Distributed Antenna Systems

PB TELECOM, INC.
303 Battery Street
Seattle, WA 98121
206.838.9275
www.pbtelecom.net

What is DAS?

Distributed Antenna Systems (DAS) offer enhanced wireless coverage in areas where traditional towers cannot be used for aesthetic or zoning reasons.

DAS may be used in large buildings such as hospitals and stadiums, on college campuses, along traffic corridors or in dense urban areas or residential neighborhoods.

After

Before

How does DAS work?

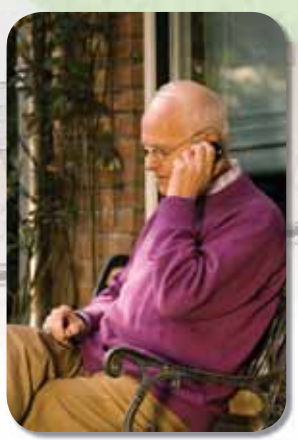
When a person located within a DAS network places a call, the wireless signal is picked up by strategically located antennas. In existing residential communities these small, low power antennas are often mounted on existing light and utility poles. This stealth siting provides maximum benefit to the community while minimizing changes to its appearance.

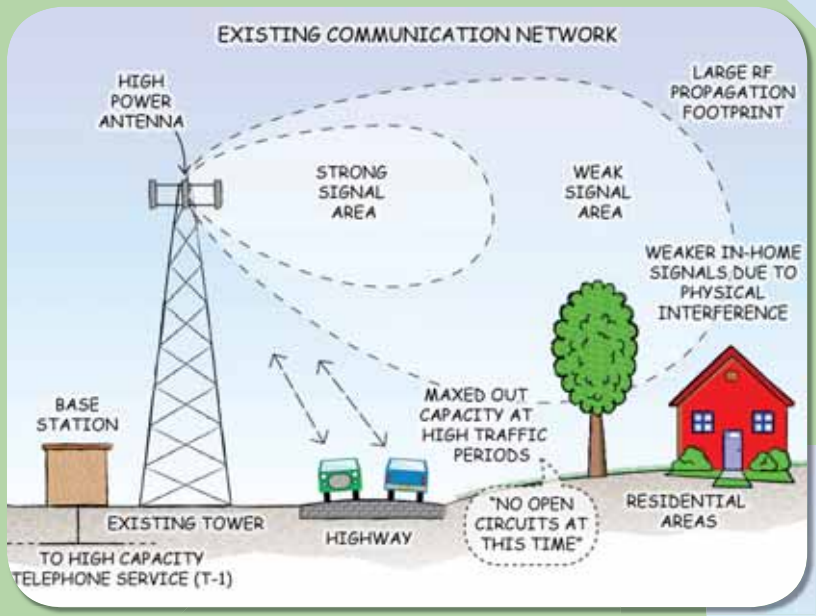
Once an antenna receives a wireless signal, the signal is converted to digital signal by equipment called a remote node. Remote nodes may be above- or underground. The digital signal is transported from the remote node to a central location, called a Hub, along fiber optic cable. The cable is run overhead between existing poles or underground. Underground cable is installed by drilling a tunnel through a small slit in the ground, reducing construction activity.

The Hub is a collection point for the fiber optic signals transported from the remote nodes. It houses the equipment needed to route mobile telephone calls to their destinations and may contain equipment for several different wireless companies. The Hub may be located within the community or miles away.

What are the benefits of DAS?

