

- CEA-608-D, *Line 21 Data Service* (published May 2007, recirculation ballot approved 8/29/07, ANSI public review on published version closed 10/1/07, ANSI public review of revisions approved by recirculation ballot closes 1/13/08)
- ANSI/J-STD-042-A, *Emergency Alert Messaging for Cable* (aka CEA-814-A, published November 2007)
- CEA-909-A, *Antenna Control Interface* (published July 2007, ANSI public review closed 10/1/07, awaiting ANSI approval)
- CEA-931-C, *Remote Control Command Pass-through Standard for Home Networking* (published June 2007, ANSI public review closed 8/20/07, unresolved comment being addressed)
- CEA-2014-A, *Web-Based Protocol and Framework for Remote User Interface on UPnP^{TM} Networks and the Internet (Web4CE)* (published July 2007, errata under development)
- CEA-2017.1, *Serial Communication Protocol for Portable Electronic Devices* (published July 2007, ANSI public review closed 10/1/07, awaiting ANSI approval)
- CEA-2018, *Task Model Representation* (published November 2007, ANSI public review closes 1/28/08)
- CEA-2020, *Other VBI Waveforms* (published August 2006, ANSI public review closed 8/20/07, awaiting ANSI approval)

- CEA-2027-B, *A User Interface Specification for Home Networks Using Web-based Protocols* (published October 2007)
- CEA-2033, *OpenEPG™ - A Specification for Electronic Program Guide Data Interchange* (published September 2007, ANSI public review closes 1/28/08)

Publications Nearing Completion

- CEA-766-B, *U.S. and Canadian Rating Region Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information Using ATSC Program and System Information Protocol (PSIP)* (published July 2006, ANSI public review completed 2/5/07, public review comments addressed, revised document approved 9/13/07, will be submitted to ANSI for a 30 day public review)
- CEA-770.3-D, *High Definition TV Analog Component Video Interface* (approved 10/17/07, will be published and sent to ANSI for public review)
- CEA-775-C, *DTV 1394 Interface Specification* (approved 10/17/07, will be published and sent to ANSI for public review)
- 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, *A DTV Profile for Uncompressed High Speed Digital Interfaces* (pre-vote comment period closed 11/23/07, comments now being addressed)
- CEA-897-A, *F-Connector Color Coding for Home Television Systems* (pre-vote comment period closed 10/2/07, comments now being addressed)

Ongoing Work

- Revision of CEA-708-C, *Digital Television (DTV) Closed Captioning*
- Revision of CEA-709.2-A, *Control Network Power Line (PL) Channel Specification*
- 5-year Review of CEA-775.2, *Service Selection Information for Digital Storage Media Interoperability*
- CEA-805-D, *Data Services on the Component Video Interfaces*
- 5-year Review of CEA-849-A, *Application Profiles for EIA-775A Compliant DTVs*

- CEA-852.1, *Enhanced Tunneling Device Area Network Protocols Over Internet Protocol Channels*
- CEA-2006-B, *Testing and Measurement Methods for Mobile Audio Amplifiers*
- Revision to CEA-2014-A, *Web-based Protocol and Framework for Remote User Interface on UPnP™ Networks and the Internet (Web4CE)*
- Revision to CEA-2017, *Common Interconnection for*
- *Portable Media Players*
- CEA-2019, *Testing and Measurement Methods for Audio Amplifiers*
- CEA-2021, *Auto Discovery & Self-configuring Home Control Networks*
- Revision of CEA-2030, *Multi-Room Audio Cabling Standard*
- CEA-2034, *Standard Method of Measurement for In-Home Loudspeakers*
- Revision of CEA-CEB11, *NTSC/ATSC Loudness Matching*
- Possible consumer guidelines for using indoor TV antennas

Summary of Projects by CEA Product Division

Accessories

"Smart" Antenna Interface

The Video Systems Committee approved CEA-909-A, *Antenna Control Interface,* on 6/6/07. It enables "smart" DTV antennas to be connected to smart antenna-capable DTV sets with a single coaxial cable. The previous version of the standard required 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. This standard was published in July 2007 and ANSI public review closed 10/1/07. It is now undergoing final editorial review.

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

Distributed Audio

The Audio 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 R3 WG7.

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.

Mobile Electronics

Serial Protocol for Portable Device Connector

CEA-2017.1, *Serial Communication Protocol for Portable Electronic Devices,* was approved by the Mobile Electronics Committee on 6/7/07. This standard is meant to accompany ANSI/CEA-2017, *Common Interconnection for Portable Media Players,* and describes a serial communication protocol that enables command and control communication between portable electronic devices and accessories attached to those devices. It was published in July 2007 and ANSI public review closed on 10/1/07.

Mobile Audio Amplifiers

The Mobile Systems Committee is working on CEA-2006-B, *Testing and 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.

PDMI Connector

The Mobile Electronics Committee is studying the possibility of sending high definition multimedia interface (HDMI) signals over portable digital media interface (PDMI) connectors. PDMI connectors comply with CEA-2017, *Common Interconnection for Portable Media Players,* which was approved as an American National Standard earlier this year. 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. Anyone interested in joining this effort should visit http://www.CE.org/Standards/1447.asp and sign up for R6 WG15.

