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Offering Reliable Information and Communications Services

Material Issue

Offering Reliable Information and Communications Services to Each and Every Customer

To provide high-quality, reliable information and communications services at all times and everywhere, we are implementing initiatives for improving service quality and disaster-preparedness for realizing the satisfaction of all users of our wide range of services.

Topics

- Improvement in the quality of information and telecommunications network services in the eyes of our customers
- Expansion and enhancement of disaster preparedness

Dialogues with Stakeholders (Engagements)

- Collection of customers' voices at the Customer Center
- Three-Voices Solution Project (Collecting the voices of our customers, agencies, and employees for analysis and improvement)
- Introduction of the Service Area Quality Information Transmission function (automatic service area quality information transmission service)
- Establishment of "Create it! au service area" (Site at which service area improvement requests can be posted)
- Provision of Reception Quality Survey service (home-visit check for better reception)

To Prepare for Disaster

Developing Technologies that Ensure Continuity of Information and Communications Service Provision during Large-scale Disasters

When a serious earthquake or other life-threatening disaster occurs, mobile phones play an essential part in checking on each others' safety and collecting safety information. Nevertheless, if the cellular base station suffers damage or when concentrated telecommunications use produces traffic beyond the capacity that the facilities can process, reliable service may at times be difficult to provide.

In order to raise the chance of connection under these circumstances, in July 2010 KDDI R&D Laboratories developed and released the guiding carrier-free communication for use in times of disaster. This system uses two methods: One guides the users to shelters and service areas via one-seg broadcasts and the other relays e-mails through the mobile phones of other carriers.

In the light of the experiences from the Great East Japan Earthquake, we will continue our efforts for the practical application of the guiding carrier-free communication.

Recovery from the Torrential Rain Disaster in Amami Oshima, Kagoshima

In late October 2010, the torrential rain that hit Amami Oshima Island in Kagoshima prefecture caused a severe damage to the telecommunications infrastructure, including the flooded cellular base stations and line breaks. In the emergency situation where not only mobile phones, but also fixed-line phones and telecommunications networks are paralyzed, 29 KDDI staff members entered the disaster-struck areas for recovery work. At the sites, the KDDI members provided communications lines using 4 vehicle base stations and engaged in recovery work at base stations.

Furthermore, in response to the lack of communication

suffered at shelters and administrative task forces and other emergency cases, KDDI provided the Iridium satellite telephones, which are effective means of communication in emergency situations, and 70 au mobile phones to local governments without charge as part of our efforts in recovering Amami Oshima's communications function.

High-quality International Video Transmission

Delivering the TV Pictures from 2010 FIFA World Cup South Africa to Japan

To deliver big international events to the TVs of Japanese homes, we need reliable international video transmission technology. For the "FIFA World Cup South Africa," which was the first ever World Cup held in Africa, KDDI received an order from Japan Consortium*1 to operate the international video transmission from Johannesburg to the KDDI Ōtemachi office. We delivered the World Cup broadcasts to all of Japan using our networks.

The relay link used two optical submarine cable systems, one via Hong Kong and the other via London & the U.S. to prepare for possible failures on these two routes, we also established a backup link in order to ensure transmission to Japan.

KDDI provided reliable, high-quality broadcasts of the month-long World Cup from June 11, 2010 (local time) and received high acclaim from the Japan Consortium.

*1 Japan Consortium:
Broadcasting organization jointly operated by NHK and commercial TV broadcasters in Tokyo



"KDDI International Television Center" in Ōtemachi, Tokyo, operating and monitoring international relay broadcast of the World Cup



Consumer Issues

Community Involvement and Development

Voice of Associate Working on Our Challenges



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We Value Our Customers' Voices, which Enables Us to Build Robust Communications Infrastructure

Our group is working on the prevention of network problems and the measures for early recovery in case of damage when a problem occurs. In FY2010, we commenced the "Recovery Time Reduction Program" based on the voices of our customers regarding problems and early recovery. Associates who are responsible for communications infrastructure monitor the status of communications devices 24/7, and should a problem occur due to a disaster or failure, they perform operations to swiftly restore the network to its normal state. We have set a target time for the recovery operation—if we are even a second short of the goal, we execute PDCA* cycles and improve on operation quality by analyzing the processes in detail and taking preventive measures. We will continue to take in our customers' opinions for the improvement of our quality of service and conduct our operations with the sense of mission that we are sustaining our customers' communications infrastructure.

