Introduction

• Next wave of wireless deployments focused on “small cells” in public rights-of-way.
• Regulation of communications involves all three levels of government and multiple public agencies.
• Starting premise is local control over placement decisions.
• However, federal and state laws and agency regulations place limits on local authority.
Wireless Technology
Macro Wireless Facility

- Antenna(s)
- Equipment
- Connecting Cables
- Support Structure
- Power Source (Meter/Battery)
- Backhaul (wired or wireless)
What are “Small Cells”?  

• Typically smaller facilities serving smaller coverage area, often in public rights-of-way  
• Distributed Antenna Systems or DAS is a type of small cell network

Figure 2: Distributed Antenna System
What is 5G?

- High capacity spectrum with short range
  - 100 times faster than 4G, low latency
  - More antennas, closer to users
- Need for high capacity backhaul
  - More fiber and fiber alternatives

SOURCE: EMERGING TECHNOLOGIES AND THEIR EXPECTED IMPACT ON NON-FEDERAL SPECTRUM DEMAND (2019)
What is driving deployment?

SMARTPHONE ECOSYSTEM

400M+
mobile devices, that's about

1.2 devices
for every person in the country

273M
are data-intensive smartphones

that's equal to 82% of the U.S. population

Up 56%
over the last ten years

Source: CTIA (2018)

DATA USE IS UP 40X SINCE 2010

TOTAL REPORTED DATA-ONLY DEVICES

2013 2017

+147% in the last five years

+19.5% from 2016-2017 alone

Source: CTIA (2018)
## Types of Entities Deploying Wireless

<table>
<thead>
<tr>
<th>Industry</th>
<th>Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless carriers</td>
<td>Small cells; distributed antenna systems (DAS); mmW 5G</td>
</tr>
<tr>
<td>Telephone companies</td>
<td>Small cells; DAS; mmW 5G</td>
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<tr>
<td>Cable operators</td>
<td>Wi-Fi hotspots; small cells; DAS; LoRaWAN</td>
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<tr>
<td>Gas, electric, water utilities</td>
<td>Advanced metering infrastructure (AMI); smart grids</td>
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<tr>
<td>Municipal</td>
<td>Traffic/parking/transit management; utilities; lighting; public safety</td>
</tr>
<tr>
<td>Others</td>
<td>Building automation; fleet management; monitoring systems, etc.</td>
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Small Cells in the ROW
Stealth Designs Evolving
Wireless Regulation: Federal Law
Key Provisions of Federal Communications Law

• 47 U.S.C. 332(c)(3) No State or local government may regulate the entry of or the rates charged by any commercial mobile services provider

• 47 U.S.C. 332(c)(7) generally preserves local authority to decide on placement of “personal wireless services” facilities, subject to certain substantive and procedural limits

• 47 U.S.C. 1455(a) (Section 6409(a)) requires local governments to allow eligible changes to “existing” wireless facilities (Eligible Facilities Requests or EFRs)

• 47 U.S.C. 224 allows FCC to regulate rates and conditions for attachments to utility poles unless state chooses to do so

• 47 U.S.C. 253 related to “telecommunications services”, and right-of-way management, and compensation
47 U.S.C. 332(c)(7)

- Limitations on local authority:
  - Action within reasonable period of time
  - No effective prohibition of personal wireless services
  - Denials in writing and supported by substantial evidence
  - No consideration of RF emissions if meet FCC standards
  - No unreasonable discrimination among providers of functionally equivalent services
  - Expedited appeals to court
Key FCC Orders

- **2009** – Established two wireless application shot clocks (90 and 150 days)
- **2014** – Established rules for Eligible Facilities Requests (plus 60 day shot clock)
- **2018** – Established that small wireless facilities are not a “federal undertaking” or a “major federal action” under NEPA/NHPA
- **2018** – Banned express and *de facto* moratoria on processing applications
- **2018** – Adopted new shorter shot clocks for small wireless facilities (60 and 90 days) and put limits on local fees and aesthetic rules. Order in effect Jan 14, 2019 (shot clocks/fees), and on April 15, 2019 (aesthetics).
- **2019** – Interpreted scope of cable franchise authority to include wireless devices
Moratoria Ban


• Holding: *de jure* moratoria and *de facto* moratoria on wireless and wireline deployment generally “prohibit or effectively prohibit” provision of telecom services in violation of federal law, and are not saved from preemption as a form of rights-of-way management

• **Examples**: street cut moratoria that don’t allow alternative means of deployment such as aerial lines
Small Cell Order


• Changed “effective prohibition” standard

• Established shorter 60- and 90-day shot clocks for “small wireless facilities”

• Fees for permits and for use of city-owned vertical infrastructure must be cost-based; established “safe harbors” (One Time: $500, $1000; Recurring: $270)

• Aesthetic regulations must be reasonable, no more burdensome than those applied to other types of infrastructure deployments, objective, and published in advance

• All permits/authorizations subject to shot clocks

• Collocation not limited to existing wireless facilities
Litigation on Recent FCC Orders

• All three 2018 FCC Orders appealed:
  • *Sprint v. FCC*, No. 19-70123 (9th Cir.) (and consolidated cases)
  • *United Keetoowah Band of Cherokee Indians v. FCC*, No. 18-1129 (D.C. Cir.)
• 2019 FCC Cable Order anticipated to be appealed as well
Sprint v. FCC, No. 19-70123 (9th Cir.)