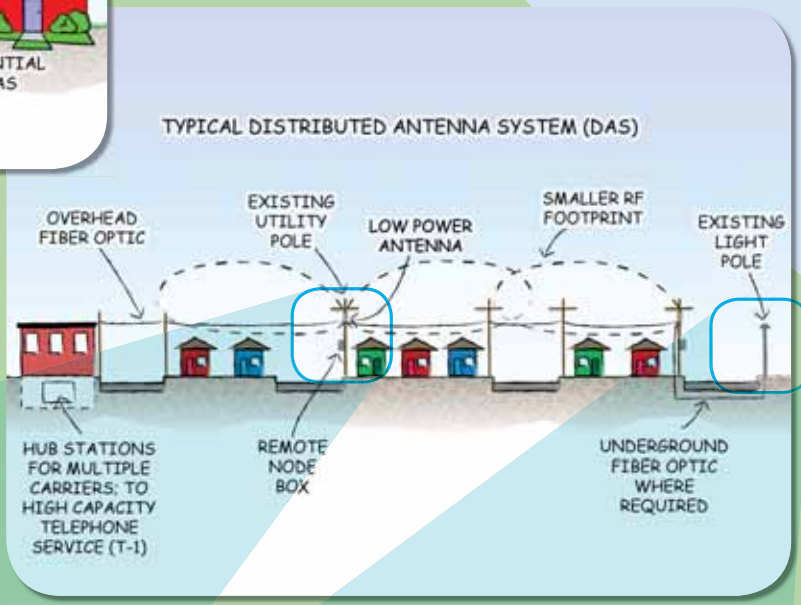
- Enhanced wireless coverage–reduces the number of "dead spots" where service is not available
- Greater call capacity–fewer instances of network unavailability and dropped calls
- Improved call quality
- Fewer full height cell towers required
- Network equipment may be shared by wireless service providers–the network is not limited to a single cell phone carrier
- Network availability during power outages–low power equipment can receive backup from batteries
- Most equipment is hidden or unobtrusive; larger equipment is contained in a single Hub
- Faster new services integration–DAS equipment is easy to upgrade

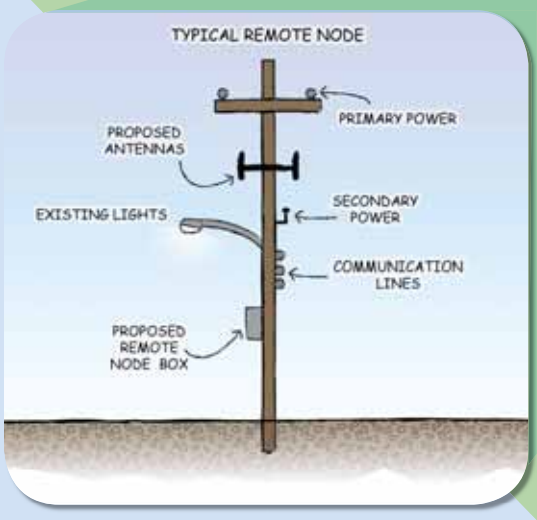




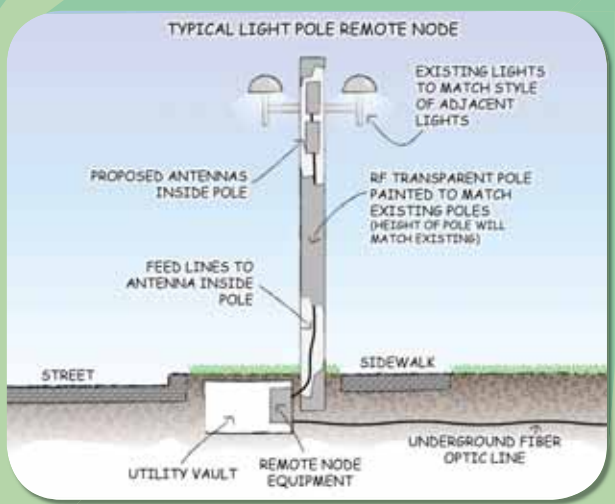
Existing wireless telecommunications networks require towers to relay signals. Signal strength is weakened by distance from the tower and interference from trees and walls.

DAS networks link remote nodes together via fiber optic cable that runs either underground or along existing overhead infrastructure. The fiber optic cable terminates at a Hub. Multiple wireless carriers can locate equipment at the Hub.





In established residential areas remote nodes are often on electricity or light poles already in place. Antennas are low power and unobtrusive.



Sites are designed individually to meet the needs of each community.

CONTACT US

services@pbtelecom.net

Washington

Peter Bocek
PB Telecom, Inc.
303 Battery Street
Seattle, WA 98121
ph 206.838.9275
fx 206.838.5021

Oregon

Eric Sladky
PB Telecom, Inc.
7100 SW Hampton
Street, Suite 223
Tigard, OR 97223
ph 503.601.3271
fx 503.352.3698

Northern California

Patti Ringo
PB Telecom, Inc.
California Business
Center
1652 W Texas Street
Fairfield, CA 94533
ph 714.535.2800
fx 714.535.0624

Southern California

Patti Ringo
PB Telecom, Inc.
1155 E Lincoln Avenue
Anaheim, CA 92805
ph 714.535.2800
fx 714.535.0624

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