Survivable Social Network

Carnegie Mellon University
Silicon Valley

Problem

1989 Loma Prieta Earthquake
• 154 of 160 telephone central offices lost primary power
• “Gold plated” network still suffered outages

2012 Hurricane Sandy
• Similar impact to affected areas
• Wireless infrastructure particularly sensitive

Now More Vulnerable Than Ever
• Citizens are more reliant on communications than ever
• The rise in importance of Social Networks
• Rising trust and ubiquity of cloud services

Solution

Concept
• Citizen-targeted: best-resource-is-closest-resource
• Rebuild a local infrastructure to assist in local response
• Use existing smartphone technology
• Crowd-sourced “grass-roots” temporary infrastructure

Implementation

Scope
• Single node software
• Twitter-like feed with search and filters
• Facebook Integration
• Users, Organizations, and Cities
• Quick Check-in
• Neighbors helping neighbors

Future Work
• Ability to make SIP-based calls
• Inter-neighborhood mesh network
• HTML5 push-to-talk functionality
• Quick node setup
• Hierarchical node setup and deployment

Sponsors

Carnegie Mellon University
Disaster Management Initiative

CITY OF PALO ALTO
CALIFORNIA