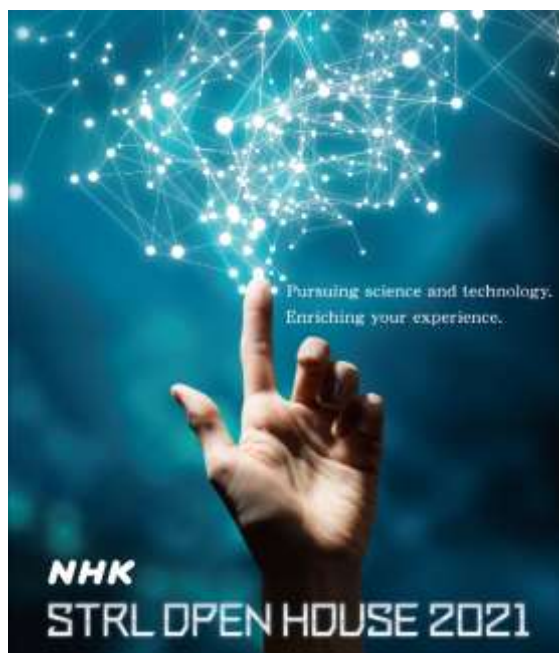


Latest Broadcast Technology to be Exhibited Online STRL Open House 2021

- ❑ “Future immersive VR display”, “Space-sharing content viewing system”, and other latest research results will be presented by NHK Science & Technology Research Laboratories (NHK STRL) in its online exhibition “STRL Open House 2021” from June 1 to June 30.
- ❑ The theme will be “Pursuing science and technology. Enriching your experience,” and it will introduce 17 research results and other items in viewer-friendly ways, including “Immersive Media,” which will provide more realistic and immersive content, “Universal Services,” which will bring content to all viewers on a range of devices, and “Frontier Science,” which includes basic research for the future.
- ❑ There will also be videos of lectures on future broadcast and media technologies, and “Lab Talks” with NHK STRL staff presenting their research.



STRL Open House 2021 Website

<https://www.nhk.or.jp/strl/english/open2021/>



❑ Highlights

❖ Space-sharing content viewing system

This new viewing style allows you to feel as if you are watching the same content in the same space with people in distant locations.

The system uses virtual reality (VR) and augmented reality (AR) technologies. We will demonstrate two people in different locations enjoy cultural heritage content together using head-mounted displays equipped with cameras.



Space-sharing content viewing system

❖ Future immersive VR display



Immersive VR display

This is a VR display of the future that allows viewers to experience highly immersive content. It uses a flexible 180 degree wrap around display and a chair that vibrates in time with images and sound. We will present how users can enjoy the experience of sitting in the driver's seat of a tram traveling through Amsterdam.

❖ Media accessibility technologies

This is a research project on technology for delivering content to all people, including those with visual, hearing, or other impairments, in an easy-to-understand manner using a variety of information presentation devices.

We will introduce haptic devices that vibrate according to the scene of the program, and a system that automatically produces sign language CG for weather information for all 47 prefectures of Japan.



Haptic device



Automatic sign-language CG production system for weather information

❑ Research to be presented

Immersive Media	Space-sharing content viewing system
	New content utilizing AR technology
	Technology composing 360° video and 3D video according to a scene description
	High-definition light-field reproduction 3D imaging system
	Future immersive VR display
	Advanced terrestrial broadcasting technology
	New terrestrial broadcasting service using technologies integrating broadcast and communications
Universal Services	Web-based media technologies for various viewing environments
	Speech synthesis technology
	Sign-language CG production technology
	Haptic information presentation technologies
	Companion robot that watches TV with a person
Frontier Science	Computational photography
	Quantum dot light-emitting diodes (QD-LEDs) with high color purity
	Depth-expression technology for 3D video
	Transcription system able to attach speaker information
	Japanese-English machine translation system for news articles
Related exhibits	Broadcast technology developed by field engineers
	Utilization and practical development of NHK technologies

Titles are tentative.

❑ Lectures, Research presentations

✧ Keynote addresses

- “Future Vision 2030 – 2040”
MITANI Kohji
Director of Science & Technology Research Laboratories, NHK
- “Future media technologies that will change our world!”
Judy PARNALL
Head of Standards and Industry, BBC R&D
Chair of the Technical Committee, EBU

✧ Lab Talk

- NHK STRL researchers will introduce their latest work.