



Orange County Wireless Tech Summit

June 27, 2008

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What Does NetLogix Provide?

NetLogix provides complete lifecycle management services encompassing all layers of telecom networking. Each layer defines requirements for our professional and managed services.

Critical Facilities

Data Centers
Facilities Engineering
Power/HVAC

Wireless Networks:

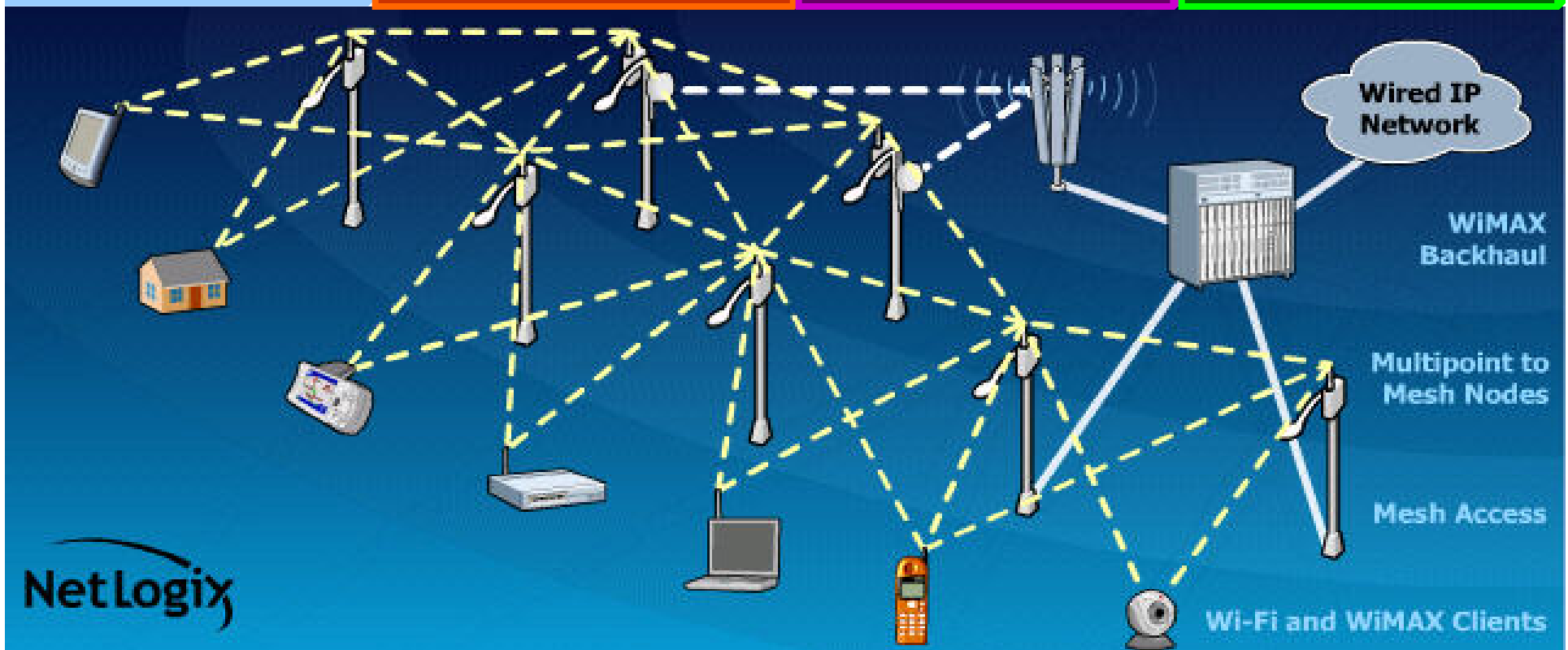
3G/4G
WiMAX/UMTS/LTE
Municipal Wireless

Applications:

Metering (AMI/Parking)
Public Safety/Fire
Video Surveillance
+ Many more...

Managed Services:

Network Management
Applications Mgmt
Video Management





Wireless Options...

Today...

Point-to-Point

Unlicensed
Licensed

Point-to-Multipoint

Unlicensed "WiMAX Class"

Portable

Unlicensed Wi-Fi (b, g)

Mobile

Licensed 1XRTT, EDGE, UMTS,
EVDO

Tomorrow...

