

STATUS REPORT

Organisation:	KBS (Korean Broadcasting System)		
Period:	2023 ~ 2024	Date of Report:	16 th Oct 2024

PART A

Technical Developments during the past year:
System upgrades/changes to practices for improved quality/efficiency Expand UHDTV Service area KBS has Broadened Microwave Transmission coverage for UHDTV. Especially, KBS conduct the UHDTV Transmission tests in Changwon and Chuncheon. Once the transmission Tests are complete, KBS will broadcast in those areas. KBS will deliver UHD content to most cities in korea. It is beneficial for Korean people to receive UHDTV Broadcasting signal freely. Strengthen to receive mobile UHDTV signal To improve Microwave UHDTV Reception, KBS develop the Signal reception Technology. Based on signal strength, receiver adjusts the signal rate between UHDTV signals(ATSC 3.0) and Telecommunication signals. This technology will help people to receive TV signal anywhere Upgrade Microwave Facilities for infrastructure KBS upgrade the microwave transmission equipment(UHDTV, HDTV, FM, DMB etc) for the internal broadcasting infrastructure. KBS also adjust the microwave frequency to comply with the Republic of Korea government's frequency operation policies Fulfill the role of Disaster Supervision Broadcaster in korea KBS try to strengthen the disaster broadcasting capabilities and deliver disaster information as soon as disaster occur. KBS make a broadcast facility management plan against disaster every year and train the disaster broadcast circumstance at least twice a year to enhance our disaster broadcasting capabilities.
New Services/new projects initiated Build the XR Studio In response to the increasing demand for XR content production, KBS establish and operate XR Studio. By establishing the XR studio, KBS can create and deliver magnificent, immersive content to viewers. It is also be environmental-friendly, as it reduces the need for set construction. Accordingly, materials used for making can be reduced.
Research projects Multicam Tracking System using AI Technology (called vVertigo) KBS Technology Research Institute develops multi-camera Tracking System (called vVertigo) using AI Technology continuously. Since it launch in 2019, It has been utilized for making Tracking cam in one of our programs "Music bank". The contents produced using this system are highly favoured by performer' fans. it has added a new feature that can be used for live broadcasts, enhancing user convenience and overall performance.(called vVertigo Live). KBS already use this system in some content. and KBS continuously develope it to ensure it can be

utilized in various programs in the future.

Color Restoration using AI Technology

KBS stores extensive video content archives. And There has been a demand for color Restoration of past black-and-white footage. To effectively address this, KBS develops the system that utilizes AI technology to convert black-and-white videos into color videos. This system has proven to be significantly time-efficient and quality-effective in color-restoring historically significant videos.

Collecting Viewing Data using AI Technology

Viewers are increasingly turning to various media, including OTT platforms, to enjoy contents. This tendency heightened the importance of collecting viewer data. KBS utilizes AI technology to gather and analyze viewing data, effectively incorporating it into the production of broadcast programs to create viewer-oriented content.

Character Generator Development

KBS Technology Research Institute has a long history in developing and innovating character generators to meet domestic broadcasters demanding requirements. Due to their excellence and versatility, they are prevailing in production sites covering from daily programs to world class events like the Olympic Games.

Immersive Contents Production Research

Through the development of a new concept production platform based on AR/VR technology, KBS Technology Research institute conducts research to showcase new next-generation content production technology to viewers. At KOBA 2024, KBS showcase XR technology that allows viewers to expand the screen displayed on the TV by wearing XR glasses. It provide a wider and more immersive viewing experience to viewer.

Communication Technology Convergence Networks Research

The Communicaiton Technology convergence network can connect the advantages of ATSC3.0 (TV broadcast) and 5G mobile network to provide viewers with content with optimal quality and seamlessly. By automatically connecting to the 5G network in a fringe area where reception is poor, it is possible to use UHD/FHD/disaster broadcasting/additional services without interruption anywhere.

UHDTV Single Frequency Network Optimization Research

UHDTV single-frequency broadcasting network optimization research is researching and developing media service technology to fulfill KBS' public responsibility. KBS Technology Research institute conducts optimization research on UHDTV single frequency broadcasting network to solve the problem of coverage loss in UHDTV broadcasting and to increase the efficiency of transmission infrastructure.

Viewer Participation Service Development

KBS Technology Research institute develops a digital service that allows TV viewers to conveniently participate in voting, quizzes, surveys and commenting on the program using smartphone apps while watching TV. And the reaction results of TV viewers are displayed on the on-air screen. I

Audio/Subtitle Research

KBS Technology Research institute conducts subtitle synchronization and voice recognition technology research to provide subtitles for hearing-impaired viewers in real-time broadcasting as well as Internet and VOD services

Emergency Alert Broadcasting Research

Research on UHD disaster warning service is being conducted to rapidly deliver disaster warning signals not only to TV but also to public places such as outdoor display boards, buses, and subways when emergencies occur.

Broadcast Network-Based Additional Data Services – Traffic and Positioning

This research focuses on developing technology to implement various additional services, such as traffic information and precise positioning, through next-generation broadcast networks. It also involves designing optimal data transmission methods suitable for the transmission process.

Providing Accurate Position Service

accurate location information can be applied across various sectors of society. As a public broadcaster, KBS is preparing and developing the services that will allow citizens to access precise location information through its broadcasting network when needed.

- Internet and Mobile Broadcasting Services

Operating Open Content Archive for Public

For Public, KBS has launched and operated the Open archive “BADA” (bada.kbs.co.kr). It contains more than 10,000 items ranging from video, audio and images. KBS aims to fulfill our public responsibility as a public service media by sharing the value of our recorded assets with the public. KBS also responds to viewer needs and current trends by returning the copyright of KBS content for public purposes through KBS’ Bada. KBS hopes that all released content will be utilized in education, research, and creative fields, fostering a freely creative environment. KBS has a plan to expand a lot of contents in BADA continuously for public responsibility

Mobile Reception Service

as part of its efforts to offer the content that viewers want and need. KBS is continuously researching and developing services to provide appropriate content to mobile viewers, including mobile cars, by utilizing the supplementary features of ATSC 3.0, which allows for mobile reception,

			Radio	Television
Coverage %				
Programme Channels				
Studios (Production)	File-based Set-up	R/N/D		
	SDTV	R/N/D		
	HDTV	R/N/D		
	UHDTV			
	IP Based Set-up	R/N/D		
Transmission & Delivery	HF	R/N/D		
	MF	R/N/D		
	FM	R/N/D		
	TV	R/N/D		
	OTT/IBB/Internet Services	R/N/D		
	Mobile Services	R/N/D		

R = Replacement/upgrade

N = New

D = Discontinued

**PART B
CURRENT ACTIVITIES**

	Activities	Area	Brief Details: 1. Objectives 2. Progress to date	Challenges/Problems Faced: 1. Lack of resources 2. Lack of know-how 3. Others (e.g. up-skilling)	Solutions Implemented/Type of assistance requirement from ABU
1.	Development projects/Upgrading facilities/Training				
2.	Participation in ABU Activities	Area	Level of Participation	Reasons for not participating (though interested)	
3.	Suggestions for New ABU Activities e.g. study topic projects, KBSbinars, workshops, symposiums etc, spectrum activities, information exchange platform	Activity 1			
		Activity 2			
		Activity 3			