

WiMAX Forum® Industry Research Report

Review of February, 2010

About

The WiMAX Forum® Industry Research Report is a monthly summary of primary and secondary research and news, provided by WiMAX Forum to the industry. It includes the latest updates on WiMAX Forum-tracked statistics, product certification, regulatory information, technology standards and more. This report will be published and made available on the WiMAX Forum website the first week of every month. If you have any questions or comments regarding the research contained herein, please contact Jonathan Singer, the WiMAX Forum's Market Research Manager at Jonathan.Singer@wimaxforum.org.

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Executive Summary

- Based on research completed in February, 2010, as of EOY2009 WiMAX networks cover over 620 million people across the globe.
- WiMAX Forum currently tracks 559 WiMAX Deployments in 147 Countries.
- WiMAX Forum certified 3 new products in February.
- WiMAX Forum completed a profile of US-based operator Clearwire. Visit the Case Studies section of our website or click [here](#) to read this updated study.
- Senza Fili Consulting completed a case study on Russian operator Yota, which reports that as of EOY2009 it has attracted 350,000 subscribers. Visit the White Papers section of our website or click [here](#) to read this new research.

Global Deployment Update

This section describes the current state of WiMAX deployments across the world. The data for this tool is delivered to us courtesy of [Informa Telecoms & Media](#), and can be viewed online in more detail at www.wimaxmaps.org. Please note that the numbers below do not necessarily represent total WiMAX networks in existence, but rather the total deployments that we currently track. Every month we find more data on new or existing deployments and add them to the database. If you are an operator, please check WiMAX Maps to make sure that your organization's information is accurate. If it is either not there or is inaccurate, please email deploymentdata@wimaxforum.org, and we will update our information immediately.

TOTAL DEPLOYMENTS*

**Note: "Deployments" in this case refers to WiMAX networks that are either in service or planned/in deployment (i.e. base stations are being deployed, but there are few/no subscribers yet).*

Total Deployments Tracked	559
<i>Total Deployments Tracked Last Month</i>	555
Total Countries** with WiMAX Deployments	147

Last Month	147
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****Note:** “Countries” in this case is representative of distinct telecommunications markets, and therefore this number may equal more than the total number of sovereign nations recognized by the UN. For example, Hong Kong and China have different regulatory structures, and are therefore treated as different markets.

DEPLOYMENTS BY REGION

REGION	DEPLOYMENTS	COUNTRIES
Africa	114	43
CALA	110	32
Asia-Pacific	102	22
Eastern Europe	84	21
Western Europe	70	17
North America (USA/Canada)	51	2
Middle East	28	10

DEPLOYMENTS BY FREQUENCY

2.3 GHz Deployments***	48
2.5 GHz Deployments***	95
3.3 GHz Deployments***	9
3.5 GHz Deployments***	283
5+ GHz Deployments***	20

*****Note:** In above table total deployment by Frequency may not add up to total deployments tracked. The missing deployments’ statuses are unknown, and will be confirmed and updated.



For more information please visit www.wimaxmaps.org

Quarterly WiMAX Equipment Update

This section provides a cumulative look at the total WiMAX equipment shipped since 2006. The data is provided courtesy of Emmy Johnson at Skylight Research. For more detailed data on WiMAX equipment numbers, please contact Ms. Johnson at Emmy@skylightresearch.com.

1Q 2006 – 3Q 2009 Cumulative WiMAX Equipment Sales	
Frequency	Total Shipped
2.3 GHz	\$243M
2.5 GHz	\$679M
3.x GHz	\$1.5B
5.x GHz (includes 4.9)	\$84M
Other	\$12M
TOTAL	\$2.5B

POPs Coverage

In February, 2010, WiMAX Forum announced that as of the end of 2009, WiMAX service providers cover more than **621 Million** people. This estimate shows that WiMAX is on track to reach last year's EOY2010 forecast of 800M+ people. WiMAX Forum now forecasts that by 2011 there will be over 1 Billion people across the world within WiMAX coverage. This POPs update is a yearly project, and will be updated again at the beginning of 2011. Below is a regional breakout of the estimate:

Region	POPs Covered
Africa	81,347,832
Asia-Pacific	237,148,673
CALA	113,246,829
Eastern Europe	82,887,886
Middle East	27,390,827
North America	47,000,000
Western Europe	32,549,629
TOTAL	621,571,679

These numbers represent an estimate conducted by WiMAX Forum via primary and secondary research of operator POPs coverage on an operator-by-operator basis. Where the operator could not or would not respond to direct inquiry, estimates were made based on public operator statements, number of base stations, government-mandated buildout requirements, and other available information. Proprietary networks (pre-WiMAX/non-WiMAX) were **not included, and geographic overlap of operator coverage areas **was** taken into account.*

Below are some industry highlights showing WiMAX's progress across the world:

- Dominican WiMAX provider Wind Telecom is building a Mobile WiMAX network in the island's two major cities: Santo Domingo and Santiago.
- Nth Air is building a WiMAX network in the US that will begin will coverage in California, Florida and Texas.
- BSNL recently launched WiMAX service in the Northern Indian state of Assam. BSNL expects to have 250,000 WiMAX subscribers by the end of 2010.
- Yota has announced plans to expand its Mobile WiMAX network to 15 cities this year with a purchase from Samsung of an addition 5000 base stations.
- Taiwanese WiMAX provider Global Mobile announced that it will continue to expand its WiMAX network within Taipei City with an additional 1000 base stations.
- Imag!ne Communications in Ireland continued to expand its Mobile WiMAX network by offering services in Leixlip.

