**Problem**

Emergency Communication System (ECS) infrastructure is becoming increasingly outdated and obsolete.
- Land lines are disappearing
- People are moving away from broadcast television/radio:
  - Favor streaming media
- Reverse 911 (Emergency notifications):
  - Mobile phones have to be registered with the ECS

**Solution**

Use broadband, software defined networks and virtualized applications to provide reliable common means of ECS.

**Approach**

Remotely Controllable Browser for ECS Applications:
- Enables the service provider to push web pages and control browser environment to users for their specific service.

VOIP-Based 911 Interface:
- Enables 2-way voice communication between service providers and users.
- Visually scaled down to start communication with emergency service provider with press of a button.

Remote Hypervisor Management:
- Enables management service provider to push a virtual machine screen to the front.

Thin Clients:
- Uses a Preboot Execution Environment (PXE) boot to run a thin client (Using LTSP).

**Mobile Testbed**

- Contains virtual servers running various services
- Servers connected to switch configured for multiple VLANs
- Home and Management devices attached to the switch

**GENI Rack at University of Idaho (CAES)**

- The framework will be migrated to GENI
- Will enable full use of OpenFlow
- Will enable Larger scale implementation

**Future Work**

- Migration to GENI.
- Thin or 0-client implementation on the home device.
- Optimize LTSP image for ECS applications.
- Detailed performance analysis.
- System at scale testing in production environment.