Point-to-Point

Unlicensed
Licensed

Point-to-Multipoint

Unlicensed "WiMAX Class"
Unlicensed WiMAX

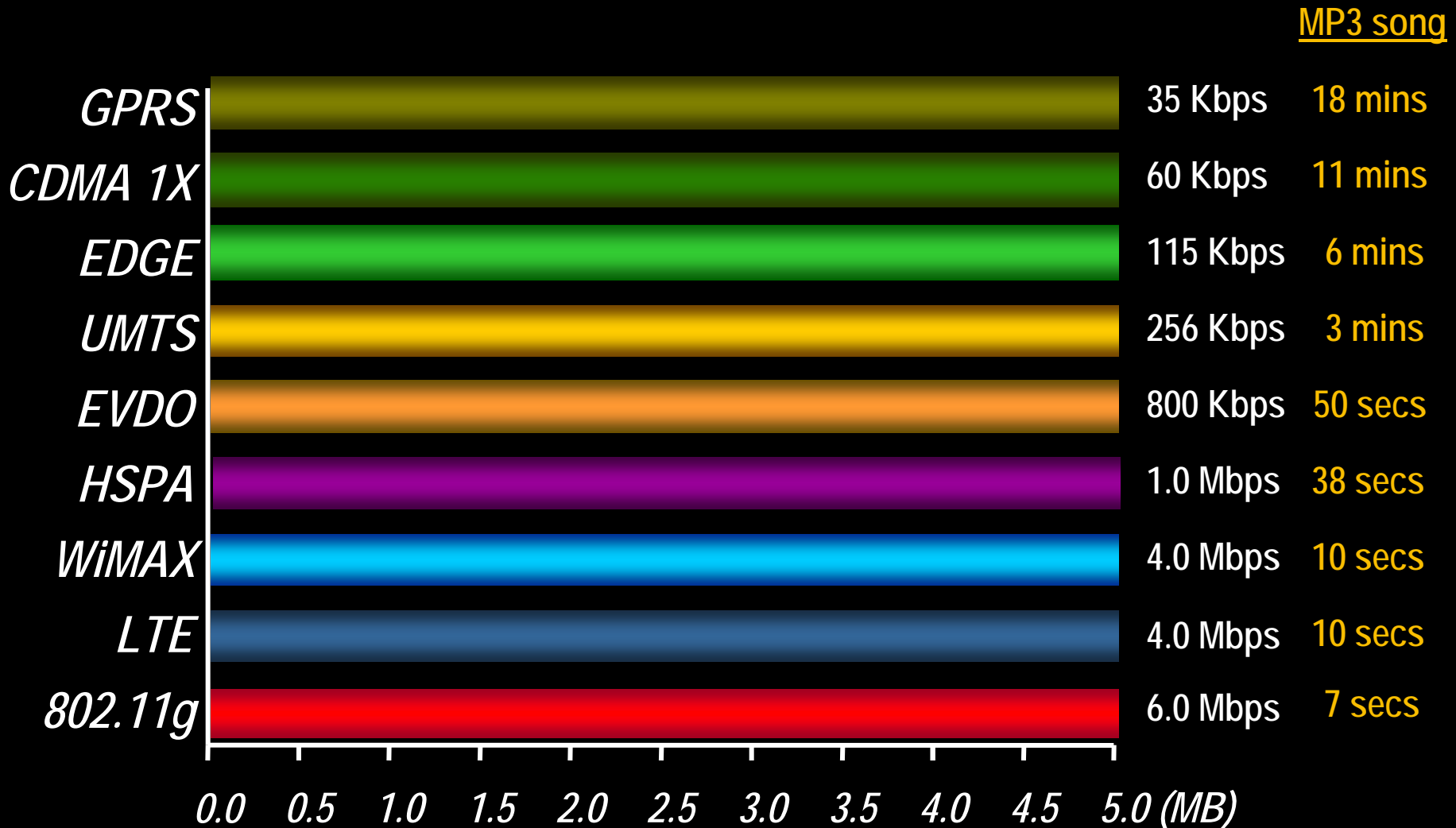
Portable

Unlicensed Wi-Fi (b, g, & n)

