Business Continuity and Disaster Recovery

Verizon Wireless
Emergency Response Capabilities and Preparedness

June 2014
Introduction

Verizon Wireless:

• Largest wireless carrier in the United States
• Invested over $80 billion to expand and maintain our wireless networks

Excerpts from our credo:

“We have work because our customers value our high-quality communications services”

“We Run To A Crisis, Not Away”
BC / DR Team Activities

Business Continuity / Disaster Recovery Supports Reliability:

• Crisis Management Structure & Training
• Focus on Mission Critical Functions and Systems that Support Customers:
  • Network Systems: Voice & Data, Authentication, Text Messaging
  • IT Systems: Provisioning, Call Center Routing, Self-service Tools
  • Functional Teams: Tech Support, Warehouse Operations, NOC
• Invest in Reliability:
  • Geographically Diverse Locations: Teams and Systems
  • Strict Standards: Engineering, Design and Operations
  • Develop / Test Recovery Plans and Capabilities: Hundreds of annual tests
Crisis Management Structure

44 Crisis Management Teams (CMTs)

- Led by Senior Management - cross functional command and control
- Local Response by Local Teams - teams support each other
- Emergency Operations Center (EOC) - locations and resources
- Annual team exercises to enhance response capabilities
- Conduit for Customer needs during an emergency
- “Battle Tested”
Network Operations

- 44 Crisis Management Teams
- Over 148 Switches
- Thousands of cell sites
- 2 Network Operation Centers
Network Operations

Network Operations Centers (NOCs)

• Located in New Jersey and Texas
• 24x7x365 nationwide monitoring:
  ✓ Facilities
  ✓ Cell sites
  ✓ Switches
• Works closely with regional field operations teams and vendors to coordinate and expedite the restoration of service in the event of outages
Network Operations

Mobile Switching Centers

- Facilities engineered to standards
- Site selection
- Fire detection and suppression systems
- Security systems & guards – restrict unauthorized access
- Back-up batteries – always online
- Back-up generators – systems and HVAC
- Diverse circuit paths – multiple building entrance points
- Disaster recovery plans
- Back-up of system configurations and data
Network Operations

Cell Sites

- Back-up batteries
- Back-up generators – fixed and portable
- Fire detection systems
- Security systems
- Real time monitoring and diagnostic capabilities
- Maintenance and operational procedures, ex. brush clearing
Network Operations

Portable Cell Sites

• Cell on Wheels (COW)
• Cell on Light Truck (COLT)
Network Operations

Back-up power

• Permanent battery and generators at all switches and most cell sites
• Generator on a Trailer (GOAT)
• Load test regularly
• Preventative maintenance
Network Operations

The most critical recovery asset

- Thousands of highly-trained and experienced technicians
- Proven ability to respond
- Clear direction and priorities
- Test equipment and tools
- Credentials and company vehicles
- Emergency response training
Talk To Us

• We have the same goal – to enhance communication

• Before an Emergency:
  • Understand our capabilities, your capabilities, concerns, and needs
  • Set expectations & identify solutions
  • Identify contact people

• During an Emergency:
  • Establish contacts, back-ups, and call times
  • Maintain situational awareness – information sharing
  • Identify priorities, set expectations
VCRT: Verizon Wireless Crisis Response Team

• Program supports first responders, government agencies, and non-profit organizations during emergencies

• **VCRT offers:**
  - Nationwide hotline answered live 24x7
  - Loaner phones & data devices
  - Assist with emergency wireless coverage
    - COWs & COLTs
    - Repeaters
  - Emergency Communication Centers
    - Charging stations
    - Phone calls – Internet access

• **Example Deployments:**
  - 2014 Arkansas and Mississippi Tornados – charging stations, loaner phones and data devices
  - 2013 Moore, OK Tornado – community communication trailer, command vehicle, charging stations
  - 2012 Hurricane Sandy – mobile offices, command vehicle, 2,000 data & phone devices deployed
# Services that Support Emergency Needs

