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Operation Life Line Case Study

AWINS Interoperability Supports Katrina Relief

ARINC Public and Enterprise Solutions
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This presentation summarizes a case study on Operation Lifeline, Maryland's medical mission for disaster relief following Hurricane Katrina in Jefferson Parrish, Louisiana.

Specifically, it presents the capabilities of a Mobile Command Vehicle from Anne Arundel County MD that is powered by ARINC's Wireless Interoperable Network Solutions (AWINS™) architecture

Mobile Command and Control Vehicle Requirements

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- Anne Arundel County sought a Mobile Command Vehicle in response to issues after Hurricane Isabel in Maryland
- Requirements included the ability to:
 - Establish Interoperable Communications with any agency in the State of Maryland and jurisdictions in counties of border states as a sharable resource
 - Remain operational in the event the primary EOC is unavailable.
 - Manage emergency operations using the National Incident Management System (NIMS) from a mobile environment.
 - Stream video surveillance footage and have video teleconferencing capabilities from the Mobile Command Vehicle back to the Anne Arundel County EOC

- Communications vehicle designed for mobile communications and RF interoperability. Systems include:
 - 800 MHz
 - UHF
 - VHF High Band
 - VHF Low Band
 - Marine Band
 - Aviation Band
 - RACES VHF Voice/Packet (HAM/Amateur)
 - RACES HF Band (HAM/Amateur)
- Provides for mobile communications and interoperability between:
 - 17 RF Systems (479 Frequencies-250 programmed)
 - 20 IP Phones
 - 10 POTS/Cell connections at one time
- Other capabilities include Video Teleconferencing, Video Surveillance, and Data Applications
- Can run independently for 3 days

- ARINC delivered MCCU-1 to Anne Arundel County Maryland on August 23rd, 2005
- September 2, 2005, MCCU-1 was assigned to a Maryland team destined for Louisiana
 - Part of a Maryland Emergency Management Agency (MEMA) medical mission
 - 14 participating Maryland organizations
 - Over 100 doctors and nurses
- Team self-sufficient with 2 weeks worth of supplies including an extra generator and fuel towed by MCCU-1
- ARINC supplied a small team of engineers to the County because on-site testing and training had not yet been completed
- Due to the potential lack of radio infrastructure ARINC also supplied an extra VHF repeater to supplement on-board capabilities

Anne Arundel Mobile Command Vehicle

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Position Layouts

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Operation Lifeline

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- Operation Lifeline was set up in Jefferson Parish, LA. And established 6 medical clinics in Jefferson Parish to treat citizens and transport them to functioning hospitals.
- The MCCU provided dispatch and interoperable communications for over 20 different agencies
 - 14 from Maryland
 - 7 others including Jefferson Parrish police and fire, National Guard, Louisiana State Patrol, Georgia State Patrol, Park police Helicopter, private ambulances
- Many had different radio systems



- Treated almost 6000 walk-in patients and rescued over 35 stranded citizens.
- MCCU-1 was operational within 45 minutes of arriving at Meadowcrest Hospital

- Interoperable communications among 9 radio systems, VoIP phones, and laptops
- 4 permanent talk groups:
 - Transport (ambulances), Security, Clinics, Logistics and base camp staff
 - Ad-hoc talk groups as required
- Used VHF repeater and antenna on the roof of the hospital to extend range
- Connected to Jefferson Parrish system as it was repaired
- Satellite provided constant communications to outside world
 - Regular Video conferences back to MEMA and AACo EOC
 - Phone connections from MCCU-1 to MEMA, AACo, and anywhere else on the PSTN
 - Internet connectivity

Other highlights

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- MCCU-1 ran continuously for 15 days with only one restart for training purposes
- “Internet Café” allowed staff to communicate with home via email and VoIP in off hours
 - This had a very positive affect on morale
- Additional portable radios were effective for some teams that didn’t have radios of their own (National Guard in particular)



At press conferences after returning from Jefferson Parrish, Anne Arundel officials spoke about what MCCU-1 accomplished

- “It far surpassed our expectations”
 - Janet Owens Anne Arundel County Executive
- “There are always some questions in your mind, will it do what we’ve been told it will do, when it’s most needed ... this unit has passed that test with flying colors”
 - Chief Ron Blackwell, Anne Arundel County Fire Department

Post-Katrina ARINC has added more communications options to their offering allowing customers to choose the communications paths most likely to work for them

- **Cellular connectivity** – rack mount mobile phones that are integrated into the phone system and can be used for both inbound and outbound calling
- **Mesh Networking** – Wireless connectivity that can be used to extend connectivity to the MCV and/or as a backhaul to fixed infrastructure
- **Microwave** – An additional backhaul or inter-truck connection option
- **802.11 Bridges** – An additional backhaul or inter-truck connection option
- **Radio Repeaters** – For extended radio coverage
- **Private Cellular** – Communications options when public cellular networks are down

An Integrator and more...

- A Culture of providing **Mission Critical Services**
- Recognized performance during crisis
- Certified Radio Maintenance Repair for most Radio systems
- Full Service: Helpdesk, NOC, On Call Maintenance
- Quality Performance reviewed quarterly by the Board

ARINC, an Integrator who lives what we deliver!

For more information, visit www.awins.net

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