Mobile

Licensed WiMAX, LTE, HSPA

Average Data Transfer Rates (MP3 Song)



"MUNICIPAL WIRELESS"

| SPECTRUM | PRIMARY USE |
|---------------------|-------------------------|
| 900 MHz | Fixed & Mobile Access |
| 4.9 GHz | Public Safety Access |
| 5.3, 5.4, & 5.8 GHz | Fixed Access |
| 3.65 GHz | Fixed & Portable Access |
| 2.4 GHz | WiFi Access |

900 MHz

- ▶ Up to 1~2 Mbps
- ▶ Excellent in high foliage or non-line-of-sight environments
- ▶ Excellent range (up to 5 miles non-line-of-sight)
- ▶ Limited channels
- ▶ Highly susceptible to interference
- ▶ Works in mobile environment
- ▶ Common uses: rural and public safety

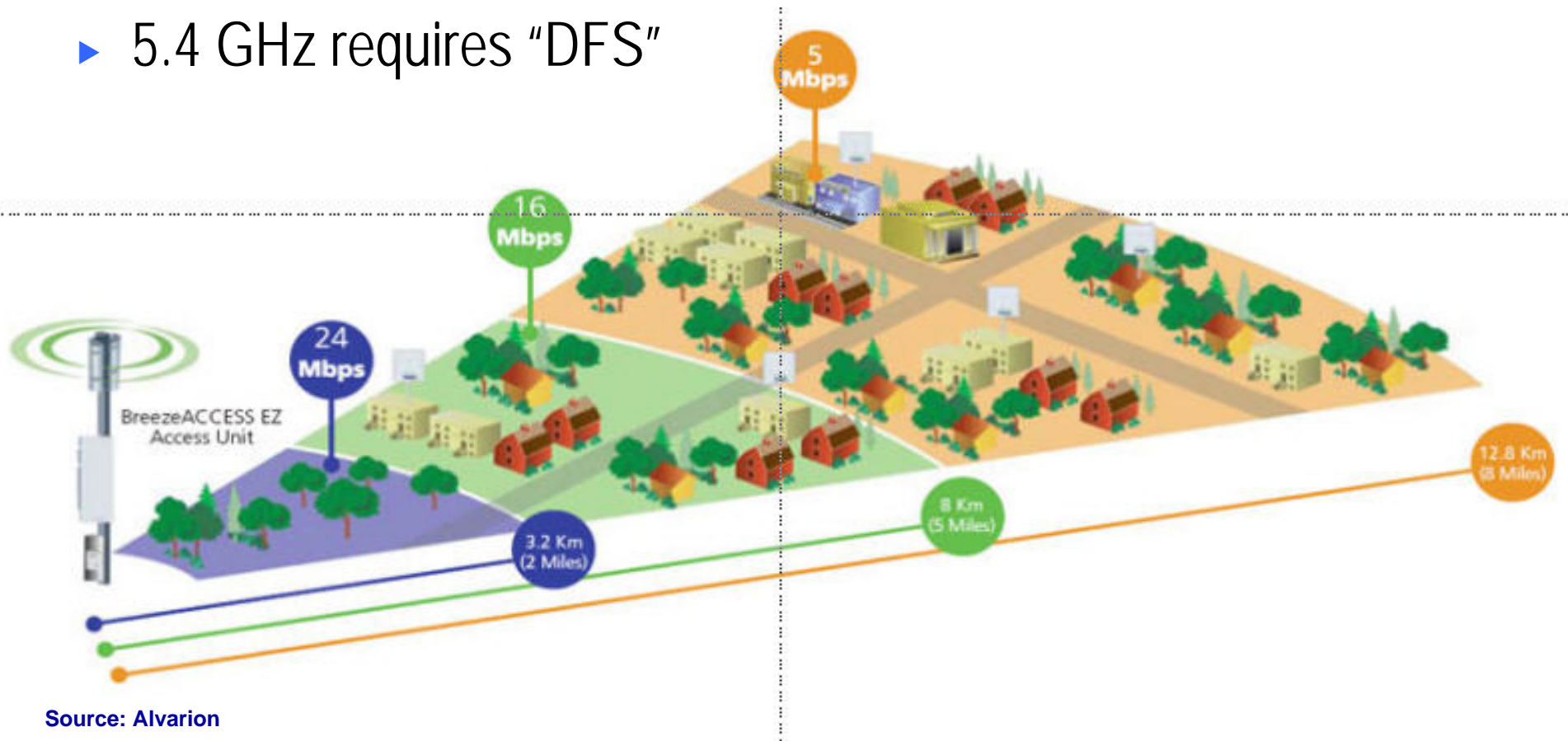
4.9 GHz (Public Safety)

