



## **Technical Committee meeting 26-27 November 2022**

ABU Technical Committee meeting was held from 26-27 November 2022. It was hosted by ABU full member in India, Prasar Bharati, at the Pullman hotel in New Delhi. The event started with an address by Mr. Hamid Dehghan Nayeri, Director, International Technical Affairs, IRIB, Iran and ABU Technical Committee Chairman.

### **Opening Session**

In his opening remarks, Mr. Nayeri welcomed all the delegates and thanked Prasar Bharati for hosting the prestigious event. He showed his delight on resumption of in-person event after a halt of two years due to covid pandemic. Mr. Nayeri informed the delegates about the periodical reviews and activities published on the ABU website along with other resources. He introduced the newly added category of awards for the young engineers called “ABU Young Engineers' Broadcasting Award”. He emphasized on the importance of cyber security and invited all the delegates to give their views and share their experiences on this key topic of concern. He provided an overview of the following two days of interesting topics and updates on the upcoming activity. Mr. Nayeri then invited Director General of Doordarshan, Mr. Mayank Kumar Agrawal to address the delegates.

Mr. Agarwal started by welcoming all the attendants to India and the ABU Technical Committee meeting. He emphasized the importance of the technical team in any broadcasting organization. He encouraged the technical team to keep learning and being a part of the evolving broadcasting technologies. He insisted the technical team should share their learning with the other ABU members. The use of 5G technology rollout, enhancement of picture quality right from SD to 4K and now going towards 8K and 16K and, Broadcast on Mobile were highlights of his address. He introduced the training facilities formed at Doordarshan to bring its engineers and technicians are at par with the latest trend in the broadcasting industry.

Mr. Sunil, Additional Director General (Engineering) & Head International Relations, Prasar Bharati-India was hereafter called upon to share his views and address the assembly. Mr. Sunil also started his address with a warm welcome and thanked all the attendees to have accepted the invitation to come to India and make this event a grand success. Mr Sunil continued his speech with the key responsibilities that lie on the shoulders of a national broadcaster. He also spoke about the continuous challenge being faced by a public service broadcaster which are fulfillment of public mandate, be commercially viable and continuous content development. Doordarshan has a vast network of TV channels in different languages which carry different genre of content such as educational content, informational content, entertainment content just to name a few.

Dr. Javad Mottaghi, Secretary-General of the ABU, added his welcome to the delegates and his happiness to be in India. He continued by thanking Prasar Bharati for hosting its third major event of the year. He was overwhelmed to be attending the in-person conference after 2019. Since the outbreak of Covid pandemic, the ABU has been hosting a vast number of online events which included the DBS, GA, song festival, and a lot of online trainings. Dr. Mottaghi called for better cooperation between ABU Members to bridge the digital divide. He requested the broadcasting members who have a much better infrastructure and much more advanced technology to help the broadcasters who are trying to catch up on the infrastructure and technology. There are some of the broadcasters who had to quit the memberships during the pandemic due to financial crisis. He finally congratulated Mr. Ahmed Nadeem for

being elected as the new Secretary-General of the ABU and he will take over the position from Dr. Mottaghi on the 1<sup>st</sup> of April, 2023.

At another welcome address to the august gathering, Mr. Gaurav Dwivedi, Chief Executive Officer of Prasar Bharati, India welcomed Secretary-General, ABU Team and the Member delegates to India. He wished next few days' interactions and deliberations to be a success.

The event continued with the Announcement of Winners of the Annual ABU Engineering Awards and Technical Review Prizes 2022.

### **ABU Engineering Awards 2022**

Mr. Ahmed Nadeem first began with the Technical Review Prizes award. The awards were given to several authors of Technical Review magazine published between October 2021 to September 2022 in different categories as follows.

The Award for Best Article, in the category of Practical Implementation was given to Ms. Fatemeh Fallahi from Islamic Republic of Iran Broadcasting for her article on "How DVB-I help broadcasters to get prepared for the future" the award was presented by Mr Masashi Kamei, ABU Technical Committee Vice-Chairman.

Award for Best Article, in the category of research was presented to the team of Mr. Javad Mardanpour Bogar, Mr. Mohammad Reza Noorifard and Mr. Mohammad Behdadfar from Islamic Republic of Iran Broadcasting for their article on "A resource allocation metric for multimedia content in LTE network". The award was presented by Mr Masashi Kamei, ABU Technical Committee Vice-Chairman.

