

Integrated Vehicle-Based Safety System Field Operational Test (IVBSS FOT)

Program Overview

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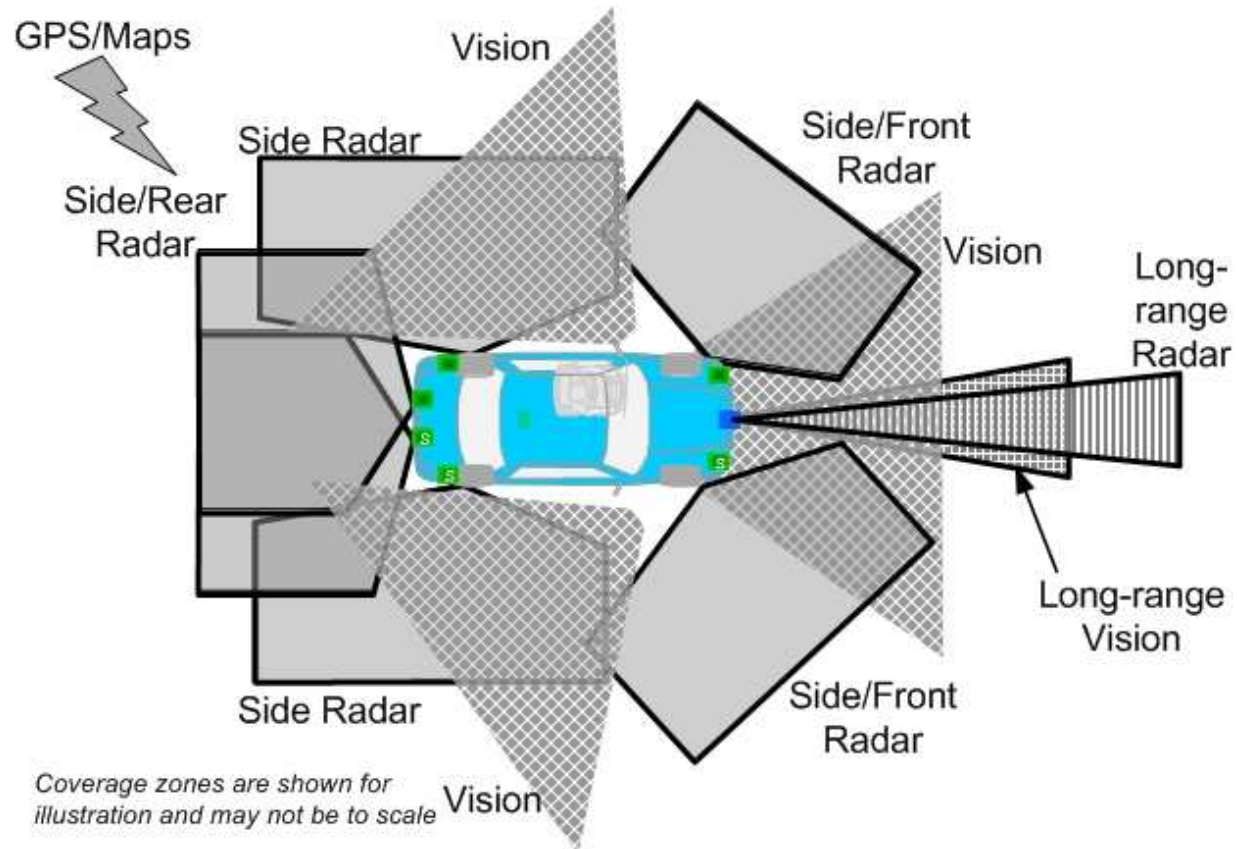
What is IVBSS FOT?

- **UMTRI-led cooperative agreement with U.S. DOT**
 - NHTSA, FMCSA and JPO
- **Equip passenger cars and heavy trucks with integrated crash warning systems**
 - Rear end: Forward crash warning
 - Road departure: Lane departure warning
 - Lane change: Lane change/merge
 - Curve speed warning

What is IVBSS FOT?

- **Over 2.6 million rear-end, road departure, and lane-change crashes every year**
 - **27,500 crashes with one or more fatalities**
- **Rear-end, road-departure and lane-change countermeasures have the potential to prevent 67% of all crashes**

