



DSRC FOUNDATION OF THE THEA CV PILOT DEPLOYMENT

Walk. Ride. Drive. *Smarter.*



CV PILOT DEPLOYMENT AREA



EQUIPMENT



1,620

On-Board Units (OBUs)

A rear view mirror for passenger vehicles and tablet display for transit vehicles



40

Road Side Units (RSUs)

Mounted on existing structures throughout the deployment area

CHANNEL ALLOCATIONS - TAMPA

- 172 –
 - Basic Safety Message
 - Real Time Correction Message
 - Signal Phase and Timing
 - MAP Message
- 176 –
 - Personal Safety Message
 - Security Credential Management System
 - Signal Request Message
 - System Signal Message
- 178 –
 - WAVE Service Advertisement
 - Travel Information Message
 - Roadside Alert



DSRC HISTORY

- FCC specifically set aside 75 MHz of the 5.9 GHz in 1999
- Used for ITS vehicle safety and mobility applications
- Europe adopted DSRC for tolling in 2003
- USDOT and Partners have matured technology for current use



STRENGTHS

- Ready Today
- Reliable, High speed, low latency
- Existing pilot, test bed, and project sites
- Designed with security & privacy focus
- Based on standards for interoperability
- Local agency control



DEPLOYMENTS

- Safety Model Deployment
- CV Pilots (Tampa, New York, & Wyoming)
- Existing test bed, and project sites (e.g., Anthem, Az,
- Florida DOT FRAME (I-75)
- Florida SPaT Challenge project (Tallahasee)
- University of Alabama
- Virginia I-66 area
- Federal Law Enforcement Training Center (FLETC)
- New York (Albany) snow plow demo through the Pooled Fund Study
- USDOT MI Test Bed: (i.e., City of Novi, Farmington Hills and surrounding areas)
- MDOT Test Bed:
- City of Detroit Test Bed:
- Ann Arbor Connected Vehicle Test Environment (AACVTE):



COMMS FOR APPLICATIONS MOVING FORWARD

- DSRC
 - V2V – Electronic Brake Light, Forward Collision, Intersection Movement Assist, Right turn in front of a transit vehicle
 - V2I apps - End-of-Ramp Deceleration, Ped in Crosswalk, Ped Mobility, I-SIG, Probe Enabled Data Monitoring, Transit Priority, Wrong Way
- Satellite
 - Satellite band being used to “back-haul” SCMS information
- Cellular
 - Serving as an interim carrier for “back-haul” to the TMC for areas without fiber
- WiFi
 - V2I apps (ad hoc network, very short range, low latency) – Detect Pedestrians and generate PSMs.



OEMS AND AFTERMARKET OBU PROVIDERS

- Aftermarket device manufacturers
 - Savari
 - Commsigna
 - Leer
 - Sirius XM
 - Delphi
 - Cohda
- GM Cadillac STS V2V Standard Feature February 2017
- Roadside Unit manufactures working with OEMs
 - Siemens
 - Savari
 - Leer
 - Cohda
 - Sirius XM



TAMPA HILLSBOROUGH
EXPRESSWAY
AUTHORITY



**CONNECTED
VEHICLE PILOT**
— TAMPA —



U.S. Department of Transportation

