

Vehicle Infrastructure Integration

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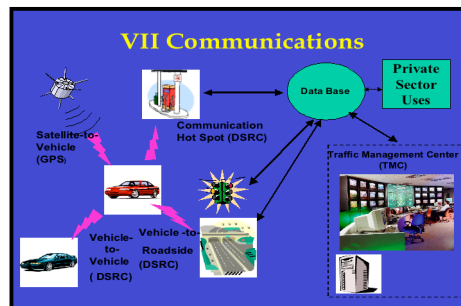
Redmond, WA
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What is VII?

Vehicle Infrastructure Integration (VII) connects vehicles and the infrastructure to enable transmission of information between:

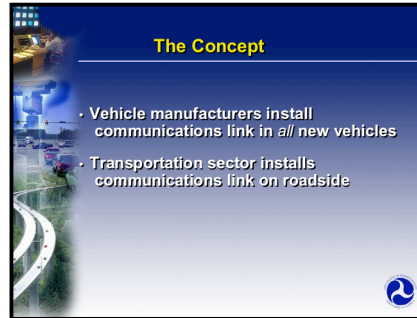
- Vehicles to the infrastructure
- Infrastructure to vehicles
- Vehicle to vehicle



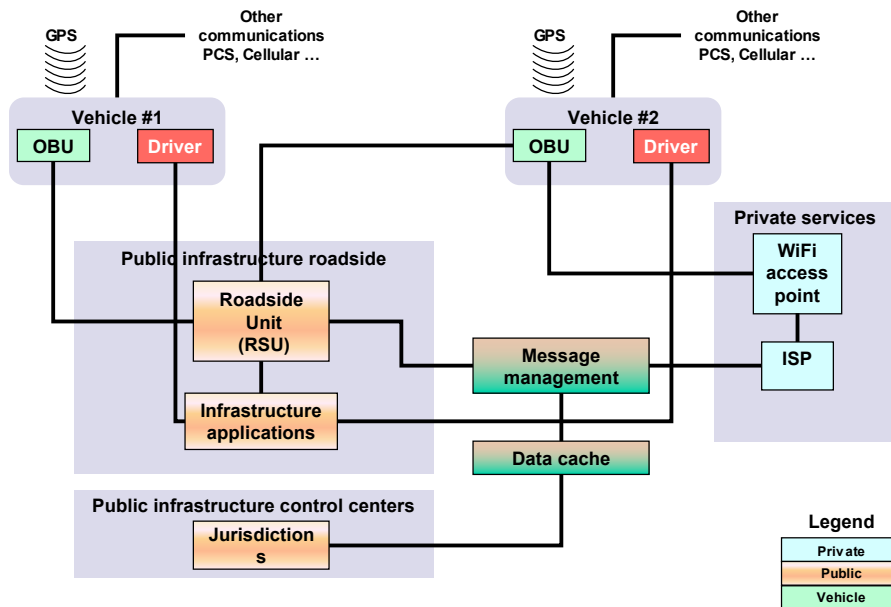
How VII Will Work

Vehicle manufacturers will install all new vehicles with the equipment necessary to provide 2-way communications with the department's roadside infrastructures.

This will allow motorists advanced warning of traffic and weather conditions, and allow traffic management centers first-hand information about what is happening on the roadway.



VII - The Big Picture



VII

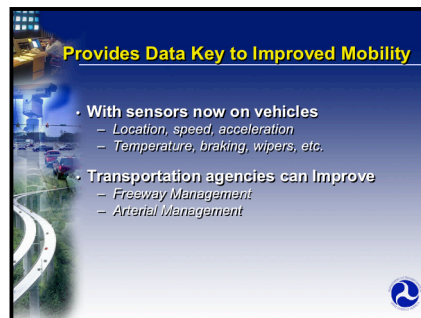
What it Can Do

Improve Safety

- Prevent Collisions
- Serves as a tool for emergency responders
- Increases operational efficiencies
- Provides travel information

Improve Freight Mobility

- Expands on devices motorists already use
- Benefits truck drivers which benefits ALL drivers
- Provides tools for travel times that are relevant
- Provides tools for travel times that are relevant to truckers



The VII Team

Who's involved?

Currently the US DOT, AASHTO, several state DOTs, contractors and vehicle manufacturers are involved in discussions and subcommittees of VII.

