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View from the Top

Katsuhiko Kawazoe, Senior Vice President, Head of Research and Development Planning, NTT

▼Overview

The NTT laboratories heretofore have focused on research supporting NTT's own services and systems. However, their strategy has been shifted to the promotion of the B2B2X (business-to-business-to-X) model and now emphasizes *value creation* with partner companies. What is the mindset at the NTT laboratories to advance research and development (R&D) with the aim of creating innovation for people to live their lives more affluently and in a more *natural* manner? Katsuhiko Kawazoe, Senior Vice President and the head of Research and Development Planning, NTT, was asked about his attitude toward R&D that will transform the world.

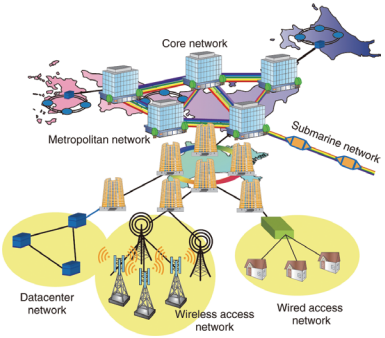
Feature Articles

Ultrahigh-speed Transmission Technology to Support High-capacity Communications Infrastructure of the Future

Ultrahigh-speed Transmission Technology for Future High-capacity Transport Networks

▼Abstract

Ultrahigh-speed transmission technologies in radio and optical fiber transport systems are essential to accommodate the ever-increasing demand for bandwidth in future network infrastructure. Advanced digital modulation/demodulation techniques as well as ultrahigh-speed front-end integration technologies are optimized to fully exploit the characteristics of different types of transmission media such as air and optical fiber, considering novel degrees of freedom such as space division multiplexing. This article introduces state of the art research and development that achieves ultrahigh-speed communications at speeds of over 1 Tbit/s per carrier (over a hundred times the current speed) in both optical fiber transmission and radio transmission.



Regular Articles

Recent Progress in Applications of Optical Multimode Devices Using Planar Lightwave Circuits

▼Abstract

The optical propagation mode—the electromagnetic field distribution of light propagating through a waveguide—is attracting attention as a new degree of freedom of light and is expected to provide new functions and improved optical characteristics in optical devices and systems. In this article, we introduce optical device technologies that utilize the optical propagation mode in an integrated optical waveguide component called a planar lightwave circuit.