
Wireless Broadband Access Service Market in Japan

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- Broadband service and cellular service in Japan market
 - Fixed-line broadband service
 - Cellular service
 - Wireless broadband data service
- Discussions and activities for promoting wireless broadband access service in Japan
 - Perspective for Spectrum Reallocation
 - Report by Study Group for Wireless Broadband Promotion
 - Recent discussion about technical requirement for wireless broadband



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Fixed-line Broadband in Japan

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- The number of fixed-line broadband access service subscribers
 - 23.3 million (as of Mar 2006)
 - FTTH 5.5 million
 - DSL 14.5 million
 - CATV 3.3 million
 - Details about the number of FTTH subscribers
 - 2.9 million (Mar 2005) to 5.5 million (Mar 2006)
 - 3-month increase : FTTH 820 thousand, DSL 36 thousand (Jan-Mar 2006)
 - cf. NTT aim to raise the FTTH subscriber figure to 30 million by fiscal 2010.

MIC: Subscription Contract Numbers for Broadband Services (as of the end of March 2006)
http://www.soumu.go.jp/joho_tsusin/eng/Statistics/pdf/060925_01.pdf

*FTTH: Fiber To The Home

NTT: Promoting NTT Group's Medium-Term Management Strategy
<http://www.ntt.co.jp/news/news05e/0511phqg/051109.html>



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Cellular market in Japan

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- Cellular telephone
 - 92 million (as of Mar 2006)
 - Two new service providers will appear:
 - 1.7GHz band: e-Mobile will start in 2007Q1
 - 2GHz band: IP Mobile will starts in 2006Q3
 - cf. Vodafone K.K. became a wholly-owned subsidiary of BB Mobile Corp. (Aug 2006)
- PHS (Personal Handy-phone System)
 - 4.7 million: Increasing slightly
 - WILLCOM only gets new subscribers

MIC: INFORMATION on subscribers of Cellular telephone, Pager and PHS (Personal Handy-phone System) in Japan
http://www.soumu.go.jp/joho_tsusin/eng/Releases/Telecommunications/news060526_1.html
MIC: Attestation of "Establishment Plans" Pursuant to the "Establishment Guidelines for the Specified Base Stations" Using 1.7 GHz or 2 GHz Bands
http://www.soumu.go.jp/joho_tsusin/eng/Releases/Telecommunications/news051109_1.html
Vodafone K.K. became a wholly-owned subsidiary of BB Mobile Corp.
http://www.softbank.co.jp/en/news/release/2006/060815_0001.html



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Wireless Broadband Data Service

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- Cellular telephone
 - NTT DoCoMo: 3G-FOMA 64Kbps-384Kbps
 - NTT DoCoMo: HSDPA 3.6Mbps (Aug 2006)
 - KDDI: CDMA2000 1x EV-DO 144Kbps-2.4Mbps
- PHS
 - WILLCOM: 32Kbps- 408Kbps
- Public WiFi (Hotspot): mainly IEEE802.11b
 - NTT Group: more than 7000 base stations
 - Cost: US\$3-8/month (depends on each provider)
 - Free public WiFi (Buffalo)

Source: Each company's web site



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Perspective for Spectrum Reallocation

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- The Telecommunications Council in Japan reported "Proposal regarding Radio Policy Vision" (Jul 2003)
- Contents related to wireless broadband are:
 - Future Core Radio Wave Utilization
 - Mobile Radio Communication System
 - Width of approx. 270MHz (At present)
 - Width of 330-340MHz(5 years later) *
 - Width of 1,060-1,380MHz(10 years later) *
 - Wireless LAN/NWA
 - Width of approx. 160-200MHz (At present)
 - Width of 480MHz at maximum (5 years later) *
 - Width of 740MHz at maximum (10 years later) *
 - (and mentioned about Terrestrial TV Broadcasting, RFID, and etc.)



"The Guidelines for Spectrum Reallocation" (MPHPT, Oct 2003)

* These frequency demand are calculated by the ITU-formulated prediction method. These data is based on estimation of such as the number of medium/long-term subscribers of cellular/PHS or users of wireless LANs, as well as necessary transmission speeds.

MPHPT: The Guidelines for Spectrum Reallocation (in Japanese)
http://www.soumu.go.jp/s-news/2003/031010_4.html
MPHPT: MPHPT receives report from Telecommunications Council about Radio Policy Vision
http://www.soumu.go.jp/joho_tsusin/eng/Releases/Telecommunications/news030730_3.html



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Report by Study Group for Wireless Broadband Promotion

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- Nov 2004: Start
- Dec 2005: Final Report
- Proposal: Reallocate to systems that match our lifestyles (4 main fields)
 - Next-generation mobile radio communication systems, Mobile offices/homes
 - Ensuring required quality: Ex. Advanced 3G, 4G
 - Continuous access upon request/In conjunction with Mobile phones and Wireless LANs, etc. : Ex. WiMAX(802.16e), Next-generation PHS, etc.
 - Alternative systems to wired broadband
 - Ex. WiMAX(802.16-2004), iBurst, Advanced DS-CDMA, etc.
 - ITS (Intelligent Transport System)
 - Next-generation intelligent home appliances, Home NW

MIC: Results of Public Comments on Final Report from "Study Group for Wireless Broadband Promotion" and Release of Final Report
http://www.soumu.go.jp/joho_tsusin/eng/Releases/Telecommunications/news051227_3.html



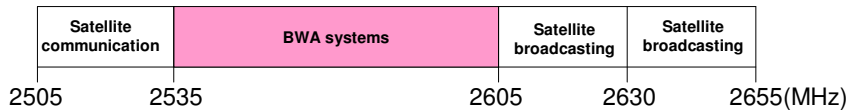
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Recent discussion about technical requirements

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- Study on technical requirements by Information and Communications Council
 - Feb 27, 2006 : The MIC* asked Information and Communications Council to study technical requirements for broadband wireless access systems using 2.5 GHz band.
 - Mar 17, 2006 : Broadband Wireless Access (BWA) System Committee 1st meeting
 - Study Items: Necessary frequency guard bandwidth between BWA systems and other adjacent, etc.
 - Around Nov 2006: Final report from the Council (expected)
 - After Final report: Rulemaking process



*MIC: Ministry of Internal Affairs and Communications

MIC: MIC's Efforts Toward the Realization of IMT-Advanced
http://www.soumu.go.jp/joho_tsusin/eng/presentation/pdf/060920_1.pdf



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