Citywide Wi-Fi Coverage
Wireless Security Networks

Wireless technology designed for city & county size network capacity

- Developer
- Manufacturer
- Industrial Grade

Secure and Reliable Connectivity:

- Cities & Counties
- Municipalities
- Businesses
- Public Facilities
- Marinas
- Hotels
- Residential Complexes
- Underserved / Non-serviced
Wireless Technology

- **Wi-Gate Series Access Points (AP)**
  - Long Range
  - Intelligent Network Resources
- **Wi-Fi Coverage, Wireless Video Surveillance, Access Control, Automatic Meter Reading, Wi-Fi Offload, any IP base service and much more**
- **Local Distribution:**
  - 2.4 GHz (Wi-Fi)
  - 4.9 GHz Public Safety
- **Mesh Network Support:**
  - 4.9 GHz (Public Safety)
  - 5.3 GHz (Backhaul)
  - 5.8 GHz (Backhaul)
  - WiMax Ready
Wi-Fi Dilemma No More

- Standard Industry APs are known for:
  - Small radius range per device
  - Loss of quality and speed with increased distance
  - No more than 30 to 40 end-users simultaneously

- Wi-Gate 300-8-8 Two Radios Outdoor Access Point:
  - Quarter mile Wi-Fi device connectivity in each Radio
  - Half Mile connectivity with Customer Premise Equipment
  - No Loss of Quality or Speed
  - Up to 200 simultaneous end-users
Average competitor AP radius range
- 45 - 100 Mts. Radius

Wialan Wi-Fi device direct connectivity
- 250 Mts. (.15 mile) / 54 Mbps
- 400 Mts. (.25 mile) / 11 Mbps

With Customer Premise Equipment (CPE)
- 500 Mts. (.3 mile) / 54 Mbps
- 800 Mts. (.5 mile) / 11 Mbps
Average competitor AP radius range
- 35 - 75 Mts. Radius

Wialan Wi-Fi device direct connectivity
- 250 Mts. (.15 mile) / 300 Mbps
- 400 Mts. (.25 mile) / 150 Mbps

With Customer Premise Equipment (CPE)
- 500 Mts. (.3 mile) / 300 Mbps
- 800 Mts. (.5 mile) / 100 Mbps

Incredible Reach - Speed 300 Mbps 802.11n
Ex: Miami Beach Florida

In 2006, the commission approved a $5 million contract with IBM to create the network. Under the deal, 95 percent of the city should have had free Wi-Fi by 2007. That didn't happen. The problem: Ironically, creating a wireless network requires a hell of a lot of wires. To get a strong signal across one square mile, you need about 60 wireless signal nodes, says Fleishman.

Current City Wide Wi-Fi Dilemma

Saturate easily
Most act as a bridge only
Low multitasking capabilities
Most have Slow processing speeds (ARM Processor)
Many fail to have NEMA Standard Enclosures
AP dependent on centralized command center
Users vulnerable to cyber threats (hackers, viruses)
No VPN from AP to Device included
Poor standalone network traffic & analysis capabilities
Each Wi-Gate is its own Network handling distributed processing

- 500 MHz AMD GEODE CPU
- 256 MB Ram, 256 Solid state Storage
- VPN Server included (40, 56, 128 bit Encryption)
- Encrypted Mesh
- Network Access Translation (NAT)
- Bandwidth Shaper
- Quality of Service (three levels)
- Traffic Analyzer
- Port Mapping Support
- Client Signal Analyzer
- Wi-Max and other technology ready
- Patented Hermetically Sealed Enclosure
- More features not listed here
The Distributed Network

Wi-Gate creates a Distributed Network Structure (DNS)

**Reliable:** If one AP fails the network can reroute itself using a variation of the spanning tree protocol concept, if pay portal goes under, system will still provide service to customer

**Secure:** VPN server (250 simultaneous VPN end users), encrypted mesh and firewall protection assures that users and network are safe from cyber threats

**Intelligent:** QoS (3 levels), bandwidth shaper, client signal analyzer, port mapping, and traffic analyzer help to manage network usage

**Efficient and Fast:** 500 MHz AMD Multitask processor, 256 MB of ram and hardware supported encryption enable quick packets transfer in the most demanding conditions

**Profitable:** Pay portal ready

**Manageable:** Remote support and advance management functionality.
Five AP covers one square mile in open areas (more required in city setting)

Signal redundancy for reliable Wi-Fi coverage

1/4 mile reach per device
Accomplish More with Less

- Less access points and repeaters due to superior radius range
- Less time installing and launching network (plug and play)
- Less money on fewer devices therefore less installs

- Full Wi-Fi coverage everywhere
- Internet to underserved and non-served areas
- Public safety wireless video surveillance
- Wi-Fi Off Load
- Entire System Available with Solar power
- Solar powered Cameras, switch, transmitter, and more
Wireless Miami-Dade has partnered with WI-FI providers, Motorola, Nortel, Cisco, and **Wialan Technologies**. Each park is sponsored by a different company. Goulds Park is sponsored by Wialan.
Our partnership with Wialan Technologies will enable County residents to surf the Internet, work and learn in a pleasant outdoor setting. It will help close the digital divide and keep our parks safe through the use of wireless security cameras,” Mayor Alvarez said.

- Published by the office of Mayor Alvarez

Parque Goulds de Miami
Video Surveillance Directly by Patrol Cars, Recording of event Directly on laptop hard drive for evidence.
View of Surveillance with 4 Wireless Cameras.
Clarity and Color, Wireless Full HD 1080P (1920 X 1080)
Cellular Solution

Distribution WiFi 2.4GHz

Mesh 5GHz

Wi-Gate 300

LAN Switch - POE

Femto Cell

Gateway Multibanda

Carrier Ethernet

Internet
Cellular Distribution & WiFi – 4G SIM and Booster

- **WiFi Distribution 2.4GHz**
- **Cellular Booster Receiver up to 20 miles**
- **4G/3G Antenna**
- **Wi-Gate 300**
- **Cellular Base Station**
- **Internet**
Internet Distribution & WiFi via 4G SIM

- WiFi Distribution 2.4GHz
- Cellular Booster - Receiver up to 20 miles
- 4G/3G Antenna
- Wi-Gate 300
- Cellular Radio Base Station

SIM
Cellular Booster
Internet
Cellular Distribution, Internet & WiFi w/ Satellite Link

- Cellular Booster Distribution
- WiFi Distribution 2.4GHz
- Mesh 5GHz
- Cellular Booster - Receiver up to 20 miles
- Wi-Gate 300
- Internet
- Cellular Base Station
School Distribution in Dominican Republic

[Diagram of school distribution network with various access points and equipment placements]

Leyenda:
- Full HD Camera
- Point to Point
- WiFi Distribution
- PA System
- Wi-Gate 300
Installed Wialan Systems

Locations in U.S.
- Miami Dade Count, FL
- Coral Gables, FL
- Tampa, FL
- Cutler Bay, FL
- West Palm Beach, FL
- Ashland, OR
- Suffolk, MI

Internationally:
- Mexico
- Dominican Republic
- Bolivia
- Spain
- Ecuador
- Venezuela
- Colombia
- Uganda
- Chile
- Congo
- Guatemala
- Nicaragua
- Honduras
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