Connected and Automated Vehicles

September 13, 2017
STSMO Annual Meeting
Rapid City, SD
Overview

• AASHTO STSMO Connected and Automated Vehicles (CAV) Task Group
  ▪ Blaine Leonard, Utah DOT
  ▪ Greg Larson, CalTrans
  ▪ Collin Castle, Michigan DOT

• AASHTO SCOWCT (Special Committee on Wireless Communications Technology)
  ▪ Russ Buchholz, North Dakota DOT
Agenda

• CAV Summary
  ▪ Review of Strategic Goals
  ▪ Summary of Recent CAV Activities
  ▪ Overview of Upcoming CAV Activities

• Summary of Recent SCOWCT Activities

• Vehicle Automation Update

• Federal CAV Research & Policy Initiatives
First Electric Traffic Light

• Lester Wire, Salt Lake City Police Officer
• 1914
CAV Goals / Actions

STS MO Strategic Goal #8
Encourage and facilitate the development and deployment of connected vehicle infrastructure and applications, including elements that support automated vehicle features.
CAV Goals / Action

CAV Vision

“...the recognized leader for state transportation agencies for information and collaboration on connected and automated vehicle deployment and impacts, and the voice for those entities...”
CAV Challenges

• This is NEW (relatively)
  ▪ Changing Paradigms
  ▪ Different skill set
  ▪ New tools & resources

• Rapidly evolving

• Diverse (and changing) stakeholders & partners
Related CAV Groups

• AASHTO SCOP CAV Task Force
• V2I DC (AASHTO / ITE / ITSA / FHWA)
  ▪ Working Groups
  ▪ SPaT Challenge Committees
  ▪ IOO/OEM Working Groups
• CV PFS (about 20 states / local agencies)
• TRB Vehicle-Highway Automation Comm
Related CAV Groups

- ITE
- ITS America
- AAMVA
- ASCE T&DI
- Probably (certainly) others . . .
CAV Goals / Action

• CAV Goals
  ▪ Support SPaT Challenge and other V2I DC Activities
  ▪ Provide Members with Comprehensive information about CAV
  ▪ Support State DOT’s in CAV efforts
    ❖ Existing members / invite new ones
  ▪ Provide Updates to DOT Executives
CAV Focus Area Activities

• Updates from Related Groups:
  ▪ V2I DC
    ❖ SPaT Challenge
    ❖ IOO / OEM Meetings
    ❖ Transition to Phase 2
The SPaT Challenge

Challenge state and local public sector transportation Infrastructure Owners & Operators (IO&Os) to deploy DSRC infrastructure with SPaT (and MAP) broadcasts in at least one coordinated corridor or network (approximately 20 signalized intersections) in each state by January 2020.

Additional V2I Applications that build on SPaT are also encouraged!

20 Intersections in 50 states by 2020!
The SPaT Challenge

Why this Challenge?
To provide IOOs with an entry into DSRC-based V2I deployment allowing them to gain valuable procurement, licensing, installation, and operation experience, which in turn will:

- Lay the ground work for more advanced V2I deployments
- Show a commitment to OEMs and applications developers
SPaT Challenge Resources

www.transportationops.org/spatchallenge
# SPaT Challenge Resources

<table>
<thead>
<tr>
<th>SPaT Challenge Resource</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSRC Licensing Information</td>
<td>On-line / Available</td>
</tr>
<tr>
<td>Guidelines for Selecting Corridors</td>
<td>On-line / Available</td>
</tr>
<tr>
<td>Implementation Guidance</td>
<td>On-line / Available</td>
</tr>
<tr>
<td>SPaT Challenge Folio</td>
<td>On-line / Available</td>
</tr>
<tr>
<td>SPaT Challenge FAQs</td>
<td>On-line / Available</td>
</tr>
<tr>
<td>SPaT Challenge Estimated Costs</td>
<td>Draft Being Reviewed</td>
</tr>
<tr>
<td>SCMS &amp; The SPaT Challenge</td>
<td>Draft Being Reviewed</td>
</tr>
<tr>
<td>Standards Versioning Management</td>
<td>Draft Being Reviewed</td>
</tr>
<tr>
<td>Simple Steps to Deployment – Resource Guide</td>
<td>Draft Being Reviewed</td>
</tr>
<tr>
<td>Specifications &amp; Requirements</td>
<td>In Development</td>
</tr>
<tr>
<td>Procurement Guidance</td>
<td>In Development</td>
</tr>
</tbody>
</table>
CAV Focus Area Activities

• Updates from Related Groups:
  ▪ V2I DC
    ◆ SPaT Challenge
    ◆ IOO / OEM Meetings
    ◆ Transition to Phase 2
  ▪ Maintenance and Road Weather Activities
  ▪ AASHTO SCOP CAV Task Force Update
  ▪ NCHRP 20-102: State and Local AV/CV Policies
CAV Focus Area Activities

- NHTSA NPRM on V2V (and comments)
- Recap of ITS World Congress (Melbourne)
- AV Policy Updates
  - NHTSA AV Policy (and comments)
  - California AV Legislative Overview
  - Michigan AV Legislative Overview
- Outreach to State DOTs / Determine Needs
CAV – Moving Forward

• Support SPaT Challenge
  ▪ And other V2I DC Activities
• Support State DOT’s in CAV efforts
  ▪ Share Best Practices
  ▪ Discuss developments / policy issues
  ▪ Outreach
• Coordinate with Other Groups
• Look for Opportunities to Advance CAV