Vehicle-based Advanced Intelligent Transportation System (AITS)

Exploit onboard sensing and computing resources in vehicles to provide new technologies to augment and enhance existing AITS and other systems.

Goals
- Simulation of current and future traffic conditions
- Well-known interfaces for integration purposes
- Data sources
- Complimentary systems
- Client systems
- Data-based QoS
- Timeliness, fidelity
- Reservation systems
- End-to-end
- Per-Link
- Public transportation

Research Issues
- Reservation system methods
- Using simulation to support reservations
- Vehicle-to-vehicle network architectures and protocols
- Ad-hoc, cell-based, or hybrid
- Updateable simulations
- Distributed, time-managed simulation in unstable networks
- E.g., wireless ad-hoc networks
- Integration services
- E.g., web services, grid computing
- Fault Tolerance