- ▶ Up to 15 Mbps from one point to multiple points.
- ▶ VERY limited channels (2)
- ▶ Susceptible to high levels of self-interference

| | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 1 | 2 | 1 | 2 |
| 2 | 1 | 2 | 1 | 2 | 1 |

5 GHz

- ▶ Up to 24 Mbps to multiple points & multiple sectors
- ▶ Multiple channels
- ▶ 5.4 GHz requires "DFS"



Source: Alvarion

3.65 GHz

- ▶ Up to 15 Mbps to multiple points & multiple sectors
- ▶ Limited channels
- ▶ Requires "DFS"
- ▶ Requires license
 - ▣ NetLogix has a national license!
- ▶ Excellent for "RF saturated" environments
- ▶ Fixed and Portable (Not mobile!)

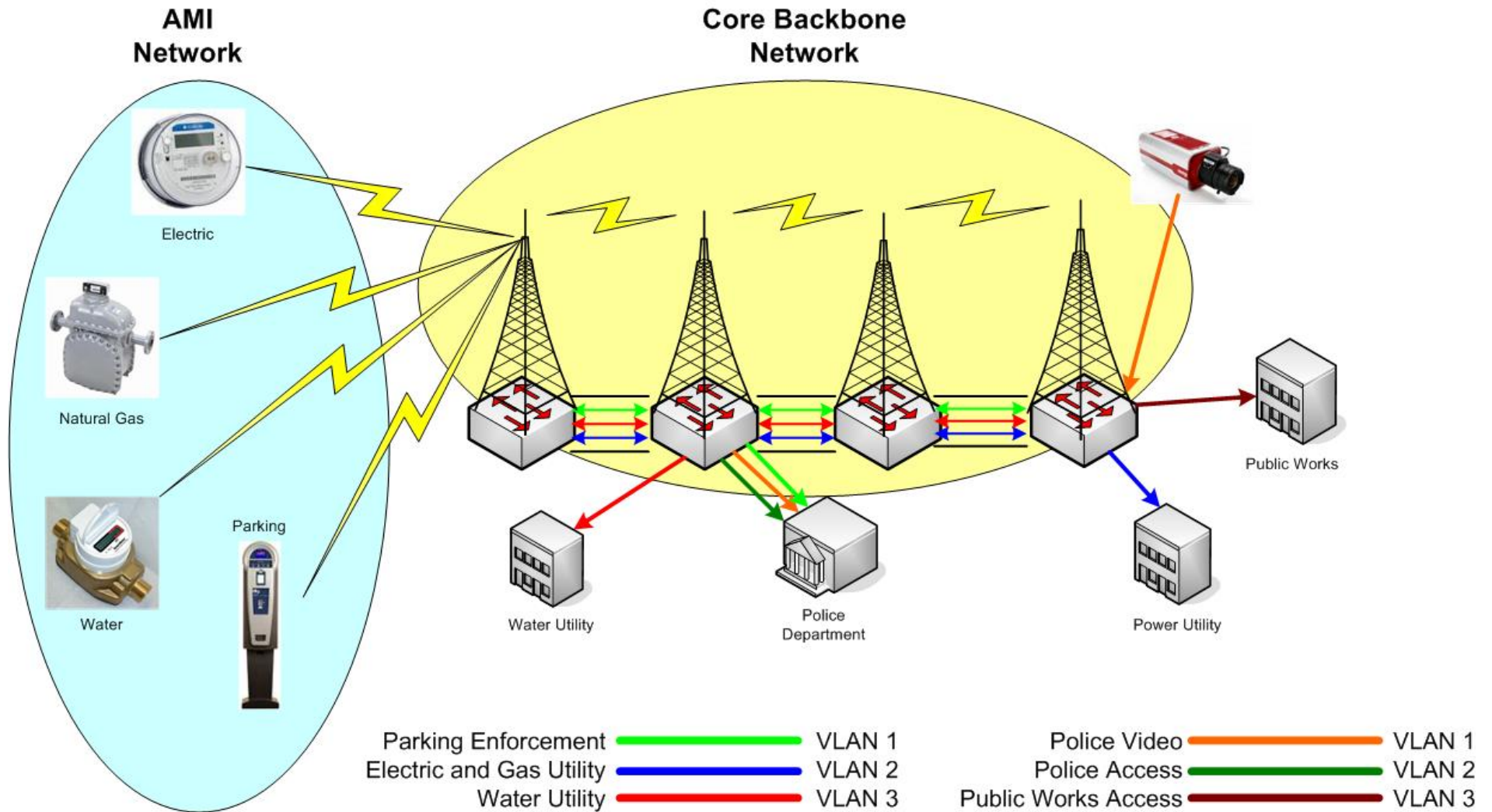
2.4 GHz (WiFi)

