

# **Digital Cities**

*A paradigm shift that is changing  
the world*

*June 2005*

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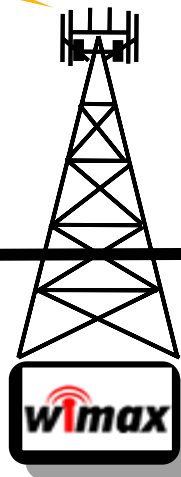
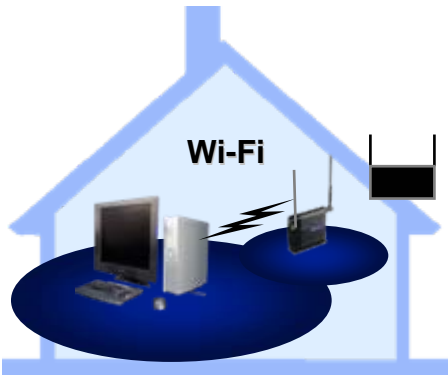
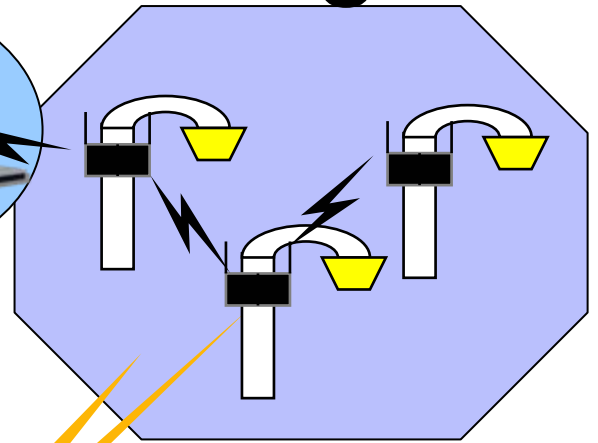
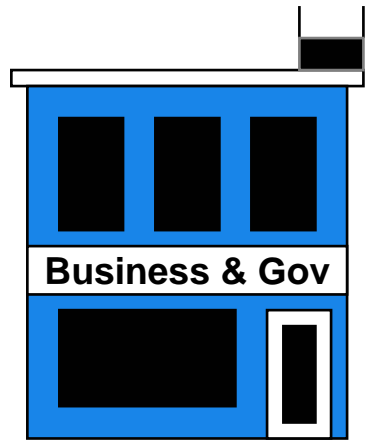
# Environment

- Municipal WMAN deployments
- Creative business models
- Legislated restrictions
- Demand driving innovation
- Range of technologies
  - Wireline, WiFi, WiFi Mesh, WiMax, Proprietary Wireless
  - Wi-Fi service launched in Islington (London)
  - Glen Cove, Long Island gets Wi-Fi hotzone
  - Moorhead, Minnesota gets citywide Wi-Fi
  - Push for free citywide Wi-Fi in San Antonio, TX
  - Buffalo, NY plans giant Wi-Fi hotzone
  - Addison, Texas unwired
  - San Francisco public utility approves muni broadband study
  - Chicago looks into citywide Wi-Fi
  - South Bend, Indiana gets downtown hotzone
  - OneCleveland serves high-speed access
  - Rio Rancho, NM unwired
  - Hongkong residents get Gigabit broadband
  - San Sebastian, C unwired
  - Anaheim, CA ponders citywide Wi-Fi
  - Citywide Wi-Fi for the Twin Cities
  - St. Cloud, Florida gets citywide Wi-Fi
  - Cebu City unwired
  - Bringing broadband to Brooklyn
  - Fullerton, California unwired
  - Las Vegas mesh network details
  - Atlanta unwired
  - Dayton, Ohio goes Wi-Fi
  - Seattle to get fixed wireless service

