



Satellite Emergency Management

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Agenda

- **Emergency Management: Who are the Customers ?**
- **What are their Needs and Challenges ?**
- **What Solutions Exist Today ?**
- **Is There a Best Practice Example ?**
- **What does Spacenet Recommend Going Forward ?**
- **Appendix:**
 - › Satellite Networks For Emergency Management
 - › Sharing the Broadband Advantage for Emergency Management

Emergency Response Extends Beyond Government Agencies

Emergency Management

First Response

On Scene In Minutes

Deployed For Hours

- **Federal, State & Local Agencies**
- **Law Enforcement**
- **Emergency Medical Services**
- **Fire, Rescue & HAZMAT**
- **Utility Services**

Relief Deployments

On Scene In Hours

Deployed For Weeks

- **Commercial & Civilian Agencies**
- **Red Cross/Relief Shelters**
- **Mobile Insurance Claims Centers**
- **Grocery & Pharmacy Supplies**
- **Financial – ATM, Pay Checks**
- **Equipment, Fuel, Logistics**

Communication Challenges in Emergency Management

Minimize Complexity → Focus On The Mission



Solution is Much More Than Equipment

Success Requires Integrated Service

Application Considerations

- # of users
- Voice lines
- Internet, secure data, two-way video
- Bandwidth
- Length of deployment



Cisco iComm System



Spacenet ION Instant Communications Solution

Budget Considerations

- Equipment cost = \$50,000+
- Service charges = \$150 - \$2500+ MRC
- Full-time or Part-time Service Plans



Spacenet ECV

Case Study: Public Service – Large Metro Police Force

Reliable, Redundant Emergency Communications

Customer Need

- Continuity of Operations for All Precincts and Data Centers
- Complete voice, video, & data support
- Integrated into existing IT infrastructure
- Special high wind resistant antennas

Solution

- Always-on “hot stand-by” solution
- Custom satellite network (TDMA & SCPC)
- Employs Cisco® Network Module
- Specialized ultra high wind antenna system design



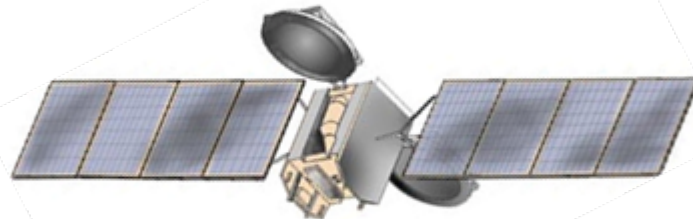
CUSTOMER VALUE

- Total network back-up solution
- Independent from terrestrial network
- Near 100% network availability

Satellite Value Proposition

Satellite Enables High Performance Networking Virtually Anywhere

- **Ubiquitous Coverage** - anywhere with view of the Southern sky
- **Converged Communications** – simultaneous voice, video and data
- **Continuity of Operations** – redundant, diverse, and independent path
- **Rapidly Deployable** – mobile systems deploy in 10 minutes or less
- **Scalability** – service for a single site or thousands of sites
- **Security** – inherent security plus secure over-the-air encryption
- **Capacity/Speed** – satellite is capable of delivering speeds to one location or thousands from Xkbps to XMbps



Recommendations

- Public Safety Agencies have a recognized need for COOP solutions, but can't attain the funding through the normal budget process

Recommendations:

1. *Dedicated government grants for satellite COOP programs*
2. *Create efficiencies by coordinating the acquisition of telecom equipment and services at the state level by combining a variety of requirements, e.g. Emergency, public safety, schools, libraries etc.*

- Many state and local governments have implemented terrestrial based COOP solutions that are susceptible to the same vulnerabilities as their primary network

Recommendation:

1. *Mandate appropriate public safety agencies have a COOP plan independent of terrestrial infrastructure*