- ▶ Outdoors up to 3 Mbps ("b"), 6 Mbps ("g")
- ▶ 11 channels (overlapping)
- ▶ Limited range (typical laptop = 200')
- ▶ **Lowest cost client devices – by far!**
- ▶ **"Open Architecture" (interoperability)**

2.4 GHz (802.11n)

- ▶ *Speeds "maybe 20 Mbps"*
- ▶ *3-4 Channels*

GOAL: INTELLIGENT MULTI-USE NETWORK



Network Component & Service Considerations

Core Equipment

- Core Router
- VLAN-enabled Switch
- VPN/Firewall
- Captive Portal Gateway

Wireless Equipment

- Mesh Radios
- Antennas, Connectors, Etc.
- Photocell Adapters
- Multipoint Radios

Professional Services

- Feasibility/Survey
- RF Design & IP Design
- Project Management
- Physical Installation
- Testing & Optimization

Managed Services

- Tech Support
- Network Monitoring
- Network Management
- Remote Engineering
- Field Maintenance

NetLogix Pilot Program

Core Equipment

- Core Router
- VLAN/Network Switch
- VPN/Firewall
- Captive Portal Gateway

FREE!

Wireless Equipment

- Mesh Routers
- Antennas/Access Points
- PoE Switches
- Multipoint Radios

FREE!

Professional Services

- Feasibility/Survey
- RF Design & Deployment
- Project Management
- Physical Installation
- Testing & Optimization

FREE!

Managed Services

- Tech Support
- Network Monitoring
- Network Management
- Remote Engineering
- Field Maintenance

NetLogix Pilot Program

- ▶ **FREE Core Equipment**
- ▶ **FREE Wireless Equipment**
 - ❑ Up to 10 Mesh Radios (5.8 / 2.4)
 - ❑ Substitute for Multipoint where needed
 - ❑ Approximately 1 Linear Mile of Coverage
- ▶ **FREE Professional Services**
 - ❑ Feasibility / Survey
 - ❑ RF + IP Design
 - ❑ Installation
 - ❑ CPE solutions
- ▶ **Only Pay for Managed Services**
 - ❑ \$5,000/mo
 - ❑ Reduces price after term concludes – you own the network!

BUT WAIT...

**THERE'S
MORE!!!**

NetLogix Video Surveillance Pilot Program

- ▶ **FREE Core Equipment**
- ▶ **FREE Wireless & Video Equipment**
 - ❑ All requisite Multipoint radios
 - ❑ (5) Megapixel or PTZ cameras
 - ❑ Video Management Software
 - ❑ Terabyte Server
- ▶ **FREE Professional Services**
 - ❑ Feasibility / Survey
 - ❑ RF + IP + Video Systems Design
 - ❑ Installation
- ▶ **Only Pay for Managed Services**
 - ❑ \$5,000/mo
 - ❑ Reduces price after term concludes – you own the network!

THANK YOU!!!

Eric DaVersa
Vice-President, Business Development
Phone (858) 764-1998
edaversa@netlogix.com