

Wireless Convergence

The Creation of the
Ubiquitous Wireless Network

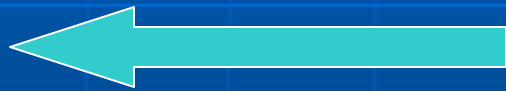
ATS Communications

Evolution of Wireless

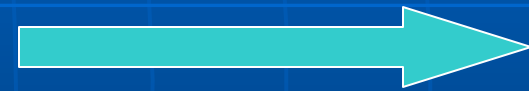
- Approximately 10 years ago the wireless carriers in the marketplace were PacBell, AirTouch, and LA Cellular.
- Current wireless carriers: AT&T, Verizon Wireless, T-Mobile, MetroPCS, and Sprint/Nextel.

Future Infrastructure

Today = 5 Major Carriers = 5 Networks



Infrastructure
Consolidation



10 Years = Many Phones = 2 or 3 Networks

Key to Success

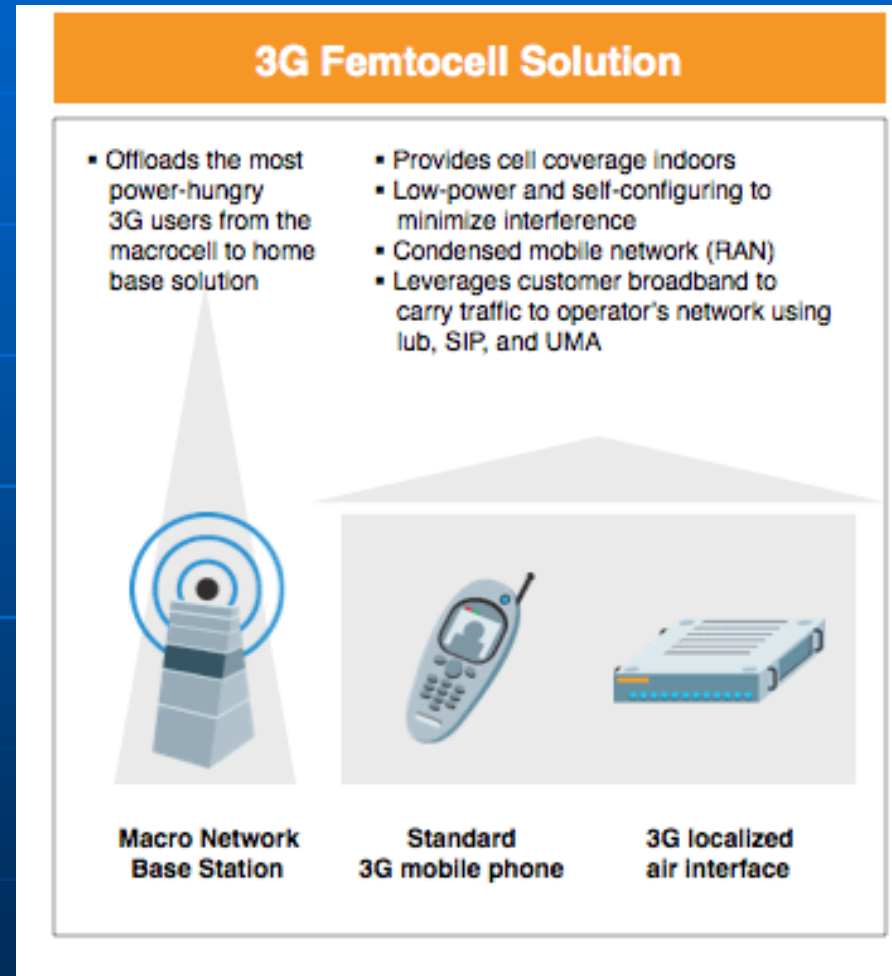
- Capturing and keeping customers is the key to success!
- Phone service is a commodity – add on services lead to profitability.
- Carriers will continue to build out their networks as the Wireless Industry evolves to keep up with services.
- Phones/Wireless devices will become more technologically agnostic.
- As coverage is completed, maximizing capacity will be the goal to profitability.
- Since the infrastructure represents more than 50% of the on-going cost – several methods lead to reduction of costs:
 - More Frequencies
 - Greater Bandwidth/Efficient Technology
 - Most Important – consolidation of customers.

What Does This Mean for Municipalities?

