



The Lights Are Out In Newport.
The Phones Are Out.
Now What Do We Do?

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This goal of this presentation is to create an awareness of how vulnerable our normal voice communication mechanisms have become and to introduce you to a new, low technology backup communication system that is standing by to help fill the void should normal phone and cellular services get disrupted.

The Motivation

- Regional Power Outage of 2003
- Hurricane Katrina
- Higher Tech Means Greater Dependency
 - Cell Phones
 - Internet-based Telephone
- What Happens When the Infrastructure Fails?
- What's the Backup Plan?

The motivation for this backup communication system stems from recent major events and shifts in how we are using communication technology. Our nation's electrical distribution infrastructure is fragile as evidenced by the regional power outage in 2003 that lasted hours in some place. Hurricane Katrina demonstrated what happens when public communication systems collapse on a grand scale. More citizens are relying heavily on cellular phone and Internet-based telephone systems. In 2006, one out of eight Americans surveyed indicated they no longer used a traditional "landline" telephone. When the electrical or digital infrastructure fails, what alternatives are readily available? Unfortunately there are no good answers at the moment.

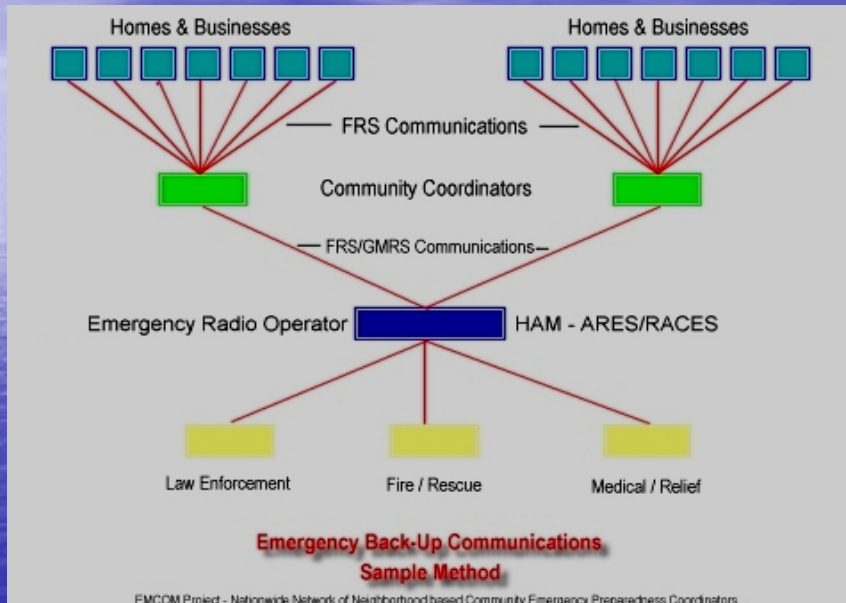
Newport Community Emergency Radio Network

Low Tech, Potential for High Impact During a Disaster

- Enable Residents to Contact Police/Fire Independent of Infrastructure
- Enable City to Pass Information to Residents
- Leverages Radios Already in Place
 - Family Radio Service (FRS) – 100 Million in U.S.
 - Ham (Amateur) Radio
- Tie-In with Local Agencies and Programs
 - Police – Fire – Medical
 - Civic Groups, Neighborhood Associations
 - Non-Profits

There is an alternative that doesn't rely on a sophisticated distribution infrastructure. The backup system marries existing the large install base of Family Radio Service radios with the proven message relaying capabilities of local amateur (ham) radio operators. The local system is called the "Newport Community Emergency Network" and creates the potential for the public to signal for help while giving the city's first responders to communicate timely information to the public without needing to use vulnerable phone or commercial broadcast facilities. This network can also support the missions of other groups that might be active during a local emergency.

