



V2V

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Overview – February 9, 2009



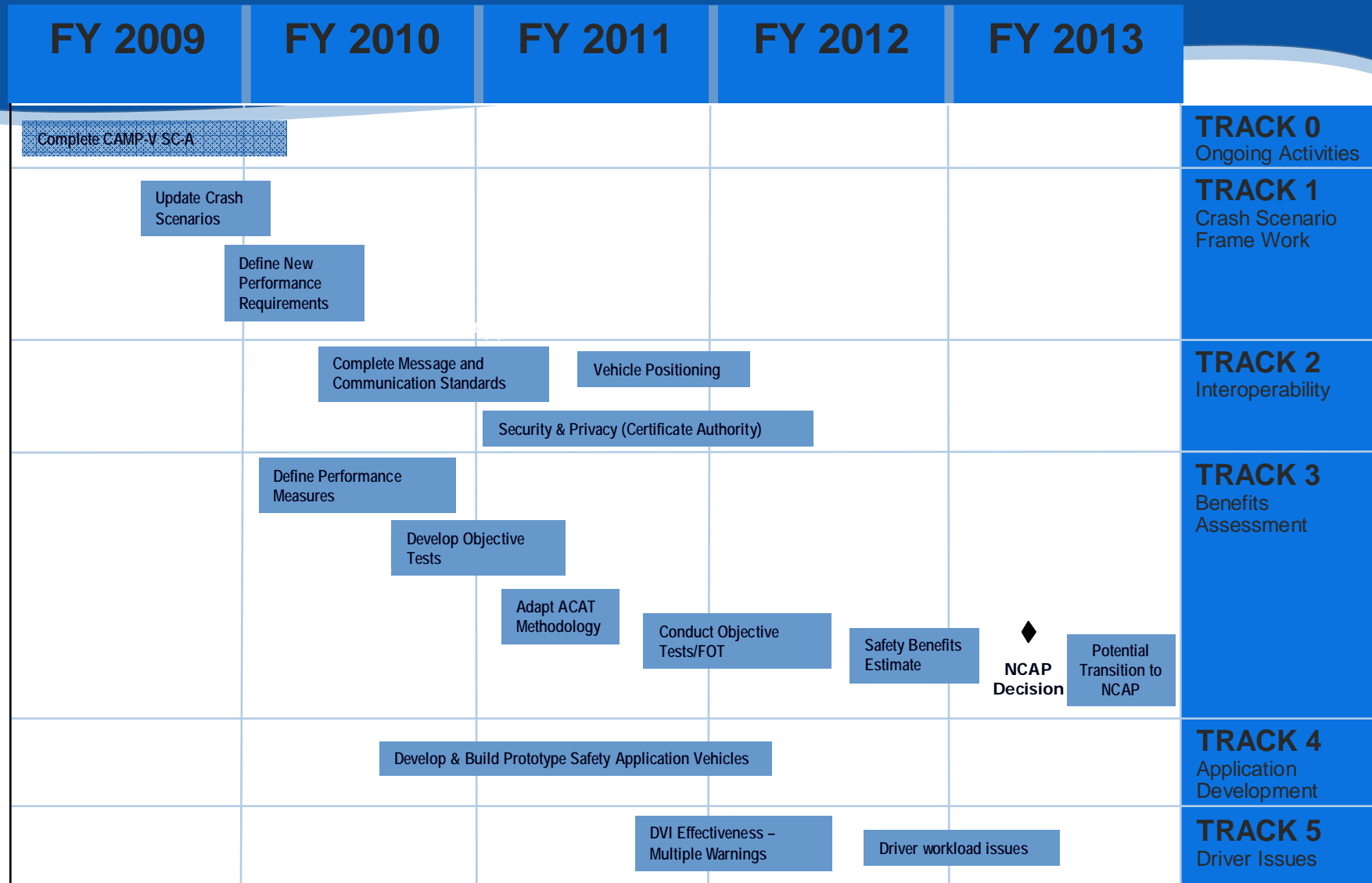
Vision Statement

- USDOT believes that Vehicle-to-Vehicle Communications (V2V) will support a new generation of effective safety systems for motor vehicles.

