Vehicle to Infrastructure Deployment Coalition
V2I DC

Update Based on the Initial Executive Committee Meeting Results

September 2015
Topics

• Update on the V2I DC Executive Committee (V2I DC EC)
• Relationship between V2I DC EC and the Connected Vehicle Executive Leadership Team (CV ELT)
• Focus Areas and Goals for the V2I DC
V2I DC Executive Committee (V2I DC EC)

• Inaugural meeting on September 10, 2015
• Key outcomes included:
  ▪ Clarified the role of the Executive Committee
  ▪ Defined initial focus areas for the V2I DC
  ▪ Defined an initial set of goals for the V2I DC
  ▪ Discussed a preliminary Business Plan for ongoing V2I DC efforts beyond June 2016 (still in development)
Role of the V2I DC Executive Committee (V2I DC EC)

1. Define the primary focus areas for the entire V2I DC;

2. Identify goals that the V2I DC can use to measure progress towards accomplishing the focus areas;

3. Support the work of the TWGs by offering input to the processes and review of work completed; and

4. Elevate the results of coalition technical work to the Connected Vehicle Executive Leadership Team (ELT) for policy level considerations.
Relationship Between V2I DC EC and the CV ELT
V2I Deployment Coalition Structure

- Connected Vehicle Executive Leadership Team
- V2IDC Executive Committee
- TWG 1: Deployment Initiatives
- TWG 2: Deployment Research
- TWG 3: Infrastructure Operator, OEM, and Supplier Partnerships
- TWG 4: Deployment Guidance
- TWG 5: Deployment Standards

USDOT - ITS JPO - FHWA - FTA - NHTSA
AASHTO CV ELT

• Meeting since 2005:
  ▪ Provide strategic guidance,
  ▪ Recommend policies and national deployment approaches,
  ▪ Provide critical program reviews,
  ▪ Assess the risks associated with deployment,
  ▪ Commit the resources of their organizations,
  ▪ Educate their organizations and supporting institutions.
# CV ELT and V2I DC EC

<table>
<thead>
<tr>
<th>AASHTO CV Executive Leadership Team (CV ELT)</th>
<th>Recommend Policies &amp; Deployment Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle to Infrastructure Deployment Coalition Executive Committee (V2I DC EC)</td>
<td>Guidance to V2I DC on Technical &amp; Institutional Issues</td>
</tr>
<tr>
<td>V2I DC Technical Working Groups (TWGs)</td>
<td>Collaborate on technical work (Input level actions)</td>
</tr>
</tbody>
</table>
CV ELT and V2I DC EC

CV Executive Leadership Team (CV ELT) → Recommend Policies & Deployment Approaches

Vehicle to Infrastructure Deployment Coalition Executive Committee (V2I DC EC) → Guidance to V2I DC on Technical & Institutional Issues

V2I DC Technical Working Groups (TWGs) → Collaborate on technical work (Input level actions)

Technical findings & Questions

Policy level Feedback

Feedback & Guidance

Input
Focus Areas and Goals for the V2I DC
Role of the V2I DC

At the September V2I DC EC meeting, the group identified the V2I DC role as:

“To help accelerate consistent and effective deployments of Connected Vehicle technologies that address passenger vehicles, freight, and transit operations in both urban and rural areas.”
V2I DC Initial Focus Areas and Goals

• To help accelerate V2I deployments related to:
  - Intersections (signalized and non-signalized)
  - End of queue warnings
  - Work zone management
  - Curve warning systems
Initial 18 Month Activities to Support Focus Areas

• Informing and educating Connected Vehicle stakeholders on available tools to assist them in deploying V2I technologies

• Researching and defining a set of V2I issues and identifying needed action plans to address the issues, as they relate to the initial four goals/focus areas

• Facilitating discussions between OEMs and infrastructure owners & operators to enable both parties to understand the goals and objectives of the other party
TWG Work Plans

- Should be adjusted as needed to focus on the initial focus areas and goals
- Should continue to focus on researching and defining the issues to identify actions that will address the issues over the coming years
TWG 3: Work Plan

Activity 1: Identify Application Value and Costs

1.1: Compile list of apps
   Gather information from USDOT, CAMP and operators

1.2: Define value
   Determine how value will be assigned

1.3: Identify value
   Select 3 applications for case study of qualitative and quantitative value

1.4: Identify costs
   Use case studies for operator, OEM and supplier costs

Activity 2: Identify Data Issues

2.1: Define data
   Create a definition of data for TWG3 purposes

2.2: Identify case studies
   Data sources, availability and challenges

2.3: Document data sources, availability and challenges
   Providing and receiving data from operator, OEM and supplier

Activity 3: Identify Common Goals

3.1 Brainstorm goals

3.2 Merge goals

3.3 Present and share results

Identify commonality and uniqueness among goals

Document and share with other TWGs

Brainstorm goals

Convene focus group

Identify commonality and uniqueness among goals

Document and share with other TWGs
Identify Common Goals

“To help accelerate consistent and effective deployments of Connected Vehicle technologies that address passenger vehicles, freight, and transit operations in both urban and rural areas.”

Accelerate V2I deployments related to:
1. Intersections (signal & non-signal)
2. End of queue warnings
3. Work zone management
4. Curve warning systems

Themes

RSZW
RLVW
CSW

MMITSS
Intelligent Traffic Signal System (ISIG)
Transit Signal Priority (TSP)
Mobile Accessible Pedestrian Sig. System (PED-SIG)
Emergency Vehicle Preemption (PREEMPT)
Freight Signal Priority (FSP)

All Modes & Roads

In this environment, the Q-WARN application may reside in the vehicle or within an infrastructure-based entity, or utilize a combination of both.

Q-WARN
Queue alert immediately provided to following vehicles to prevent secondary crashes
Freeway collision occurs and queue forms

CAMP LLC
Vehicle to Infrastructure (V2I) Consortium

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Honda R&D Americas
Hyundai Kia Motors
KIA
NISSAN
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GM
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1
3
4

16
Questions?