

Research and Development of New Generation Wireless Communication Systems

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Systems	Present situation
<p style="text-align: center;">Mobile communication system</p>	<ul style="list-style-type: none"> ◆ VHF/UHF band: will be reallocated after digital analog TV take out of service. ◆ In 800MHz-band, regional disaster prevention radio communication will be used in 260MHz band (by May 2011), and Aircraft radio telephony will be used in 400MHz band (by May 2010). ◆ 800MHz band and 1.5GHz band MCA wireless systems : part of bands (4MHz and 18MHz bandwidths) will be reduced by May and Sept. 2007, and will reallocated the useful frequency. ◆ 1.5GHz band: is now being considered to upgrade the 2G mobile communication systems to 3G mobile communication systems. ◆ 1.7GHz band : 15MHz × 2 bandwidths were assigned to all prefecture except Tokyo/Nagoya/Osaka, to which 20MHz × 2 bandwidths were assigned, 70MHz bandwidths in total, for mobile phone, in Aug. and Nov. 2005. ◆ 2GHz band : will be assigned to TDD mobile communication systems in 2010–2025MHz. ◆ 2.5GHz band : is now being considered to introduce mobile broadband wireless access systems. ◆ 4/5GHz band : fixed wireless systems for telecommunication operation are being replaced by fixed wired ones.

Systems	Present situation
Wireless LAN, NWA	<ul style="list-style-type: none"> ◆ 4.9–5.0 GHz (outdoor/indoor): will be substituted for with the fixed wireless systems for telecommunication operation in the three major metropolitan areas by Nov, 30th, 2005. In the other areas, the substitution are enforced and will be finished by Nov. 30th, 2007. ◆ 5.2–5.35 GHz band (indoor): has been available since May 2005 ◆ 5.47–5.725 GHz (outdoor/indoor): advisory opinions are invited toward institutionalization to radio regulatory council by Oct. 2006
Digital terrestrial TV	<ul style="list-style-type: none"> ◆ Frequency re-allocation will occur after July 2011 when digital analog TV will take out of service ◆ Start call for proposal and discussion how to use the vacant frequency band from Mar. 2006
RFID	<ul style="list-style-type: none"> ◆ Introduction of high-power (36dBm) type passive RFID system at 950 MHz from Apr. 2005. ◆ Introduction of low-power (10dBm) type passive RFID system at 950 MHz from Jan. 2006. ◆ Start to decide technical requirement on low-power type active RFID system at 950 MHz.
UWB, ITS, home information appliance	<ul style="list-style-type: none"> ◆ UWB: Start to use (From Aug. 2006) ◆ ITS: Consider a new frequency band for advanced ITS communication system. ◆ Home information appliance: Consider available frequency bands based on the final report of the study group for wireless broadband promotion (summarized in Dec. 2005)
Millimeter-wave	<ul style="list-style-type: none"> ◆ 54.25–59GHz was allocated as a licensed frequency ◆ 59–66GHz was allocated as an unlicensed frequency ◆ 22–23GHz, 25.25–27GHz, 38–39GHz were allocated for FWA

Current status of frequency allocation plan in Japan - VHF and UHF band -