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 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.

Remote Control Commands over Home Networks

The Home Networks Committee has also developed 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. The standard was published in June 2007, and the ANSI public review period closed on 8/20/07. It is now in final editorial review.

Open EPG

The Home Networks Committee published CEA-2033, *OpenEPG™ - A Specification for Electronic Program Guide Data Interchange* in September 2007. This standard enables home entertainment devices to access program guide information using messages that are based on standard Internet protocols. It is currently undergoing ANSI public review with a comment deadline of 1/28/08.

Remote User Interface for Home Networks

The Home Networks Committee published CEA-2027-B, *A User Interface Specification for Home Networks Using Web-based Protocols* in October 2007. 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^{TM} Devices

The Home Networks Committee published CEA-2014-A, *Web-Based Protocol and Framework for Remote User Interface on UPnP^{TM} Networks and the Internet (Web4CE),* in July 2007. Shortly thereafter, several errors were discovered, and an errata is now under development. This standard defines how to produce remote user interfaces for UPnP^{TM} devices. Revisions from the previous version clarify several points that some readers thought were unclear. The Home Networks Committee has now begun a second phase of its efforts to revise ANSI/CEA-2014. This next 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. A call for participants and request for use cases was issued on 6/26/07. Interested? Join R7 WG9.

Task-Based User Interfaces

The Home Networks Committee published CEA-2018, *Task Model Representation,* in November 2007. This standard defines how to describe tasks performed by consumer electronics products in XML. It is currently undergoing ANSI pubic review and comments are due by 1/28/08.

Power Line Carrier

The Home Control Systems 1 Subcommittee is working on a revision to ANSI/CEA-709.2-A, *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 has also begun work 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.

Video

⚓ Data Over Component Video Interface

The DTV Interface Subcommittee is working on CEA-805-D, *Data Services on the Component Video Interfaces.* 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).

⚓ HD Analog Component Video Interface

The DTV Interface Subcommittee approved CEA-770.3-D, *High Definition TV Analog Component Video Interface* on 10/17/07. This standard defines two raster-scanning systems for high definition analog component video. The first system uses 1280 x 720 samples (pixels) inside a total raster of 750 lines, and the second uses 1920 x 1080 samples (pixels) inside a total raster of 1125 lines. Both image formats have an aspect ratio of 16:9. This standard will be sent to ANSI for public review.

⚓ F-Connector Color Coding

The Video Systems Committee is revising CEA-897, *F-Connector Color Coding for Home Television Systems.* This standard defines color-coding schemes that make it easier for consumers to distinguish between different F connectors found on television sets (e.g., F connectors for cable ready inputs vs. F connectors for satellite TV inputs, etc.). Pre-vote comments were due by 10/2/07 and are now being addressed.

⚓ 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. This standard was published in August 2006, and is now awaiting final ANSI approval before publication as an ANSI standard.

⚓ Cable TV Emergency Alert Messaging

CEA and the Society of Cable Telecommunications Engineers jointly published ANSI/J-STD-042-A, *Emergency Alert Messaging for Cable* in November, 2007. This standard was approved by CEA's Cable Compatibility Committee as CEA-814-A, *Emergency Alert Messaging for Cable* on 2/27/07. It describes how cable companies can transmit emergency messages to cable-ready digital equipment sold at retail. It enables cable operators to select a warning method with a level of viewing disruption that is appropriate for the type and scope of the emergency.

⚓ Parental Guidance

Another standard approved by the Television Data Systems Subcommittee is CEA-766-B, *U.S. and Canadian Rating Region Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information Using ATSC 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. Comments were received and addressed, and a revised document was approved via letter ballot on 9/13/07.

⚓ Loudness Matching Between Analog/Digital TV

The Video Systems Committee is reviewing 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 WG10.

⚓ DTV Closed Captioning

The Television Data Systems Subcommittee is working on a revision to CEA-708-C, *Digital Television (DTV) Closed Captioning,* which 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 was published in May 2007, and ANSI public review of this published version was completed on 10/1/07. A correction and a clarification were approved by recirculation ballot to the Television Data Systems Subcommittee on 8/29/07, and ANSI public review of these changes closes 1/13/08. If approved by ANSI the modified standard will be published as ANSI/CEA-608-E.

DTV 1394 Interface

The DTV Interface Subcommittee approved CEA-775-C, *DTV 1394 Interface Specification,* on 10/17/07. This standard 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. The DTV Interface Subcommittee works to keep CEA-775 up to date with the latest standards developed by the 1394 Trade Association. It has also begun five year reviews of CEA-775.2, *Service Selection Information for Digital Storage Media Interoperability* and CEA-849-A, *Application Profiles for EIA-775A Compliant DTVs.* Interested? Join R4.8 WG1.

HDMI and DVI Interfaces

The DTV Interface Subcommittee is working on CEA-861-E, *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). The pre-vote comment period closed on 11/23/07 and comments are now being addressed. Interested? Join R4.8 WG7.