Women In Broadcast

Hosted By Samina Husain, BTS AdCom Member

I hope you and your families are keeping healthy and safe as we navigate in these challenging and uncertain times.

Although BTS was unable to host our in-person events due to the current global environment, we were able to fulfill our integral role and goal of industry information sharing. Through our multiple virtual events: NAB Webinar Series, IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB), and the newest addition to our events series, the IEEE Pulse, we have been able to provide the latest developments in the broadcast technology. Amongst industry experts, Aneta Baier (IRT) and Madeleine Noland (ATSC) delivered compelling topics during our Pulse and BMSB events.

In addition, I am pleased to recognize awards recently received by young women in broadcast: best student paper award in transmission technology: as first author Dr. Haining Duan for her contribution to "Optimized Resource Allocation in Scalable Video Broadcasting Using LDM and BDM", and best new technology paper award: as first author Dr. Ting Wang for her contribution to "EVAL Cane: An IoT based Smart Cane for the Evaluation of Walking Gait and Environment". We look forward to reading articles from these young recipients about the evolution of our industry and its technology landscape in future Women in Broadcast articles.

In this edition we bring you an article from Ruxandra Obreja, the current chair of Digital Radio Mondiale (DRM) consortium. Ruxandra is deeply involved in the promotion of digital radio all over the world. Her article outlines the advantages and great strides DRM is making globally. As a follow-up article on leveraging OTT as a platform for education, in this edition Mardhiah Nasir, vice president of sales at IPSB Technology in Malaysia, shares her thoughts on education content.

Bringing Digital Radio Service To The Masses

By Ruxandra Obreja
Chair, Digital Radio Mondiale Consortium

For many years, my closest brush with technology and distribution was the mic I was using to broadcast live news from the Bush House BBC World Service studios. Little did I know that one day the interesting road of the sound from studio to transmitter and then listener would become more than a job, rather a passion. When I took over as chairman of the DRM Consortium more than 10 years ago, I had to confront my lack of technical information, and lead representatives of the very knowledgeable tribe of mainly male engineers. Digital Radio Mondiale (DRM is registered trademark and not to be confused with digital rights management) was first imagined as a replacement for mediumwave and shortwave, used then extensively by international broadcasters like the BBC.

DRM (*www.drm.org*) itself extended its many advantages in AM to the VHF bands (mainly to FM) in 2011, the very year India practically adopted DRM as its standard. Suddenly this ITU-endorsed digital system for all bands, able to cover small localities, regions, countries and even continents, was out in the wide world. It had to perform and deliver the spectrum savings (up to three programs and one data channel on what had been a one-channel-per-one-frequency in the analog world), the energy savings and many extra services and benefits like emergency warnings, etc. And much has changed since these beginnings. India remains the top DRM country (alongside China). More than two-and-a-half million cars with DRM receivers are placing India in a class of its own. Receivers are fitted at no cost in cars from the top brands. Work is continuing to increase pure DRM hours for five All India Radio (AIR) transmitters to full day and to diversify content.

The Indian rollout has spurred India's neighboring countries to look at DRM too. The adoption of DRM in all bands by Pakistan and its public broadcaster (PBC), and its roll out in three stages is now very much in the cards. Indonesia and its public radio service (RRI) have five FM transmitters that went on air over the last few months, and the excellent results of the Emergency Warning Functionality was demonstrated on a DRM FM transmitter in Jakarta last August. There is a recent tender for digital DRM transmitters in Brazil. A locally-produced shortwave DRM transmitter has just been installed near the capital of Brasilia, and will broadcast to Amazonia, a region of seven million people. If this sounds like a BRICS (Brazil, Russia, India, China and South Africa) country update, so it is. Russia is pushing for DRM in FM. And South Africa has really scored a first with its policy announced some months ago that it recommends both DRM and DAB (the two open digital terrestrial broadcasting standards originating in Europe) as a way to digitize radio in the country. This is a true torch-bearer for other African countries still so reliant on analog AM and FM radio.