Award for Best Article, in the category of Case Studies was given to Ts. Ahmad Shafiq Mirza Bin Mansor from Radio Television Malaysia for his article on "High Definition (HD) News Digital Archive, Revolutionary broadcast technology towards effectiveness future demand". The award was presented by Mr Masashi Kamei, ABU Technical Committee Vice-Chairman.

The Engineering awards consists of four categories:

- ABU Broadcast Engineering award on SDGs implementation
- ABU Developing Broadcasters' excellence awards.
- ABU Engineering Industry Excellence Awards.
- ABU Broadcast Engineering Excellence Awards

The first category of awards announced was for ABU Broadcast Engineering award on SDGs implementation. These awards were presented to the organizations for their contribution towards sustainable development goals. There were three joint winners for this category.

All India Radio, Dibrugarh was awarded for establishing an energy efficient infrastructure for preserving the environment and ecosystem. The award was presented by Dr. Javad Mottaghi, Secretary-General of the ABU. The Radio, Film and TV design research institute (RTPRC – China) was the second joint winner of the award. The award was presented by Mr Masashi Kamei, ABU Technical Committee Vice-Chairman. The third joint winner of the awards were NHK Japan for their development of AI based multi-language technology to reduce the inequality between people. The award was presented by Mr. Hamid Dehghan Nayeri, ABU Technical Committee Chairman.

The second category of award presented was for the ABU Developing of Broadcasters' excellence awards. The award was presented to Mr. Udaya Krishna Shrestha from Radio Broadcast Service, Radio Nepal (RNE). The award was presented by Mr. Hamid Dehghan Nayeri, ABU Technical Committee Chairman.

The third category of award presented was for ABU Engineering Industry Excellence awards. The award was presented to Ms. Qiao Xiaoyan, from Wasu Media Holding – RTPRC China. The award was presented by Dr. Javad Mottaghi, Secretary-General of the ABU.

The final award presented was for the category ABU Broadcast Engineering Excellence Awards. The award was presented by Shri Mayank Agarwal, Director General of Doordarshan, to Mr. Cui Jianwei from China Media Group – CMG China.

This concluded the award ceremony. Mr. Nayeri congratulated all the winners and invited Dr. Javad Mottaghi to present a token of appreciation to Prasar Bharati for hosting the event. Shri Mayank Agarwal, Director General of Doordarshan received it.

### **Keynote Presentation**

The keynote presentation was done by Mr. Nigel Fry, Director of Distribution at BBC world service. His presentation was about Cloud solutions and sustainability-Learnings from lockdown, opportunities, and challenges for the future. In his presentation, Mr. Nigel said that the BBC has been producing programs in 42 languages across different broadcast platforms. The BBC has set several production goals such as clean energy and gender equality just to name a few. Mr. Nigel also spoke about the new learnings post lockdown and different ways of working post the lock down event. Remote operations are a good mode of working but consists of several challenges of itself.

He spoke about the advantages of Cloud based broadcasting. Some of the advantages he talked about were as follows. High availability, Low entry cost, avoiding physical server rooms, Increase of tools and so on. According to him there are questions that arise about the platform are security and continuous and growing bills. The solution of having an internal cloud platform is much more effective as the public cloud platform can be very volatile and economically unviable for the broadcasters. Mr. Nigel also spoke about the importance of sustainable and clean energy such as solar energy and wind energy. He also discussed the importance of energy storage and connected grids. BBC has implemented the clean energy-based transmission sites at Bamian for a 30W FM transmitter in 2003 and at Ascension Island Five, 330kVA wind energy converters (2010).

Mr. Nigel also expressed his concern for the rural population in the world which is still not connected to mobile data services. This amounts to almost 2.7 billion people worldwide. This makes the MF and HF platforms all the more important to make sure even the people who are not connected using internet are able to stay informed using the conventional Radio and TV. He talked about the new version of DRM receivers which are in their testing phase and are expected to bring the pricing of the DRM radio sets down. There was a concern raised by Mr. Nigel about the workplace safety of the team members.

### **Confirmation of the Agenda and TC-2021 Proceedings and Appointment of Rapporteurs**

Mr. Nayeri led the delegates through the agenda, which was confirmed. The proceedings of the Technical Committee meeting 2021 were approved as well. The Rapporteurs for reporting the next two days of proceedings were appointed namely Mr. Yashovardhan Sharma from Whiteways Systems, Singapore; Ms. Arunima Singh from Prasar Bharati – India; Mr. Warren Robert from VBTC – Vanuatu and Mr. Udaya Krishna Shrestha from RNE – Nepal.

