

NEW GENERATION WIRELESS NETWORKS

A complete view of the emerging wireless marketplace requires both technical and market perspectives. ALS' Emerging Wireless Technologies course puts technologies and products into their global market and business perspectives and explains global wireless technologies, predominantly cellular-based, in this framework. The outline below is representative of content but may not exactly reflect the content to be presented as this topic area is changing frequently and the course material is updated frequently to reflect the most current topics and their status.

Audience:

Anyone with a need to know and understand the global wireless marketplace.

Prerequisites:

Basic understanding of existing and emerging wireless technologies, systems, standards, products and global markets.

Objectives:

At the conclusion of this course the student will be able to:

- Explain key global wireless manufacturers, standards, products and services
- Describe the market forces in major global wireless markets
- Advise on product and service choices and positioning
- Consult on wireless investments and initiatives in various global markets

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COURSE OUTLINE

Day 1

1. Emerging Wireless Technology Business

- Licensed Spectrum
- Worldwide Carriers: Battle of the Titans
- Americas: VZW, Cingular, Sprint, Nextel, Telefônica, America Movil
- Europe: VOD, Deutsche Telekom, Hutchison/3, Orange, TeliaSonera, TIM,
- Asia PAC: KT, SK Telecom, China Mobile, NTT DoCoMo

2. Worldwide Vendors: Counterweight to the Titans

- Americas: Motorola, Lucent, Nortel, Qualcomm
- Europe: Ericsson, Nokia, Siemens
- Asia: NEC, LG, Samsung, China, Inc.

3. Unlicensed Spectrum

- Worldwide: Free for All
- Community wireless/community clouds
- Contention with incumbents
- Proprietary hotspot offerings
- Deutsche Telekom/SBC major proponents
- Sustainability
- Vendors: Similar atomization
- Lower-tech
- Channel, vertical and regional diversity

4. Technology

- "Holy Wars" have dissipated
- GSM prevailing worldwide with 80% of users
- 100% in Europe and much of rest of world
- CDMA 20%
- Strength in Americas and APAC
- Convergence between standards starting
- Limitations of GSM time-division technology
- Code-division's spectral efficiencies
- Closer look at each

Day 2

5. GSM

- Ecosystem: European carriers/suppliers
- Technology: Time Division
- Rationale
- Migration path: 2G: GPRS 2.5G EDGE

6. CDMA

- Ecosystem: America's carriers/suppliers
- Royalties to incorporate into devices/base stations
- Technology: Code Division
- Rationale
- Migration path: 2G: 1xRTT (existing spectrum)
- 3G EvDO (new spectrum)

7. Other topics:

- WiMAX
- RFID
- FlashOFDM