Goals for Session

• Basics of Wireless Communication
• Description of the Site Selection Process
• Overview of the Current Regulatory Framework
• Recent Case Law
• Practice Tips
Wireless Basics
Growth in Wireless Communication

• More cell phones in use today than televisions, personal computers, and cars combined – Sprint CEO Dan Hesse

• About 1 in 5 Georgia households have “cut the cord” – relying entirely on wireless service for communication – CDC (2010)

• Rapidly increasing range of services and devices available for businesses and at home

• Mobile to mobile explosion

• Amount of data and speeds increasing rapidly
Meeting the Needs

- Wireless carriers modifying and upgrading existing sites by changing out antennas, adding capacity when possible
- Significant new service through collocation on existing towers owned by tower companies or other carriers
- Adding new towers to increase coverage and capacity where necessary
**Elements of Wireless Network**

- **Cell Site** – Antennas at appropriate height along with associated ground equipment

- **Base Station** – Ground equipment at cell site that facilitates transmission and reception of wireless signals

- **Switch** – Central location through which all calls in given area are routed to landline or another mobile device
Basic Wireless Network Design

PSTN

BASE STATION

SWITCH

BASE STATION
Basic Tower Types

- Monopole
- Self-Supporting Tower (Lattice Tower)
- Guyed Tower
Monopole
Self-Supporting/Lattice Tower
Guyed Tower
Stealth Design

• Design of tower and/or antennas intended to blend into surrounding landscape – either urban or natural

• Wide variety of applications

• Trade-off between stealth design and service quality, height of facility, and ability to collocate additional carriers
Ancient Stealth Treatment

"Guess which one is the cell tower."

TUESDAY 7
SEPTEMBER
“Mono-Palm”
“Mono-Pine”
Flagpole
Clock Tower
“Slick Stick”
Light Standard
Ecumenical Treatment
Building Mounted
Other Stealth Towers?

AT LEAST THEY NO LONGER LOOK LIKE CELL PHONE TOWERS.
Distributed Antenna System (DAS)

- Use of multiple small antennas in specific area rather than single tower + antennas
- Used in specific area to fill coverage holes or provide additional capacity in areas with high service demand
- Easiest application where single property owner controls service area (college campuses or sporting venues)
More on DAS

- Outdoor application possible using public rights of way and power poles
- Not seen as “silver bullet” solution
- Business Models:
  - Carrier Driven
  - Venue Driven
  - Neutral Host
Schematic DAS Network
Typical Indoor DAS Application
Typical Outdoor DAS Installation
Additional Outdoor DAS Use
Site Selection Process
Site Selection Process - I

• Carriers *constantly* monitor service
• Areas of limited coverage/capacity identified and evaluated for more service
• Build only where need and demand exists
• *Radio Frequency Engineer* identifies “search area” – geographic area where new site must be located to provide desired service – and height needed
Site Selection Process - II

- **Site Acquisition Specialist**
  1. Identifies candidate sites within search area – strong preference for existing towers or other tall structures in area
  2. Researches local requirements/process
  3. Contacts property and tower owners
  4. Works with RF Engineer to evaluate suitability of candidate site(s)
Site Selection Process - III

- **Site Acquisition Specialist**

5. Negotiates lease with property owner

6. Works with land use attorney and others to identify local zoning action(s) needed, prepare and submit required applications and documents, attend public hearings

7. Helps coordinate permitting and construction of approved facilities
Example of Search Area
RF Coverage Map – Without Site
RF Coverage Map – With New Site
The Regulatory Framework
Telecommunications Act of 1996

- Overhauled Federal regulation of wireless communications companies
- Pro-competitive, deregulatory national policy framework that supports rapid deployment of wireless infrastructure
- Imposes certain limitations on exercise of local zoning authority
Section 704 of TCA - Grant of Authority

• Amends 47 U.S.C. Sec. 332 (c)

• “Except as provided . . . nothing . . . shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.”
Section 704 of TCA - Limitations on Authority

- “Regulation of the placement, construction, and modification of personal wireless services facilities . . . shall not unreasonably discriminate among providers of functionally equivalent services; and shall not prohibit or have the effect of prohibiting the provision of . . . services.”
“A state or local government . . . shall act on any request for authorization . . . within a reasonable period of time after the request is duly filed . . . , taking into account the nature and scope of such request.”
Section 704 of TCA - Limitations on Authority - III

• “Any decision . . . to deny a request to place, construct, or modify personal wireless facilities shall be in writing and supported by substantial evidence contained in a written record.”
“No state or local government . . . may regulate . . . personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that facilities comply with the [FCC’s] regulations concerning such emissions.”
Section 704 of TCA -
Right to Expedited Review

“Any person adversely affected by any final action or failure to act by a state or local government . . . that is inconsistent with [Section 704 of the TCA] may, within 30 days . . . commence an action in any court of competent jurisdiction.”