### **ABU Technology Activity Report**

Mr. Ahmed Nadeem was invited by Mr. Nayeri to take the participants through the ABU Technology Activity report. A webinar series on Member Innovations was started by the ABU Technology. A lot of members during the pandemic worked remotely. The idea of this event was to share the learnings of ABU Members during the past years. ABU did 7 webinars sessions with over 110 participants per session on average. Similarly, there was another webinar series started for capacity building activities which had about 25 sessions and over 140 participants per session on average. The first in-person workshop on Cloud Technologies for Media Services took place in Kuala Lumpur from 25-27 July. This workshop on media services received a lot of traction and fifty delegates from ten (10) countries representing 19 organizations took part in the event. During the period of pandemic, DBS was still hosted as an online event. ABU is pleased to announce the resumption of in-person ABU DBS next year from 6<sup>th</sup> to 9<sup>th</sup> of March 2023 in Kuala Lumpur.

The training course on engineering fundamentals for broadcasters was organized by the ABU with the experts' help from Prasar Bharati-India, TRT-Turkiye and IRIB-Iran. Level-2 of the course went on from April to June of 2022, Level-1 completed in 2021. This training had more than 90 participants from 31 organizations across the region. The course is in progress while ABU is designing the course for the Third Level of this training. He went on to inform the delegates about the online recordings available on the ABU website. This portal hosts all the webinars from 2020 which are available only for ABU members. The delegates can register on <https://vod.abu.org.my> to get an access to the knowledge base. Mr. Ahmed told that the cooperation and collaboration with international organizations like World Broadcast Unions,

Broadcast Asia, Inter Bee, IBC and HFCC continues to be a high priority for the ABU. All the ABU technical reviews details are available online at [www.abu.org.my/technical-review](http://www.abu.org.my/technical-review). Finally, Mr. Ahmed thanked all his team members Dr. Veysel, Mr. Shree Bhadra, Ms. Najwa, Mr. Saravana, Mr. Siva, Mr. Sharzuan, Ms. Nerina and Ms. Irfah who have worked tirelessly to make this event a success.

### **Bureau Proposals (Introduction)**

Finally, Mr. Ahmed introduced the bureau proposal and the introduction of newly added category of awards for the young engineers called “ABU Young Engineers' Broadcasting Award”. A task group on Review of Engineering Awards Guidelines was setup in 2022 when some members highlighted the demand of revisiting the criteria and guidelines of the awards. Some of the highlights were as follows: On the point to allow repeat winners, as It's not a competition but a recognition of contributions, there will not be a repeat winner in the same category but if in different category repeat winner will be eligible only after 3 years gap. The second point is the clear difference between BEEA & DBEA and BEEA & EIEA which is stipulated in the document. The third area is that as most of the awards are being won by highly experienced professionals, it's time to recognize young engineers and so a new category of young engineer's award has been constituted. These all points will be incorporated and current guidelines will be updated for the same.

### **Future Strategies**

Mr. Sunil, ABU Technical Committee Vice- Chairman chaired the afternoon session of technical meet on 26.11.2022. He invited the speakers to deliver their presentation on different topics.

Miss Emily Dubs, Head of Technology, DVB Project was the presenter and her topic of presentation was “How DVB unifies IP-centric media delivery”. She stressed on the fact that DVB is bringing broadcast like experience to broadband technology. It gives seamless experience from delivery to discovery. A converged media delivery ecosystem is being enabled due to DVB-NIP and DVB-I. DVB-NIP does the aforementioned task by working at transport layer and DVB-I does the same by working at user end.

She stated advantage of DVB-NIP that it leverages existing broadcast and broadband infrastructure and opens up new business models for B2B segment. Live TV can be enabled in rural areas where there is poor internet connectivity and TV less environments. Monetisation of the existing entertainment methodologies like incorporating live TV for audience in bus can be done to generate revenue. Operators can launch OTT services in rural areas and public places. Satellite providers can sell additional bandwidth for OTT and stay relevant with the future DTH. OTT providers can scale down infrastructure costs and extend their market reach. All will gain with Native IP, leveraging the existing infrastructures & mobile devices proliferation. She also introduced DVB-I (TS 103 770) which defines the mechanisms for the discovery of service lists and to retrieve EPG over the internet. DVB-I offers a common service layer across networks.

Mr. Matthew Phillips, VP Marketing, CML Microcircuits Ltd. was the second speaker and his topic of presentation was “A breakthrough innovation in Digital Broadcast Radio Receivers”. The presentation started with emphasizes on the relevance of the importance of radio from last 100 years. In times of natural disaster radio provides a vital service when infrastructure is compromised. With the analog transmission coming to an end in near future, digital transmission is getting popularized. However biggest bottle neck in the spread of digital technology in radio is the absence of the low-cost radio receivers.

