Breakout Session 7-II: Mobile and Carry-in Devices

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Agenda

- Introduction (5 min.)
- Matching Game (10 min.)
- Questions and Discussions (20 min.)
- Brainstorm (20 min)
- Conclusions (5 min.)

WEBINAR PROTOCOL:
Please use chat box to indicate you have a comment or a question, a support staffer will jump in for you to ask the question.

Please MUTE your phones!
Introduction

- **Session Objective:**
  - Engender stakeholder feedback on the utilization of vehicle devices and future enhancement with the increase of integrated vehicle devices.

- **Definitions for the purposes of this breakout session**
  - **Carry-in devices**: portable devices potentially brought in and connected to vehicles but not generally utilized outside of vehicles.
  - **Mobile devices**: portable devices with built-in communications capabilities, such as smart phones, can be used outside vehicles and may or may not necessarily be connected to vehicles.
  - **Integrated devices**: devices built into vehicles, not portable, including aftermarket/retrofit integrated devices and OEM integrated devices.
Matching Game

- Please **match** utilization of vehicle devices to applications using the **colored cards**.
  1. Safety - Pedestrian in Signalized Crosswalk
  2. Mobility - Signal Priority (transit, freight)
  3. Environment - Low Emissions Zone Management
  4. Agency Data - Work Zone Traveler Information
  5. Smart Roadside - Smart Truck Parking

- **How to play**
  - *Everyone gets three colored cards: pink, yellow and blue*
  - *Each card represents one device type*
  - *As the speaker calls out each application, please raise the corresponding colored card(s) that apply to the application (you may raise 1, 2, or 3 cards).*
  - **Note to Webinar participants:** *Please type in your color(s) via the chat box.*
### CV Pilot Applications

#### V2I Safety
- Red Light Violation Warning
- Curve Speed Gap Warning
- Spot Weather Impact Warning
- Reduced Speed/Work Zone Warning
- Pedestrian in Signalized Crosswalk Warning (Transit)

#### V2V Safety
- Emergency Electronic Brake Lights (EEBL)
- Forward Collision Warning (FCW)
- Intersection Movement Assist (IMA)
- Left Turn Assist (LTA)
- Blind Spot/Lane Change Warning (BSW/LCW)
- Do Not Pass Warning (DNPW)
- Vehicle Turning Right in Front of Bus Warning (Transit)

#### Environment
- Eco-Approach and Departure at Signalized Intersections
- Eco-Traffic Signal Timing
- Eco-Traffic Signal Priority
- Connected Eco-Driving
- Wireless Inductive/Resonance Charging
- Eco-Lanes Management
- Eco-Speed Harmonization
- Eco-Cooperative Adaptive Cruise Control
- Eco-Traveler Information
- Eco-Ramp Metering
- Low Emissions Zone Management
- AFV Charging / Fueling Information
- Eco-Smart Parking
- Dynamic Eco-Routing (light vehicle, transit, freight)
- Eco-ICM Decision Support System

#### Mobility
- Advanced Traveler Information System
- Intelligent Traffic Signal System (I-SIG)
- Signal Priority (transit, freight)
- Mobile Accessible Pedestrian Signal System (PED-SIG)
- Emergency Vehicle Preemption (PREEMPT)
- Dynamic Speed Harmonization (SPD-HARM)
- Queue Warning (Q-WARN)
- Cooperative Adaptive Cruise Control (CACC)
- Incident Scene Pre-Arrival Staging Guidance for Emergency Responders (RESP-STG)
- Incident Scene Work Zone Alerts for Drivers and Workers (INC-ZONE)
- Emergency Communications and Evacuation (EVAC)
- Connection Protection (T-CONNECT)
- Dynamic Transit Operations (T-DISP)
- Dynamic Ridesharing (D-RIDE)
- Freight-Specific Dynamic Travel Planning and Performance
- Drayage Optimization

#### Agency Data
- Probe-based Pavement Maintenance
- Probe-enabled Traffic Monitoring
- Vehicle Classification-based Traffic Studies
- CV-enabled Turning Movement & Intersection Analysis
- CV-enabled Origin-Destination Studies
- Work Zone Traveler Information

#### Smart Roadside
- Wireless Inspection
- Smart Truck Parking
1. Can CV applications be most successfully deployed as a part of operational practice, leveraging vehicles and mobile devices (in-vehicle or outside of the vehicle) together as data sources and application platforms?

2. What specific challenges do you see with carry-in/mobile devices?

3. What is the most appropriate role of carry-in/mobile devices in CV pilot?
Brainstorm
Operational CV Applications in 2024

- Future applications and enhancement
  - Does the current CV pilot applications have the capability of incorporating integrated vehicle devices in both near-term and long-term deployment?
  - What are the potential differences between mobile devices, carry-in devices and integrated devices in future deployments?

![Graph showing the number of vehicles with integrated devices from 2012 to 2022]