“The court shall hear and decide such action on an expedited basis.”
FCC Declaratory Ruling – November 18, 2009

• Cleared up legal question in Federal Courts over “one provider” rule – can’t deny application because one provider already has adequate service in jurisdiction because doing so is “unreasonable discrimination”
• Also sets outer limits for local review and action:
  • 90 days for collocation
  • 150 days for new structures
  • 30-day completeness review
Georgia’s Advanced Broadband Collocation Act (O.C.G.A. §36-66B-1 et seq.)

• Result of cooperative effort involving ACCG, GMA, local governments, wireless industry

• Recognizes importance of wireless communication to business, personal, emergency communication

• Establishes streamlined procedure for review and permitting of modification and collocation of wireless facilities – effective May 24, 2010
Collocation
Georgia’s Advanced Broadband Collocation Act - II

- Applies to modification of facilities, and to any collocation that:
  - does not increase tower height or width
  - does not expand equipment enclosure
  - meets original/amended zoning conditions
  - does not exceed tower weight limits, based on Structural Engineer’s certification

- Does not affect local government review and approval process for new towers
Georgia’s Advanced Broadband Collocation Act - III

- Sets limits on scope of review:
  - No evaluation of technical, business, service characteristics of proposed facility
  - No review of radio frequency or other analysis related to need or business decision

- Process collocations & modifications like any other building/electrical permit application

- Adopts FAA Declaratory Ruling timeline for decision (90/30)
New York SMSA Limited Partnership
PCS LLC USA v. Town of Clarkston

- Town of Clarkston, NY adopted new telecommunication ordinance that implemented “preference” in residential areas for DAS or “microcell” technology
- Pre-screening process assigned extra points to these specific technologies
- Applicant also required to demonstrate that proposed facility will not interfere with existing broadcasts
New York SMSA Limited Partnership
PCS LLS USA v. Town of Clarkston - II

- Challenged by industry on grounds that ordinance was preempted by federal law
- District Court held and United Stated Court of Appeals, 2d Circuit, agreed that provisions related to RF interference and giving preference to the “alternate technologies” was preempted by federal law under theory of “field preemption.”
New York SMSA Limited Partnership
PCS LLS USA v. Town of Clarkston - III

- Case clarifies limits and distinction between federal regulation and local zoning authority
- Courts recognize FCC has authority over technical aspects of nation’s wireless telecommunication facility development
- Local zoning ordinance must yield to federal regulation
MetroPCS v. City of Mount Vernon

- Involved application for Special Use Permit for rooftop installation
- “Highest Priority Site” under Ordinance
- 3 existing installations by other carriers
- Denied after 15 months:
  - “conflicting and missing material”
  - “applicant refused to provide the requested information and states there will be no additional material forthcoming”
MetroPCS v. City of Mount Vernon - II

- City and Consultant (Center for Municipal Solutions) claimed applicant:
  - failed to prove need
  - failed to prove installation was safe
  - failed to prove proposal was most feasible option

- MetroPCS submitted application plus 6 supplements responding to CMS requests

- CMS billed nearly $17,000 in fees during first 12 months
MetroPCS v. City of Mount Vernon - III

- Court found City violated TCA:
  - Failed to base its denial on substantial evidence (crafted justifications afterward)
  - Unreasonably discriminated against MetroPCS (denial despite 3 previous approvals for other carriers at same site)
  - Unreasonably delayed application review process (CMS “repeatedly request[ed] unnecessary information and belabor[ed] issues already resolved”)
MetroPCS v. City of Mount Vernon - IV

- Court found City, through CMS, violated state law based on unreasonable fees and unlawful fee provisions
  - Unlawful “to charge a wireless carrier prohibitive fees by simply dragging out the process”
  - No evidence “that the fee for a [wireless] facility should be twelve to twenty-four times higher” than fees for other special use permits
MetroPCS v. City of Mount Vernon - V

- Court struck illegal provisions of Zoning Ordinance addressing fees charged by consultant for application review and fees charged in connection with application submittal
- Court held subsequent hearing on fees
- Settlement reached and CMS ordered to return significant portion of fees
Practice Tips
Practice Tips

• Recognize role and importance of wireless communications infrastructure in supporting economic development and public safety

• Understand the investment carriers make in licensing and designing their systems

• Involve industry, citizens, businesses, and other stakeholders in drafting ordinances
Practice Tips – II

- Adopt reasonable standards and workable ordinances tailored to local conditions, staff abilities, time for review, and budget.

- Establish clear procedures to minimize delays in considering applications.

- Work cooperatively with applicants to provide clear understanding of process and review standards.
Practice Tips - III

• Establish “fast track” for collocations, modifications, and other desirable projects – see Advanced Broadband Collocation Act

• Understand the legal environment and monitor changes in the law and regulatory environment

• Explicitly reject arguments regarding health effects of radio frequency emissions
Practice Tips - IV

- Supplement staff skills only to extent necessary
  - Don’t complicate the simple
  - Keep control of process

- Don’t duplicate regulatory requirements of federal agencies (e.g., FAA, FCC)

- Base staff recommendations and final decisions on standards and on reliable, substantial evidence in written record
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