One of the latest preoccupations of a tight, passionate group of DRM experts is to explore the possibilities of delivering

education via terrestrial digital broadcasting to areas where IP, laptops and even mobile phones, are not available. Possibilities are being explored to establish an educational channel in India.

The increase of the DRM presence and the general technical effort being made will stimulate the receiver production and availability. Besides the two-and-a-half million car receivers on the Indian roads, there are many receiver prototypes and receiver solutions using multi-standard chipsets. Receivers go from top-range to "tuk-tuk" versions, but the struggle to bring millions of inexpensive receivers to all continents is still there.

So, DRM is making great strides technically, geographically, and in coming up with ingenious receiver solutions. But the battle is not won. Radio, written off so many times, and particularly digital radio, sometimes seen as a casualty of IP and the "mythical" 5G, is stronger than ever in these uncertain pandemic times. Its battles are still many and it is hard to believe that the DRM project, which I thought in 2008 would take me two to four years to accomplish by bringing the broadcasts and receivers quickly to a radio-hungry world, is far from finished. The project is more real and more complex, the achievements and challenges are bigger, too. My passion is undiminished and is constantly supported by that of many of my knowledgeable colleagues to whose tribe I hope I now belong.

Monetizing Content In Our Connected World

By Mardhiah Nasir, Vice President of Sales, IPSB Technology

In the past few decades, incredible innovations have taken place, with TV moving from analog transmission to digital broadcasts, enabling thousands of unique channels to deliver premium content to consumers. Now, we are ready for the next challenge, with mobile 5G connectivity firmly in mind—with revolution 4.0. According to Ovum research, in a study requested by Intel, 5G is not just going to change the way people consume content, but it will expand all kinds of markets. The industry is going to generate trillions of dollars in revenue in 2028. The report says that traffic is going to rise from 11.7 GB per month in 2019, to 84.8 GB per month in 2028. This report also has promising numbers for augmented reality (AR) and virtual reality (VR), which are expected to exceed 140 billion dollars in 2028. Immersive and new media applications, a market that isn't fully developed yet, could generate 67 billion dollars in nine years.

The key reasons for this growth are the assumption that once 5G network availability and 5G devices arrive, people will consume even more content than today because it will be faster and more immersive. This content could include mobile media, advertising, home broadband, TV, education and more.

Over the years, education found the potential of 5G as a great resource for its purpose: making the learning process more attractive and interactive for students. The newest devices, such as tablets, more powerful computers, digital screens and new technologies such as VR and AR have also allowed the teachers to adjust their lectures to the digital revolution, creating new ways to plan and present their programs. At the same time, the educators can contemporarily demonstrate how a tool is used, and have the trainees practice and improve their skills.

Clearly, audiences are in love with digital media consumption and over-the-top solutions in many forms: video, audio live streaming, video on demand, podcast, digital materials and digital books, online events, online learning, user-generated content, interactive user experience, virtual reality/augmented reality, and many more on multiple platforms.

This presents a unique opportunity for organizations to monetize their education media libraries and create stable streams of recurring income. From ad-supported content, viewer subscriptions, sponsorship, e-commerce, all the way up to pay-per-view and on-demand services, monetization is the new standard of profitable media delivery and consumption across all verticals.

Simply put, content monetization is getting paid for the media you publish and stream online. Not so much for the creation, but rather when audiences view or download your content. The more people that watch the greater your earnings.

Content owners can generate revenue from their videos in a number of different ways. The most common include inserting ads, incorporating sponsors, offering subscriptions, or creating product or service reviews. Generating income from your videos is based on these distinct business models.

Access to individual content: when you serve the needs of your audience well, followers will pay to view the content you create. Educational curriculum, training courses, and other digital downloads are prime examples.

Access to your audience: advertisers with a product or service (that aligns with your brand) will sponsor ads or pay for placement within your video content. Think about promoting workout gear or supplements to a fitness audience or running team apparel ads during a live sports event.

Access to your platform: as a content owner creating a subscription model to access premium content—or your entire video-on-demand library—is a smart monetization play. This