



An Update from the Consumer Electronics Association

Brian Markwalter, Consumer Electronics Association

AN UPDATE FROM THE CONSUMER ELECTRONICS ASSOCIATION

Five years in the future, many in the consumer electronics (CE) industry will look back on 2009 and think about how brutal the year was for business rather than the very successful turn-off of full-power analog TV broadcasting. By midyear, Consumer Electronics Association (CEA) had ratcheted down its consensus forecast for the year to negative 7% in terms of dollar volume growth. There were a few bright spots among product categories, the number of DTVs sold being one of them. Automotive electronics on the other hand—definitely not. In the CEA standards world, the majority of new or revised standards were in the video field. Transition or not, television is still a huge force in our industry.

THE CE MARKET

CEA forecasts total industry revenues for 2009 to be \$165 billion, representing negative 7.7% growth over 2008's volume of \$179. Looking ahead to 2010, CEA forecasts total industry revenue to be \$166 billion, representing a slight gain over 2009. DTV unit sales remain strong, with manufacturers expecting to deliver 35.4 million units in 2009, up from 31.2 million units in 2008. Price erosion continues to hamper revenues even when unit volumes are brisk. The average wholesale price for DTVs has fallen from \$1,015 in 2005 to \$652 in 2009. The double-digit increase in unit sales for DTVs in 2009 will be offset by a double-digit decline in average wholesale price, in part to the result of swelling in sales of mid-size TVs.

LCD TV continues to lead the way in 2009, with unit volumes soaring 24%, accounting for 84% of total DTV units. Plasma displays, on the other hand, are expected to see a 5% unit decline, comprising just 10% of total DTV volume. As was the case in 2008,

rear-projection sets will extend their slump, falling another 39% by the end of the year.

Complementing growth in DTVs will be robust growth for Blu-ray players, which should see 112% unit growth in 2009. Netbooks are also on CEA's list of hot products. The forecast calls for the volume of netbooks to double in 2009 to 8.4 million units.

CEA TECHNOLOGY AND STANDARDS ACTIVITIES

Those of us involved in DTV reception issues would love to see smart antennas break the chicken and egg cycle and get a bigger share of the market. Three important standards were revised this year to accommodate smart antennas. ANSI/CEA-774-B, *TV Receiving Antenna Performance Presentation and Measurement*, was updated to include test procedures for smart antennas. ANSI/CEA-2028-A, *Color Codes for Outdoor TV Receiving Antennas*, and ANSI/CEA-2032-A, *Indoor TV Receiving Antenna Performance Standard*, were updated to include performance requirements for outdoor and indoor smart antennas, respectively. ANSI/CEA-2028-A and ANSI/CEA-2032-A are each the basis for an associated logo program administered by the CEA, with the former being the basis for matching antennas in the popular AntennaWeb website. The smart antenna interface itself is defined in ANSI/CEA-909-A. Research conducted by the National Association of Broadcasters (NAB) indicated that some converter box implementations of the smart antenna interface did not properly interpret protocol timing. CEA recently established a project to update ANSI/CEA-909-A to make the timing requirements unambiguous.

Brian Markwalter is vice president of technology and standards for the Consumer Electronics Association (CEA), a trade association representing the \$172 billion U.S. consumer technology industry. Markwalter is responsible for overseeing CEA's ANSI-accredited standards development operation. CEA hosts more than 70 committees, subcommittees, and working groups that produce standards used in millions of consumer devices. CEA technology and standards also hosts industry interoperability test events, called Plugfests, and provides key engineering support on policy matters affecting the industry.

CEA's Video Systems Committee created a new bulletin, CEA-CEB20, titled "A/V Synchronization Processing." The bulletin recommends methods for synchronizing audio and video content at the receiver using time stamps in MPEG-2 transport streams. CEA's Television Data Systems Subcommittee published two standards. CEA-708-D, *Digital Television Closed Captioning*, folded in guidance that had been found in a separate CEA bulletin and more cleanly separated production and transport of digital captions among the relevant standards groups. As necessitated by ANSI's five-year review policy, CEA-516, which defines teletext for NTSC, was reaffirmed without change.

CEA's DTV Interface Subcommittee had a productive year. The subcommittee revised and published six standards, listed in **Table 1**.

CEA has many other active standards projects under way. There are three open projects related to energy consumption measurement of TVs and set-top boxes. Another group is working on audio meta-data normalization to make it easier to identify and select audio streams in DTVs. Finally, CEA's new joint committee with CEDIA is developing a bulletin for home theater video design.

Information on all of CEA's standards activities, including how to get involved is available at www.ce.org/standards.

Standard	Title	Scope
ANSI/CEA-762-B	DTV Remodulator Specification	Defines minimum specifications for a one-way data path using an 8-VSB trellis remodulator that complies with ATSC Standard A/53B, Annex D.
ANSI/CEA-775-C	DTV 1394 Interface Specification	Defines a method by which set-top boxes, DVRs, and similar devices may send MPEG video to a DTV set using a 1394 interface.
ANSI/CEA-775.2-A	Service Selection Information for Digital Storage Media Interoperability	Defines how to store service selection information when recording a program over the IEEE 1394 high-performance serial bus.
ANSI/CEA-805-D	Data Services on the Component Video Interfaces	Describes how to transmit data over the analog component video interfaces (CVI) described in CEA-770.2-C and CEA-770.3-D.
ANSI/CEA-849-B	Application Profiles for CEA-775-Compliant DTVs	Defines profiles for various applications of the IEEE 1394 high-performance serial bus described in CEA-775-B.
CEA-861-E	A DTV Profile for Uncompressed High-Speed Digital Interfaces	Errata clarifies the relationship between the AFD line numbering scheme used in CEA-861-E, and the line numbering scheme used by SMPTE.

Table 1. Most recently published DTV interface standards.