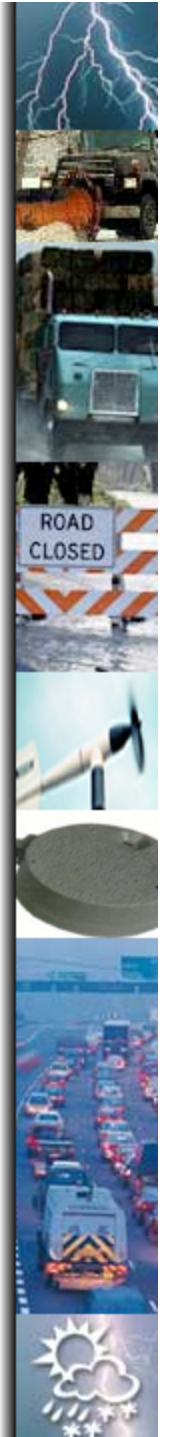


Vehicle Infrastructure Integration (VII) Initiative: Update

James PoI - USDOT

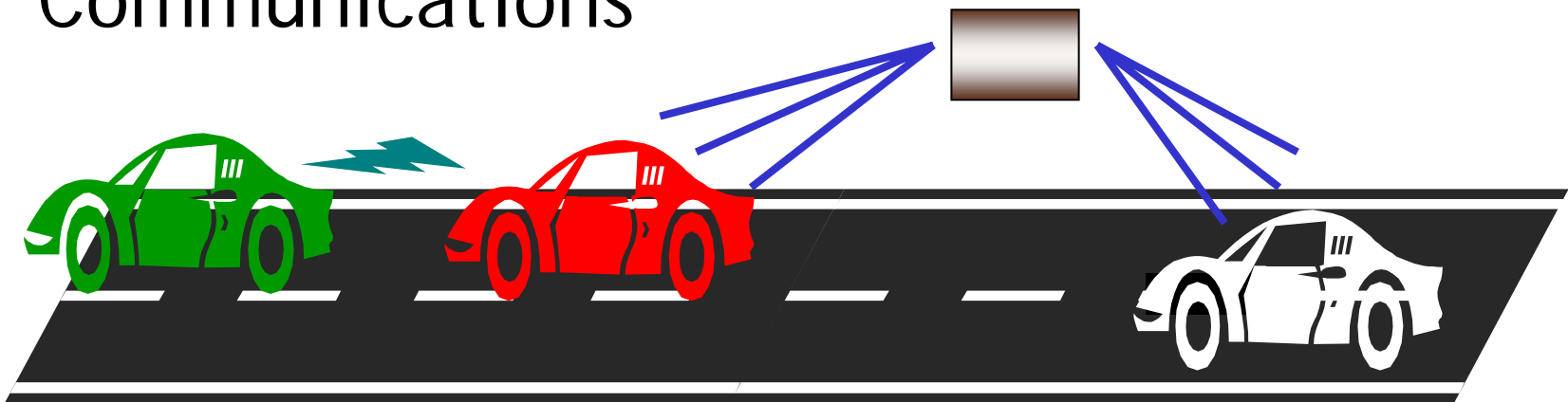
Clarus Initiative Coordinating Committee

March 2, 2005



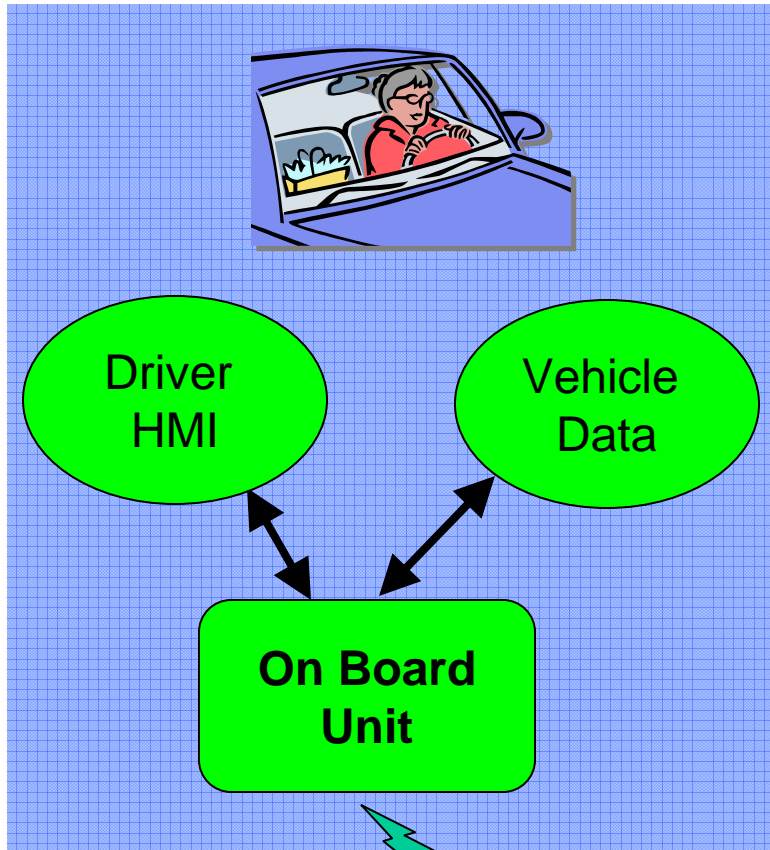
What is VII?