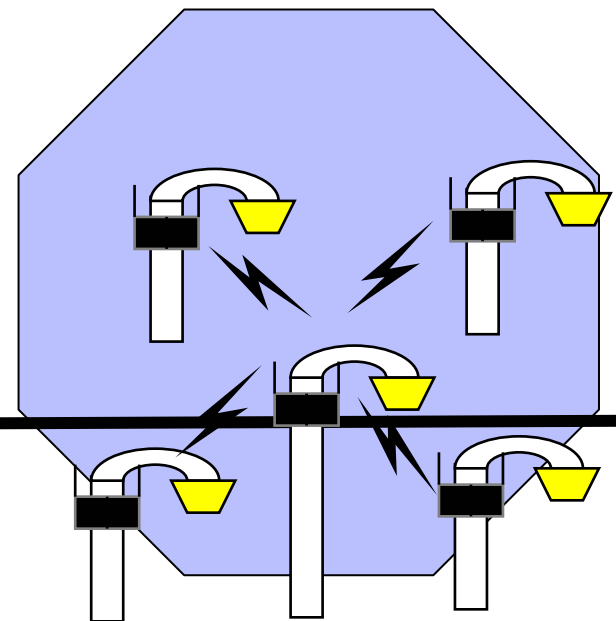
# Principles for Municipal Broadband

- More Bandwidth is ‘Good’
  - Digital divide is real and must be addressed
  - Broadband underpins IT-based economies
- Thriving ecosystem of innovation: no bans on municipal actions, but no exclusivity either
- Not a competition: public-private partnerships work and make sense

