

NTT DoCoMo Achieves World's First 2.5Gbps Packet Transmission in 4G Field Experiment

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NTT DoCoMo, Inc. announced today that it achieved 2.5Gbps packet transmission in the downlink while moving at 20km/h. The fourth-generation (4G) radio access field experiment took place in Yokosuka, Kanagawa Prefecture on December 14, 2005.

DoCoMo achieved a maximum 1Gbps speed in a similar field experiment on May 9, 2005. This time, by increasing the number of MIMO transmission antennas from four to six and by using 64-QAM, data volume per transmission was increased from four bits to six bits. As a result, DoCoMo achieved a maximum speed of 2.5Gbps, which is faster than the International Telecommunication Union Radiocommunication Sector (ITU-R)'s proposed standard.

Frequency spectrum efficiency, which is expressed as information bits per second per Hertz, was also increased from 10 bits per second per Hertz during the last experiment to 25 bits. This figure is the maximum frequency spectrum efficiency for 4G as defined by WINNER. WINNER (Wireless world INitiative New Radio) is a EU research project started in January 2004. This project aims to develop a ubiquitous radio system concept based on global requirements for mobile communication systems beyond 3G.

Source: NTT DoCoMo

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