DRM is the energy efficient broadcasting standard which can use between 25% to 30% of the energy of analog broadcasting. The various benefits of DRM are that the technical standard is complete, published and open and readily available for use, technology is cost effective, content management, delivery and transmission system, compatible with existing analog broadcasting. The limited resource of spectrum can be effectively utilized by DRM.

Mr. Matthew introduced CML/CC DRM1000 DRM Receiver module which is a core component to implement a full DRM capable of behaving as a broadcast receiver covering all bands. It is jointly developed by CML Microcircuits and Cambridge Consultants (CC). A fine tuning of frequency ranges from 150 kHz to 108MHz with no-gaps and supporting AM/FM/DRM broadcasts is very well achieved with it. DRM 1000 receiver will play for 30 hours continuously on 3 X AA cells. The miniaturization of it has led to use radios in pocket and even compatible with smart phone and smart devices.

Next speaker was Mr. Jens Fischer, Territory Sales Manager, Signiant and his topic of presentation was "Live File contribution technologies". Signiant is well known name in area of file transfer with 50,000 businesses with more than 200 countries worldwide. An expanding set of applications and services that make working with media more efficient. The main innovation they came up is with transfer of more information without increasing bandwidth.

Mr. Jens laid focus on the fact that prior to the data transfer, characteristics of channel is measured thoroughly. Smart OB workflows is the dire need of the current changing broadcasting industry. This will lead to reduction in OB parking time and production costs, more data volume due to new production standards (e.g. UHD), sharing the content immediately, works with modern and older truck, fully encrypted and accelerated transports, reduction of production time and satellite transponder time. This works with any internet connection and any Slomo solution. Signiant can provide universal solution for every broadcasting industry and they not even demand dedicated hardware for doing the same.

The last speaker of the session was Mr. Kazim Pektas, Chief Engineer of TRT Turkey. The topic of his presentation was "Digitalization Digital Transformation" and delivered it virtually. "Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities" said Mr. Kazim Pektas. He further stated the process of moving to a digital business. Digitalization deals with information processing, or how digitized data can be used to improve workflows through automating existing processes. Finally, digital transformation is all about leveraging knowledge and integrating it in all business areas to enhance engagement and create new value. Various TRT mobile applications like TRT World TRT Haber, TRT Izle, TRT Spor, TRT VOT, TRT NUCE have been currently in market.

TRT Electronic document management system previously was a lot manual and time taking but now it has been replaced with digitalization as now the document can be signed anytime and anywhere. Digital transformation is the process of using digital technologies to create new or modify existing business processes, business models, organisation culture, and audience experience. In this regard, he laid emphasis on explaining different parameters of Digital Transformation. Organizational culture is defined as the underlying beliefs, assumptions, values and ways of interacting that contribute to the unique social and psychological environment of an organization. Business models deals with who all people can be involved and cooperated. Talking about audience experiences, Mr. Kazim stated each person is unique and can be identified according to their needs and can be catered accordingly.

Mr. Sunil, the session chair, thanked all experts for their presentation and closed the session.

### **Media Technologies and Solutions**

Mr. Masashi Kamei, ABU Technical Committee Vice-Chairman chaired the session which had four presentations.

The first speaker in the session was Mr. Christian Christiansen, COO Silver Trak Digital / DAMsmart and the topic of his presentation was "Empowering Broadcasters to monetise their legacy audio-visual archives". DAMsmart is the leading agency in audio-visual digitisation in APAC. They have over 16 years of experience and have proven track record in handling digitisation of national audio video projects. They have highly trained team with professional backgrounds in the broadcasting industry with unmatched expertise and experience.

The main problem which was posed at international level by archive bodies was that the year 2025 is the deadline for all forms of Analog AV Legacy content to be digitised failing which they can never be digitised forever. DAMsmart started a project with Telstra and AWS for saving Australian Football League (AFL) historical collection. The major challenge which was faced by AFL was inefficiency in managing the video archive and relied on skilled technicians to access the vision. Even the distribution and reproduction of tape footage as short clips and stories was challenging as it was not scalable for digital consumption in multiple video formats. Telstra Broadcast Services provided an end-to-end Platform-as-a-Service solution to the AFL, bringing together all aspects of the Digitisation, and the connectivity to support the MAM platform hosted on AWS.

