

Designing for Development

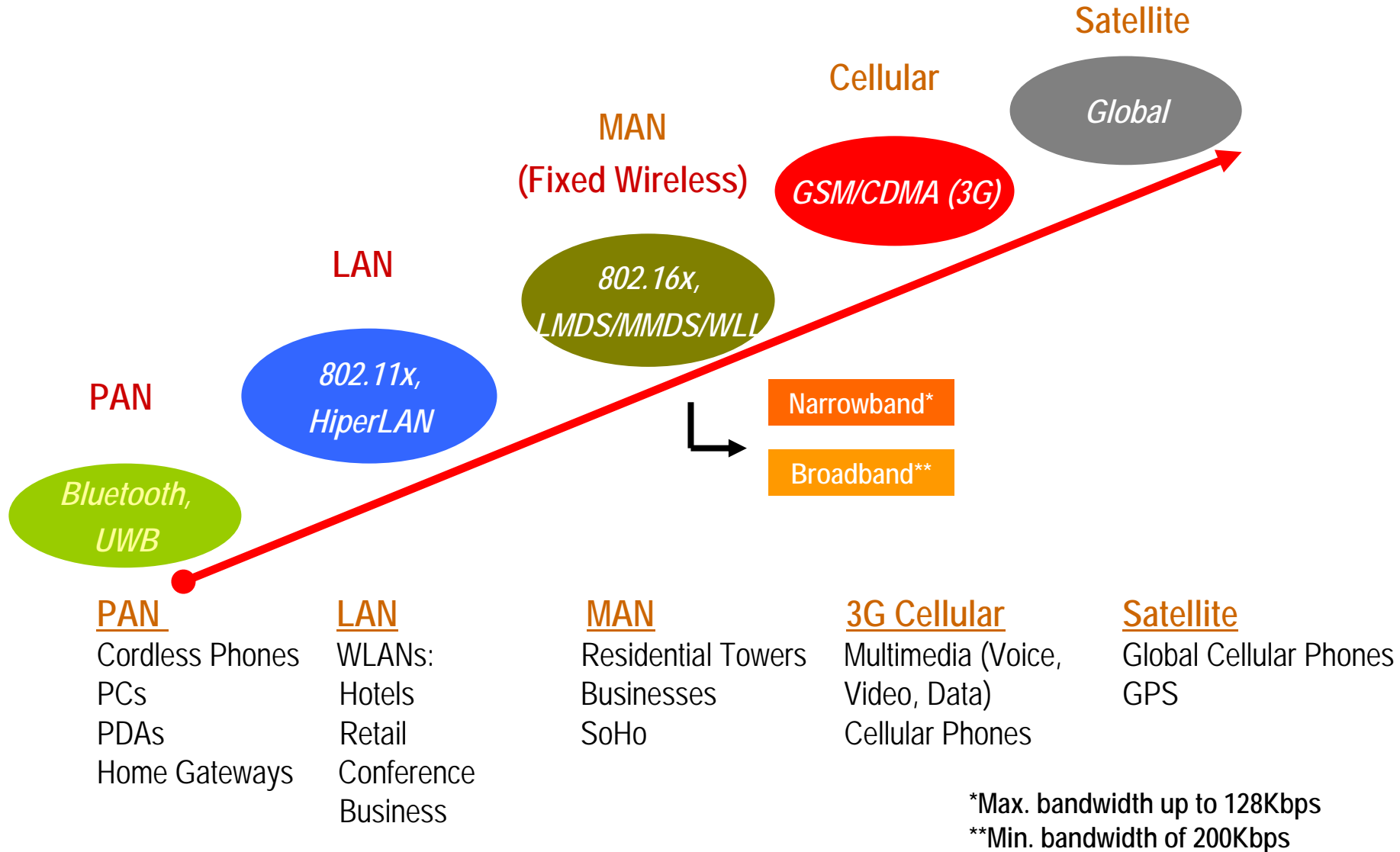
**Fujitsu Solutions for WiMAX-Certified™
Products for Next-Generation Broadband
Wireless Access**

