

# Mobile Broadband Markets

## *WiMAX, EV-DO, HSPA & Beyond*

### **2007-2012**

This report offers an in-depth analysis of the different broadband technologies available whilst providing a credible five year forecasting suite showing how the mobile broadband market will be segmented. It explores the various technologies including mobile WiMAX, Flash OFDM, UMTS-TDD, CDMA, 1xEVDO, HSPA, 3G LTE & UMB, and provides realistic forecast data on projected market shares by technology and region over the next five years. The detailed study includes extensive primary research from interviews with key players such as Nokia, Alcatel-Lucent, Motorola and QUALCOMM. This report analyses the current & future market status of HSPA & mobile WiMAX whilst providing practical subscriber numbers and service revenues for 2006-2012.

#### **Key Questions Answered by this Report:**

- How will broadband ARPU trends change in the future?
- What do key industry players believe are the market drivers and inhibitors for HSPA and mobile WiMAX?
- How much service revenue will be generated by mobile broadband?
- What issues will determine the success of mobile broadband?
- What are the strategies of the leading mobile broadband vendors?
- How large will the mobile broadband market be?
- What will be the main areas of mobile broadband growth and why?
- How will the mobile broadband market segment into EV-DO, HSPA, mobile WiMAX, LTE and UMB?
- How significant will mobile WiMAX be in the market?

#### **Main Benefits:**

- A unique source of research, analysis and information for the mobile broadband market including technologies, market characteristics & forecasts.
- Practical analysis of the emerging opportunities available to vendors and operators.
- Unique insights: includes interviews with leading industry players who have significant experience in the mobile broadband market.
- Benefit from fresh thinking and an intelligent market assessment from a respected thought leader.

A silhouette of a person sitting on a log by a lake, using a laptop. The scene is set against a sunset or sunrise background with a warm, orange glow.

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# Mobile Broadband Markets: Analysis & Forecasts

## report overview

The Mobile Broadband report offers reliable forecast data up until 2012, broken down by HSPA, EV-DO (Revs A, B), mobile WiMAX, 3GLTE & UMB, and eight key regions. The complete forecasting suite provides data on 3G and broadband subscribers, whilst offering subscriber forecasts up until 2012. The tabular data also includes cellular mobile user revenues by global forecast, and average revenue per mobile user (ARPU) forecast. The forecasts, which are backed up by thorough market analysis are broken down into eight key regions including: North America, South America, Western Europe, Eastern Europe, Far East & China, Indian Sub Continent, Rest of Asia Pacific and Africa & Middle East.

## analysis & forecasts

### Report Analysis

**In-Depth Evaluation** with market sizing & practical assessments, including 5 yearly market projections to 2012; combining player analysis & positioning strategies for strategic & market planners concerned with current & prospective mobile broadband market potential.

**Clear Insight** into opportunities afforded to industry operators, vendors & manufacturers - researched by a highly respected expert with 25 years industry experience.

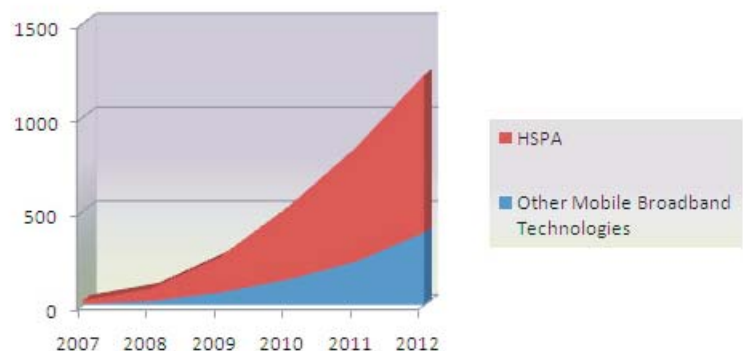
**Invaluable Tool** for assessing & realising the unfolding opportunities in the mobile broadband marketplace.

**Global Coverage** offering in-depth analytical forecasts until 2012 for regions of strategic importance including: N/S America; W/E Europe; Far East & China; Indian Sub Continent; Rest of Asia Pacific; Africa & Middle East.

### Market Forecast Suite

**Global Mobile Subscriber** Subscribers (m) (All technologies): North America; South America; Western Europe; Eastern Europe; Far East & China; Indian Sub Continent; Rest of Asia Pacific; Africa & Middle East

**Mobile Broadband Subscriber Forecast (m)  
2007-2012**



**3G & Mobile Broadband Subscriber** Subscribers (m): North & South America; Western & Eastern Europe; Far East; Indian Sub Continent; Rest of Asia Pacific; Africa & Middle East; Global (market overview: mobile broadband as % of all technologies)

**Mobile Broadband Technology** Subscribers (m): HSPA; EV-DO Rev A & B; 3GLTE; UMB; Mobile WiMAX

**Mobile Broadband Service Revenue** ARPU & revenue

## our background

Juniper Research specialise in providing high quality analytical research reports & consultancy services to the telecoms industry. We have particular expertise in mobile, wireless, broadband & IP-convergence.

Juniper is independent & provides authoritative assessments of markets, technologies & industry players. Our analysts are experienced senior managers with proven track records in each of their specialist fields.