Next speaker Mr. Yogendra Pal, Honorary Chair of India Chapter, DRM Consortium delivered on the topic of "DRM Social Benefits – Distance Learning & Emergency Warning Functionality (EWF)". DRM is mainly for non-profit organization and they have global presence in countries like Brazil, Germany, India, South

Africa, Pakistan and Indonesia. DRM Digital Radio standard is an Open System and has all required tools built-in for a quick and complete mass-notification in case of disasters / catastrophes. DRM is finding its use in distance education as it offers conventional audio and data services. Due to the wide coverage area of radio, DRM can be easily put to use to provide education to remote areas during pandemic or crisis.

DRM offers education/ information free to air to everybody without the need of internet. In DRM due to the feature of Journaline which deals with textbook content, distance learning has been made possible. DRM distance learning have several benefits like live lessons with teacher as scheduled radio programmes; self-teaching of students in their own language and at their own speed of learning through on-demand lookup of lessons. Mr. Pal introduced one of its first kind of energy-saving, low-cost and multi-functional DRM module, which could be a true game-changer for the receiver market and he also updated participants on the latest DRM developments and give an insight in the efficient introduction of DRM into the analogue FM market.

Mr. Aale Raza, Managing Director, Whiteways Systems was the next speaker and the topic of his presentation was “Bid Good Bye to the green screen, say welcome to XR”. Mr. Aale stated that his company has drawn inspiration for augmented reality from gaming industry. The previous virtual setup studio was horrendous and very time consuming. But with this new LED studio set up of XR has mitigated all the drawbacks of the former. He informed about the launch of Unreal Engine 5.1. It allows virtual simulated environments to be projected onto LED wall. The camera is equipped with a tracking system that allows 3-D set to adapt to the position. The XR frees the production from constraints of time and space. It allows you to be instantly transposed to any part of the planet while remaining in the comfort of the studio.

Virtual shoot allows to create the illusion of dizziness and emptiness with complete safety. Beyond the technology XR is totally immersive experience that creates bridge between real and virtual world. Various programs can use XR like musical album, production of a TV serial, Product Launch, Online event, Dynamic TV setup studio, real time audience, etc. The creativity is the limit. There are many benefits associated with the use of XR like minimizing real lightning usage, texture constraint, real time environments and physical production can be easily made available; free from real time constraint. The benefits of XR are mainly safety versatility, ease of production and cost cutting.

Mr Lindsay Cornell, Principal Systems architect, BBC Digital and World DAB TC Chairman was the next presenter and the topic of his presentation was “Economics, environment and emergencies leading the way for DAB+ development”. As he couldn’t attend in-person, he delivered it virtually to the audience.

The three major reasons for widespread usage of DAB+ are economics, environment, and emergencies. In terms of economics, the cost per service of DAB is far lower than FM approximately 80% less consumption. The share of new consumer radios with DAB have been almost doubled in last 4 years. DAB has led to extension of opportunities from London to UK along with Asia Pacific markets which are running trials. DAB is 33% more efficient than FM and consumes significantly less energy than FM. In terms of emergencies DAB is resilient in comparison to mobile services. Due to European Union mandate (EECC) all new car radios must have digital terrestrial and this led to incorporation of DAB in almost all cars in Europe. Highlighting the usage of DAB in natural disaster like the floods in Germany in 2021 emergencies.

Mr. Masashi Kamei, the session chair, thanked all experts for their presentation and closed the day’s activity with the session.

Both these sessions were open to have any questions from the floor. The speakers had the audience engaged with updated answers to relevant questions from the floor.

## **Topic Area Reports**

The next day on 27<sup>th</sup> November started with the Topic Area reports session. Mr. Hamid Dehghan Nayeri, ABU Technical Committee Chairman opened the session and invited first Mr Kazim Pektas to present the Production Topic Area report.

The Chairman of the Production Topic Kazim Pektaş of TRT- Türkiye introduced the session and spoke of some important development. He spoke about the Radio and Television archiving including metadata for international program, the Ultra High-Definition TV with some of the loudness related standard. He also informed the delegates about system for people with special needs That sometimes the virtual reality can create a temporary change in a person sensory which can alter their movement and also their orientation. And finally, he briefed them about the Internet Protocol media experience which is the new free and open standard for AV over IP, the transmission of very high-quality video, audio and control signals over IP Network. He closed his report by highlighting about the reliable internal stream transport in an open source, open specification transport protocol designed for reliable transmission of video over lossy network with low latency and high quality.

