NAB TV TechCheck

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Mobile DTV, 3D TV Loom Large at 2008 NAB Show

US broadcaster's are in hot pursuit of mobile DTV service and there was ample evidence of this at last week's 2008 NAB Show in Las Vegas, NV (see www.nabshow.com for more information about the show). Between all the meetings, conference sessions, exhibits and mobile DTV demos it was clear that the industry is fully focused on expanding terrestrial DTV service to mobile, portable, and handheld devices.

On Monday, April 14, 2008, the Open Mobile Video Coalition (OMVC) announced that the recent Independent Demonstration of Viability (IDOV) trials (being undertaken by OMVC) showed that "...DTV-based mobile video technologies are feasible." The vehicle being used to collect the field trial data purpose-built by integration company TEC and consulting group Meintel, Sgrignoli and Wallace (MSW) under contract to the Association for Maximum Service Television (MSTV) was on display in the exhibit hall (see photo at right - inset shows equipment rack located inside of vehicle). "We are on schedule for the 2009 rollout of commercial mobile DTV," said Brandon Burgess, president of the OMVC and CEO of ION Media Networks.

The OMVC is an association of commercial and public television broadcasters representing over 800 television stations, which came together in 2007 to accelerate the development of mobile digital television. "We are laser-focused on finalizing a technology standard for mobile DTV, and working with technology companies and service operators to launch services beginning next year," said Anne Schelle, executive director, OMVC. OMVC has been working with the Association for Maximum Service Television (MSTV), NAB, and the Advanced Television Systems Committee (ATSC) for the past six months to conduct trials for pedestrian and mobile digital television reception. OMVC initiated the IDOV trials at ATSC's request to accelerate the adoption of an effective, mobile DTV standard.

Laboratory and field trials were conducted in March and April of 2008 in the San Francisco Bay Area and Las Vegas. Additional lab testing will be completed over the next several weeks. OMVC is confident that it will complete the IDOV field and lab tests and have results available in time to meet the mid-May timeframe established by ATSC. The trials constitute a critical first step toward the ATSC's adoption of a standard that will enable broadcasters to launch mobile DTV services that will effectively serve the American public. Preliminary and partial results of the trials have been encouraging, and OMVC has reported the following findings:

- The trials show that both high VHF and UHF mobile reception works at pedestrian and highway speeds;
- Mobile reception can be achieved as far as 40 miles from the transmitter;
- None of the systems interfere with normal digital broadcasting.

The three systems that have been subjected to preliminary testing and evaluation are: the MPH (Mobile Pedestrian-Handheld) system jointly developed by LG Electronics and Harris Corporation; the A-VSB system jointly developed by Samsung Electronics, Co. Ltd and Rohde & Schwarz; and a third system jointly developed by Thomson and Micronas (T/M). Harris/LG and Samsung had demonstrations of the MPH and A-VSB systems using buses driving around Las Vegas with fixed screens and handheld devices receiving transmissions from two Las Vegas DTV stations. The MPH and A-VSB systems also had exhibits on the NAB show floor (see photos above—the inset in the A-VSB photo is a Samsung cell phone that was displaying real-time video utilizing A-VSB). The Thomson booth had a demonstration of their "StaggerCast" system, showing an ability to maintain continuous video with one-second signal interruptions. Thomson also demonstrated the use of Scalable Video Coding (SVC), enabling enhanced quality for higher resolution receiving devices. OMVC expects to deliver a final report to the ATSC in May. Next steps will include consumer trials. For additional information go to www.openmobilevideo.com.

Also on Monday at the NAB show, 3ality Digital hosted a live 3D digital TV demonstration of a new game show with "Deal or No Deal" host Howie Mandel and executive producer Scott St. John. Led by 3ality Digital's Steve Schklair, John Modell and Howard Postley (shown on the dais in the photo at right), the event was broadcast out of 3ality's facility in Burbank from 3:15-3:45pm PDT. It was a live 3D feed, sent in a single stream using an existing broadcast infrastructure via satellite transmission, to the NAB "Content Theater," a state-of-the-art digital screening room on the exhibit floor featuring RealD's 3D technology where top Hollywood filmmakers and executives revealed how they used new technologies to produce their latest content.

The demonstration highlighted the advanced camera technology created and utilized by 3ality Digital and showed the ease with which production can be accomplished. One of these advancements is in the camera's zoom lenses, which can compensate for the differences in the two lenses used for 3D imaging as they zoom in and out. 3ality Digital says that the immersive 3D effects "...heighten the stakes for the viewers and makes them feel in the moment." For this live demo, there was audience interaction with a vote as to a choice the game show contestant had to make (between kissing a 90-year old toothless woman or hugging a large brown bear that was in the studio!).

"We are thrilled to have partnered with 3ality Digital and to share their excitement and enthusiasm for the 3D format that will change how home entertainment is experienced," said Mandel and St. John in a joint statement. "3ality Digital is taking 3D to another dimension and it's changed all the things I used to believe about 3D,"

continued Mandel. St. John added: “As a producer I’m completely blown away by the cameras’ ability to change depth while shooting. Today’s event totally broke through a wall and now allows viewers to be in the game, not just watching it.”

“The debut of our groundbreaking technology today displayed the rapid development of 3ality’s advanced image capture and transmission capabilities for live 3D entertainment and sports,” stated 3ality Digital CEO Sandy Climan. “This takes fans into a zone where they get to feel what the contestants are feeling. Whether it’s game shows, reality television, or sports, this is the technology of the future, and it’s available today. We look forward to continuing to deliver this kind of quality 3D content to the public.” For more information see www.3alitydigital.com.