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Licensing in an Era of Convergence: Notes on Spectrum Licensing

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Notes on Licensing

- A Quick Review:
  - Traditional licensing and its rationale
  - Potential negative effects of licensing – discourages competitive entry and new investment through
    - Increased costs
    - Bureaucratic delays
    - Increased opportunities for arbitrary actions or corruption
  - Rethinking licensing in view of technological and marketplace changes

Notes on Licensing

- Spectrum Related Licenses
  - Importance of spectrum to economic and social development and to the safety of life and property and to national defense
  - Interference concerns
    - Improper design (e.g., spurious signals)
    - Proximity (frequency and place)
    - Improper operation
  - Wireless licensing in response to concerns
  - Reducing licensing requirements/restrictions in view of technological and other developments

Notes on Licensing

- Management of the Spectrum Resource
  - Still primarily an engineering oriented, centralized, “command and control” system exercised through network licensing requirements focused on eliminating or minimizing interference
  - Pressures on the spectrum resource due to growth in users, uses and capacity requirements compounded by rapid technological and marketplace changes

Notes on Licensing

- Management of the Spectrum Resource (Continued)
  - Criticisms of the traditional command and control system of spectrum management
    - Excessive rigidity – administrative scarcity
    - Stifles technical and service innovation
    - Lacks positive incentives for efficient use of the resource
    - Creates barriers to voluntary and involuntary sharing of the resource
    - Erects barriers to other beneficial transactions

Notes on Licensing

- Proposals for Reforming the Traditional System
  - Move more toward the use of market-place forces in the management of the resource
    - Property-like, exclusive rights
    - Flexibility of use
    - Spectrum trading
    - Examples – Australia, Guatemala, and New Zealand and, partially, the U.S.

Notes on Licensing

- Proposals for Reforming the Traditional System (Continued)
  - Move towards an unlicensed, spectrum commons approach
    - No exclusive rights – anyone can use certain blocks of spectrum subject only to certain basic rules (e.g., maximum power) and for any lawful purpose using any technology
    - Examples of the commons approach
    - Immense success of unlicensed equipment/service market (e.g., Wi-Fi) for internal WLANs, public hot-spots, and Wireless Internet Service Providers (WISPs)

Notes on Licensing

- Closing Thoughts
  - Advantages and disadvantages of licensed and unlicensed approaches to spectrum management are summarized in Trends 2004/2005
  - Examples of the successful use of unlicensed spectrum to provide Internet access are now widespread
  - Merits of combining unlicensed spectrum with the idea of providing Internet access on an unlicensed or minimally licensed basis
  - Notion of a “Universal Access Provider” in rural, low income, unserved or underserved areas as proposed my Prof. Michael Best in Trends 2003/2004