* PDCA: Plan-Do-Check-Act process intended to improve the next plan

Results and Future Issues

KDDI sincerely apologizes to our service users for the inconvenience caused by the numerous communication problems that occurred due to the Great East Japan Earthquake.

As our resolve for FY2011, we will further technical development while improving disaster preparedness of networks as well as contingency planning and training, in addition to reinforcing our telecommunications facilities. Through these efforts, we will continue to offer reliable quality that meets the diverse needs of our customers.

Challenges for Information and Communications Technologies

Quality Improvement Efforts

• Improving call quality: "EVRC-B" Technology

In anticipation of "higher quality calls closer to natural voice than ever," KDDI introduced the "EVRC-B" technology in February 2011 to improve the call quality of au mobile phones.

"EVRC-B" can convey up to 1.4 times more voice information than can be transmitted via "EVRC*2", which was adopted for previous au mobile phones, at the current transmission speeds. According to the results of the survey we conducted at "Wireless Japan 2011," an exhibition held in May 2011, approximately 98% of the responding visitors*3 appraised the EVRC-B-equipped phones as "having a voice quality equivalent to or better than the previous models." This service is available with models that support "EVRC-B."

*2 EVRC (Enhanced Variable Rate Codec): Speech coding technology that changes the transmission rate between approximately 1.2 and 9.6 kbps during a call.

*3 Results are based on 461 respondents to a questionnaire originally created by KDDI.

• Improving the quality of communications:

"Service Area Quality Information Transmission function"

In order to further improve the quality of au service area, KDDI has adopted the "Service Area Quality Information Transmission" function starting with our Spring 2011 models. The au mobile phones*4 are the first in Japan*5 to be equipped with this function.

Should any communication error such as disconnection occur during the use of an au mobile phone, the Service Area Quality Information Transmission function automatically detects the location of the mobile phone, be it indoors or outdoors, and transmits the error occurrence location and reception status information to KDDI. Upon the receipt of this information, KDDI can improve on the service area quality*6 at an early stage.

KDDI will continue to improve on the quality of communications

in all service areas where we serve customers, from stations and meeting places, back alleys and residential areas, to offices and apartments, for the provision of reliable service to customers.

*4 Current models supporting the Service Area Quality Information Transmission function: S007, T007, T008, CA007, K009, S006, SH011, K007, T006, and [iida] G11 (support planned for future models)

*5 Based on KDDI survey

*6 This function only operates when the function is enabled in the settings by the customer. No communication charges are incurred when the mobile phone automatically transmits detected information.

KDDI R&D Laboratories and Indian Institute of Technology Hyderabad Enter into Memorandum of Understanding

KDDI R&D Laboratories is engaged in the research and development of a wide range of top-caliber information and communications technologies, covering fixed-line and mobile communications, FMBC*7, next generation networks and ultra-high speed radio transmission technologies, security technologies, and application development.

In January 2011, KDDI R&D Laboratories entered into a memorandum of understanding with the Indian Institute of Technology Hyderabad, known for their excellent engineers, for joint research. Currently, we are discussing the particulars for joint research in the fields of radio communication, sensor networks, multi-media communication, security and many others. Through lectures at symposia held at the Institute, we will continue to have extensive exchanges and conduct collaborative research.

*7 FMBC is an abbreviation for Fixed Mobile and Broadcasting Convergence.



Signing of the memorandum with Indian Institute of Technology Hyderabad