

# WiMAX Forum® Industry Research Report

Review of October, 2009

## **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](mailto:Jonathan.Singer@wimaxforum.org).

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## **Executive Summary**

- WiMAX Forum currently tracks 518 WiMAX Deployments in 146 Countries.
- WiMAX Forum profiled Caribbean operator Scarlet B.V. Visit the WiMAX Forum webpage to read all about it: <http://www.wimaxforum.org/resources/documents/marketing/casestudies>.
- Clearwire, Tatung InfoComm and VMAX [publically demonstrated the first Mobile WiMAX™ global roaming at the WiMAX Forum Member Conference in Taipei](#).
- At ITU Telecom World, the WiMAX Ecosystem [publicly backed IEEE 802.16m for IMT-Advanced](#)
- Yota announced that it reached 200,000 Mobile WiMAX subscribers, and become EBITDA positive.
- Clear launched service in major US cities including Chicago, Philadelphia, and more.
- WiMAX Forum published two in-depth whitepapers aimed at regulators:
  - TDD-TDD Interference Analysis Involving Synchronized WiMAX Systems
  - Managing TDD-FDD Interference between Co-Sited Base Stations deployed in Adjacent Frequency Blocks
  - Both of these whitepapers are available in the White Papers section of the WiMAX Forum website: <http://www.wimaxforum.org/resources/documents/marketing/whitepapers>

## **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](http://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](mailto: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).*

<b>Total Deployments Tracked</b>	518
<i>Total Deployments Tracked Last Month</i>	502
<b>Total Countries** with WiMAX Deployments</b>	146
<i>Last Month</i>	145

*\*\*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

<b>Africa</b>	110
<b>CALA</b>	102
<b>Eastern Europe</b>	84
<b>Asia-Pacific</b>	82
<b>Western Europe</b>	69
<b>North America (USA/Canada)</b>	51
<b>Middle East</b>	20



For more information please visit [www.wimaxmaps.org](http://www.wimaxmaps.org)

### **POPs Coverage**

In February, 2009, WiMAX Forum announced that WiMAX service providers cover at least **430 Million** people. Below is a regional breakout of the estimate:

<b>Region</b>	<b>POPs Covered</b>
<b>Africa</b>	52,000,000
<b>Asia-Pacific</b>	205,000,000
<b>CALA</b>	49,500,000
<b>Eastern Europe</b>	45,300,000
<b>Middle East</b>	20,000,000
<b>North America</b>	28,000,000
<b>Western Europe</b>	34,600,000
<b>TOTAL</b>	<b>434,400,000</b>

*\*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.*

Since this research was conducted, many operators have announced changes in POPs coverage. Below are some highlights:

- Clearwire launched its CLEAR 4G WiMAX service in more major markets including Chicago and Philadelphia. Clearwire is on track to cover 30 million POPs by EOY2009.
- Enforta announced that it will expand its WiMAX network to reach an additional 25 cities in 2010, bringing its total footprint to 93 cities.
- Green Packet has entered into a deal with Singapore-based PacNet to use PacNet's BWA spectrum license. Green Packet's subsidiary P1 Networks use this spectrum to develop a WiMAX network in Singapore.
- Comzatel has announced it will deploy a Mobile WiMAX network in Mozambique.
- Imag!ne launched its Mobile WiMAX network in Ireland, which it claims will cover 90% of the Irish population by 2012.
- P1 Networks received government approval to continue its Mobile WiMAX network rollout into East Malaysia. It plans to deploy its network there in early 2010.
- Clearwire announced that it will launch Mobile WiMAX service in 2010 in Spain.

*\*\*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](mailto:Jonathan.Singer@wimaxforum.org).*

## **Monthly Featured Operator Case Study**

*WiMAX Success Stories: Scarlet B.V.*

*Scarlet B.V. is a Netherlands Antilles based wireless telecommunications carrier operating throughout the Dutch Caribbean. Scarlet launched its flagship Scarlet One broadband service in 2005 using the Navini (now Cisco) proprietary CDMA-based system with its critical adaptive beam-forming technology. The system was converted to WiMAX™ in 2008, and operates in a 30 MHz block of the 2.3 GHz spectrum band. As of 3Q2009, Scarlet began work on again updating its WiMAX network.*

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

## **WiMAX Forum Certified™ Products**

In October of 2009, WiMAX Forum certified 2 new devices.

<b>Total WiMAX Forum Certified Products</b>	<b>159</b>
<i>Base Stations</i>	<i>54</i>
<i>Subscriber/Mobile Stations</i>	<i>105</i>

### **Recent Certified Devices**

Below is a list of the WiMAX devices certified in October, 2009:

<b>Company</b>	<b>Product Name</b>	<b>Product Type</b>	<b>Frequency</b>
Airspan	MacroMAXe (2510)	Base Station	2.5 GHz
Airspan	MacroMAXe (2510 Mid)	Base Station	2.5 GHz

### **WiMAX Forum Certified Product Vendors**

<b>WiMAX Vendors with WF Certified Products</b>	<b>Total</b>
Base Station Vendors	<b>25</b>
Subscriber/Mobile Station Vendors	<b>42</b>

- Base Station Vendors
  - Airspan Networks, Alcatel-Lucent, Alvarion, Aperto Networks, 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, Aperto Networks, Axxcelera Broadband Wireless, Beceem, Cisco Systems, C-motech Co. Ltd., E.T. Industries, Fujitsu, GCT Semiconductor, Inc., Gigaset Communications, Harris Stratex, Huawei Technologies, Intel Corporation, Interbro, Kyocera, Lenovo, Micro-star International, 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, 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:

- **United Kingdom: Freedom4 application for license variation** - On October 6, 2009, the Regulator, Ofcom, published its decision on the request from Freedom4 Limited to vary its Wireless Telegraphy Public Fixed Wireless Operator 3.6 to 4.2 GHz license in two ways:
  - To increase the central station maximum power
  - To remove the requirement to coordinate low-power terminals and allow them to be used for providing mobile services.
- In both cases Ofcom ruled to grant Freedom4's request, allowing it to deploy and offer new kinds of services using WiMAX technology. The variation would be consistent with the European harmonization of the 3.4 to 3.8 GHz bands for broadband wireless services, according to the Commission Decision 2009/411/EC.