

Unused Licensed Spectrum: Case TD-CDMA



- About Mandating the Technology
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- The "Impasse" of Mobile Operators
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Mandating of Technology for Licensed Spectrum

- "harmonization of spectrum usage and exclusive licensing for GSM technology"
- mandated by European Commission in the early 1990s
- significant advantages for both operators and vendors:
- "economies of scale, interoperability and international roaming"

A Technology Neutral Approach

- adopted by U.S., FCC, for the PCS auctions
- licenses "services", not "networks", inherently less emphasis to technology
- regulatory agencies more subject to political pressures
- problems of interoperability but opened opportunities for entrepreneurial innovation

Alternative Radio Technologies

Following the success of CDMA2000

- IPWireless TD-CDMA
- Flarion Technologies FLASH-OFDM
- Navini Networks TD-SCDMA (MC)
- ArrayComm iBURST
- InterDigital Communications WTDD
- NextNet Wireless OFDMA
- Broadstorm Telecommunications OFDMA

The New Regulatory Framework of European Union

- technology neutral stance and reviewing secondary trading of spectrum rights
- consequences huge for 3G license holders:
- "using the mentioned proprietary technologies alongside W-CDMA"
- catalyst for fixed-wireless service convergence

The "Impasse" of Mobile Operators

- telecom operators desperately need services to differentiate in the competition
- realizing the benefits of alternative radio technologies: mandated to deploy inferior
- economic downturn: operators lack financial and engineering resources to deploy both

One's Problem is Another's Opportunity

- adding mobility to broadband wireless access one evolutionary strategy for fixed operators (and vice versa)
- alternative technologies allows them to challenge mobile operators on country or regional basis
- SK Telecom hit the market with its converged concept
- Softbank, i.e. Yahoo BB, emerging to challenge 3G mobile operators

Case: Softbank BB and TD-CDMA