The Chairman of the Transmission Topic Kenichi Murayama of NHK, next, introduced his report in the session and spoke of the important developments taking part in these field. He thanked all project managers and contributors in preparing the report. He talked on the project entitled 'Frequency Planning for Digital Broadcasting', about the ITU-R BT. 2144 about the guidance for introducing new digital terrestrial television broadcasting (DTTB) system, technologies and applications for broadcasting services. Also, he presented few updates from the ABU members who have done the analogue switch overs an example was in Fiji where the DVB-T2 was launched and now the number of customers has increase to 217,358.

He informed the delegates that few countries are auctioning for the 5G implementation, such countries are Bangladesh, South Africa, Belgium and India. Another project that was discussed was the Next Generation Terrestrial Broadcasting update from NHK Japan. They have been using the 8K-UHDTV field experiment with channel bonding. This is by bonding two channel frequencies to transmit data from a physical pipe. Korea Broadcasting Service (KBS) developed and launched ATSC 3.0 and 5G broadcast transmission technique. It is a multi-channel/ mobile/ interactive service. Also, he reported on the project of IBB/OTT and mentioned on Cybersecurity threat that is frequently happening in some major broadcasters. Therefore, there is a need to strengthen this area as well. And finally, the last project topic was on the updated report on the ITU-R BO. 2397 satellite transmission for UHDTV for satellite broadcasting. Mr Murayama informed that it has been updated at ITU-R Study Group 4 meeting in September 2022.

Mr. P Das of Prasar Bharati, Chairman of the Training & Services topic area continued this discussion on the ABU Activities. This topic mainly focused on capacity building and technical training among the members of ABU. Mr Das reported on three different projects within the topic area. Information was provided to members that a survey will be done regularly to find about the needs in various technical areas. Also working with the ABU Media Academy, a curriculum will be formulated which will be standardized among members of broadcasters and this will eventuate in a recognized certification. Also, some training programmes for non-technical, managerial, financial and occupational safety & skills enhancement be identified and developed.

Mr Das briefed the audience on the ABU activities that are completed in the last year such as webinars, technical advisory services and international cooperation projects. He also briefed the activities that are undergoing & will be updated with the help of project managers and co-project managers to assist in the coming years.

The next topic area report on Spectrum was prepared by Dr. Li Leilei of RTPRC-China who is the Spectrum Topic Area chairman. But he was unable to attend the meeting and the report is to be made available in ABU website.

### **Information Exchange**

Mr Nayeri informed the audience that, in total, seven information documents have been received- six from China and one from KBS-Korea. The documents contributed as follows are:

- KOBA 2022 KBS Exhibition Booth Introduction by Jeongseob Kim, Korean Broadcasting System
- 4K UHD live video broadcasting over 5G wireless transmission network by Linda Guo, Sumavision Technologies
- Immersive Video in China by Ouyang Yue, Radio, Film & TV Design and Research Institute, NRTA



- Introduction of HDR Vivid Standard by Jinhui Ning, Academy of Broadcasting Planning, NRTA
- Audio Vivid – The next generation of audio coding standard by Jinhui Ning, Academy of Broadcasting Planning, NRTA
- Olympic Winter Games Beijing 2022 on the Cloud by Guangliang Zhang, Alibaba Cloud
- Bullet-time /FreeView Application scenarios Powered by 5G by Pengzhou Zhang, Beijing International Cloud Broadcasting Technology

Mr Jeongseob Kim from Korean Broadcasting System introduced the document and briefed the meeting about KBS services and solutions during the KOBA 2022 Show in Korea. KBS promoted few services at the exhibition booth when the show was held from 29 June to 1 July 2022 in Seoul. KBS promoted UHD IBB Service, UND Multimedia Emergency alert Service, Broadest-Telecom Digital Convergence network, Advanced TPEG-Broadcast RTK Service, AI-based Vertigo video service.

As the delegates from China were not present in-person, the information documents were briefed by ABU Secretariat to the meeting delegates. Mr Nayeri thanked the contributors of the information documents from Korea and China.

