

STATUS REPORT

Organisation:	NHK (Japan Broadcasting Corporation)		
Period:	Sep.2024 - Aug.2025	Date of Report:	August 29, 2025

PART A

Technical Developments during the past year:

- System upgrades/changes to practices for improved quality/efficiency

Initiative to Promote IP Remote Production

Products compliant with the SMPTE ST 2110 standard are increasing as the shift toward IP-based production is accelerating. While AMWA NMOS has been standardized as a control protocol, it primarily supports device discovery and connection management, and does not cover detailed operations such as audio fader control. As a result, many vendors use proprietary protocols, making interconnection and interoperability between different vendors challenging.

To address this issue, NHK has been working on enabling remote production while maintaining compatibility across different vendors. Specifically, NHK developed a tool that allows control of audio faders using an open standard "Ember+" while conforming to international audio standards. This tool was successfully tested in remote environments with favorable results.

Additionally, Dante holds a significant share in the audio-over-IP market, and many broadcasters already own Dante-compatible equipment. To make effective use of these assets, the tool incorporates a conversion function between ST 2110 and Dante. Since Dante and ST 2110 use different synchronization methods, aligning synchronization was a challenge. However, by handling synchronization internally within the converter, this issue was resolved, simplifying system integration.

Furthermore, the tool enables bidirectional conversion of control signals between Dante and Ember+, allowing for matrix control and audio level adjustments.

NHK plans to continue leveraging these insights to further promote remote production, including the development of remote-controllable Fader Units and other related initiatives.

- New Services/new projects initiated

Completion of the Information Building

The construction of the Information Building at the NHK Broadcasting Center in Shibuya, Tokyo, was completed at the end of October in 2024. This marks the first phase of the Broadcasting Center redevelopment project, which began in May 2021.

The Information Building will serve as a new hub for NHK's news and information dissemination, both domestically and internationally. It will house facilities such as the News Center and play a vital role in delivering reliable information during major disasters, including a potential earthquake directly beneath the Tokyo metropolitan area, helping to protect the lives and livelihoods of viewers and citizens.

Currently, broadcasting equipment is being installed, and full-scale operations of television/radio broadcasting and internet delivery are scheduled to begin in 2026.

- Research projects

Development of Large Language Models with Data Held by Broadcasting Stations

NHK Science & Technology Research Laboratories (STRL) is developing large language models (LLMs) to improve the efficiency of various tasks in the program production process. STRL has experimentally built an LLM that has been trained on news articles and other data (i.e., broadcasting station data) broadcast by NHK, and verified the effectiveness of using this data in improving the accuracy of answers to questions about news coverage. As a result, we confirmed that the rate of incorrect answers regarding broadcast facts was reduced by around 10%. Going forward, STRL will proceed with further verification and R&D with a view to supporting information gathering by summarizing large volumes of documents, as well as supporting tasks such as translation and proofreading.

<https://www.nhk.or.jp/strl/english/news/2025/3.html>

A VVC Multi-layer Encoding System That Enables Video Content Layering

NHK STRL has succeeded in developing the world's first real-time multi-layer video encoder which is compatible to the international video coding standard VVC (Versatile Video Coding). This will enable people to watch two (or more) different types of content through one broadcasting channel. This is the first time a real-time VVC encoder will make possible the multi-layering of video content without sacrificing video quality.

<https://www.nhk.or.jp/strl/english/news/2024/6.html>

• Internet and Mobile Broadcasting Services

New Internet Service "NHK ONE" (Starting October 2025)

In response to the revision of the Broadcasting Act, NHK will begin offering internet-based program distribution as a mandatory service starting October 1, 2025. Alongside traditional TV and radio broadcasting, NHK will enhance its delivery of reliable information and rich content via the internet.

Key Features of "NHK ONE"

- A new NHK ONE website: Offers live streaming, catch-up (on-demand) services, news articles/videos, and other content in a more user-friendly format.
- TV app: Provides live streaming of NHK General TV and Educational TV along with news articles. Catch-up content, which is already available, will continue to be offered.
- Smartphone/Tablet apps; "NHK Plus", "News & Disaster Prevention", and "for School" apps will be updated. Radio-focused app "Radiru Radiru" and language learning app "Gogaku" remain unchanged. Note that the international service app "NHK WORLD-JAPAN" can be used as it is now.

			Radio	Television
Coverage %			MF Radio1: 99.9% Radio2: 99.9% FM: 98.0%	Digital Terrestrial: 98.2%
Programme Channels			AM Radio:2 FM Radio:1	Digital terrestrial:2 Digital Satellite (HD):1 Digital Satellite (UHD):2
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	3	
	MF	R/N/D	Radio1: 280 Radio2: 146	
	FM	R/N/D	532	
	TV	R/N/D		Digital: 2,212
	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, webinars, workshops, symposiums etc, spectrum activities, information exchange platform	Activity 1			
		Activity 2			
		Activity 3			