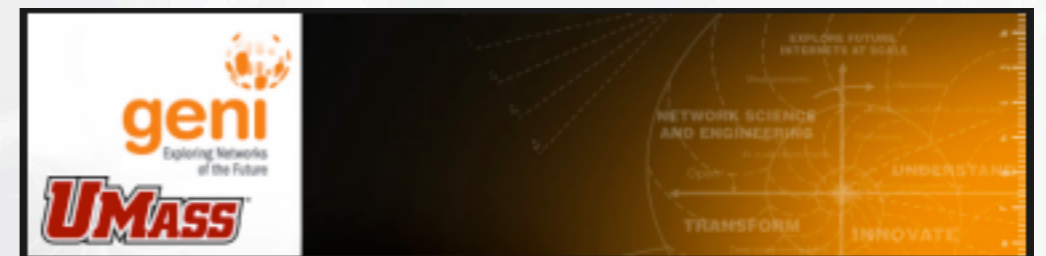# Diverse Outdoor Mobile Environment (DOME)

University of Massachusetts, Amherst

Mark Corner, Brian Levine, *Brian Lynn*
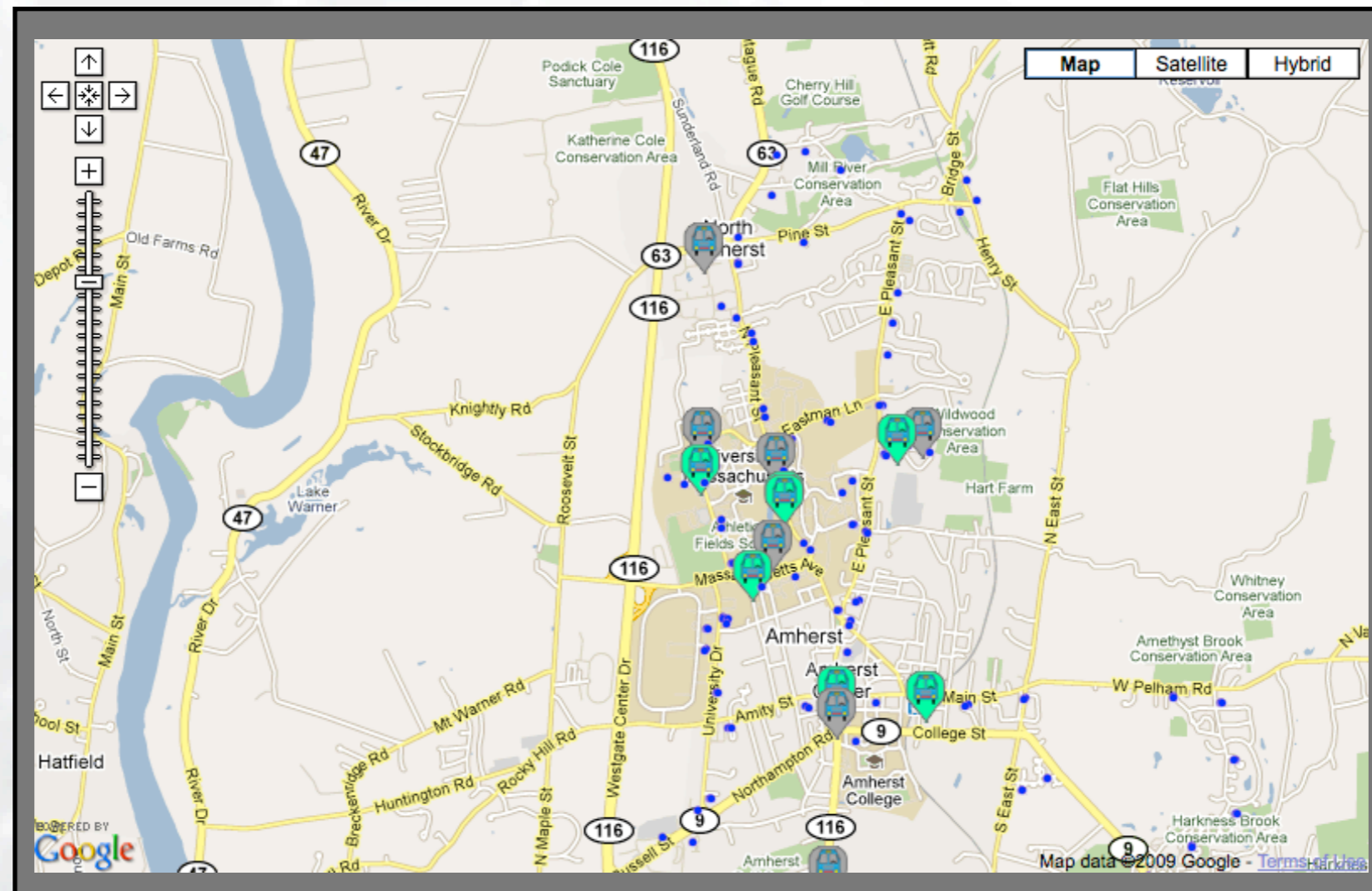
http://geni.cs.umass.edu/dome/

What is DOME?

- Mobile testbed of 35 transit buses
  - WiFi (PCI and AP), 3G, GPS on all buses
  - Approximately 150 square miles
  - Campus and Town WiFi mesh

GENI Year 1 Tasks

- Goal: Open up DOME
  - Limited ability to modify software on the buses
  - Trusted UMass users
- Solution: Run all experiments within a customizable Xen VM sandbox
- DOME portal to define and schedule experiments
  - User interface
  - Front-end to ORCA for allocating testbed resources
  - Interface to buses for staging and launching experiments
- DOME made available in September 2009

GENI Year 2 Tasks

- Improve and enhance DOME
  - Add 900 MHz radios
  - Status and monitoring
- VLAN / Internet2
  - Internet2 VLAN to DOME/ViSE server
  - Plan how we might extend access to buses
- Support enhanced ORCA
- Expand scope of DOME
  - More users
  - Multiple GENI testbeds
  - Other opportunities, e.g., U of Washington's Seattle