State and Local

Agencies:

Florida DOT
NYS DOT
Virginia DOT
MTC
Idaho DOT
Caltrans
Utah DOT
*WSDOT
Indiana DOT
Minnesota DOT
Michigan DOT
Maryland SHA

Auto Manufacturers:

Alliance of Automobile
Manufacturers
General Motors
Mitsubishi Motors
Nissan
Honda R&D
Ford
General Motors
Ford
Mercedes Benz
BMW
Daimler Chrysler
Toyota

US DOT:

FHWA
DOT/NHTSA
DOT/FMCSA

Associations:

AASHTO
ITS America

Contractors:

PB Farradyne
MitretekSystems
Cambridge Systematics
University of Maryland
EI Tinklenberg

*WSDOT Policy – Doug B. MacDonald
Working Group – Gummada Murthy

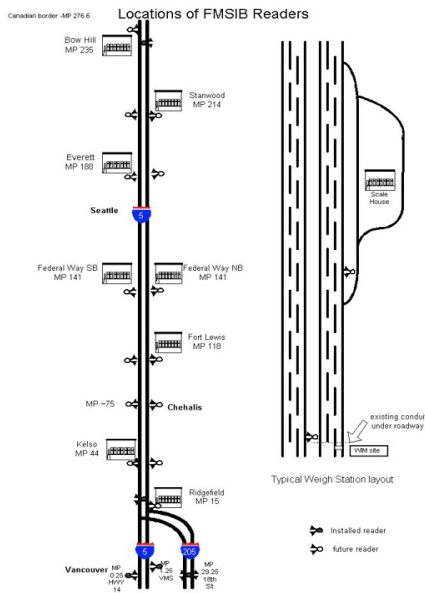
Licensing

WSDOT applies for DSRC licensing

- WSDOT is currently in the process of applying for two dedicated short-range communication (DSRC) licenses with the Federal Communication Commission (FCC).
- The licensing is mandatory for registering radio signals with the FCC and to ensure there is no interference with other licensed services.

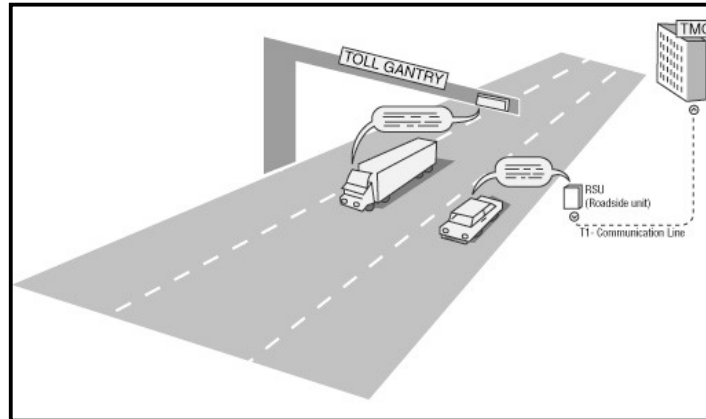
DSRC Locations

Current and Proposed



The Future of VII with Current Roadside Devices

VII is the next step for integrated electronic toll collection/travel information/CVISN



CVHAS Pooled Fund Study

The cooperative vehicle-highway automation systems (CVHAS) is a federal pooled-fund program.

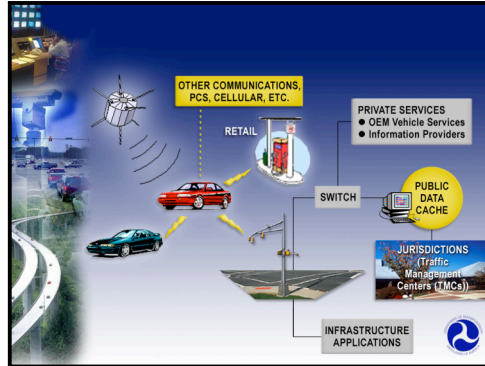
- Uses pooled resources from public and private sectors
- Deploys solutions that will improve transportation and seeks to facilitate sharing of experiences from its projects

Active projects

- Radio Freq. ID tags to enhance truck safety (Cal. PATH Program)
- Lane Departure Warning (Florida DOT / Turnpike)
- Vehicle-Vehicle and Vehicle to roadside communication (California PATH)
- Passive roadside reflectors to improve radar reliability (University of Minnesota)
- Expediting VII integration (for integrated pavement information etc.) (California PATH/Chrysler).

WSDOT current involvement in VII

- WSDOT is proposing a freight application for CVHAS
- NW VII Coalition participant along with:
 - Utah
 - ODT
 - ITD
 - CalTrans
 - Alaska DOT
- AASHTO/VII Working Group



In Washington State, we view VII as state-of-the-art, leading edge technology. We fully support VII nationally, and immediately transpose the concepts presented for our statewide applications.