NAB TV TechCheck
The Weekly NAB Newsletter for Television Broadcast Engineers
February 4, 2008

STUDY ON MOBILE/HANDHELD DTV STANDARDIZATION

In May 2007, ATSC issued a request for proposal (RFP) for technology for mobile/handheld (M/H) DTV that will enable broadcasters to deliver television content and data to mobile and handheld devices via their DTV broadcast signal (see *TV TeckCheck* May 21, 2007). Ten responses to this RFP were received, with three different RF physical layer systems proposed by Samsung/Rohde & Schwarz, LG Electronics/Harris, and Thomson. The other proposals concerned various alternatives for codecs, transport and system management.

ATSC is now evaluating the proposals to select suitable technologies for the different parts or system "layers." The intent is to document an ATSC M/H standard for a single complete system.

The Open Mobile Video Coalition (OMVC) is an alliance of numerous U.S. commercial and public broadcasters formed in April 2007 to accelerate the development of mobile digital broadcast television and realize the full potential of the television spectrum in the United States. In parallel with the ATSC activity, OMVC has planned a program for independent demonstrations of viability (IDOV) for the principal alternative M/H systems, which will start in the near future.

Mobile/handheld DTV holds a tremendous potential for broadcasters, and there are numerous factors that will affect its successful introduction. Therefore, through its FASTROAD (Flexible Advanced Services for Television & Radio On All Devices) program, NAB commissioned a study to examine some of the factors, relating to standardization and multiple M/H systems.

On January 31, NAB released a report entitled "Study of the Impact of Multiple Systems for Mobile/Handheld Digital Television," authored by Richard Ducey, Ph.D and Mark Fratrik, Ph.D of BIA Financial Network (BIAfn) with support from Joseph Kraemer, Ph.D from Law and Economics Consulting Group (LECG).

Given the competitive selection process with multiple proponents, the report commissioned by NAB examines the impact of the possible introduction of multiple technology solutions for M/H DTV in the United States as compared to a single ATSC standardized solution. It also considers whether market success is sensitive to the timing of such standardization.

The BIAfn report concludes that the success of new mobile and handheld DTV services will be greatly facilitated if an agreed upon ATSC standard for M/H DTV is released by February 2009 and universally adopted for M/H broadcasting in the United States. It also estimates the significant increase in the revenue and value of local television stations that potentially will result from providing these new services. The conclusions strongly indicate that much reduced figures will result absent the timely introduction of a universally adopted standard, or if an attempt is made to introduce two or three competing systems into the broadcast market place.

The report is divided into several sections that include:

- A review of the economic literature of standards, with examination of recent examples of standard setting in related broadcast technologies and consumer equipment.

- A review of the mobile television marketplace, identifying the companies that are already in that market and the companies that are planning to enter.

- Broadcasters' economic potential in this mobile television marketplace.

- Estimates of the impact of a M/H DTV standard on the number of devices able to receive M/H DTV services by the year 2012 and the resulting additional revenues generated by the availability of those services.

In order to estimate the impact of the standardization process it assesses the likelihood of success under four different scenarios:

1. A single system is introduced into the marketplace and that system is the one the ATSC standardized.
2. Two systems are introduced into the marketplace and only one of those systems was standardized by ATSC.
3. Two systems are introduced into the marketplace and the ATSC was not able to agree upon a standard.
4. Three systems are introduced into the marketplace and the ATSC did not agree upon a standard.

The report also identifies additional steps that must be taken in order to ensure broadcaster success in this marketplace, which include:

1. Companies must negotiate, with reasonable and non-discriminatory, (RAND) terms, rights to intellectual property associated with a candidate standard.
2. Broadcasters intending to offer M/H program services which are simulcasts of their main channels (HDTV or SDTV) must clarify their rights to do so with program owners.
3. Reliable audience measurement procedures must be put in place to measure the M/H DTV audiences in order for broadcasters to sell advertising on those services.
4. A significant number of broadcasters provide M/H DTV services by Christmas 2009.
5. CE and cellular service providers offer M/H DTV devices by holiday season 2009.

FASTROAD is the technology advocacy program announced by NAB in April 2007. The overall mission of the FASTROAD program is to seek and facilitate development and commercialization of new technologies that can be exploited by broadcasters using radio and television broadcast spectrum. The full text of the report of the Mobile/Handheld report and information on the NAB FASTROAD technology advocacy program is available at www.NABFASTROAD.org.

Information on the Advanced Television Systems Committee is available at www.atsc.org. Information on the Open Mobile Video Coalition is available at www.openmobilevideo.com.

NAB Provides Members with Energy Consulting to Lower Their Expenses

The APPI Savings Solution Program is a National Association of Broadcasters member-only benefit that manages and reduces member's rising energy costs. Members who utilize this program will benefit from APPI's extensive knowledge of and expertise in electricity and natural gas markets across the U.S. APPI analyzes, negotiates, and structures individual and aggregation supply solutions for NAB members in deregulated states. There are no upfront fees and compensation is results based. As energy costs continue to rise and decrease your bottom line, contacting APPI is a wise business decision. Contact APPI at (800) 520-6685 or e-mail info@appienergy.com and be sure to mention you are an NAB member or visit the APPI Web site at www.appienergy.com.

ATSC Digital VSB Measurements Seminar

Monday, March 10, 2008
Great Lakes Broadcasting Conference
Grand Rapids, Mich.

A one-day seminar on the ATSC's digital television (DTV) vestigial sideband (VSB) transmission system measurement methodologies will be presented on March 10 in Grand Rapids, Mich. Presented by DTV

transmission engineer, Gary Sgrignoli, the seminar identifies and describes the pieces of test equipment needed for VSB testing in the laboratory, at transmitter sites and at remote field sites.

For additional information contact Gary Sgrignoli, Meintel, Sgrignoli & Wallace at (847) 259-3352 or Gary.Sgrignoli@IEEE.org.