- More cell sites before there are less.
- Technology landscape will evolve faster than most municipalities can keep up with or understand.
- Don't count on long term revenue from cell sites
 - less costly technology already exists:
 - WiMax/WiFi
 - DAS Networks
 - Femto Cells

Femto Cells

- A small wireless base station that resides in the consumer's home or office
- Uses IP broadband connection
- Transmit at a low power, ideal for indoor radio conditions
- Cell phone traffic is parked on a femtocell instead of a macrocell
- Can support four to six voice calls



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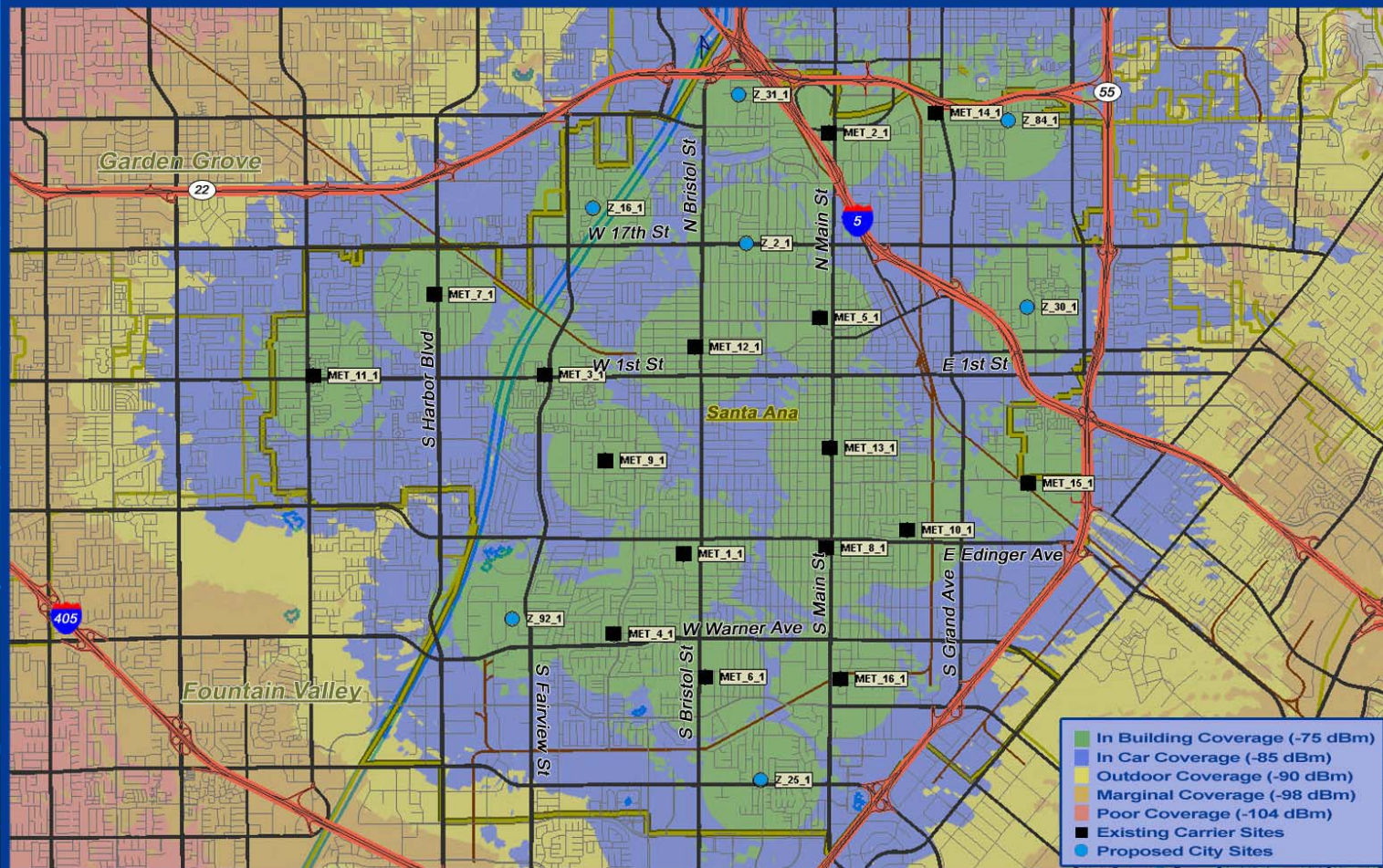
Services

- Protects Property Owners in Cell Site Deals
- Manages the 1 – 1.5 year Site Development Process
- Generate the Highest Revenue
- Presents All Options to Clients
- Maintains Relationship with All Wireless Carriers

Goals

- Facilitate future network development through a proactive approach; implementing the WMP;
- Mitigate the visual impact of towers and antennas by employing “stealth” technology into design standards;
- Reduce the number of cell sites through a coordinated co-location process; and
- Maximize the economic benefit to the City

RF Engineering Analysis



Pro-active Planning Approach for Infrastructure

ATS Represents

Government Entities and Large Property Owners

- **Cities** – Mission Viejo, Santa Ana, Laguna Beach, Tustin, San Clemente, Orange, Chino, Maywood, El Cajon, Palmdale, Placentia, Villa Park, San Bernardino
- **School Districts** – Oceanside Unified, San Jacinto Unified School District and Antelope Valley Unified High School
- **Water Departments** – Trabuco Canyon Water District, Inland Empire Utilities Agency, Orange County Water District

Reduce your Risk and Invest Wisely in your Capital Infrastructure