# Fixed or mobile WiMAX? Forecasts and assessment for the transition from 802.16-2004 to 802.16e WiMAX

#### **Review Pack**

#### This review pack includes:

- Summary
- About Senza Fili
- About the Author
- Table of Contents
- List of Figures
- List of Tables
- Ordering information

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## Summary

The report "Fixed or mobile WiMAX? Forecasts and assessment for the transition from 802.16–2004 to 802.16e WiMAX" presents an in-depth analysis of the market dynamics for the two versions of WiMAX, and for both fixed and mobile services.

The availability of two, mutually incompatible, versions of WiMAX creates a challenge for everybody in the industry, trying to understand how they will fare in the market, which one will dominate in the long term and which services they will support. 802.16–2004 WiMAX only supports fixed access, but products are already available.

802.16e WiMAX supports mobile and fixed access but products are still at least a year away. Vendors need to understand what demand there is for these two technologies in order to refine their product roadmaps. Service providers want to understand which technology best meets their requirements and will enjoy long-term support from vendors.

The report addresses these issues and in addition it provides an extensive overview of WiMAX technology, competing technologies, regulation, and business models. It gives a very detailed forecast of subscribers, service revenues and equipment revenues for 15 countries, 6 regions and for the worldwide market.

#### Topics covered:

- The differences between 802.16–2004 and 802.16e in terms of functionality, performance, services supported, target market segments and regulatory implications.
- The market dynamics for fixed and mobile WiMAX access in different regions and different market segments.
- WiMAX technology.
- Standardization efforts.
- The role of the WiMAX Forum and its certification program for interoperability.
- Upgrade paths to 802.16e WiMAX for service providers using 802.16–2004 WiMAX or proprietary solutions.
- Competition from wired technologies (DSL, cable modem, fiber-to-the-home) and from wireless technologies (Wi-Fi, 3G including WCDMA, HSDPA, EV-DO, TD-CDMA, and proprietary solutions like Qualcomm's FLASH-OFDM).
- Timeline for WiMAX product availability.
- Spectrum availability and regulatory impact on WiMAX deployments.
- WiMAX fixed and mobile services and applications.

- Comparison of the WiMAX opportunity for service providers in the residential and business, rural and metropolitan, emerging and developed markets, as well as municipal networks.
- Vendors' perspective on the development of the WiMAX market and their product strategy for transitioning current customers to 802.16e WiMAX.
- Profiles of 23 major vendors.
- Drivers towards adoption of WiMAX, deployment timeline, services offered and market size in the largest markets worldwide.

## Extensive forecast (2006-2010) of WiMAX demand, service revenues and equipment revenues

The forecast presents data at the global, regional and country level as shown below.

**Regions** North America

Latin America Western Europe Eastern Europe Asia Pacific

Rest of the World

Countries Argentina Italy

Australia Japan
Brazil Korea
Canada Mexico
China Spain
France UK
Germany USA

India

For each market, the forecast includes:

- Fixed and mobile broadband subscribers
- Fixed and mobile WiMAX subscribers
- Data and VoIP service revenues
- Data revenues by market segment
- Residential, business and mobile ARPU
- Equipment revenues.

#### Companies mentioned

O2 Huawei Runcom Access Telecom Iberbanda Samsung

ADP Telecom Iliad Samsung Venture Investment

Afribone Mali InfiNet Wireless Corporation

Airspan Intel SBC

Alcatel Intel Capital SEQUANS Communications

Altitude IntroWeb Sequoia Capital
Altitude Telecom Inukshuk Siemens Mobile
Alvarion IP Wireless SiGe Semiconductor

Aperto Irish Broadband Singtel
ArrayComm JStream Technologies SK Telecom
AT&T Korea Telecom SkyPilot
Axtel KT Smart

Axxcelera Broadband Wireless KTB Ventures SOMA Networks
Beceem Libera Speakeasy
BelAir Link 3 Sprint Nextel
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BellSouth Marconi Telabria

Biva MiTAC TeleCis Wireless
Brasil Telecom Motorola Telkom SA
BT MVS Comunicaciones Telmex
Cambridge Broadband Navini Terabeam
Clearwire Netia Time

Dedicado Nex-G Time Warner Cable

Delta Networks Nextel T-Mobile

Deutsche Telekom NextNet TowerStream

Digitel NextWeb/Covad UHT

Digiweb Nortel UK Broadband

EarthLink Orange Ultranet
Enertel picoChip Unwired
Entel Pipex VCom

Ericsson Protel Walden International

Ertach Proxim WaveIP
FarmTel Qualcomm WaveRider
Flarion Quantum Broadband Wavesat