**Keith Horn
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Fujitsu Microelectronics America, Inc.**



Fujitsu Wireless Strategy

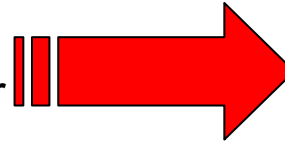
Wireless Market at a Glance



Broadband Wireless

• Now

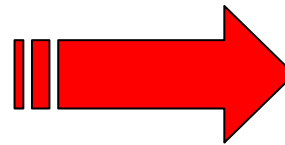
- Proprietary solutions
- Expensive equipment for the consumer
- Limited market exposure



Limited Growth

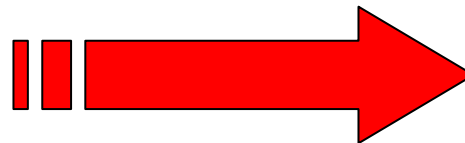
• The Future

- WiMAX standardization
- High data rates
- Long range
- Scalable system capacity
- Low-cost equipment for the consumer
- Vendor interoperability
- Quality of service



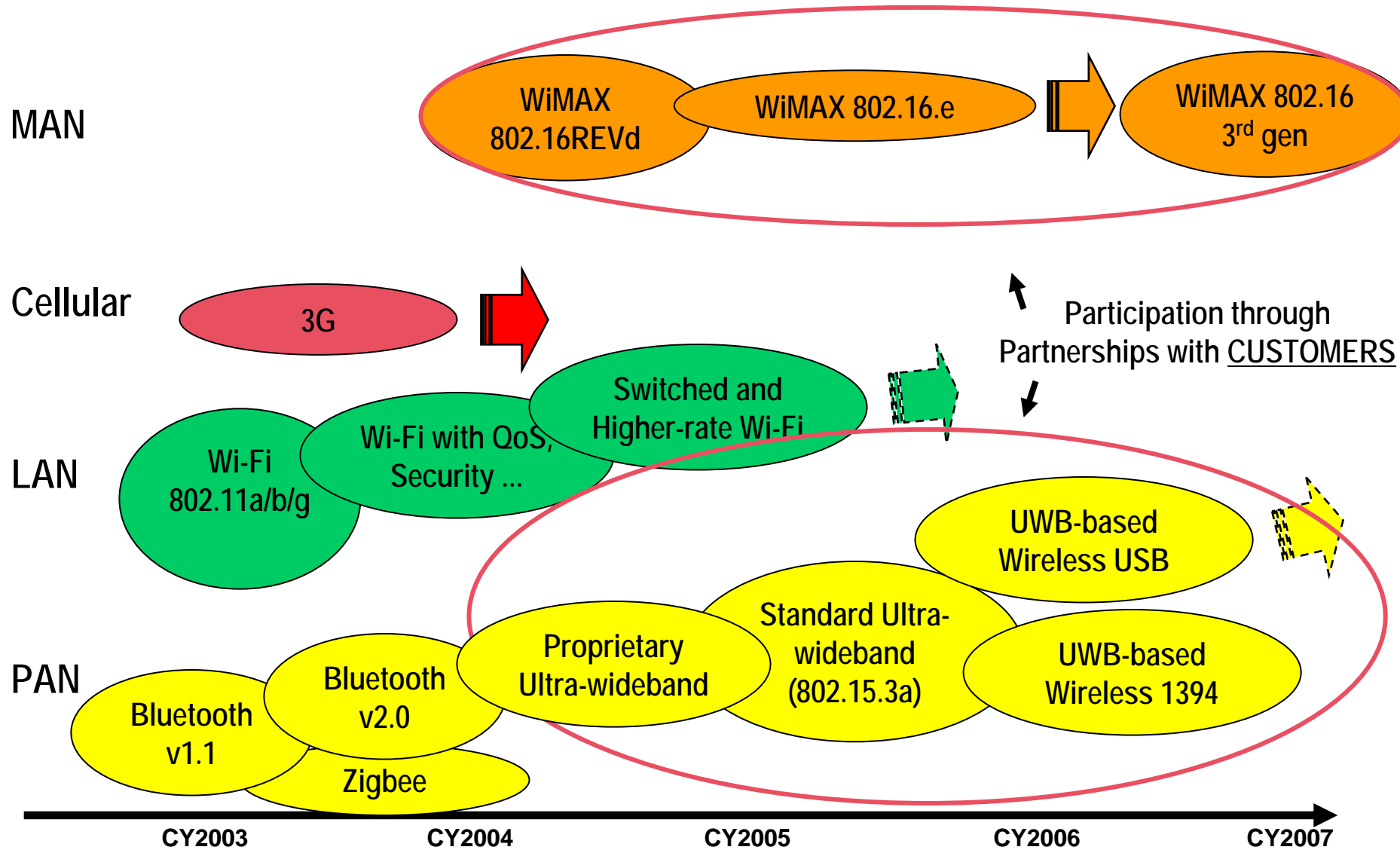
Expanded Growth

Fixed BWA



Mobility

Fujitsu Wireless Strategy



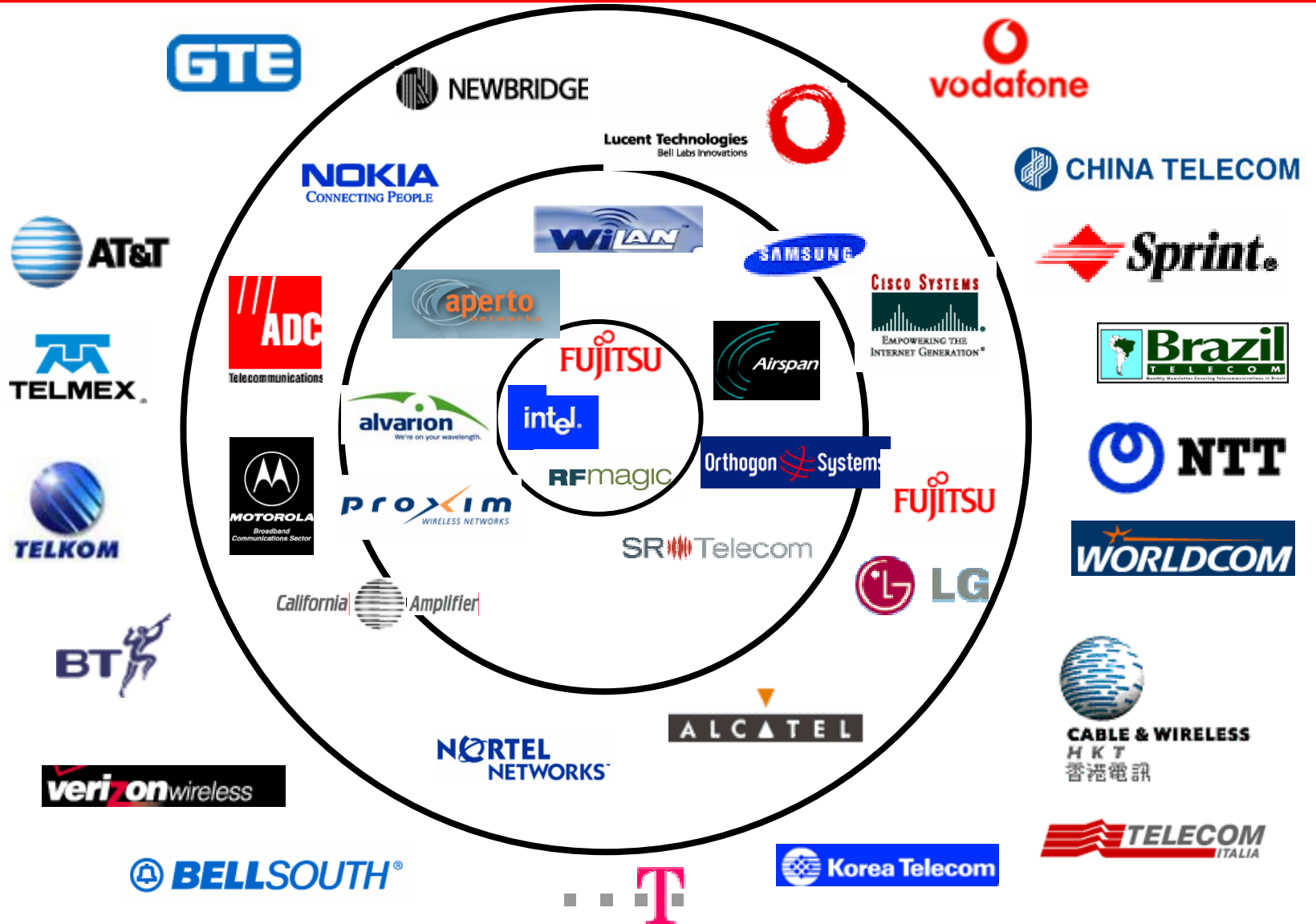


WiMAX Deployment

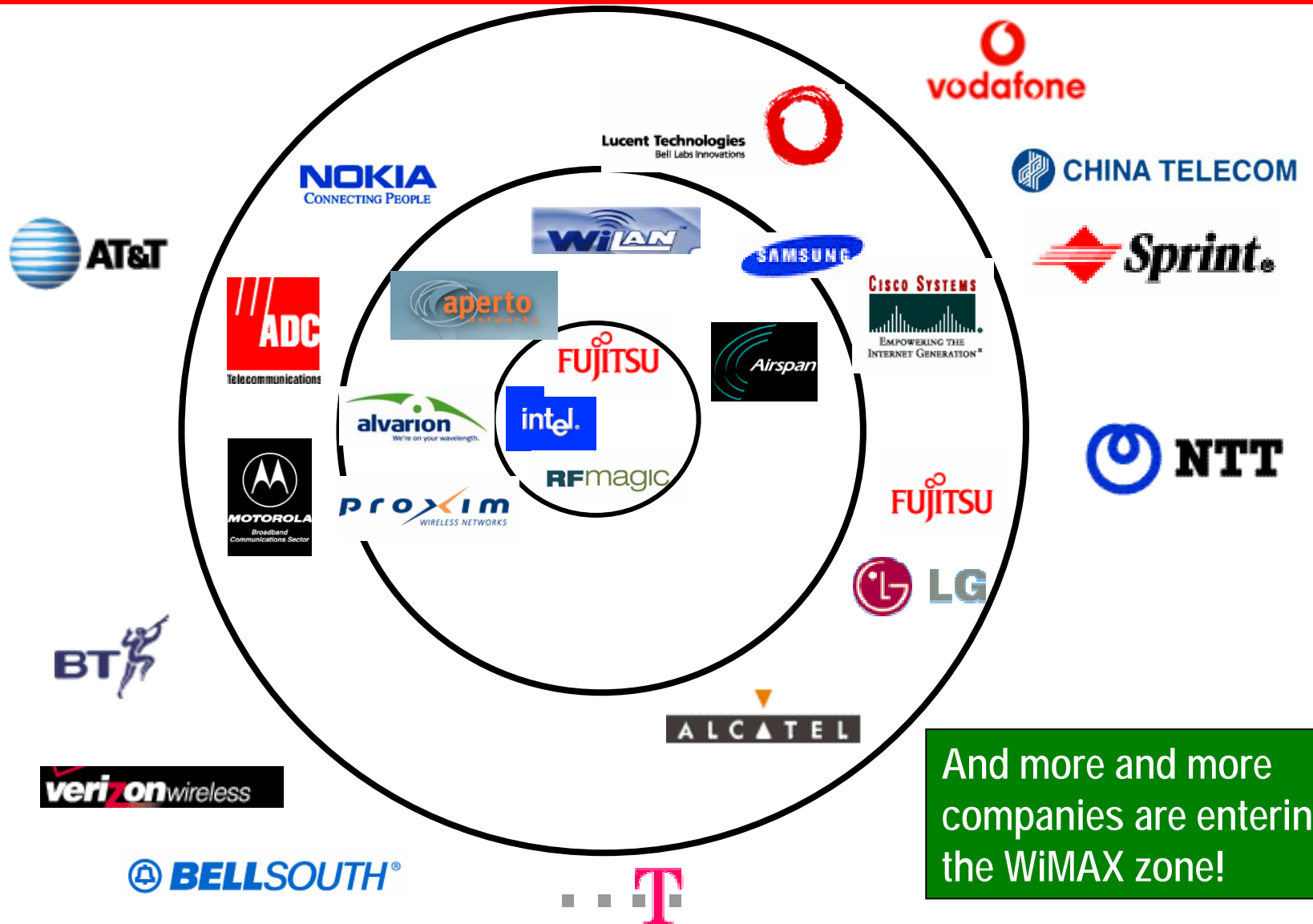
WiMAX – a Trillion Dollar Holy Grail

- **Finally, a wireless technology that holds the potential of fulfilling so many promises**
- **Tremendous curb appeal – a powerful price/performance duo**
- **Narrow the digital divide between developed and developing nations**
- **Zip information straight to the doorsteps of rural communities**
- **Give cable, DSL and T1/E1 a run for their money in some areas**
- **When Wal-Mart enters the BWA game, we'd better pay attention**