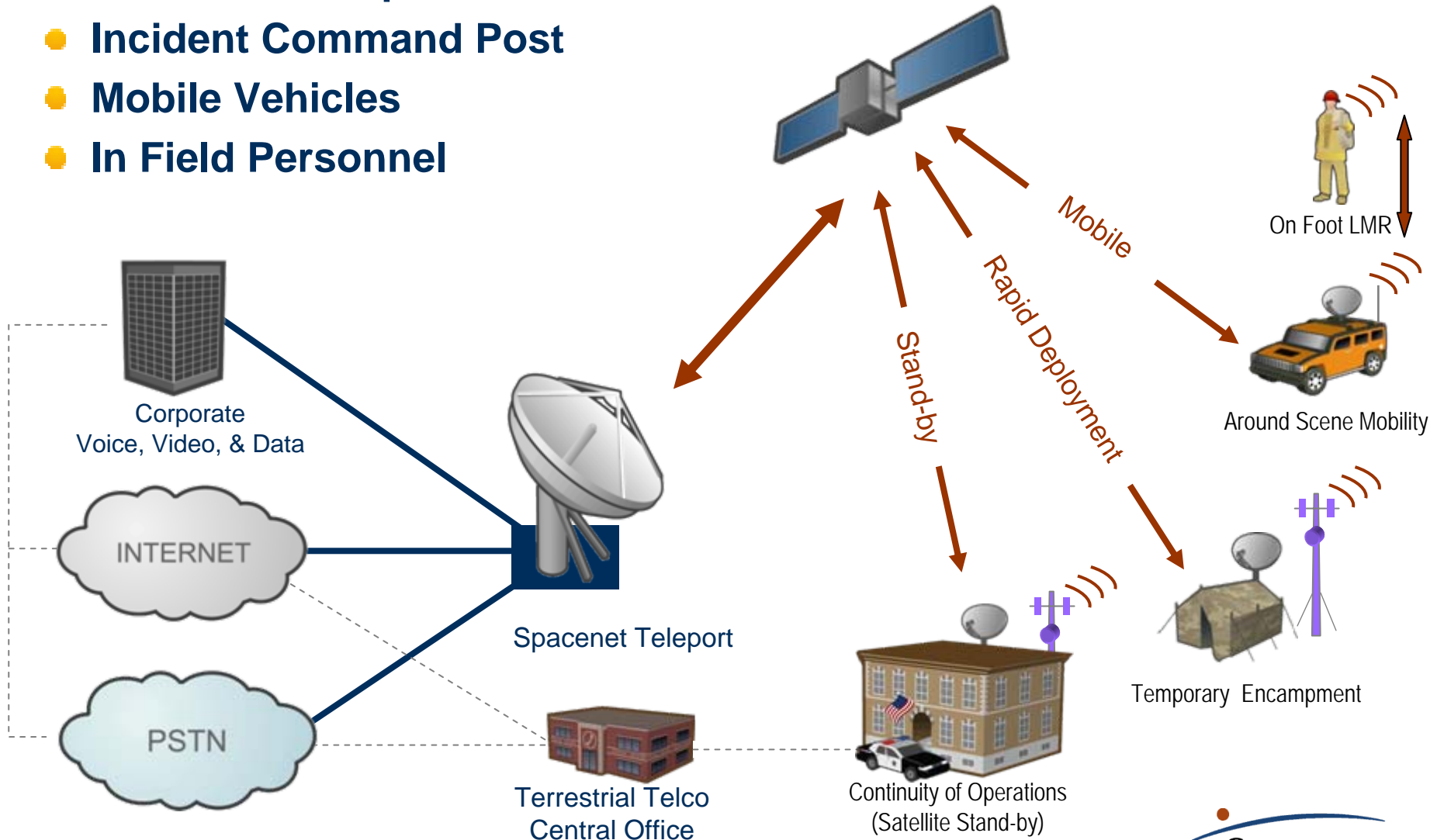
Appendix

Sharing the Broadband Advantage

Emergency Communications

Integrated Satellite Solution - Multiple Form Factors

