



NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

Meeting Highlights

Vehicle Probe Data Users Group

Date: Thursday, October 9, 2014
Time: 9:30 AM – Noon
Place: Meeting Room 4&5, First Floor, MWCOG

Meeting Attendees (16)

Amy McElwain	VDOT Northern Region Operations
Anthony Hofmann	Michael Baker Jr. Inc.
Bob Moore	VDOT Transportation Planning
Dan Stevens	Fairfax County DOT
Edward Stylc	Baltimore Metropolitan Council
Jefferson King	WMATA
John Thomas	Montgomery County DOT
Keith Jasper	Northern Virginia Transportation Authority
Liz Parrish	Montgomery County DOT
Lulu Mao	VDOT Northern Region Operations
Matt Wolniak	JMT; Representing Maryland SHA
Michael Pack	CATT Lab, University of Maryland
Nikola Ivanov	CATT Lab, University of Maryland
Ruihua Tao	MD SHA
Sanhita Lahiri	VDOT
Terri Tabesh	MD SHA

COG/TPB Staff in Attendance (10)

Andrew Meese
C. Patrick Zilliacus
Erin Morrow
Feng Xie
Jim Yin
Jinchul Park
Jon Schermann
Marco Trigueros
Martha Kile
Wenjing Pu

1. Welcome and Introductions

Participants introduced themselves including main responsibilities in their organizations.

2. Overview of the Vehicle Probe Data Users Group

Speaking from a [presentation](#), Mr. Pu introduced the background, mission, goals, structure, participation and [website](#) of the Vehicle Probe Data Users Group. He also introduced the ways to obtain access to the vehicle probe data provided via the I-95 Corridor Coalition Vehicle Probe Project and the National Performance Management Research Data Set enabled by the FHWA.

Ms. McElwain added that the goals of the Users Group could also include providing feedback to data vendors and VPP Suite developers. In response to Ms. McElwain's question regarding whether non-COG/TPB agencies such as the operator of the I-495 and I-95 Express Lanes are eligible for this meeting, Mr. Pu welcomed participation of those agencies by stating that the goal is to make this group's meetings as public as possible, but cautioned that restrictions could be imposed to certain meeting items or datasets if they do not have a Data Use Agreement (DUA) with the University of Maryland or the I-95 Corridor Coalition. Mr. Meese added that the eligibility of the participation could be determined on a case-by-case basis, and clarified that the focus of the Users Group is technical issues other than policies.

3. Roundtable Discussions

Participants were invited to speak on what they have done and plan to do with vehicle probe data, challenges in the use of data, and their expectations of the Vehicle Probe Data Users Group.

Level of Experience

There was a wide range of familiarity of vehicle probe data among the participants, from unfamiliar with the data to regular or power users. There were a handful of participants indicated that their agencies had not signed the DUA thus did not have access to the I-95 Vehicle Probe Project data. One agency just signed the DUA but the access to the data had not yet been set up. The majority of the participants come from agencies with an active DUA and some of them are power users.

Applications

Current applications of vehicle probe data included both real-time operations such as Dynamic Message Signs and historical data-based planning activities and products such as system performance reports. Some agencies independently procured probe data from TomTom or AirSage for travel demand modeling purposes.

In the future, some participants expressed the interest of using probe data for micro- or meso-simulations, merging vehicle probe data with transit bus automatic vehicle location (AVL) data, and using the probe data to improve bus arrival time forecasting. One participant hoped that the vehicle probe data could provide a knowledge base for transportation improvements by monitoring highway performance over time. Another attendee was interested to get some

insights of travel behavior such as origin-destination (OD) and mode choice patterns out of probe data.

Challenges

The major challenge of using vehicle probe data rooted in data quality concerns on arterials and freeways with HOV or HOT lanes (but without dedicated HOV/HOT TMCs). Arterials have a wide range of characteristics and data quality varies from place to place and time to time. It was suggested that arterial data quality could be a candidate topic for the next Vehicle Probe Data Users Group meeting.

Other challenges included data integration, for example, integrating data from INRIX and Bluetooth detector and fusing vehicle volume and speed data, and data sharing among different agencies.

Expectations of the Users Group

Two additions to the proposed mission and goals of the group as presented in item #2 of this meeting were to provide feedback to data vendors and the VPP Suite developer, and to create certain form of online or mailing group that can be used as a library for experience sharing.

4. VPP Suite Demonstration and Transition to VPP2

Mr. Pack discussed the difference between VPP1 and VPP2 and some possible new features of the VPP Suite in the era of VPP2. He emphasized the importance and effectiveness of a single DUA that agencies have to sign in order to use the data under the I-95 Corridor Coalition Vehicle Probe Project umbrella.

Mr. Pack did a live demonstration of the tools in the VPP Suite, including Vehicle Probe Project Suite Dashboard, Massive Raw Data Downloader, Trend Map, Congestion Scan, Bottleneck Ranking, User Delay Cost Analysis and Performance Summaries and Charts.

5. COG/TPB's Use of Probe Data and Lessons Learned

Mr. Pu made a [presentation](#) to share COG/TPB's use of vehicle probe data and lessons learned over the last five years of experience.

6. Other Business

None.

7. Adjourn

The meeting was adjourned a little before noon.