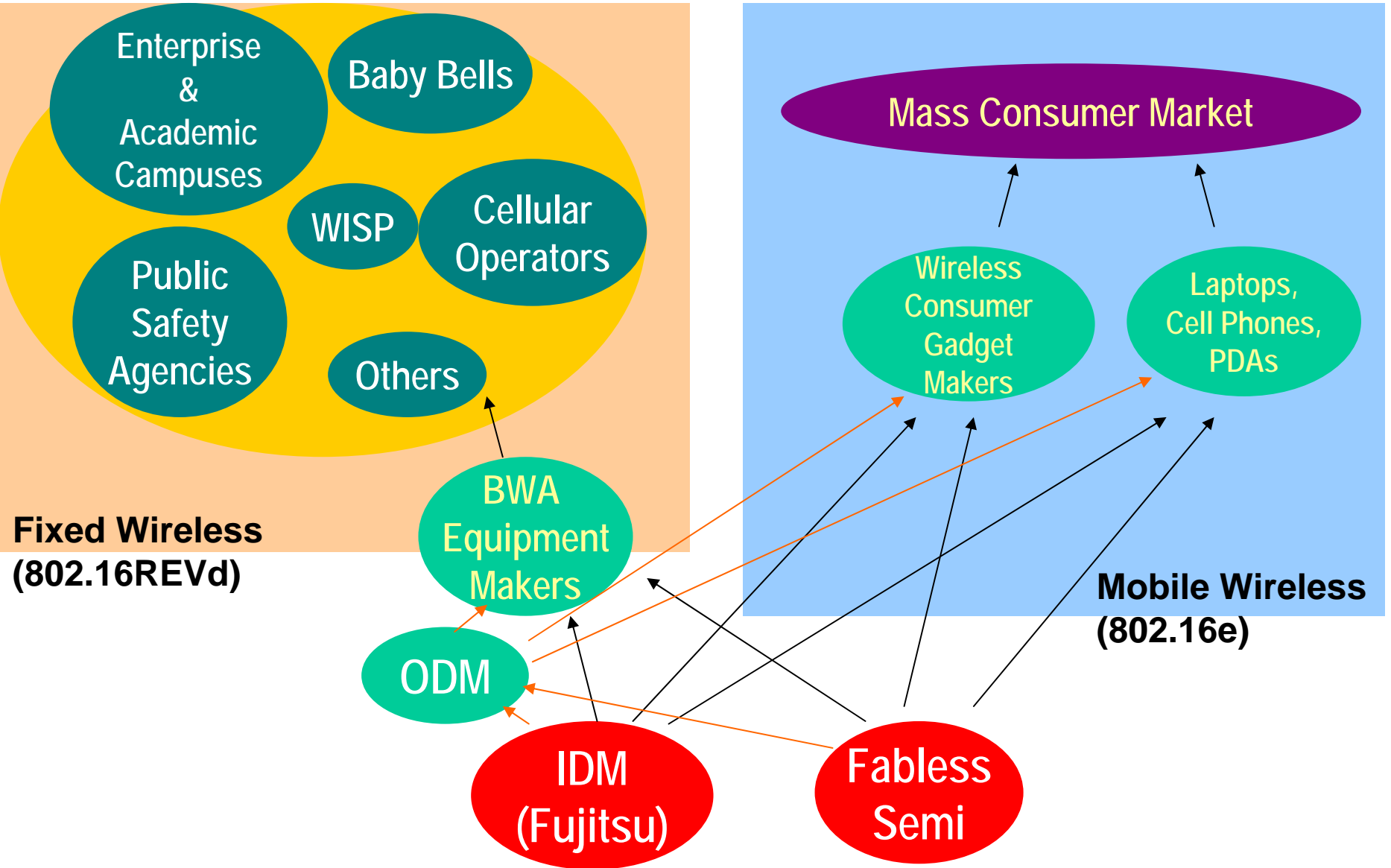
BWA Market Structure



WiMAX Market Structure



Who are the Customers?





