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BROADBAND WIRELESS: REGULATORY AND LEGAL ISSUES

Charles A. Hudak, Esq.

Friend, Hudak & Harris, LLP

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Definition of Broadband:

The capability of supporting, in both the provider-to-consumer (downstream) and the consumer-to-provider (upstream) directions, a speed (in technical terms, “bandwidth”) in excess of 200 kilobits per second (kbps) in the last mile.



Broadband Wireless - Driving Factors

- Deployment of Faster Speed Technologies by telephone and cable companies
- Transformation of Mobile Telephone Handsets to Sophisticated Data Devices
- Growth of Wireline Internet/Increase in Demand for Wireless Access

Benefits of Wireless

- Avoidance of Costs/Delays (Avoid costs and delays of deploying fiber or upgrading cable networks)
- Network Deployment Issues (Minimize deployment problems such as access to municipal rights-of-way; ease of network upgrades)
- Proven Business Model (Public acceptance of wireless technologies)

Drawbacks of Wireless

- Spectrum Scarcity (Demand for and price of spectrum remains high)
- Line of Sight Restrictions (Presence of obstacles can hinder reception)
- Distance Sensitivity (The higher the frequency, the more distance sensitive it will be; Result: system design/increase to costs)
- Tower Siting/Placement (Community/Environmental concerns)

Wireless Applications

- **PCS** - Sprint PCS (Wireless Web - 14.4 kbps); AT&T (PocketNet - up to 19 kbps)
- **SMR** - Nextel (Nextel Online - 19.2 kbps)
- **MMDS** - WorldCom & Sprint (128 kbps - 8 mbps)
- **“Upper Band” (24, 28 & 39 GHz)** - Nextlink, Winstar, Teligent and Advanced Radio Telecom (64 kbps to 155 Mbps (OC-3))
- **Unlicensed** - Metricom (128 Kbps)
- **Satellite** - Globalstar (currently 9.6 kbps)

Legal Issues - Federal and State Telecom. Regulations

- **FCC** - Regulates “interstate and foreign commerce in communications by wire or radio” (47 USC § 152(a))
- **State PSCs** - Regulation limited to “charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio” (47 USC § 152(b)(1)); However, State PSC authority largely preempted (47 USC § 332(c)(3))
- **Local Governmental Authorities** - Regulate use of city, county or municipal rights-of-way

Legal Issues - FCC Licensing

- **Issuance of Licenses** - Exclusive FCC authority (47 USC § 301)
- **Regulation of Licensees** - FCC authority to classify radio stations, to prescribe the nature of the services offered from a station, to assign frequencies, to determine locations, to restrict license transfers, and to hear complaints (47 USC § 303, 310, 312)
- **Devices That Emit Radio Frequency (“RF”)** - FCC classifies devices as intentional or unintentional emitters of RF; Requires FCC authorization or certification prior to distribution in US (47 USC § 302a; Part 15 of the FCC’s Rules)

Legal Issues - Contracts

- **Existing Wireless Carriers:**
 - Collocation of ISP at carrier's premises
 - Internet access
 - Wireless portal
 - Handsets
 - Software - handset operating systems
 - Other issues

Legal Issues - Contracts

- **Wireless ISPs (Non-Telecom. Carriers)**
 - Interconnection with local exchange carrier networks (for example, use of wiring)
 - Wireline capacity agreements (Traffic backhaul)
 - Pole attachment
 - Tower siting/placement of transmitters/receivers
 - Software/hardware
 - Other issues