France Telecom Solutions Whoosh Wireless

Fujitsu Qwest Wi-LAN

GemTek Technology Radionet WiMAX Telecom

Global Catalyst Partners Redline Yozan
Hanaro Reliance Infocomm Z-Com
Hopling Technologies Rogers Communications ZTE

## About Senza Fili Consulting

Senza Fili Consulting provides advisory support on wireless data technologies and services. Our expertise extends to cellular communications, WiMAX, Wi–Fi, and other fixed and mobile Broadband Wireless Access (BWA) technologies. We assist vendors in gaining a better understanding of the service provider and end–user markets. We work alongside service providers in developing a wireless data strategy and gaining a better understanding of the demand for wireless services. Independent advice, a strong quantitative backing, and an international perspective are the hallmarks of our work.

At Senza Fili we have in-depth expertise in financial modeling, market forecasts and research, white paper preparation, business plan support, due diligence, training, and evaluation of end-user requirements. Our clients are international and span the entire value chain: they include fixed and mobile operators, ISPs, wireless ISPs, other service providers, vendors, solution providers, system integrators, investors, and industry associations.

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## About the Author

Monica Paolini is the founder and president of Senza Fili Consulting. She is a well-known expert in wireless data technologies such as WiMAX, WCDMA, HSDPA, EV-DO, Wi-Fi and other 3G and fixed proprietary technologies. She has a PhD in Cognitive Science from the University of California, San Diego (USA), an MBA from the University of Oxford (UK), and a BA/MA in Philosophy from the University of Bologna (Italy). She can be contacted at monica.paolini@senzafiliconsulting.com.

## Table of contents

#### **Executive Summary**

- 1 Fixed and mobile WiMAX: two technologies and two markets?
- 1.1 Why a mobile WiMAX?
- 1.2 802.16-2004 WiMAX: dead on arrival?
- 1.3 A transition to mobility through portability
- 1.4 Report roadmap
- 2 A comparison between 802.16–2004 and 802.16e WiMAX
- 2.1 The difference between 802.16 and WiMAX
- 2.2 Standardization efforts at the IEEE
  - 2.2.1 The IEEE 802.16 standard
  - 2.2.2 802.16-2004: the basis for WiMAX for fixed services
  - 2.2.3 802.16e: the amendment that supports mobility
  - 2.2.4 Handoffs and interworking
  - 2.2.5 Further requirements for mobility not included in the IEEE standard
- 2.3 Technology overview
  - 2.3.1 System and certification profiles
  - 2.3.2 What is WiMAX? System profiles for 802.16-2004 and 802.16e WiMAX
  - 2.3.3 OFDM
  - 2.3.4 OFDMA and SOFDMA
  - 2.3.5 Why isn't 802.16e WiMAX backwards-compatible with 802.16-2004 WiMAX?
  - 2.3.6 Duplexing: TDD and FDD
  - 2.3.7 Adaptive Modulation Coding (AMC)
  - 2.3.8 Maximum and expected, real-life throughput and range
  - 2.3.9 Reuse factor
  - 2.3.10 Security
  - 2.3.11 QoS
  - 2.3.12 Multiple antenna technologies: STC, MIMO, and AAS
- 2.4 The WiMAX Forum
  - 2.4.1 The role of the WiMAX Forum
  - 2.4.2 The need for certification: isn't a standard enough?
  - 2.4.3 The WiMAX Forum certification program
  - 2.4.4 WiMAX certification profiles
  - 2.4.5 WiMAX certification waves
- 2.5 WiBRO
- 2.6 Upgrade paths to portability and mobility
  - 2.6.1 The need for a smooth transition
  - 2.6.2 Different transition paths
  - 2.6.3 Who needs to upgrade?

