Vehicle Infrastructure Integration (VII) Deployment in Non-Urban Areas – Not “Business As Usual”
VII Vision

- VII envisions a nationwide system in which intelligent vehicles routinely communicate with each other and the transportation infrastructure.

- The purpose is to enable a number of new services that provide significant benefits:
  - **Safety** improvement based on cooperative vehicle-to-vehicle and vehicle-to-infrastructure interaction
  - **Mobility** improvement from shared information and emergency management
  - **Commercial** applications to improve consumer convenience, entertainment, and business
VII Concept
Proof of Concept (POC) Testing

- Demonstrate the technical viability of the VII System concept
- Prove that VII System can meet basic objectives required to demonstrate feasibility of VII-enabled applications
- Demonstrate that VII System provides technical solutions to address policy concerns: anonymity, privacy, and security

**VII Subsystem Testing**
(OBE, RSE, Infrastructure)

**System Integration and Test**
(Herndon, VA)

**System Integration and Test**
(Detroit, MI)

**Applications Integration and Test**
(Detroit, MI)

Other Tests
VII Roadmap

Track 1: Technical Framework
- Proof Concept Testing

Track 2: Applications
- Benefit/Cost Analysis
- Initial application development

Track 3: Policy and Business Models
- Develop business models and governance alternatives
- Refinement of Institutional Policy and Business Models
- Decide on the business model

Track 4: Outreach and Community Support

Deployment of VII

OEM Executive Forum

Congressional Language/Approach

Community Engagement – Consensus Building

Source: “VII Program Overview”, Shelley Row, ITS JPO Director, ITSA 2007
Deployment Is Not “Business As Usual”

- Vehicles Distribution Throughout The Country
- Deliveries Not Limited to Just Urban Areas
- Every Area Will Host Thousands Of VII-Enabled Vehicles
- Regional Deployment Not Attractive
- Complete Nationwide Deployment on Day-1 Not Practicable
- Incremental & Progressive Nationwide Deployment Conceivable
Deployment Strategy Considerations

- Power & Backhaul Communications
- Diverse Geography
- Variety Of Travel Weather Conditions
- Operations & Maintenance Of RSEs
- Interurban / Interstate Travel
- Penetration Of VII-enabled Vehicles
- Many Types Of Travelers
- Traveler Adoption Rates
- Benefits & Costs
- Lessons Learned From Testing Efforts
Applications

- Traveler Safety And Security
- Emergency Response
- Travel & Tourism Information
- Road Weather Applications
- Commercial Vehicle Operations
- Others

Accelerated Deployment
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