V2V ADVANCEMENTS IN LAST 12 MONTHS

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Safety Pilot Model Deployment

- Deployment began August 21, 2012
  - Continue to collect data from vehicles and the infrastructure
- As many as 2843 vehicles equipped
  - Motorcycles and a bike
- 3.9 million trips and 24.6 million miles
- Continued strong support and interest from the community
- 100’s of visitors and inquiries
Ice Formation Warning Application

- With Civil Engineering, deployed a pavement temperature/moisture sensor to send slippery road condition message
- Prototype application installed
  - Collect and analyze environmental conditions
  - If conditions favor ice formation then broadcast a Travelers Information Message (TIM) from the local RSE
  - Customized ASD and DVI on a vehicle
    - Visual cue in rear-view mirror w/ integrated LCD display
    - Unique audio tone
Ice Formation Warning Application

Sensor location 2 (SE pole)
- 1 humidity sensor
- 1 thermistor
- 1 water sensor

Wireless sensor node with antenna

Sensor location 1
- 4 thermistors

4 strands cables (two lines)
Certificate Authority (CA) Expiration

- Original plan for Security Credential Management System (SCMS) was to let the CA expire May 31, 2014
  - After planned decommissioning
- Affects all security certificates:
  - Fall-back certificates, 5-minute certificates – OTA and preloaded (VAD), 1-year certificates
- During the update process there will be a mix of certificates generated from the old and new CV – they are not compatible
DSRC-Equipped Motorcycles
Summary Statistics (All Motorcycles)

- Overall Duration: 6 months (May - November)
- Motorcycles Fielded: 6 (4 equipped with DAS)
- Total Miles: 4676
- Total Trips: 865
- Number of Drivers: 14
- BSMs Broadcast: 4,021,772
- Total time: 112 hours
Trips Coverage
DAS Motorcycles and ASD/VAD Vehicles

The DAS-Equipped motorcycles encountered (*) ASD/VAD-Equipped vehicles 4,376 times

(*) Encounter: period when BSMs are exchanged between vehicles, average 49 second duration
Motorcycles Generating Warnings

- Integrated truck (15501) approaching an intersection, motorcycle (502) in crossing direction.
- IMA warning in truck (about 7 sec. prior to frame shown).
Began Work with Vulnerable Road Users

- Pedestrians
  - City’s #1 concern
- Bicyclists
  - City’s #2 concern