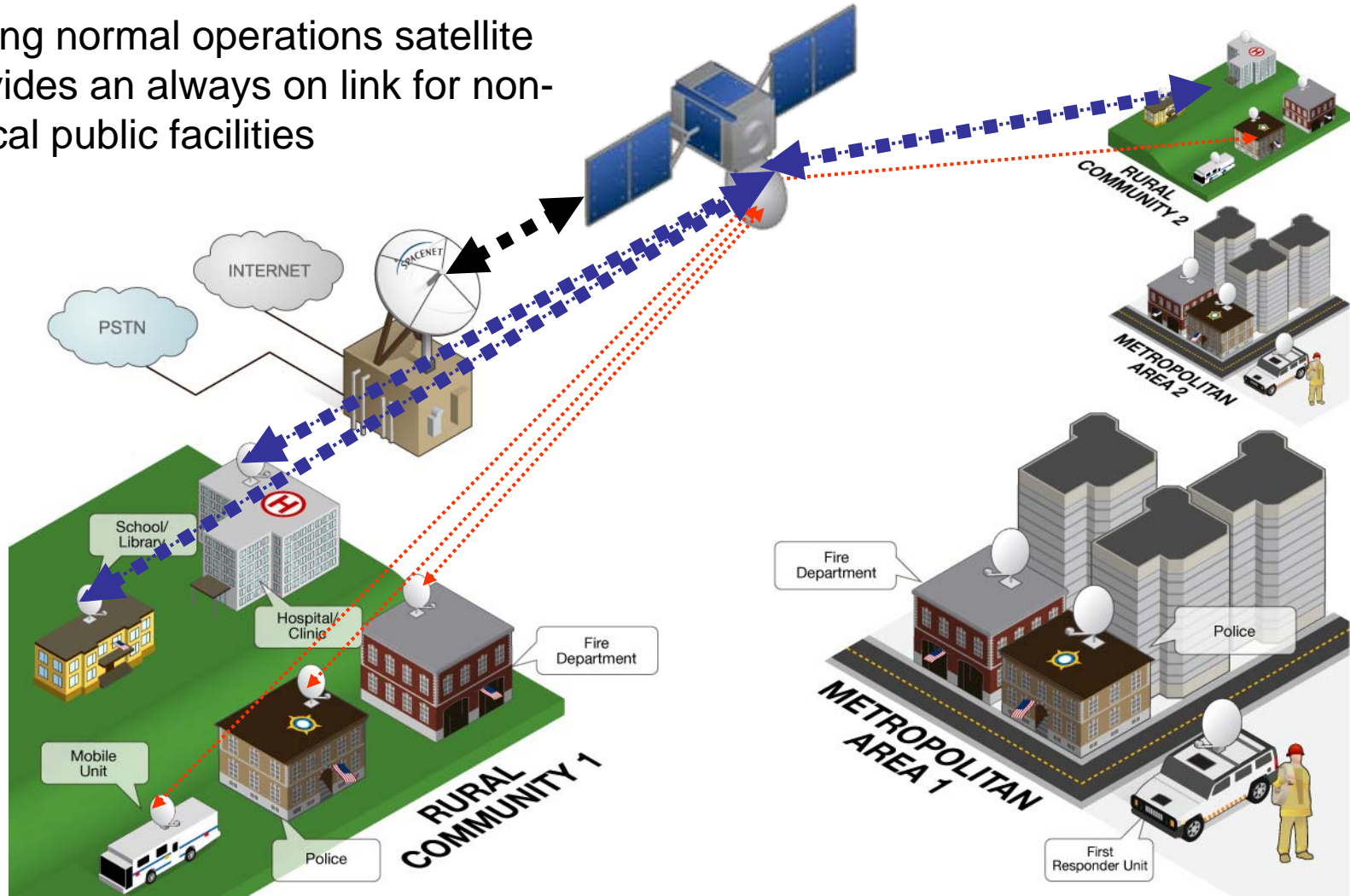
- HQ/Precinct/Squad
- Incident Command Post
- Mobile Vehicles
- In Field Personnel