Similarly, the delegates heard about status reports from various broadcasting members detailing what development they have achieved and what their plans and services are for the following year. The nineteen (19) organizations who contributed these updates were National Radio and Television Administration (RTPRC-China), National Broadcasting Services of Thailand (NBT-Thailand), Korean Broadcasting System (KBS-Korea), Radio Republik Indonesia (RRI- Indonesia), Japan Broadcasting Corporation- NHK(Japan), Sri Lanka Rupavahini Corporation (SLRC- Sri Lanka), Radio Television Hong Kong (RTHK), Turkish Radio Television Corporation (TRT-Turkiye), Pakistan Broadcasting Corporation (PBC- Pakistan), Radio Television Brunei (RTB- Brunei), Vanuatu Broadcasting & Television Corporation (VBTC-Vanuatu), Mediacorp Pte Ltd (Mediacorp-Singapore), Vietnam Television (VTV- Vietnam), Radio Broadcasting Service (RNE-Nepal), Nepal Television (NTV-Nepal), Voice of Viet Nam (VOV- Viet Nam), Television Broadcasts Limited (TVB-HongKong), Radio Televisyen Malaysia (RTM), Kiribati Hope Radio (Kiribati).

## **Bureau Proposals**

Mr. Hamid Dehghan Nayeri, ABU Technical Committee Chairman had a final reading of the following bureau proposals for any further comments.

- Decision 1: Amending the Engineering Award guidelines - in accordance with the recommendations of the EA review Task Group-
- Decision 2: Instituting ABU Young Engineers' Broadcasting Award
- Recommendation 1: Supporting the WBU Recommendations related to Cybersecurity issued in 2022
- Recommendation 2: Supporting the WBU-TC Recommendation on the Need to Maintain Resilient Mix of Media Distribution Infrastructures for Times of Crisis

As there were no further comment or objections, the two ABU recommendations and the two ABU decisions were approved by the meeting.

## **Technology Panel**

The next interesting session was the Technology panel session on 'Opportunities and Challenges to Broadcast and Media Organizations in Managing the Connected vs the Traditional Environment. Mr Aale Raza, Managing Director at Whiteways Systems-Singapore chaired and moderated the session. The invited panelists were Nigel Fry- Director of Distribution at BBC World Service, Christian Christiansen- COO at Silver Trak Digital, Jens Fischer-Territory Sales Manager at Signiant, Bishnu Ram Neupane- Deputy General Manager at Nepal Television, Shri N Thiagarajan- Additional Director General (South Zone) at Prasar Bharati-India and Dr Riyadh Najm, ABU Alumni from Saudi Arabia.

The experts' panel deliberated on the Opportunities and Challenges of traditional Broadcast Organisation. Today, Facebook, TikTok, Netflix and other platforms have overtaken traditional media platform such as analogue. TV and Radio. Traditional viewers are not the same as in twenty years ago, people watching TV on TV or on other devices is decreasing rapidly. The panel observed that viewership on traditional TV has dropped but has it affected business revenues or not. The panel said that there is still a role for



traditional media to play and expand its service. The advantage of the traditional media is that it is not very costly to the audience and viewers. And also, that they are 1.2 billion people still not connected with internet thus they rely on traditional media to access information.

The panel reiterated that with the advancement of technology, new platforms have emerged and also being embraced by the young generations. But the content for these new and traditional channels might be the same. Therefore, it is vital for content makers as well as broadcasters to be on that those platforms. It was also raised that within the Asia Pacific Broadcasting Union (ABU) all members do not have the same level of standard in terms of technology. And while a technology will be of greater value in a particular geographical area, it does not mean that it will be good in other areas as well.

At the end of the session the panel concluded that any broadcast media organisation will need to embrace the connected environment as well as maintaining its traditional environment. Opportunities are created to the Public Service Broadcasters to serve differently with new purpose and new content rather than taking this as unfair burden imposed to them in serving diverse audience.

### **The Host Presents | Prasar Bharati-India**

The afternoon session on 27<sup>th</sup> November was the Host Presents panel session hosted by Prasar Bharati, India. The session was attended by more than 50 participants representing of ABU members and non – members organization from different countries from the world.

Moderator and Chair of the session was Mrs. Anuradha Agarwal, Additional Director General, NABM, India. The topics were as diverse as ranging from Technological & Managerial aspect of broadcasting to capacity building of its human resources and catering digital contents for audiences' consumption. It discussed about the broadcasting experiences and developments of Prasar Bharati over the past 100 years. The future plan of Prasar Bharati was discussed as well during this session.

