



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



Mobile Device



Carry-in Device



Integrated Device



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.*



Carry-in Device



Mobile Device



Integrated Device



CV Pilot Applications

V2I Safety

Red Light Violation Warning
 Curve Speed Warning
 Stop Sign Gap Assist
 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)

Road Weather

Motorist Advisories and Warnings (MAW)
 Enhanced MDSS
 Vehicle Data Translator (VDT)
 Weather Response Traffic Information (WxTINFO)

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

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

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

Smart Roadside

Wireless Inspection
Smart Truck Parking



Questions and Discussions

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?