# WiFi and WiMAX Technologies



Wired Backbone

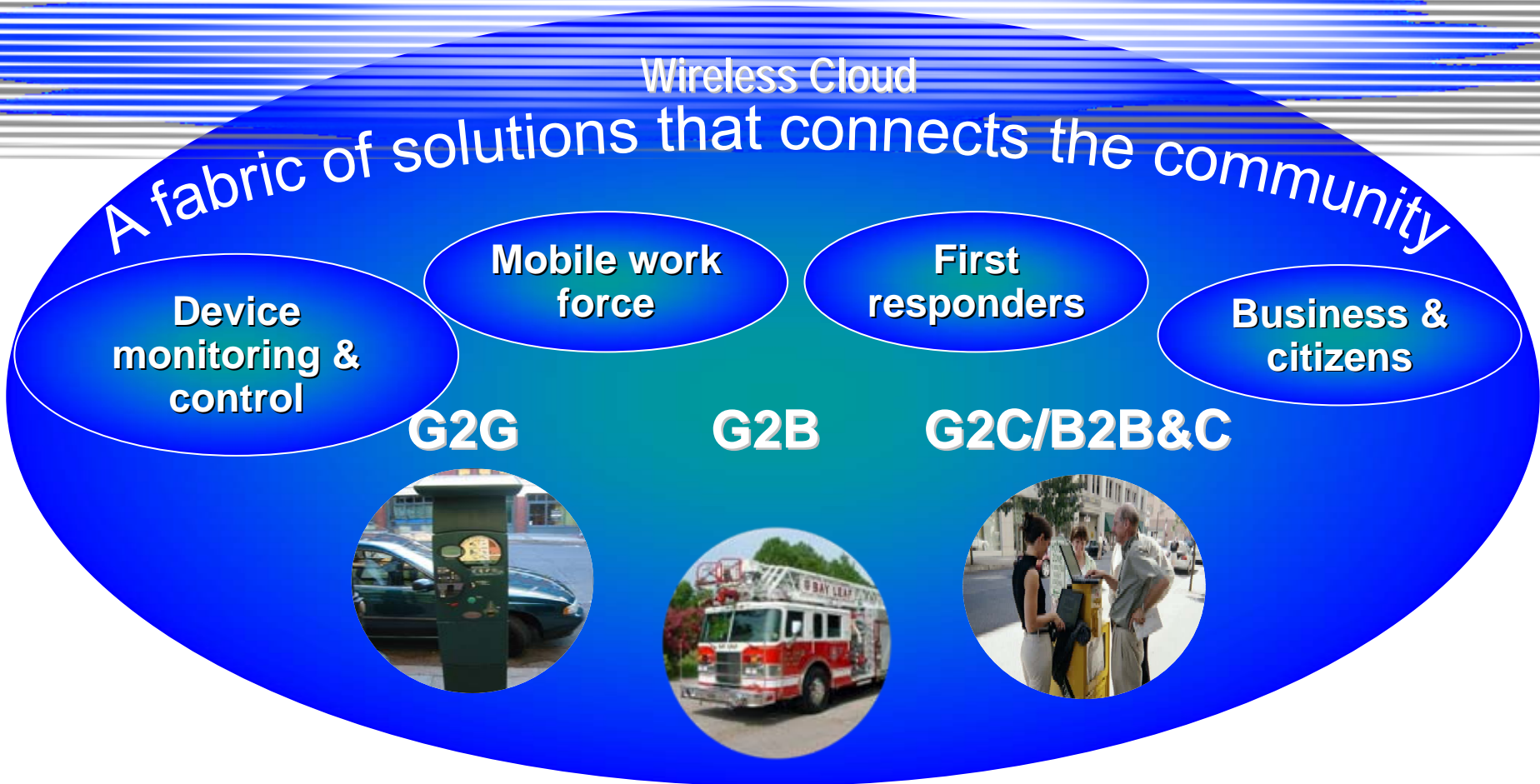


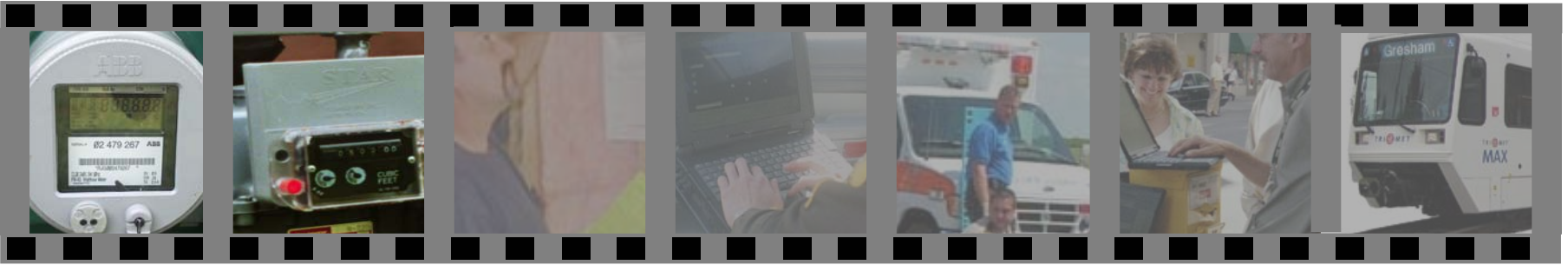
# What is a Digital City?

A community whose leadership has a vision and active plan; to transform the way people live, work and play – through a computing and communication fabric which enables government, business and citizens.



# Digital Cities





- Device Monitoring & Control

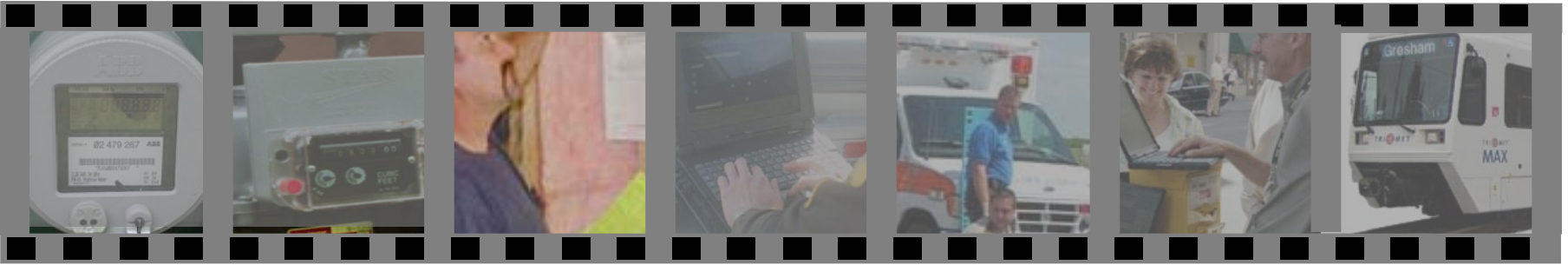
- Examples

- Gas Water & Electric Meters
- Parking Meters
- Appliance control – Furnace, Water Heater, Air Conditioning
- Sensors (*Temperature, Chemical*)
- Vehicle Tracking & Location