#### 3 Competing technologies

- 3.1 DSL, cable modem and other fixed technologies
- 3.2 Wi-Fi
  - 3.2.1 The public access hotspot market
  - 3.2.2 The last mile market
- 3.3 3G technologies: EV-DO, WCDMA/HSDPA and TD-CDMA
  - 3.3.1 Will WiMAX be faster than 3G?
  - 3.3.2 ...or will it be cheaper?
  - 3.3.3 Friends or foes?
  - 3.3.4 IP Wireless TD-CDMA
- 3.4 Qualcomm's FLASH-OFDM
- 3.5 Pre-WiMAX proprietary technologies
- 3.6 Where does WiMAX fit?
- 4 Business models for fixed and mobile services
- 4.1 Product timeline
- 4.2 Spectrum availability and regulation
  - 4.2.1 Choosing a spectrum band
  - 4.2.2 Licensed or license–exempt spectrum?
  - 4.2.3 Worldwide spectrum availability
- 4.3 Services and applications
- 4.4 A facilities-based approach to last mile connectivity
- 4.5 Fixed, portable or mobile?
- 4.6 Business and residential market segments
- 4.7 Rural and metropolitan markets
- 4.8 Municipal networks
- 4.9 Developed and emerging markets
- 5 The vendors' perspective
- 5.1 Chipset manufacturers
  - 5.1.1 Beceem
  - 5.1.2 Fujitsu
  - 5.1.3 Intel
  - 5.1.4 picoChip
  - 5.1.5 TeleCIS Wireless
  - 5.1.6 SEQUANS Communications
  - 5.1.7 Runcom
  - 5.1.8 Wavesat
- 5.2 WiMAX vendors
  - 5.2.1 Airspan
  - 5.2.2 Alcatel
  - 5.2.3 Alvarion
  - 5.2.4 Aperto Networks
  - 5.2.5 Motorola

- 5.2.6 Navini Networks
- 5.2.7 NextNet
- 5.2.8 Nortel
- 5.2.9 Proxim Wireless
- 5.2.10 Redline Communications
- 5.2.11 Samsung
- 5.2.12 Siemens
- 5.2.13 SOMA Networks
- 5.2.14 SkyPilot Networks
- 5.2.15 SR Telecom

#### 6 Worldwide demand for 802.16-2004 and 802.16e WiMAX

- 6.1 Scope and methodology
- 6.2 Fixed and mobile broadband forecast
  - 6.2.1 Fixed broadband
  - 6.2.2 Mobile broadband
- 6.3 Global WiMAX forecast
  - 6.3.1 Subscribers
  - 6.3.2 Service revenues from data and VoIP
  - 6.3.3 Equipment revenues
- 6.4 North America
  - 6.4.1 United States
  - 6.4.2 Canada
- 6.5 Latin America
  - 6.5.1 Brazil
  - 6.5.2 Mexico
  - 6.5.3 Argentina
- 6.6 Western Europe
  - 6.6.1 Germany
  - 6.6.2 UK
  - 6.6.3 France
  - 6.6.4 Italy
  - 6.6.5 Spain
- 6.7 Eastern Europe
- 6.8 Asia Pacific
  - 6.8.1 China
  - 6.8.2 Japan
  - 6.8.3 Korea
  - 6.8.4 India
  - 6.8.5 Australia
- 6.9 Rest of the World
- 7 Conclusions
- **Annex: Acronyms**

# **List of Figures**

- Figure 1. Timescale for 802.16-2004 and 802.16e WiMAX
- Figure 2. Point-to-point and multipoint networks in different spectrum bands
- Figure 3. System and certification profiles
- Figure 4. Multipath environment
- Figure 5. Single and multiple carrier transmission
- Figure 6. OFDM and OFDMA with multiple access
- Figure 7. Uplink in OFDM and OFDMA
- Figure 8. Modulation schemes: QAM 64, QAM 16, QPSK
- Figure 9. MIMO's performance improvement for Wi-Fi and 802.16e WiMAX
- Figure 10. WiBRO timeline
- Figure 11. Transition paths to 802.16e WiMAX
- Figure 12. Competing technologies
- Figure 13. Product availability and services timeline
- Figure 14. Worldwide spectrum availability for WiMAX
- Figure 15. WiMAX spectrum bands
- Figure 16. Competitive landscape for chip vendors
- Figure 18. Market focus of WiMAX vendors
- Figure 20. Samsung WiBRO mobile phone and PDA
- Figure 21. Forecast model for demand for fixed and mobile broadband
- Figure 22. Fixed broadband forecast
  - 22.1 Global fixed broadband subscribers by technology
  - 22.2 Global fixed broadband subscribers by region
  - 22.3 Global fixed BWA broadband subscribers by region
  - 22.4 WiMAX market share of fixed BWA subscriptions
- Figure 23. Mobile broadband forecast
  - 23.1 Mobile broadband subscribers by device type
  - 23.2 Mobile broadband subscribers by region
  - 23.3 Mobile broadband market share of broadband
  - 23.4 Mobile WiMAX market share of mobile broadband
- Figure 24. 802.16–2004 and 802.16e WiMAX global subscribers
- Figure 25. WiMAX subscribers forecast
  - 25.1 WiMAX subscribers by region
  - 25.2 Fixed 802.16–2004 WiMAX subscribers by region
  - 25.3 Fixed 802.16e WiMAX subscribers by region
  - 25.4 Mobile 802.16e WiMAX subscribers by region
- Figure 26. Market size and WiMAX penetration by country and region in 2010
  - 26.1 Percentage of WiMAX global subscribers
  - 26.2 Ratio of WiMAX to broadband subscribers

