



# Amateur Radio Emergency Communications





# Who? What? Why?



- The Players (Alphabet Soup)
  - FCC-Federal Communications Commission
    - Regulates all non-Federal radio emissions
    - Amateur Radio regulated under part 97 of the FCC Rules
      - 47CFR97
  - ARRL-America Radio Relay League (National Level)
    - Field Organization-Divisions-Sections-States-Affiliated Clubs
      - ARES-Amateur Radio Emergency Service (ARES)
      - LARG-Loudoun Amateur Radio Group
  - RACES-Radio Amateur Civil Emergency Service
    - Federal Program under FCC-Part 97



# ARES in Loudoun



- Predominantly Supported by LARG members
- Served Agencies:
  - Red Cross
  - County EOC
  - Dulles Airport
  - Hospitals
    - In Developmental stages
  - CERT
    - In Developmental stages





# Amateur Radio Operator Activities



- Provide Technical Skills/Material to set up Communications systems when and where needed
- Provide Skilled Communications services
  - Voice messages formal/informal
  - Text messaging (Packet/other Digital Modes)
  - Video (Amateur TV)
  - Location (APRS)



# LARG/ARES Public Service



- Reston Bike Club/ Loudoun Red Cross Ride through Loudoun:
  - Annual Event; Usually August
  - Amateur Radio Stations at each rest stop
  - Amateur Radio Stations with Support Vehicles
  - VHF Primary/HF voice frequencies employed



# Public Service Events (Continued)



- First Night Leesburg (Annual)
  - Set up portable-town wide radio system
  - Monitor Attendance at each venue
  - Locate Volunteers
  - Check the status of each venue's supplies
  - Check/Report facility issues
    - Locked Doors
    - Water leaks



# Emergency Drills

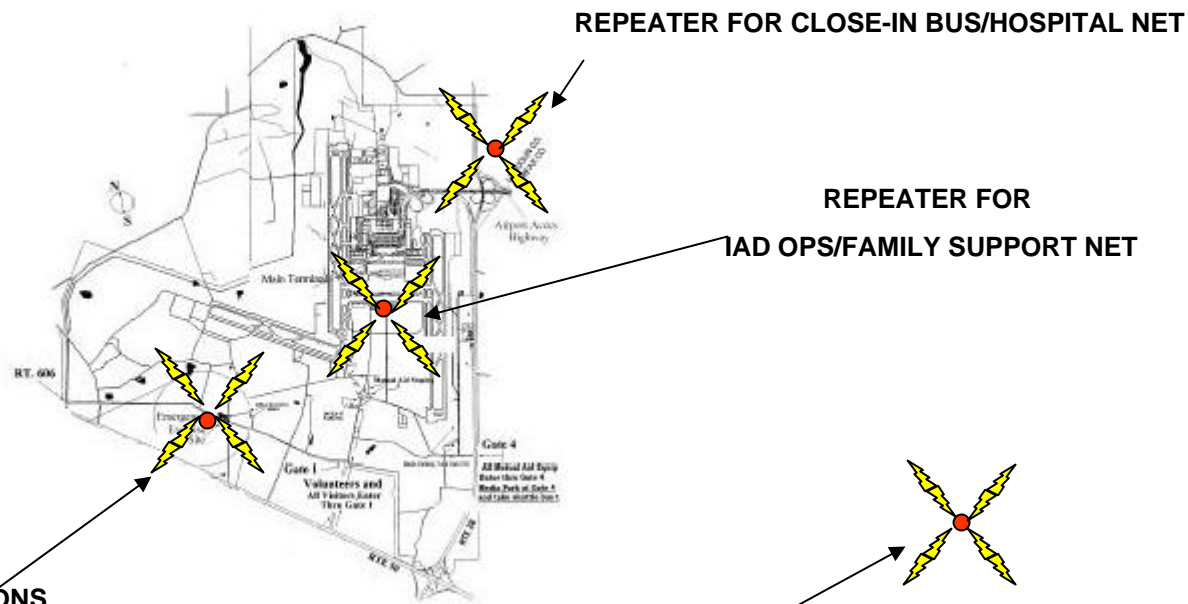


- Dulles Drill-2000, 2004
  - Provided On-site Communications support
  - Provided Communications for Buses transporting ambulatory “patients”
  - Linked all operations sites on/off the airport
    - Staging areas
    - Operations Center
    - Crash Site
    - Hospitals





# DULLES DRILL: AMATEUR RADIO COMMUNICATIONS NETWORK



•ATV TX & COICE NET CONTROL STATIONS

•OPERATES ON-SITE NETS FOR:

