

Wireless Broadband Industry Analysis

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Abstract

On the global stage, broadband and wireless is the major driving force behind the transformation of telecom industries. Only this can explain the extraordinary efforts taken by policy makers and telecom, IT, and Internet players around the world to develop and evolve a variety of wireless networks and broadband services.

In this project, wireless broadband is defined as the technology that is able to form nationwide or metropolitan wide wireless infrastructure to deliver high-speed Internet access and data communications. The purpose of this project is to provide a useful framework to facilitate in-depth analysis of wireless broadband industry development in country of interest.

Six elements are defined by the project in order to conduct the wireless broadband industry analysis. They are: 1) position of government in promoting and developing wireless broadband technologies and services in the country; 2) capability and timing of wireless broadband technology in deployment and service opportunities it brings to the market; 3) telecom market landscape and competitions among service providers in the nation; 4) deployment and operation cost of competing wireless broadband technologies; 5) market segments the technology in deployment targets to serve; and 6) customer demand environment in the country.

This project provides an overview of capabilities and timing of mainstream wireless broadband technologies from both cellular and data network worlds, focusing on 3G/3.5G and WiMAX technologies. As well, it presents an analysis of various service and business opportunities made possible by those technologies. Furthermore, it contributes an understanding of the complex of wireless broadband market development from service providers' point of view, through a thorough case study of South Korean telecom market.

This analysis finds out that WiMAX, HSDPA/WCDMA, and CDMA2000 1x EV DO each aims to provide end users with high speed data access and carrier-grade services on both IT and telecom communication devices. WiMAX has some technical advantages over 3G/3.5G. However, while 3.5G targets undershot and service demanding customers, WiMAX aims to cover a very broad range of network types and applications. As horizons of WiMAX have expanded, so has its competition.

The case study of South Korean wireless broadband market demonstrates that government plays a pivotal role in shaping the country's wireless broadband market landscape. Meanwhile, competitions among service providers have promoted wireless broadband network developments and service offerings in South Korea. Moreover, both WiBRO (a variant of WiMAX) and HSDPA, CDMA2000 1x EV-DO services target undershot customers in South Korea, and it is widely believed that coexistence is more likely than outright competition between WiBro and HSDPA. Finally, there is a chance that service can cross cultural boundaries.