Newport Community Emergency Radio Network Project Architecture



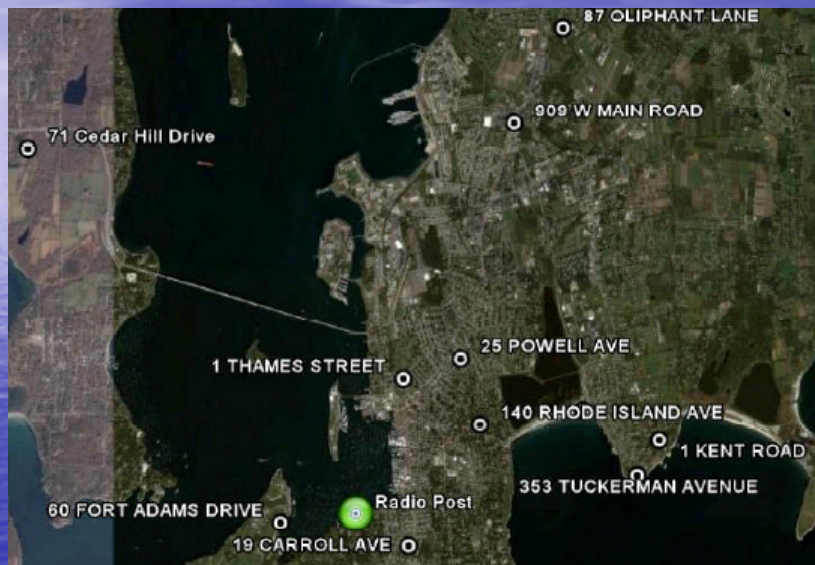
The system works like a fire bucket brigade where citizens and businesses use their FRS radios to transmit urgent messages to neighborhood coordinators who in turn pass them to ham radio operators who relay the messages to the Newport emergency operations center.

Newport Community Emergency Radio Network Project Implementation

- Low Cost/ No Cost
- Develop and Implement a Local Testbed
 - Single Neighborhood “Cell”
 - The Point is Good Candidate
- Involvement With All Stakeholders
 - Residents
 - Civic Leaders
 - Newport Public Safety
- Build It, But Will They Will Come?
 - Promoting the FRS Value Proposition to the Public and the City
 - “Radio 101” Training to Boost Confidence Using the Radio
 - Strengthening the Ham Amateur Radio Layer

Equipment costs to establish the network are low since many FRS and ham radios are already used in the community. To gain experience with the concept, project organizers are focusing in and around The Point area of Newport before expanding the focus to the entire city. Educating the diverse base of stakeholders, most of whom likely little experience with operating a two-way radio, is expected to be a major hurdle. The narrow volunteer base will need additional volunteers and marketing support from the City of Newport to educate the public on how to best leverage the communications network. Formal and visible support from the City of Newport will be most helpful in order to overcome the natural resistance to thinking about disaster planning matters.

Newport Community Emergency Radio Network Demonstrated Ranges: Handheld-To-Base Station



Testing during September 2006 demonstrated the ability of FRS radios to be heard around the Newport area out to five miles. A portable base station established at the General Rochambeau statue in King Park could talk to FRS users from Jamestown, Middletown, and Newport.

Newport Community Emergency Radio Network What Do I Need to Know?

- Don't Bet Your Life on the Radio. Have a Plan B.
- The Network Becomes Active on Channel 1 When Phone Service is Disrupted OR May be Activated by City Request Due to a Public Safety Issue
- Stock Up on Radio Batteries
 - Phones Could Be Out for Days
- If the City Tells You to Evacuate ... **EVACUATE !**

The backup radio network provides an important tool for both resident and the city. The communication tool should not be viewed as a "lifeboat" that will guarantee the user anything. During an actual disaster your urgent call is not guaranteed to be heard. Users need to have a "Plan B." Channel 1 is the main channel for emergency communications. Other channels will be used for non-emergency purposes. Again, during a communication outage Channel 1 is for emergency communications. The network will be activated only when other forms of communications have been lost or when requested by the City of Newport. Users of the network are encouraged to keep ample batteries on hand for their FRS radios so they have the ability to sustain operations for several days.

Newport Community Emergency Radio Network How Can I Participate ?

- Invest \$10 to \$25 in a FRS Radio
 - Wal-Mart, Radio Shack, Staples, West Marine ...
- Gain Confidence Using the Radio
 - Every Thursday, 8:30PM FRS Channel 3
- Tell Your Friends About the Project
- Help Them Build Confidence in Using the Radio
- Volunteer to be a Coordinator for Your Neighborhood

Participating in the Newport Community Emergency Radio Network is straight forward. Family Radio Service (FRS) radios, sold as pairs in the \$20 to \$50 price range, are available at local retailers such as Wal-Mart, Radio Shack, Staples, Office Depot, and West Marine. If you only need one radio, then consider giving the spare radio to an elderly neighbor. It is important to practice with the radio a few times so that you'll be able to use it with confidence should the need arise without warning. Local ham radio operators, training each Thursday night, host an informal practice session Thursdays at 8:30PM on FRS Channel 3. If you are already comfortable talking on a two-way radio, then consider volunteering as a project coordinator for your immediate neighborhood. Contact Mike Cullen, cullen@cox.net, if interested.

Newport Community Emergency Radio Network

- Questions ?
- Thank You

Questions, comments, and ideas are invited.

Contact Mike Cullen, cullen@cox.net, 401-848-2945.