ATMS Deployment Using Non-Intrusive & Wireless Technologies

Presented by: Martin Glaubitz, P.E.

ITS Engineers and Constructors, Inc.

Our Challenge

- To instrument 10 Miles of Interstate 80 between Salt Lake City and Park City, Utah with ATMS Technology:
  - 10 miles of new fiber optic trunkline cable
  - 3 new variable message signs
  - 8 new closed circuit television cameras
  - 8 new non-intrusive vehicle detector stations
  - 3 existing traffic signal controllers
  - 5 miles of new multiduct distribution conduit
  - Integration of all devices to existing communications hub

A Hybrid Communication System

- Communication from Traffic Operation Center to distribution hubs: fiber optics
- Communication from distribution hubs to field devices: fiber optics
- Communication from field device controller to near-side NID detector unit: RS-485 copper
- Communication from field device controller to far-side NID detector unit: 2.4 GHz spread spectrum

Project Design Aspects

- Design/Builder was able to use next generation fiber optic modems, saving spare capacity in fiber strand count
- Tie into existing fiber backbone
- Use of 2.4 GHz instead of bores across mainline
- 2.4 GHz radios are integrated into NID detectors
- Solar power for far-side NIDs