

First Element of ATSC 3.0 Approved for Standard

Bootstrap architecture gets the full vote March 28, 2016

By Deborah D. McAdams

vote.

WASHINGTON—The Advanced Television Systems Committee has approved the bootstrap component of its developing broadcast transmission standard. "Bootstrap" refers to the "System Discovery and Signaling" architecture of the ATSC 3.0 physical layer. The bootstrap provides a "universal entry point into a broadcast waveform," for multiple service types such fixed and mobile television, for example.

It is the first element of ATSC 3.0 to reach standard status. This means there will be no further modifications made to this particular element of the developing ATSC 3.0 standard. The bootstrap signal is one of the five technologies that will comprise the physical layer, the foundation of the standard. The remaining four are at "Candidate Standard" status and await a full The bootstrap architecture is "integral to reception," according to *TV Technology* contributor Doug Lung. "The receiver only has to detect the bootstrap signal to know there is a DTV signal on a channel. The bootstrap signal is much more robust than the payload data, so antenna positioning isn't likely to be a problem." (*See* "<u>The ATSC 3.0</u> <u>Physical Layer—Bootstrap</u> <u>Basics</u>." Dec. 23, 2015.)

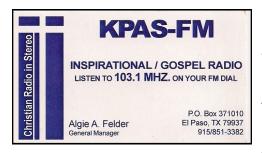
The bootstrap signal uses a fixed configuration "known to all receiver devices," the**bootstrap standard docu-**

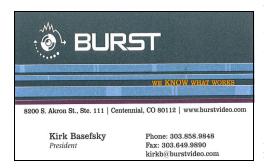
ment states. Another characteristic provided by the bootstrap architecture is the accommodation of future signal configurations, including those not directly associated with the ATSC 3.0 standard:

KTSM-TV
KVIA-TV
KRWG-TV
KBNA-AM/FM & KAMA-AM
KHEY-AM/FM, KPRR-FM & KTSM-AM/FM
KLAQ-FM, KISS-FM & KROD-AM
KPAS-FM- ALGIE A. FELDER CSBE
KINT98.COM INTERNET RADIO NETWORK
BURST COMMUNICATIONS INC KIRK BASEFSKY
GIESLER BROADCASTING SUPPLY INC.
ENTRAVISION COMMUNICATIONS
SCMS, INC
TNT BROADCAST AND TELECOMMUNICATIONS CONTRACTORS,INC
KSCE-TV
RF Specialties of Texas Dan Sessler.
KCOS-TV
KELP-AM ARNOLD McClatchy.
MARSAND, INC.

Ho Tah Say. LLC













"New signal types, at least some of which have likely not yet even been conceived, could also be provided by a broadcaster and identified within a transmitted waveform through the use of a bootstrap signal associated with each particular timemultiplexed signal. Some future signal types indicated by a particular bootstrap signal may even be outside the scope of the ATSC."

The remaining components of the physical layer at Candidate Standard status include the "Physical Layer Protocol," which describes the RF transmission system of the waveform. The CS period ends for the PLP April 4. "Signaling, Delivery, Synchronization and Error Protection" defines the "technical mechanisms and procedures pertaining to service signaling and IPbased delivery of a variety of ATSC 3.0 services and contents" over-the-air, via broadband and a hybrid of the two. It will come up for a vote after the CS period ends July 31.

All ATSC 3.0 Candidate Standards are available **here**.

For a comprehensive list of TV Technology's ATSC 3.0 coverage, see our <u>ATSC3</u> <u>silo</u>.

See more of Doug Lung's contributions, including... November 3, 2015

"<u>Getting Ready for the Re-</u> pack"

After the FCC incentive auction is complete, likely before we transition to ATSC 3.0, many UHF TV stations will have to move to new channels. Many TV translator stations will have to find new channels, if they can

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EL PASO, TX SBE CHAPTER 38 MEETING MINUTE

DATE 03/08/2016 LOCATION: COMO'S ITALIAN REST.