- ROI

- Wages, Insurance, vehicle maintenance, leaks/peaks/outages, billing cycles, affordable backhaul





- Mobile Work Force

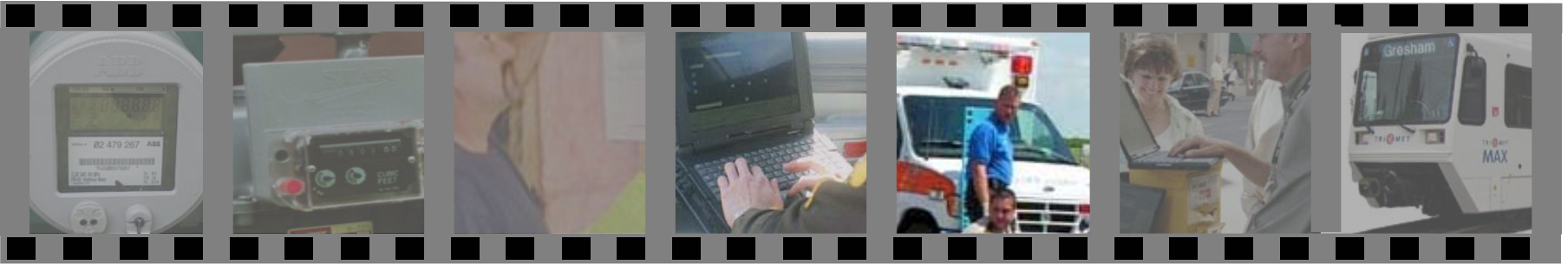
- Examples

- Permits & Licensing
- Automated field inspectors
- Work order automation for maintenance & Repair
- Vehicle inventory tracking (*RFID*)

- ROI

- Remote Access to Data, Reporting & escalation, Reduce lost equipment





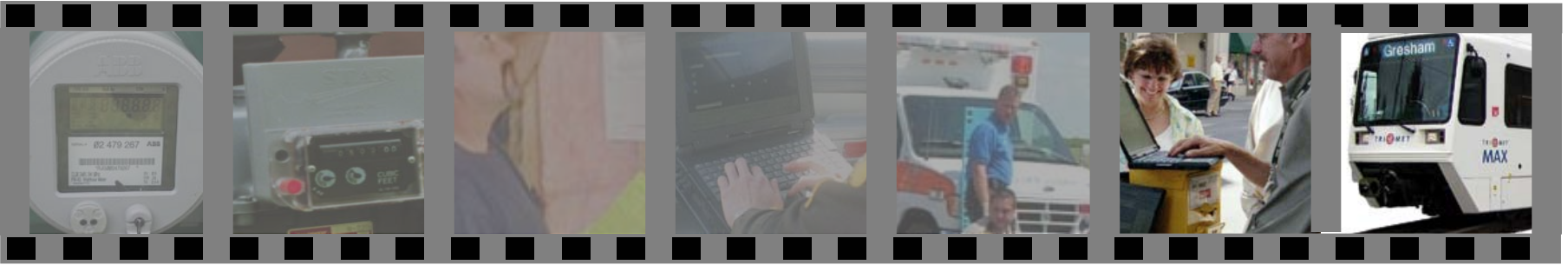
- Public Safety

- Examples

- Access & exchange of data (*Video*)
    - Vehicle location
    - Incident command
    - Patient identification & triage
    - Vehicle Inventory Tracking (*RFID*)

- ROI

- Reduced travel to file reports, reduce lost equipment, locate missing vehicle or person in building, save life



## • Business and Citizens

### – Examples

- Education (*Collaborative & distance learning*)
- More than email (*Order entry, CRM, Finance, HR, Inventory, Travel*)
- Product delivery (*Field sw upgrade*)
- Advertising (*Not proven yet*)

### – ROI

- Make decisions with same tools found in office, *fast order entry*