ARKnet Pilot
Project Data Sheet; December 2014

Goal Description

Cupertino has 7 ARKs located throughout the city where, in the event of an emergency, Cupertino Citizen Corps members will converge, self-organize, and deploy into the surrounding neighborhoods to assist the community with stabilizing the situation and assisting with the recovery. Information about the response is critical to the field and EOC to ensure the success of the response.

The current communications bandwidth between the EOC and the ARKs limits the volume and richness of information to only the critical elements about the response.

ARKnet addresses the bandwidth issue and will create a Cupertino-internal emergency Intranet in support of a city declaration of an emergency.

Triggering Problems/Opportunities

- There are new cost-effective commercial technologies that can be leveraged to support a City-wide Emergency Intranet.
- There are Citizen Corps members with the knowledge and skills to create a wireless environment.
- ARKnet will support the activities planned for the ARK Data Management project thereby improving the information sharing throughout the City.
- There are other commercially available applications that will dramatically improve information sharing once a high-speed network is in place.

Supporting Objectives

The ultimate objective of a full deployment is to support the City's need for an accurate and timely assessment of the situation in the field as an emergency evolves.

For this Pilot, the project's objectives are:

- Confirm the feasibility of establishing an emergency wireless network in the City.
- Confirm the operation of all pilot applications and services.
- Develop more detailed real-world network performance metrics allowing us to better evaluate other possible applications and their associated bandwidth.

Deliverables

The following Pilot deliverables are planned for the Pilot:

- Wireless infrastructure equipment at named City sites (EOC, Hyde ARK, Montebello Condos).
- Deployment of a limited set of applications (VoIP, File Sharing, Instant Messaging, Web page serving).
- ARKnet access to the commercial Internet.

Scope – Included

- Network deployment to a limited number of sites.
- Use of existing available high altitude network backbone sites.
- Recommendation to Cupertino OES for a full city deployment.

Scope – Excluded

- Integration with the ARK Data Automation Project.
- Integration with WebEOC.
- All ARKs, other City Sites.

Project Organization:

Project Manager:	Jim Oberhofer
Technical Lead:	Kenneth Finnegan
Member, Technical Staff:	Allan Gontang
	Skip Stevens
	Ian Sidle
	Marcel Stieber
	Judy Halchin

Project Budget

Budget figures are estimates; actual costs will be provided on completion of the Design Phase.

Pilot:	$1,000
Full Implementation:	$5,000

Project Timeline: Major Milestones

Project approval	7 November 2014
Requirements Complete	26 November 2014
Design Complete	5 December 2014
Build Complete	31 December 2014
Pilot Deployment	16 January 2015

Assumptions

- The Emergency Network would always be on and operational once fully deployed.
- The Network operates under FCC Type 15 rules (no radio or operator license required).
- All equipment is Commercial off the Shelf. Other than configuration, no custom solution is planned.
- Cupertino Citizens Corps will provide the resources to support and maintain the network environment once deployed.