- CRASH SITE
- STAGING AREAS
- OPS/FAMILY SUPPORT
- CLOSE-IN BUS/HOSPITAL

•PORTABLE SHELTER AT FAIRFAX TRANSFER STATION

•NET CONTROL FOR OUTLYING BUSES & HOSPITALS

•MEMBER OF ON-SITE UHF NET

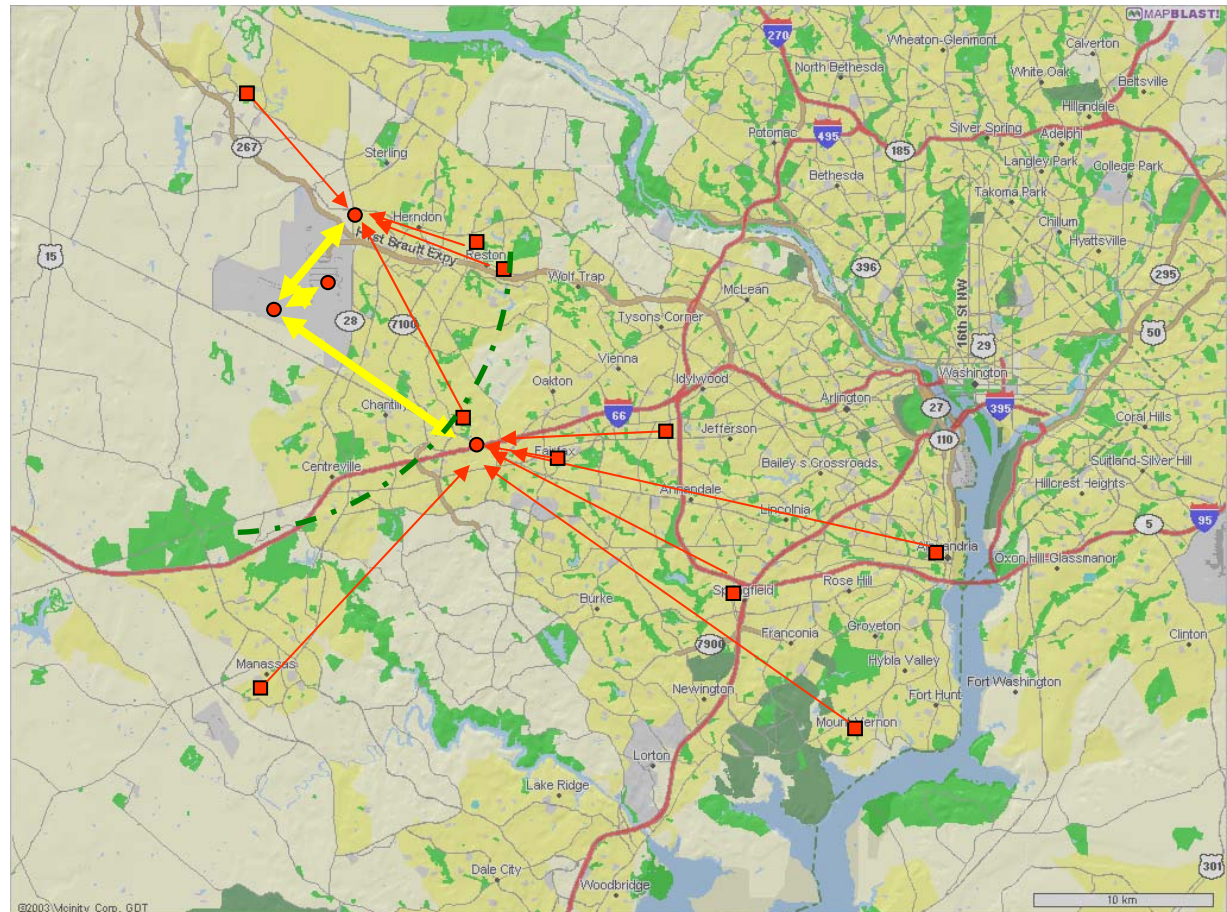




# AMATEUR RADIO AREA OF RESPONSIBILITY FOR THE DRILL



- HOSPITAL
- REPEATER OR NET CONTROL STATION
- IN-NET RADIO LINK
- ↔ RADIO LINK BETWEEN NETS
- DEMARCATION LINE BETWEEN INNER AND OUTLYING NETS





# Actual Emergencies



- 9-11-01
  - Provided Voice Link and Staffing between Dulles Marriott and Loudoun Red Cross Chapter – 24+ hours
  - Prepared for Comm Support for Bloodmobile
    - (operation later cancelled but Loudoun Red Cross had direct knowledge of what was happening at the site via Ham Radio)



# Actual Emergencies



- Hurricane Isabel
  - VHF/UHF and HF at the EOC
    - Setup Full Staffing-Through Tear Down
  - VHF/HF at Relocation Centers
    - Loudoun Valley HS
    - Heritage HS
    - Dominion HS
  - Additional Equipment Staged at Purcellville FD



# Other Emergency Support



- Skywarn
  - Provides real time regional severe weather observations to National Weather Service
  - Skywarn observations are often re-broadcast on NOAA weather Radio



# Family Emergency Preparedness



- Become a HAM Family
  - Provides your family with access to Amateur Radio Spectrum and Infrastructure
    - Local
    - Regional
    - Worldwide
  - Gives you access to broad range of technical skills
    - Radio Communications
    - Emergency Power
    - Batteries
    - Geo Location
    - Weather Monitoring
    - Emergency Management
    - Science and Technology
  - Gives you a reliable link to family, friends and Emergency Services when the chips are down



# Amateur Radio Licensing Requirements



- Study for and pass test in basic radio technology, operating practices and rules
  - HF Privileges require 5 WPM Morse Code
    - There is continued debate about the future of Morse Code
    - Remains the most reliable mode for the minimum of power and equipment



# Amateur Radio Resources



## Loudoun Amateur Radio Group (LARG)

- Meets 3<sup>rd</sup> Saturday @ Trinity Lutheran Church, W. Market & Catoctin Cir, Leesburg, 8:30 AM
- Weekly Net Meeting on 145.31 MHz
- [www.k4lrg.org](http://www.k4lrg.org)
- Fall classes are scheduled



# Resources (cont.)



- American Radio Relay League (ARRL)
  - National organization
    - Provides Educational Materials
    - Represents HAMS to Congress and International Agencies
    - Field Organization
      - Direct contact for Member Services
      - Manages Traffic Nets
      - Organizes and Supports ARES
  - <http://www.arrl.org>





# Questions



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