- Creating an “Enabling Communication Infrastructure” to support Vehicle-to-Vehicle and Vehicle-to-Infrastructure Communications

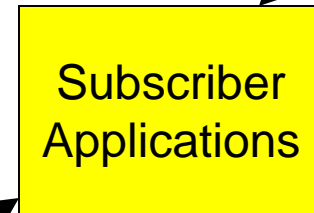
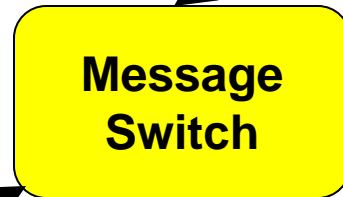
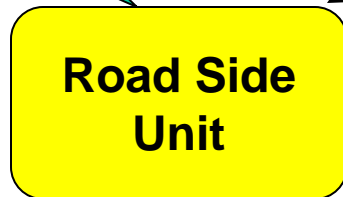


Supporting Safety AND Mobility Applications





5.9 DSRC



End User



VII Initiative Objectives

- Is the investment necessary to equip new vehicles and the infrastructure with a new communication capability warranted?
- Can the required investment for both vehicles and the infrastructure be done in a synchronized fashion?



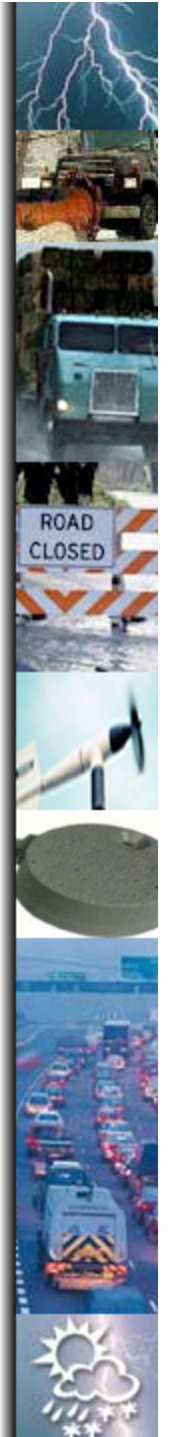
USDOT's Participation in VII

- Safety
 - Increased emphasis on crash avoidance
 - Low latency communications among vehicles and roadside
- Mobility
 - System management and operations
 - Vast amounts of data on transportation network - including surface conditions



VII Coalition

- USDOT; AASHTO; Seven major auto manufacturers
- Subdivided into four working groups:
 - Technical group
 - Institutional issues group
 - Business model group
 - Outreach group



VII Impact on Overcoming Surface Transportation Weather Gaps

- Three fundamental deficiencies today
 - Lack of transportation system relevant weather observations
 - Lack of understanding on how to apply weather information in decision making
 - Lack of capabilities for predicting and/or assessing surface level weather phenomena
- VII opens the opportunity for empirical data gathering not possible otherwise



VII Impact on Weather-related Decision Making

- VII enables enhanced response and planning through improvements to weather observations, models, and predictions
 - Microscale events for immediate response (e.g., black ice, fog banks) conveyed in seconds to minutes
 - Mesoscale events for tactical response (e.g., thunderstorms, flash floods) forecast in minutes to hours
 - Synoptic scale events for strategic response (e.g. blizzards, floods, heat) forecast in hours to days



