

Hot Topics of OKI Telecommunication Systems Business

The Great East Japan Earthquake and the subsequent tsunami on March 11, 2011 was an unprecedented and tragic disaster. We would like to express our gratitude for the many messages and support received from ITU, other organizations and countries all over the world. The disaster prevention administrative radio system which OKI provided just before 3/11 suffered damage. A staff member who repeated emergency messages using the system was unfortunately killed by the Tsunami, but many people were saved by the announcements. Together with the satellite telecommunication equipment provided by ITU soon after the event, it reminded us of the importance of telecommunication infrastructure, both in emergency and in daily life.

OKI Electric originated in telecommunication systems and has been providing printers, automated teller machines, social infrastructure systems and a variety of other systems since it was established. OKI's telecommunication systems business consists of two parts. The first is the telecommunication carrier systems business, which serves telecommunication carriers by providing telecommunication systems and other equipment supporting network infrastructure. The other is the enterprise business, which serves enterprise by providing convergent voice and video communications systems, such as IP-PBX systems, call center systems and video-conferencing systems.

Below, we introduce the latest hot news regarding OKI's telecommunication business activity.

Optical Access Network Systems

In April 2012 an OKI group company, OF Networks, successfully delivered a Gigabit Ethernet-Passive Optical Network (GE-PON) system for optical LAN to Tanah Datar, West Sumatra, Indonesia, with the cooperation of the Ministry of Communication and Information Technology of Indonesia and the Telecommunication Technology Committee (TTC) in Japan.

By using Optical LAN using GE-PON, the Tanah Datar prefectural government focused on providing not only equal access to information between cities and rural areas, but also effective administrative procedures in government work by transferring business documents between the office buildings and reducing the complexity of managing hardcopy documents.

We have been developing and commercializing 10G-EPON and researching Wavelength Division Multiplexing/Time Division Multiplexing-PON (WDM/TDM-PON) for future mobile networks and we will continue to contribute to Full Service Access Networks (FSAN) and ITU standardization processes.

We have also worked aggressively on power saving features to protect the global environment, for use in low-power devices, and we intended to contribute to establishing eco-friendly systems by utilizing standardized power saving features such as sleep mode, among other initiatives.

Video Distribution Systems

One of the driving forces for the diffusion of broadband services is video distribution on the Internet. OKI has developed the OKI MediaServer (OMS) and put it into practical implementation. OMS is a platform for IP video distribution that enables video distribution services to be provided by broadband and over the Internet. Telecommunication carriers have been providing



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IPTV services together with IP phone services on a large scale all over Japan with OMS. The number of users continues to increase annually due to the sharp image of IPTV and the attractive new services converging telecommunication and broadcasting.

OMS has been adopted as a platform for IPTV, so interoperability testing has been done with STBs conformant to International Standards from various manufacturers and with off-the-shelf IPTV digital TV equipment. OMS was used as a standardized IPTV server in the ITU booth at TELECOM WORLD 2011, and was recognized as a reference for ITU standards. Hereafter, we would like to contribute to the spread of IPTV services both at home and abroad.

OKI has been involved in standardization activities, participating in studies related to technology for utilizing IPTV audience information, as a next-generation service utilizing the bi-directionality of IPTV, to digital signage which is expected to be useful in emergency situations, and to controlling energy saving in IPTV terminals by using video sensors.

Smart Networks

After the Kyoto Protocol, many efforts are underway toward preventing global warming and realizing a low carbon society. Also, since 3/11, energy management capable of handling stringent electrical power supply conditions and developing regional disaster resistance are urgent issues.

Smart networks are designed for low data transfer rates but are earth-friendly and provide reliable connectivity with low power consumption. We believe that they represent a significant supporting technology for realizing a smart society, through energy management and utilization of municipal services.

OKI has been contributing to the realization of wireless multi-hop mesh networks using the 920 MHz frequency band from its early stages. We also have been contributing to standardization activity, namely we have taken key positions within IEEE, IETF, ZigBee and others, and participated in the Smart Grid Focus Group of ITU-T.

There is a need for smart networks in various regions including North America and south-east Asia, so we would like to respond this demand.

Conclusion

As mentioned at the beginning, 2011 was a tough year for Japan. It was the 130th anniversary of OKI, but it also reminded us of the importance of telecommunications.

There is a strong need for further progress in telecommunications in order to achieve harmony with nature.

Moving forward, OKI would like to contribute to creating new services leveraging the experiences of the last year, recalling the spirit at the time of its founding, "to create telecommunication service which support society."