- Spanish WiMAX operator Iberbanda continued its network expansion with the announcement that it had deployed 1000 base stations.
- Craig Wireless deployed a Mobile WiMAX network in Vancouver, Canada.
- Iraqi telecoms operator 7Netlayers Telecom has launched a mobile wireless broadband network in Kurdistan, Iraq.
- UAE telecoms operator Du completed installation of a WiMAX network connecting Dubai's metro system.
- The deputy mayor of Vigo, Spain launched a WiMAX network serving public spaces and municipal facilities across the city.
- The country of San Marino announced plans for a nationwide WiMAX network provided by Telenet.

***If you are a WiMAX operator and wish to be mentioned here, please contact Jonathan Singer, the WiMAX Forum's Market Research Manager at Jonathan.Singer@wimaxforum.org.*

Featured Operator Case Study

WiMAX Success Stories: Clearwire

Clearwire Communications, LLC, an operating subsidiary of Clearwire Corporation (NASDAQ: CLWR), is a United States-based wireless broadband service provider offering high-speed mobile Internet services via WiMAX™ technology. The company is backed financially by a group of large strategic investors including Intel Capital, Comcast, Sprint, Google, Time Warner Cable, and Bright House Networks. Clearwire currently holds over 43bn Mhz/POPs in the U.S. 2.5 GHz spectrum band and 8.4bn Mhz/POPs of 3.5 and 3.6 GHz of spectrum internationally. As part of a multi-year network build-out plan, Clearwire's 4G service, called CLEAR™, will be available in major metropolitan areas across the U.S. Clearwire currently provides 4G service, utilizing WiMAX technology, in 27 markets throughout the U.S. The company also provides pre-WiMAX communications services in 30 markets across the U.S. and a combination of other high-speed Internet and 4G services in five markets in Europe.

[For the full report visit: <http://www.wimaxforum.org/resources/documents/marketing/casestudies>]

WiMAX Forum Certified™ Products

In February of 2010, WiMAX Forum certified 3 new devices.

Total WiMAX Forum Certified Products	191
Base Stations	60
Subscriber/Mobile Stations	131

Recent Certified Devices

Below is a list of the WiMAX devices certified in February, 2010:

Company	Product Name	Product Type	Frequency
Toshiba	Dynabook SS RX2	Mobile Station	2.5 GHz
Micro-star International	X-420 Notebook PC	Mobile Station	2.5 GHz
Runcom	Pico BS	Base Station	2.5 GHz

WiMAX Forum Certified Product Vendors

WiMAX Vendors with WF Certified Products	Total
Base Station Vendors	25
Subscriber/Mobile Station Vendors	45

- Base Station Vendors
 - Airspan Networks, Alcatel-Lucent, Alvarion, Axxcelera, Cisco Systems, E.T. Industries, Harris Stratex, Huawei Technologies, Motorola, NEC, Nokia Siemens Networks, Nortel, PointRed Telecom Pvt Ltd, POSDATA, Proxim Wireless Corporation, Redline Communications, Runcom Technologies Ltd., Samsung, Selex Communications, SEQUANS Communications, Soma Networks, SR Telecom, WiNetworks, ZTE Corporation
- Subscriber/Mobile Station Vendors
 - Acer Incorporated, Airspan Networks, Alcatel-Lucent, Alvarion, Axxcelera Broadband Wireless, Beceem, Cisco Systems, C-motech Co. Ltd., D-Link, E.T. Industries, Fujitsu, GCT Semiconductor, Inc., Gigaset Communications, Harris Stratex, Huawei Technologies, Intel Corporation, Interbro, Japan Radio, Kyocera, Lenovo, Micro-Star Int'l co.,LTD, MITSUMI ELECTRIC CO.,LTD., MODACOM Co., Ltd., Motorola, NEC, Oki Electric Industry Co., Ltd., Onkyo, Panasonic, PointRed Telecom, POSDATA, Redline

Communications, Runcom Technologies Ltd., Samsung, Selex Communications, SEOWON INTECH Co., Ltd., SEQUANS Communications, Siemens AG, Sony, SR Telecom, Toshiba, Ubee Interactive, Wavesat Inc., ZTE Corporation, ZyXEL Communications Inc.

Regulatory Update

In partnership with WiMAX Forum Regulatory Working Group, AT4 Wireless maintains a detailed [Spectrum & Regulatory database](#). The database provides regular monthly updates detailing global regulatory proceedings. Below is a free, extracted highlight from this month's report:

- **India: 3G Auction set for April 9, 4G auction to follow two days later-**
A notice inviting applications for India's upcoming spectrum auctions was released on February 25th after public statements by the Prime Minister's office urging a start to the delayed auctions. The 3G auction is set for April 9th, with the 4G auctions scheduled to take place two days thereafter.