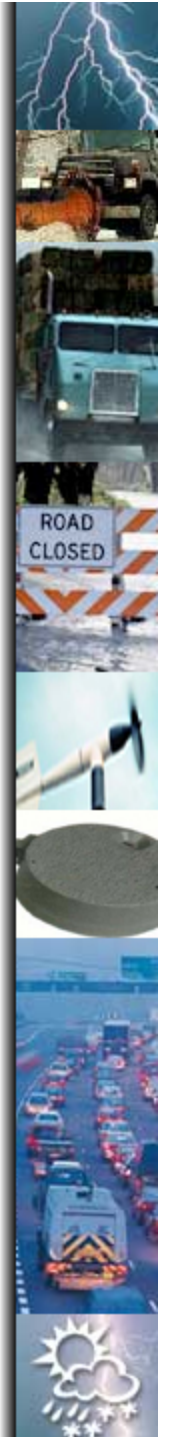
Challenges

- Overcoming paradox of VII deployment
 - Urban focus on traffic safety
 - Rural impacts of weather are often more severe, yet coverage will remain limited
- Making sense of the observations
 - Volume (filtering, prioritization)
 - Temporal decay
 - Geographic distribution
 - Quality assurance
 - Anonymity of data

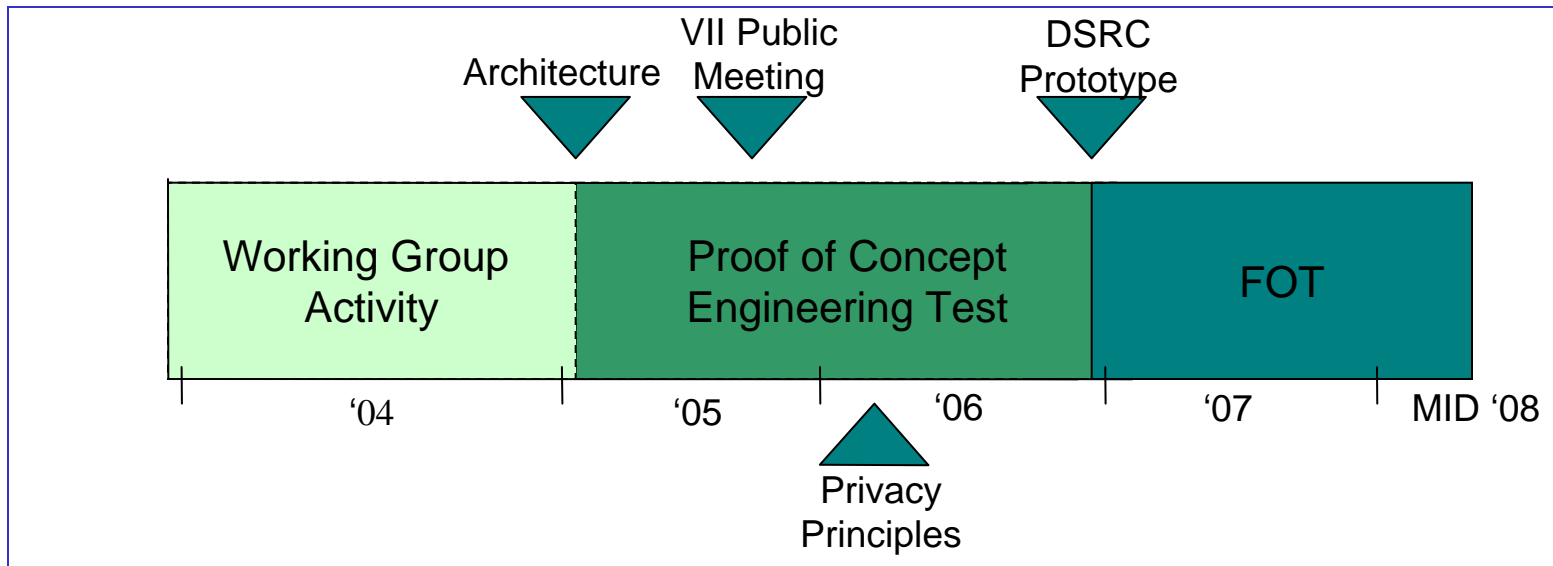


Privacy Issues

- Ensuring that consumers can opt-in
- Automated enforcement is not being considered
- No tracking of individual drivers



VII Program Timeline



Next Steps

- Contract With Auto Manufacturers Consortium
- Initiate Engineering Testing
- Develop Nationwide Deployment Scenarios
- Develop Public/Private Partnership Approaches