Sharing the Broadband Advantage

Integrated Satellite Solution – Re-purposed Capacity For Greater Efficiency

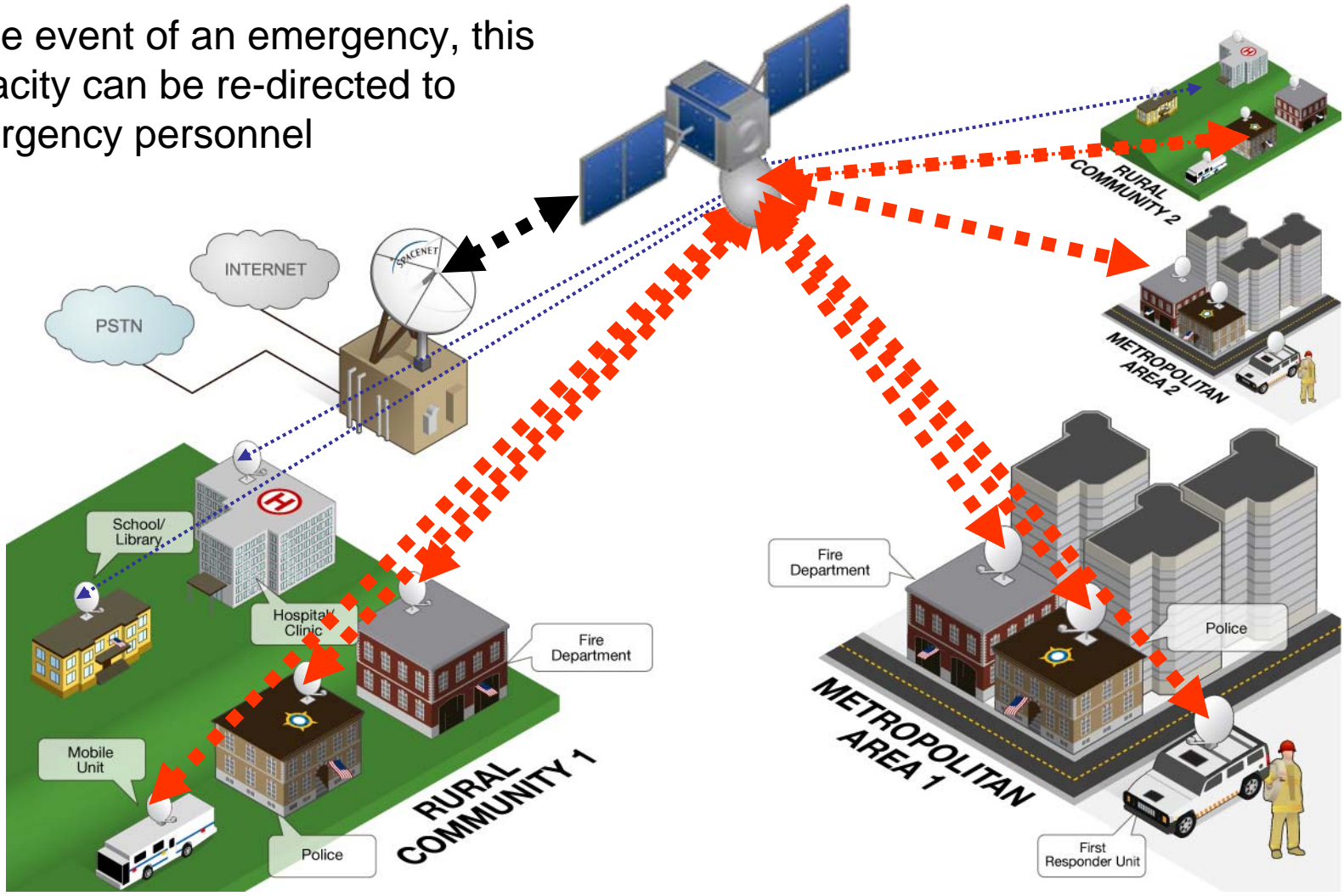
During normal operations satellite provides an always on link for non-critical public facilities



Sharing the Broadband Advantage

Integrated Satellite Solution – Re-purposed Capacity For Greater Efficiency

In the event of an emergency, this capacity can be re-directed to emergency personnel





High Performance Networking Anywhere™

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