#### Figure 27. Global service revenues

- 27.1 VoIP and data service revenues
- 27.2 Data revenues by market segment
- 27.3 Residential, business and mobile ARPU

#### Figure 28. Global equipment revenues

- 28.1 Equipment revenues for CPEs and base stations
- 28.2 Equipment revenues by region
- 28.3 Indoor, outdoor, portable/mobile CPE sales
- 28.4 CPE and base station average selling price
- Figure 29. USA data charts\*
- Figure 30. Canada data charts\*
- Figure 31. Latin America data charts\*
- Figure 32. Brazil data charts\*
- Figure 33. Mexico data charts\*
- Figure 34. Argentina data charts\*
- Figure 35. Western Europe data charts\*
- Figure 36. Germany data charts\*
- Figure 37. UK data charts\*
- Figure 38. France data charts\*
- Figure 39. Italy data charts\*
- Figure 40. Spain data charts\*
- Figure 41. Eastern Europe data charts\*
- Figure 42. Asia Pacific data charts\*
- Figure 43. China data charts\*
- Figure 44. Japan data charts\*
- Figure 45. Korea data charts\*
- Figure 46. India data charts\*
- Figure 47. Australia data charts\*
- Figure 48. Rest of the World data charts\*

#### (\*) For each market, charts include:

- 1. Fixed and mobile broadband subscribers
- 2. Fixed and mobile WiMAX subscribers
- 3. Data and VoIP service revenues
- 4. Data revenues by market segment
- 5. Residential, business and mobile ARPU
- 6. Equipment revenues

## List of Tables

- Table 1. A definition of fixed and mobile access
- Table 2. 802.16-2004 and 802.16e WiMAX compared
- Table 3. WiMAX terminology
- Table 4. IEEE 802.16 and WiMAX
- Table 5. Versions of the IEEE 802.16 standard
- Table 6. 802.16-2004 and 802.16e WiMAX system profiles
- Table 7. Number of sub-carriers in SOFDMA
- Table 8. FDD and TDD
- Table 9. Maximum throughput (Mbps) using different modulation schemes in 802.16–2004 WiMAX
- Table 10. Range, throughput and users supported by one base station
- Table 11. MIMO spectral efficiency and throughput
- Table 12. WiMAX Forum Working Groups and their charters
- Table 13. 802.16–2004 WiMAX Forum certification profiles
- Table 14. WiMAX certification waves
- Table 15. WiBRO specifications
- Table 16. Competing technologies in different market segments
- Table 17. WiMAX against DSL and cable modem
- Table 18. 802.16e WiMAX, FLASH-OFDM and 3G: throughput
- Table 19. 802.16e WiMAX, FLASH-OFDM and 3G: cell range and spectrum bands
- Table 20. Licensed or license-exempt spectrum
- Table 21. NextWeb and Covad: adopting a facilities-based approach
- Table 22. The WiMAX opportunity for service providers
- Table 23. Service operators trialing or committed to deploying WiMAX
- Table 24. WiMAX (plus Wi-Fi) on trains: Nomad Digital and T-Mobile
- Table 25. Business and residential market segments
- Table 26. Telabria: addressing both the residential and business market
- Table 27. Rural and metropolitan deployments
- Table 28. Libera: using license-exempt spectrum in metropolitan areas
- Table 29. Developed and emerging markets
- Table 30. Ultravision: from wireless cable to wireless broadband
- Table 31. Chipset developers' product roadmap and partnerships
- Table 32. Airspan
- Table 33. Alcatel
- Table 34. Alvarion
- Table 35. Aperto Networks
- Table 36. Motorola
- Table 37. Navini Networks

Table 38. NextNet Wireless

Table 39. Nortel

Table 40. Proxim Wireless

Table 41. Redline Communications

Table 42. Samsung

Table 43. Siemens

Table 44. SOMA Networks

Table 45. SkyPilot Networks

Table 46. SR Telecom

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