The topic and panel of speakers included:

- D2M with demonstration by S Vadivazagan, DDG (Innovation), Prasar Bharati and Prashant Maru, Sankhya Lab
- Content production for digital medium by Samir kumar, head (PBNS)
- Modern broadcast technologies and AIR future plan by Atul Gupta, ADG (Engineering)
- Innovations in Broadcast Technology and future plan in Doordarshan by DC Shukla, DDG (Technology)
- NABM and its programs for HR development in broadcasting sector by RK Joshi DDG (NABM)

The session stressed on the importance of the digital platform in the broadcast technology. The key features digital broadcasting system such as multiple channels per transmitter, quality signal, EWS function etc. were highlighted. It brought out and discussed on the different standard digital platforms in the transmission such as DRM, IBOC, HD, DAB, D2M, Audio over IP, IP based routing, integration of social media, Podcast OTT and Live streaming. And different traditional mediums of transmission and distribution for link connectivity like Satellite, DTH, Dedicated lease line, OFL, VSAT etc. It was mentioned that DRM broadcast started in India in 2014 in SW and MW band and is made available to about 70% population of India. Most of the car manufacturers of India are providing DRM receiver in their high-end vehicles.

One of the interesting presentations was about the Direct to Mobile (D2M) system, which is a very interesting topic in the broadcasting field in 5G network. A real time live demonstration of direct to mobile broadcasting with LPLT Broadcast Radio Head (ATSC3.0) and D2M Receiver embedded in a mobile phone. The DD India channel was live aired and received directly over broadcast mode in a mobile without internet connection. A dongle connected Tablet PC too may receive the broadcast air signal. Prasar Bharati in association with the department of telecommunication (DoT) is exploring the feasibility and launching Direct to mobile technology in 5G in India in the near future. Some features of D2M are Cheap and most reliable mode, Software encoding, Rural area and EWS coverage, Data free with D2M, Local and regional channels

A presentation on 'producing content for online platform' highlighted on the fact that to make a good content, the producer has to think about the short text, long text, graphics and video and that it should be unique, has to be from right sources. while uploading contents in online platform, one must think and know about the accessibility, affordability. Also, an appropriate platform has to be selected based on the target listeners and viewers.

NABM (National academy of broadcasting and multimedia) training center conducts training programs in collaboration with International Organizations such as ABU, AIBD, DW, IABM, BBC, CBA, UNICEF etc. The session also covered the corporate overview of Prasar Bharati, capacity building, training facilities, digital service and digital platform for studio content production, IT initiatives, OTT, Apps as well as streaming audio in web portal.

At the Members' updates session, the audience took note of the new ABU members who joined during 2021-2022 and they were:

- Universita Svizzera Italia – Affiliate member- Switzerland
- Canara lighting industries Pvt. Ltd. - Affiliate member-India
- National Radio of Cambodia- Additional Full Member- Cambodia
- Agence Kampuchea Press- Affiliate member-Cambodia
- Special Broadcasting Service - Additional Full Member- Australia
- Pebble Beach Systems Ltd. - Affiliate member- United kingdom
- Sarawak Media Group - Additional Full Member – Malaysia
- Shekhinah PR Sdn. Bhd. - Affiliate member – Malaysia
- Spacelabs Technology Sdn. Bhd. - Affiliate member – Malaysia

Mr. Alexander Zink on behalf of DRM Consortium gave a briefing of DRM activities in the world and on DRM standard updates which is open standard in AM/FM bands. He informed that the DRM receiver is already installed in almost 5.2 million cars in India.

Next, an announcement was made that the next TC meeting will be hosted by KBS-Korea and Mr Sung Rae Cho, Director of Technology Management at KBS Technology Division will be the Honorary Vice-Chairman of the ABU Technical Committee from the host of the 2023 ABU General Assembly.

In any other business, TC chairman Mr. Hamid Dehghan Nayeri extended special thanks to former ABU staffers, Ms. Geraldine Peters and Ms. Hamidah Rani for their more than two decades of dedicated and professional service.

#### **Closing Remarks**

In conclusion of 2022 Technical Committee meeting, the TC chairman, Mr. Hamid Dehghan Nayeri, reiterated on the several issues faced by the broadcasting industries in current time which was being discussed during the two-day meeting. In addition, the chairman also mentioned the D2M is a very ambitious project, which is also very interesting to all the ABU members. He stressed on the fact that working as a unit, cyber-attack problem can be solved,

On behalf of Technical Committee, Mr Nayeri thanked all the speakers for their contribution and support to the ABU. Also congratulated Technical Review prizes winners, the ABU Engineering Award winners in different categories. He also encouraged young engineers for their contribution and support in the coming years. Finally, he extended special thanks to the host members Prasar Bharati- Doordarshan and All India Radio team- related government and international organizations as well as all the team members of the ABU.

**Contributed by Rapporteurs**  
***Yashovardhan Sharma, Whiteways Systems, Singapore***  
***Arunima Singh, Prasar Bharati-India***  
***Warren Roberts, VBTC-Vanuatu***  
***Udaya Krishna Shrestha, RNE-Nepal***