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wireless Emergency Alerts (WEA)</strong></td>
<td>• emergency alerts to mobile devices based on location</td>
<td><a href="http://www.fema.gov/wireless-emergency-alerts">www.fema.gov/wireless-emergency-alerts</a></td>
</tr>
<tr>
<td><strong>Enhanced 911 (E911)</strong></td>
<td>• helps dispatcher identify caller location</td>
<td></td>
</tr>
<tr>
<td><strong>Law Enforcement Response Team (LERT)</strong></td>
<td>• assists law enforcement with legally authorized CALEA requests</td>
<td><a href="mailto:vzwlert@verizonwireless.com">vzwlert@verizonwireless.com</a></td>
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</tbody>
</table>
Wireless Solutions

- **Wireless Solutions Enhance Disaster Recovery**
  - **Contact Information:** Key contacts stored on device and cloud
  - **Broadband Access:** Work remotely with Aircard, Jetpack, etc.
  - **News & Information:** Access to Internet and news media
  - **Wireless Router:** Keep computers working if data circuit severed
  - **Network Extender:** Enhance wireless signal using wireline Internet

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JETPACK

WIRELESS ROUTER

NETWORK EXTENDER
Working Together

GOVERNMENT
• **DHS:** National Coordination Center (NCC) contact
• **FEMA:** Private Sector seat & small business mentorship
• **White House:** Briefing on private sector preparedness
• **Exercises:** Federal, State, and Local
• **State and County:** EOCs & BEOCs

INDUSTRY
• All Hazards Consortium
• NY / NJ Regional Catastrophic Planning Team
• Support regional public / private partnerships

CUSTOMER
• Electric Utilities
• Banking Sector
• Transportation, other critical infrastructure
Public Safety Outreach

Verizon Wireless displays its commitment to the public safety community across the United States through our efforts to:

• Enhance relationships with federal, state and local public safety/law enforcement communities

• Leverage the relationships of our security personnel across the country, many of whom are former local, state or federal law enforcement officers

  • Seek opportunities to increase awareness of Verizon Wireless emergency response capabilities

  • BC/DR Outreach program focus on supporting government agencies as well as enterprise customers with disaster preparedness and disaster recovery response capabilities
Public Safety Support Program

• Long standing strategic relationships with public safety agencies

• Fallen Officer Memorial Fund with FBI National Academy

• Recipients of support include:
  • FBI National Academy Associates (FBINAA)
  • National Law Enforcement Officers Memorial
  • State Chiefs of Police Associations
  • HopeLine - Domestic Violence Prevention
Disaster Tested, Disaster Proven

TORNADO TESTIMONIAL

“all this communication helps us do things faster”

“having the tools you really need and what a difference it really makes”

Rhett Burnett
Under Sheriff, Cleveland County

Vilonia, AR - 2014

Moore, OK - 2013
Disaster Tested, Disaster Proven
Hurricanes

Hurricane Sandy
Rockaway, NY

Hurricane Sandy
Long Beach, NY
Disaster Tested, Disaster Proven
Hurricanes

Hurricane Sandy
Ortley Beach, NJ

Hurricane Sandy
Hazlet, NJ
Disaster Tested, Disaster Proven
Flooding

Fargo Floods

Nashville Floods

Tropical Storm Lee
Disaster Tested, Disaster Proven

Wildfires

WILDFIRE TESTIMONIAL

“Having the Verizon Wireless COW is amazing. It gives us a reach and a network we can tie into. Being able to come into an area where there is no cell coverage and within a short time, establish that is critical.”

Public Official of Georgia Forest Commission

Outreach Command Center - CA Station Fire: Free phone calls, charging, and Internet access

AZ Wallow Fire
Disaster Tested, Disaster Proven
Other Events

- San Bruno, CA Natural Gas Line Explosion
- Gulf Oil Spill
- Blackouts
Proactive Support

Provide support to events such as:

- Presidential Inaugurations
- Sporting Events (Super Bowl)
- Republican/Democratic Conventions
- G8 Summits
- NATO Summit

Proactive Steps

- Increased capacity of wireless network
- Coordinated efforts with local, state and federal agencies prior to event
- Briefed employee teams to ensure awareness and preparation
- Deployed network assets such as COWS, COLTS, Repeaters
Summary

• Verizon Wireless and our resources are focused on consistently providing high-quality wireless services to our customers.

• We invest considerable time and money to prepare for, and test our ability to respond to, emergency situations – not only those that affect us, but also those that affect our customers.

• Our response capabilities and our teams have been tested and proven under many difficult, disastrous circumstances.

It’s The Network
Thank You

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