- All appeals of Moratoria and Small Cell Orders consolidated in 9th Circuit
- FCC and 10th Circuit denied stay requests
- 9th Circuit denied the FCC’s request to hold the case in abeyance pending resolution of reconsideration petitions
- Opening briefs were filed June 10
- Respondent briefs were filed August 8
- Briefing was completed last month
United Keetoowah Band of Cherokee Indians v. FCC, No. 18-1129 (D.C. Cir.)

- U.S. Court of Appeals for the D.C. Circuit vacated NEPA/NHPA Order August 9th:
  - FCC’s deregulation of small cells was arbitrary and capricious
  - FCC did not, pursuant to its public interest authority, adequately address possible harms of deregulation and benefits of environmental/Historic Preservation review
  - FCC mischaracterized small cell footprint (pizza-box vs. SWF definition)
  - FCC cannot square scale of deployment with “no environmental footprint” (800,000 SWFs)
Further Activity at the FCC

- August 2019, Verizon filed a petition to challenge the recurring fees charged by Clark County, Nevada
  - FCC Public Notice seeking comments on issued
  - Comments are due September 25, 2019
  - Reply Comments are due October 10, 2019
- August 2019, FCC Chairman Ajit Pai proposed:
  - to maintain current RF exposure safety standards for handsets
  - to seek comment on establishing a rule to formalize the FCC’s existing methods of determining compliance with the RF exposure standards for devices operating at high frequencies
- August 2019, Wireless Infrastructure Association (WIA) filed petitions with the FCC
  - Requested that the FCC take actions to further streamline the deployment of wireless infrastructure
  - Focus on Section 6409 – Eligible Facilities Requests (EFRs)
  - Seeking to place additional restrictions on local authority to deny EFR applications or to impose conditions of approval on permits issued for EFRs
Wireless Regulation: State Law
Key Provisions of State Law

  • Sec. 7901 grants state franchise to telephone companies to use public rights-of-way, subject to limitations (may not “incommode the public use”).
  • Sec. 7901.1 reasonable control as to the time, place, and manner in which roads…are accessed by telephone co.
  • Sec. 2902 preserves local regulation of use and repair of public streets, location of the poles, wires, mains, or conduits of any public utility, on, under, or above any public streets where not preempted by CPUC

• T-Mobile West LLC v. City and County of San Francisco (Cal. Sup. Ct, April 4, 2019) upholds local regulation of wireless facility aesthetics in streets, essentially confirming the conclusion reached in Sprint PCS Assets v. City of Palos Verdes Estates (9th Cir. 2009) 583 F.3d 716.
Key Provisions of State Law

- Gov. Code 65964 prohibits:
  - Escrow deposit for removal of a facility. (bonds ok)
  - Permit of less than 10 years (unless “public safety” or “land use” reasons).
  - Requiring all facilities to be located on sites owned by particular parties.
- Gov. Code 65850.6 intended to allow:
  - Discretionary permit to approve base facilities that may later add collocation facilities.
  - No discretionary review of facilities collocated on base facility.
- [2018 SB 649 small cell bill vetoed by Gov. Brown]
Key State Actors

• California Public Utilities Commission
  • “regulates services and utilities, protects consumers, safeguards the environment, and assures Californians’ access to safe and reliable utility infrastructure and services.” legislative and judicial powers.
  • “also includes hundreds of individuals who inspect track, municipal rail systems, electric and communications wire and poles, and gas pipelines.”
• Northern California Joint Pole Association / Southern California Joint Pole Committee – joint pole owner associations responsible for tracking utility pole ownership transactions.
Key CPUC Orders

- General Orders on construction, operation and maintenance
  - GO 95 – overhead electric lines, poles, communications lines, antennas
  - GO 128 – underground electric and communications systems
  - GO 131-D – generation and certain electric transmission facilities
  - GO 159-A – defers to local zoning for cellular facilities
- Pole Attachment Rights
  - D.98-10-058 provided competitive local exchange carriers and cable television providers with nondiscriminatory access to public utility infrastructure.
  - D.16-01-046 provides wireless carriers with nondiscriminatory access to utility poles.
Local Government Implementation of Small Cell Order
Overview

• Focus here on key components of Small Cell Order
• But updates to processes need to account for all applicable federal and state laws
• Implementation
  • Small Cell Ordinance
  • Design Standards for Wireless Facilities in the Public Right-of-Way
  • Master License Agreement
  • Wireless Application Form
Avoiding Common Pitfalls

• FCC Shot Clocks
  • Implement a streamlined process to ensure timely review
  • Have clear application requirements to facilitate the issuance of timely notices of incompleteness
  • Develop a master license agreement template for use of city-owned infrastructure
• Design standards must be reasonable, nondiscriminatory, objective, and published in advance
  • Do not have overly subjective standards
  • Do not be too restrictive so as to prohibit service (e.g., banning wireless facilities from large parts of the city)
  • Use a resolution to maintain flexibility to amend as technology and/or law changes
  • Do not require installations that are technically infeasible
  • Allow applicants to comply with CPUC General Orders
  • Request and consider industry feedback
Summary

• Next generation wireless facilities mostly will be placed in public rights-of-way on utility and other ROW poles
• Wireless providers and telephone companies have a limited franchise right to use the public rights-of-way and utility infrastructure for their facilities
• Federal law and FCC orders place procedural and substantive limitations on local authority
• CPUC mainly responsible for rules on safety of infrastructure
• Localities mainly regulate placement and aesthetics
• Process and decisions must comply with limits imposed by state and federal law
• FCC small cell order puts new limits on local time for review, aesthetic rules, and fees