Goal and Objective

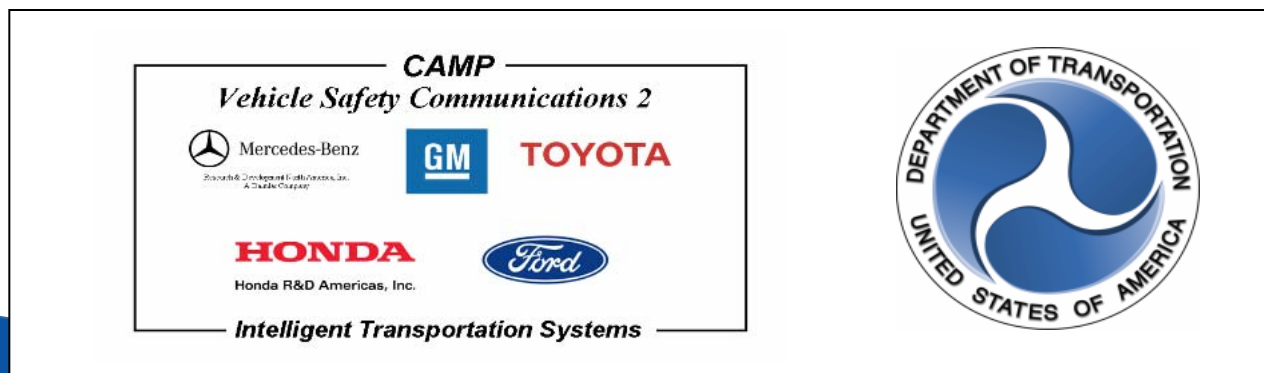
- Facilitate the accelerated deployment of effective V2V Safety Systems
- Plan and conduct the technical and policy research needed to support this goal
- Collaboratively carry out this program with the Automotive Industry

Vehicle to Vehicle Safety Application Research Plan



VSC-A Project

- 3 year project - December 2006 to December 2009
- Collaborative effort between 5 OEMs (Daimler, Ford, GM, Honda & Toyota) and US DOT
- Goal: Determine if DSRC @5.9 GHz & vehicle positioning can improve upon autonomous vehicle-based safety systems and/or enable new communication-based safety applications
- Follow-on project to CAMP/US DOT VSC I (2002-2004) project and CAMP internal Emergency Electronic Brake Lights (EEBL) project



VSC-A Main Objectives

- Develop scalable, common vehicle safety communication architecture, protocols, and messaging framework necessary to achieve interoperability and cohesiveness among different vehicle manufacturers
 - Standardize this messaging framework and the communication protocols (including message sets) to facilitate future deployment
- Develop accurate and commercially feasible relative vehicle positioning technology needed, in conjunction with the 5.9 GHz DSRC, to support most of the safety applications with high potential benefits
- Develop and verify (on VSC-A system test bed) a set of objective test procedures for the selected vehicle safety communications applications

Planned Activities: Last year of VSC-A project (2009)

- Complete Level II testbed implementation with supporting elements / enhancements:
 - Over-the-air interoperability
 - Positioning implementation
 - Security
 - Communications (Standards & multi-channel)
- Continuing Standards Participation
- Further positioning work and analyses
- Communications – Dual Radio & Channel analyses
- Security optimizations & simulations
- Finalize Performance Specifications & OTP
- Conduct OTP and perform safety benefits estimation

Next Steps

- Finish VSC-A
- Discuss V2V plan with industry
 - Planning workshop in Detroit March 2009
- Start Track 1 and Track 2
- Coordinate with the rest of the IntelliDrive Program
- Complete Advanced Crash Avoidance Technologies Research