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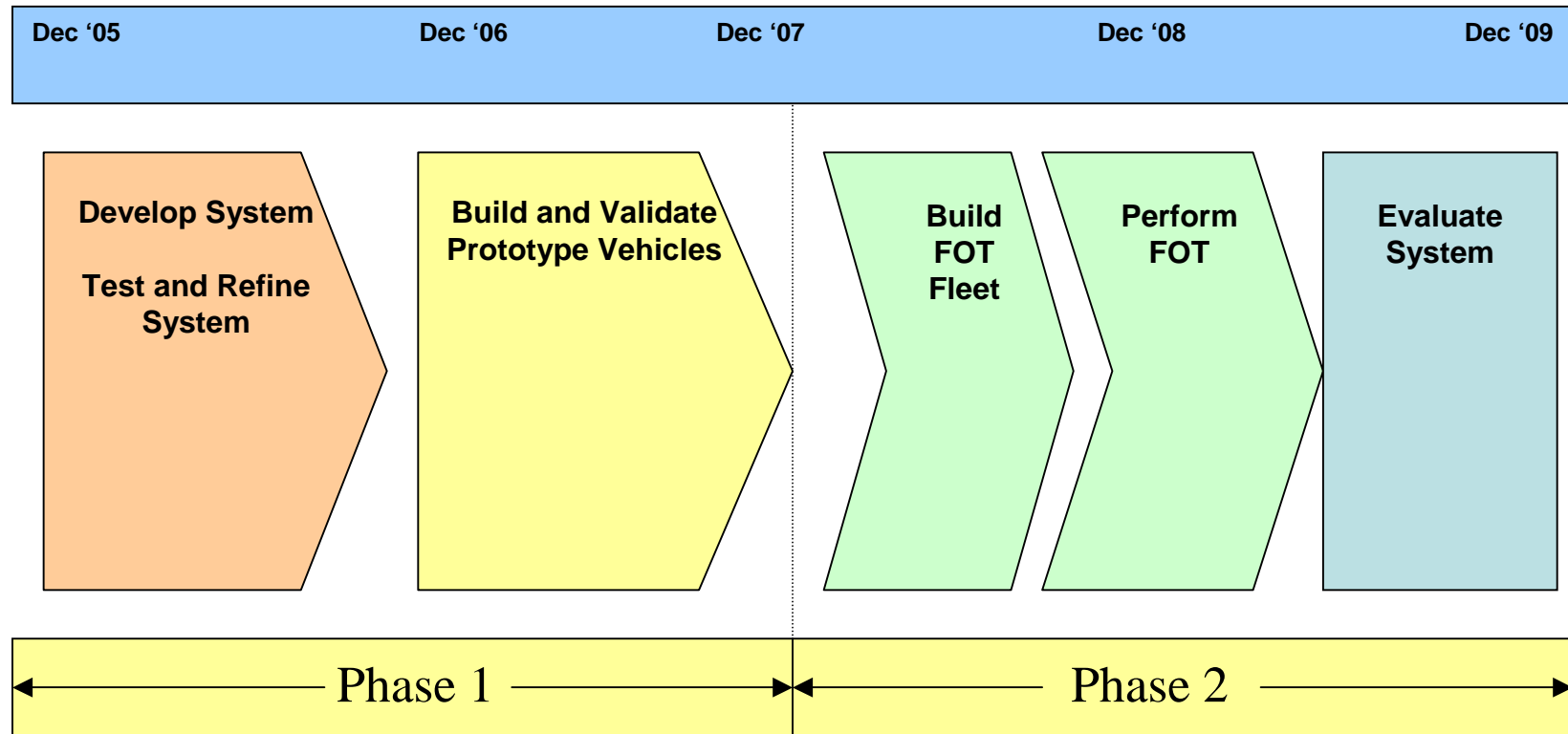
What is IVBSS FOT?

- Continued line of research
 - Over 10 years experience with similar programs
- 4-year, \$31.6M program
 - \$25M in Federal money and \$6.6M in cost share
 - Effective date Nov. 23, 2005

Goals of IVBSS

- To accelerate introduction of integrated vehicle-based safety systems into the light vehicle and commercial truck fleet
- Assess the IVBSS system for:
 - ❑ Safety benefits
 - ❑ Driver acceptance/ease of use
 - ❑ Willingness to purchase/marketability

IVBSS Program Timing



The UMTRI IVBSS Team

■ UMTRI

- ❑ Human Factors
- ❑ Engineering Research
- ❑ TSA
- ❑ OSAT

■ U of M

- ❑ Office of VP for Research
- ❑ College of Engineering

■ Michigan DOT

■ NHTSA, FMCSA, JPO, Volpe, NIST, JHU APL

■ Vehicle Manufacturers

- ❑ Honda R&D NA

■ Tier 1 Suppliers

- ❑ Visteon
- ❑ Eaton
- ❑ AssistWare

■ Supporting Organization

- ❑ Battelle Memorial Institute

Key Research Questions

- Will the integrated system improve safety?
- Do drivers understand and accept the integrated system?
 - Multiple threats and prioritization of warnings
 - Nuisance or false warnings
- What human factors guidelines apply when integrating multiple systems?
 - Effective driver-vehicle interface (DVI)
- What are reasonable objective tests?