MEETING CALLED TO ORDER: 12:44 PM, BY ANTONIO CASTRO. THERE WERE 8 MEMBERS.

REPORT OF THE SECRETARY: MINUTES IN THE MARCH NEWSLET-TER. ACCEPTED BY NORBERT MILES, SECONDED BY DAVID HALPERIN.

REPORT OF THE TREASURER: \$ 7,380.35 IN THE BANK. ACCEPTED BY NORBERT MILES, SECONDED BY ALFREDO DURAN..

REPORT OF THE CERTIFICATION COMMITTEE: NO REPORT.

REPORT OF THE MEMBERSHIP COMMITTEE: NO REPORT.

REPORT OF THE FREQUENCY COORDINATOR COMMITTEE: BROADCASTERS TO SHARE THE 2GZ BAND WITH FORT BLISS.

REPORT OF THE SCHOLARSHIP COMMITTEE: NO REPORT.

REPORT OF THE WEBSITE COMMITTEE: 2010 HITS LAST TIME, NOW 2020. (10).

REPORT OF THE EAS CHAIRMAN: BOTH TX AND NM MONTHLY TESTS WERE REC/TRANS. TEST FROM NPT WAS RIGHT.

REPORT OF THE PROGRAM COMMITTEE: KEVIN HILDEBRAND, SALES ENGINEER FOR BURST COMMUNICATIONS WILL INTRODUCE HIMSELF WITH A PRESENTATION

UNFINISHED BUSINESS: WILL UPDATE THE LIST OF E-MAILS AND PHONE NUMBERS OF THE CHAPTER MEMBERS,

NEW BUSINESS OR ANY ITEMS FOR THE CHAPTER INTERES: ENNES WORKSHOP TO BE HELD ON MAY 26, 2016, THURSDAY, AT THE WIN-HAM AIRPORT. CONFIRMED THAT ATSC.3 WILL BE ONE OF THE MAIN ISSUES

NEXT MEETING DATE AND LOCATION: APRIL 12, AT 6 PM. PLACE: OLD CLEARCHANNEL STUDIOS

MEETING ADJOURNED: AT 13:25 PM.

EL PASO ENNES WORKSHOP, MAY 26, 2016

THURSDAY THIS TIME !!!



There was no presentation for the month of March.

Good news for the month of April, we are going to have **KEVIN HILDEBRAND**, **Burst communications** Sales Engineer, who is coming to introduce himself and give us a presentation. When: Tuesday April 12th Where: iHeartMedia (clear channel) @ 6 PM. West side PIZZA and drinks will be waiting !!!



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July 23, 2015 "Getting Ready for ATSC 3.0"

The amount of spectrum devoted to TV broadcasters is shrinking—from a peak of 486 MHz before 1983 to 294 MHz today.

Also see...

May 7, 2015, "ATSC 3.0 Bootstrap Signal Becomes Candidate Standard"

The first of five components in the Physical Layer transmission standard for ATSC 3.0 has been elevated to "Candidate Standard" status.

NOTES FROM SBE NATIONAL:

1. The new <u>SBE Broadcast Engineering Handbook: Hands-on Guide</u> to <u>Station Design and Maintenance</u> is now available and can be ordered from the SBE Bookstore. It will also be available at the SBE booth during the upcoming NAB Show. It retails for \$199 and the regular SBE member price is \$159, but from now through the end of the NAB Show (April 22) you can get it for just \$139.

2. The SBE has archived the webinar, *Sharing of the 2025-2110 MHz Band Between DoD and the Broadcast Community*, which was held on March 3. The webinar describes future sharing of the band by the Department of Defense with broadcasters and discusses the plan being developed to coordinate its use. There is no cost to view the one hour webinar.

3. Those attending the NAB Show in Las Vegas are invited to attend the <u>SBE Membership Meeting</u> on Tuesday, April 19 at 6 pm in Room S225 of the Las Vegas Convention Center. A member reception will follow at 7 in the same room. Some great prizes will be awarded at both events and food and beverages will be provided at the reception. NAB Show registration is not required for either event.