Fujitsu Solutions for WiMAX-Certified™ Products

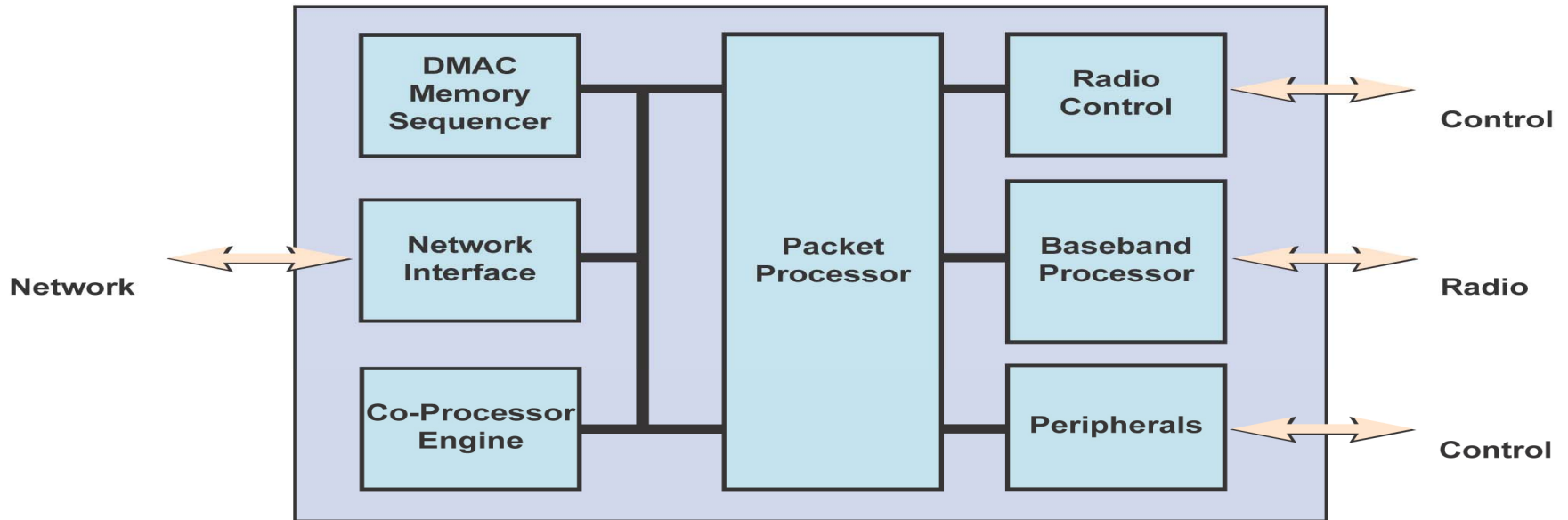
Fujitsu's WiMAX Advantages

- **One of the founding members of the WiMAX Forum**
- **Full commitment to the WiMAX cause from the get-go**
- **Longstanding System-on-a-chip (SoC) design experience in the telecommunication and networking areas**
- **Extensive experience in embedding high-speed ADC/DAC into SoC**
- **Extensive embedded processor experience – for ARM and ARC**
- **Proven deep submicron process technology with a roadmap beyond 90nm**
- **Rich package lineup to suit a large variety of wireless applications**

Key Features

- **Single-chip. Integrated, mixed-signal LSI fully compliant with IEEE 802.16d**
- **Integrated MAC-PHY**
- **OFDM256 PHY with TDD and HDX FDD**
- **Supports base stations or subscriber stations**
- **64 QAM, 16QAM, QPSK, BPSK**
- **Comprehensive encryption/decryption solution**
- **MAC PDU CRC**
