

Toward Natural Communication

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With the advances in broadband technology and the ubiquity of communication services, our life style is shifting to the next stage where real society and virtual society meet over the network. NTT introduced the concept of resonance in 2002 and aims to construct a resonant communication environment where new values can be created by wide linkages among humans, objects, and information. NTT Cyber Space Laboratories is working towards natural communication—one of the service concepts of resonant communication. Our key technologies are in the fields of media processing, information processing, and input/output devices.

Examples of our R&D results for media processing technology include stable high-quality image/sound coding that is robust against changes in network communication quality (H.264, scalable coding, etc.), a high-quality audio environment featuring noise reduction, voice & language technology that enables voice communication agents and machine translation, and automatic recognition/extraction of metadata from sound, images, text, etc. We are also conducting R&D that aims to provide super-high quality images by utilizing sur-real coding, which is expected to approach the performance limit of human vision.

Our R&D information processing activities will allow people to efficiently manage, search for, and use information in the virtual society. Key elements include metadata management and distribution technology and open source technology to promote the availability of a service usage environment at a reasonable cost.

Our input/output device R&D teams are refining 3D display & input technologies for the broadband society and a super-high-capacity optical memory for the ubiquitous society.

Given the sophistication of these core technologies, NTT Cyber Space Laboratories is aiming to achieve convenient, comfortable, and secure next-generation communication collaboration services and content distribution services. At the same time, our innovative R&D vision encompasses the creation of new businesses.

