Symposium Summary

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Background

Since 2009, the Texas A&M Transportation Institute (TTI) and the Humphrey School of Public Affairs at the University of Minnesota have partnered with transportation stakeholders to present the annual Symposium on Mileage-Based User Fees (MBUF).

This year, Symposium planners collaborated with ITS America to convene experts in mileage fees and intelligent transportation systems (ITS) as part of ITS America's Annual Conference in Nashville, TN. This venue prompted a focus on technologies that might support full-scale MBUF implementation and deployment. Speakers included representatives from state departments of transportation (DOTs), vehicle manufacturers, and technology providers. Each expert offered their perspective for developing effective MBUF programs that successfully address the fundamental issues of policy, technology and public acceptance.

Session 1 – Implementation Pathways: Research Initiatives and Demonstrations

The 2013 Symposium kicked off with discussion from the Oregon, Nevada, and Minnesota DOTs on their respective MBUF pilot programs. Oregon has just completed its second pilot and has seen the most success and legislative support with two bills currently working their way through the Oregon legislature: a House bill mandating mileage fees on highly fuel efficient vehicles starting in 2015, and a Senate Bill proposing a 5,000 person opt-in program to implement MBUF indefinitely. Both bills have bipartisan supporters.

A representative from the Nevada DOT reviewed roadblocks and lessons learned in developing the Nevada field test. Negative media bias was a major barrier to gaining public acceptance, and Nevada learned the importance of proactively developing positive relationships with the media to gain public support and increase participation.

Minnesota DOT's pilot incorporated options for use and non-use of technology. GPS-equipped mobile phones determined time and location and assessed miles traveled. This technology was accepted by the public, especially when a non-technology option was offered as an alternative. While variability in GPS reads posed some accuracy problems in calculating fees, overall the pilot was viewed as successful.

Session 2 – Implementation Challenges

In the second session of the Symposium, discussion turned to the challenges facing implementation of MBUF programs. Several experts discussed policy roadblocks impeding MBUF development and how technology can help alleviate these issues. A mileage fee and ITS consultant reviewed several myths surrounding MBUFs, including the high cost of implementation, bias against rural drivers, and loss of privacy. The consultant noted that outreach using facts to dispel myths will help gain public support for MBUF. Two experts discussed ways technology can be used to overcome implementation and public acceptance barriers. For example, technologies utilizing a vehicle's OBD-II port – standard on cars sold in the US since 1996 – can effectively collect mileage data without location data. Additionally, certain system elements can be privatized to reduce government involvement in data collection, and smart phones or other technologies that drivers are already using can be utilized to increase acceptance.

Session 3 – Nexus of Road User Fees and In-Vehicle Technologies

The final panel session featured discussion on the role that emerging technologies could play in implementing MBUF. A recurring theme in these discussions was the potential value of vehicle telematics as a means of deploying MBUF. Telematics are already being used by insurance companies as part of usage-based insurance (UBI) programs collecting data via the vehicle's OBD-II port. Telematics has advantages over cell phone-based GPS systems: OBD-II port-based devices are completely transparent to the driver, and do not suffer the accuracy and reliability issues of smart phone GPS applications. If the primary goal of an MBUF program is to assess fees solely on miles driven, and not to vary those fees based on the location or time of travel, then a telematics-based system becomes an attractive solution.

Technology is developing rapidly to network a large percentage of our environment. Cars, home appliances, public utility systems, and even people will generate their own telematics data that will in turn feed what was termed the "Internet of Things" and the "Internet of Everything" (IoE) by various presenters. The IoE was discussed extensively by an expert from Cisco Systems, who noted that as the IoE economy continues to develop, new data-dependent business models will shape the way humans interact with one another and their environment in the future. Connected vehicle technology is an advancing aspect of the IoE, and the final presenter from General Motors discussed implementation of a new "Driver Assistance" technology in select 2013 GM models. All the session presenters acknowledged that connected vehicle and IoE technologies could potentially support MBUF deployment. While both intriguing and promising, such technologies require significant development, and full-scale deployment is still years away.

Session 4 – Path Forward: Interactive Discussion and Wrap-Up

As in previous years, the 2013 Symposium concluded with an interactive discussion circle involving symposium participants. At the start of the Symposium, participants were given three questions to consider throughout the day:

- What are the most promising technology platforms/enabling systems for delivery of mileage-based fees?
- What are the research, development and testing needs for advancing direct road use charging?
- What is the role of the ITS community in supporting the development of road use fee systems?

The discussion circle fostered lively exchange of many viewpoints and summarized the messages from the day's diverse presentations. General themes emerging included:

- Technology and non-technology options exist now for implementing MBUF.
- The technologies selected are less important than developing policy and public acceptance.
- Any one technology developed for an IoE purpose could successfully break through policy and acceptance barriers and open doors for MBUF and many IoEother IoE applications.
- Much more research on MBUF policy, acceptance and implementation is needed, incorporating larger, multi-regional levels.
- Connected vehicle technologies are appealing as a means of implementing MBUF but appear to be at least a decade away from commercial application.
- Vehicle telematics are an attractive near-term option for deploying MBUF systems.