- **Power control**
- **Automatic frequency control**
- **Multiple channel bandwidths supported**
- **Frequency band agnostic**
- **Dynamic Frequency Selection (DFS) for license-exempt operation**
- **Sub-channelization support**

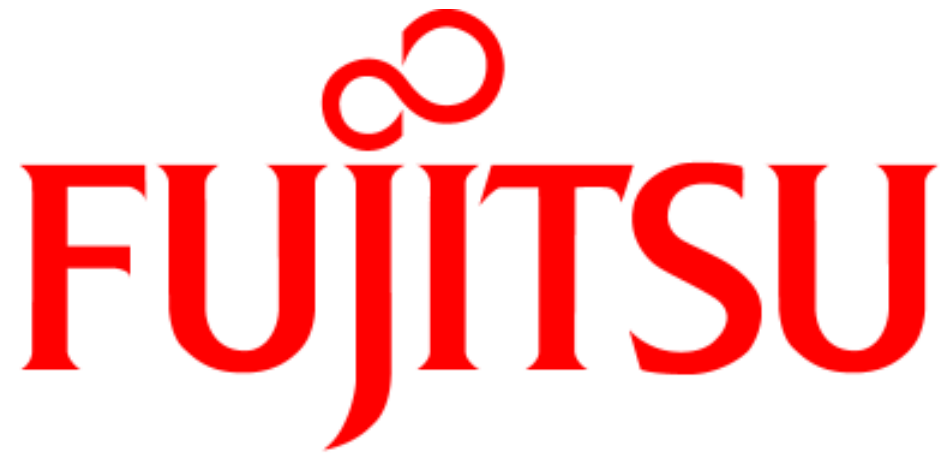
Integrated Silicon Solution



Integrated silicon solutions will make WiMAX subscriber stations highly cost-effective and help drive wide adoption of WiMAX networks.

Why Fujitsu?

- One of the two major integrated baseband LSI suppliers for 802.16
- Fujitsu will provide the complete RF+BB WiMAX-certified solution
- Strong PHY experience with Wi-LAN partnership
- Strong system-level expertise
- Flexible architecture
- Supports both base stations and subscriber stations
- Low external component requirements
- Market-enabling schedule
- Competitive pricing
- Product roadmap for next generation



FUJITSU

THE POSSIBILITIES ARE INFINITE