Each report is thoroughly researched, intelligently written & proof-read by qualified experts prior to publication. The report offers a rich mix of graphics, illustrations, technology roadmaps and tables.

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## Executive Summary

### 1. Mobile Broadband - The Technologies

#### WiMAX

- OFDM: Spectrum
- **Mobile WiMAX (802.16e-2005)**
- WiMAX timeline; Difference between OFDM & OFDMA; Scalable OFDM: Sub carrier permutations

#### Flash OFDM

- Network layer architecture for Flash OFDM

#### UMTS-TDD

#### HSPA (High Speed Packet Access)

- HSDPA performance improvements; LTE migration to packet core

#### CDMA IX EVDO & UMB

#### Technology Comparisons

- Coverage vs. throughput; Frequency reuse & spectral efficiency; Frequency selective fading; Power control; Adaptive modulation & coding; Soft handoff; Cell breathing; Smart antennas

#### Duplexing Techniques

- FDD (Frequency Division Duplexing); TDD (Time Division Duplexing)

#### Industry Associations

- WiMAX forum (working groups include): Marketing; Service provider; Regulatory; Technical; Network; Applications; Certification; Global roaming; Evolutionary technical
- WiMAX certification: Development of test scripts & validation; Lab preparation; Validation of test scripts; Certification testing
- GSM Association (GSMA); CDMA Development Group (CDG)

### 2. Personal Broadband Market Drivers

#### Personal Connectivity

- The future of connectivity; Content; Consumption; Context; OECD broadband penetration and GDP per capita

#### The Emerging Mobile Generation

- UK mobile ownership by age

### New Applications & Services

- The emergence of 3G and mobile content: Evolution of mobile applications; Voice vs. Data ARPU 2005 estimated; UK text messaging year on year growth; Global mobile subscribers by region (2007); Global 3G subscriber base by country/region (2006)
- Future applications & services; Video iPod ignites portable video revolution

#### The Need for Mobility

- Mobile phones & laptops; Mobile access to desktop PC content

### 3. Market Trends for Mobile WiMAX & 3G Technologies

#### WiMAX Drivers

- 100% IP; Lack of infrastructure in developing countries; Attractive for greenfield operators; Spectrum availability & efficiency; High QoS & data rate

#### WiMAX Inhibitors

- Widespread commercial availability unlikely before 2009; Poor mobility; New network build required

#### HSPA Drivers

- Well ahead of WiMAX in deployment; Familiar technology; Wide availability & volume of devices; Full mobility; Significant investment already made

#### HSPA Inhibitors

- Current dominance of voice; Long term viability

#### Conclusion

- Devices; Cost; Complimentary or competing technologies?

### 4. HSPA & Mobile WiMAX: Market Status

#### HSPA

- Overall status
- Network example: T-Mobile's European HSPA network; Why HSDPA? Facts & figures; HSPA over WiMAX? Outlook for mobile broadband technologies & HSDPA

#### Mobile WiMAX

- Overall status; Network example; Trial examples; Contract examples

#### Conclusion

### 5. Vendors

#### Semiconductor Vendor

- NXP Semiconductor: The company; Products; Strategy (NXP value creation strategy); Customers

#### Subsystem & Software Vendors

- Abaxia; Andrew Corporation; Harris Stratex Networks; Sasken Communication Technology: The company; Products; Strategy; Customers

#### System Vendors

- Airspan; Alvarion; Alcatel - Lucent; Ericsson; Motorola; Nokia; Nortel Networks; QCT (QUALCOMM CDMA Technologies); SOMA Networks: The company; Products; Strategy; Customers

### 6. Mobile Broadband Forecasts Subscriber Forecasting Technique

- Methodology; Geographical/Technology splits

#### Global Mobile Subscriber Forecast

- Subscriber (m) (All technologies) (2006-2012): North America; South America; Western Europe; Eastern Europe; Far East & China; Indian Sub Continent; Rest of Asia Pacific; Africa & Middle East

#### 3G & Mobile Broadband Subscriber Forecast

- Subscriber (m) (2006-2012): North America; South America; Western Europe; Eastern Europe; Far East & China; Indian Sub Continent; Rest of Asia Pacific; Africa & Middle East; Global (including global market overview: mobile broadband as a % of all technologies)

#### Mobile Broadband Technology Forecast by Region

- Subscriber by region (m) (2006-2012): HSPA; EV-DO Rev A & B; 3GLTE; UMB; Mobile WiMAX

#### Market Upside Opportunities; Service Revenues Forecasting Technique; Regional Broadband Service Revenues Forecast

134 Pages



## companies included

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## author profile

Howard Wilcox is an Analyst with Juniper Research. He has over twenty five years' in the Telecommunications sector, and extensive experience of analysing markets, vendors and service providers in the telecoms networks marketplace. He was previously Director of Industry Intelligence at Marconi, where he has spent most of his career in a variety of analytical roles.

Howard has a BA in Business Administration with French from Loughborough University, UK.

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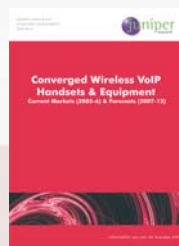
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