



ITS Program Advisory Committee

Minutes of October 10 to 11, 2012 Meeting

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1. General

- a. The Intelligent Transportation Systems (ITS) Program Advisory Committee (ITS PAC) met on October 10 to 11, 2012, at the University of Michigan North Campus Research Complex, Chairman Robert Denaro, presiding.
- b. These minutes provide a high-level summary of the meeting proceedings. A transcript of the meeting proceedings is available in the *October 10 – 11, 2012*, section of the ITS PAC webpage at <http://www.its.dot.gov/itspac/index.htm>. For easy reference, the transcript includes a table of contents with hyperlinks to meeting agenda topic headings within the document. Copies of the meeting presentations and other ITS PAC-related documents also are available in the website.

2. Meeting Attendance

- a. Committee members present:

Mr. Robert Denaro, Vice President, Nokia, Committee Chairman

Dr. Teresa Adams, Chair, Transportation Management and Policy Program and Director,
National Center for Freight and Infrastructure Research and Education, University of
Wisconsin-Madison

Mr. Stephen Albert, Director, Western Transportation Institute, Montana State University

Mr. Scott Belcher, President and CEO, Intelligent Transportation Society of America

Mr. Roger Berg, Vice President of Wireless Technologies, DENSO North American
Research Laboratories

Mr. Joseph Calabrese, CEO, Greater Cleveland Regional Transit Authority

Mr. John Capp, Director of Global Active Safety Electronics, General Motors
Corporation

Mr. Sonny Holtzman, Principal, The Holtzman Group

Mr. Steve Kenner, Global Director of Automotive Safety, Ford Motor Company

Mr. Ronald Kirby, Director of Transportation Planning, National Capital Region
Transportation Planning Board, Metropolitan Washington Council of Governments

Mr. J. Peter Kissinger, President and CEO, AAA Foundation for Traffic Safety

Dr. Hans Klein, Associate Professor, School of Public Policy, Georgia Institute of
Technology, Committee Vice Chairman

Mr. Scott McCormick, President, Connected Vehicle Trade Association

Dr. Raj Rajkumar, Department of Computer and Electrical Engineering, Carnegie Mellon
University

Mr. Brian Schromsky, Director, Federal Government and Public Safety, Verizon
Wireless

Mr. Kirk Steudle, Director, Michigan Department of Transportation

Mr. George Webb, County Engineer, Palm Beach County, Florida

b. Others present:

Mr. Greg Winfree, Deputy Administrator, Research and Innovative Technology Administration (RITA), U.S. Department of Transportation (by teleconference)
Dr. Peter Sweatman, Director, University of Michigan Transportation Research Institute (UMTRI)
Mr. John Maddox, Director of Collaborative Program Strategies, UMTRI
Mr. John Augustine, Managing Director, ITS Joint Program Office (JPO), RITA
Ms. Valerie Briggs, Team Lead, Knowledge and Transfer Policy, ITS JPO
Mr. Brian Cronin, Team Lead, Research, ITS JPO
Mr. Walton Fehr, Program Manager, Systems Engineering, ITS JPO
Mr. Kevin Gay, Volpe National Transportation Systems Center (Volpe), RITA
Mr. Stephen Glasscock, Program Coordinator, ITS JPO
Mr. Peter Hardigan, Ford Motor Company
Mr. Sam Lamagna, Intel Corporation
Mr. Mike Lukuc, National Highway Traffic Safety Administration (NHTSA)
Ms. Emily Nodine, Volpe
Mr. Ray Resendes, NHTSA
Dr. James Sayer, UMTRI
Mr. Mike Schagrin, Program Manager, Safety, ITS JPO
Mr. Matt Smith, Michigan Department of Transportation
Mr. James Szudy, Bendix Commercial Vehicle Systems, LLC
Mr. Carlos R. Vélez, Citizant, Inc.

3. Meeting Action Items

- a. The ITS Joint Program Office (JPO) will make available to committee members a copy of the announcement of an upcoming public demonstration of a commercial vehicle-oriented application using 5.9 GHz Dedicated Short-Range Communications (DSRC) technology.
- b. Chairman Denaro will provide committee members a copy of the interim advice memorandum tentative outline developed during Day 2 of the meeting.
- c. Chairman Denaro and Vice Chairman Klein will coordinate preparation of the initial draft of the interim advice memorandum with committee members by email.
- d. The committee will meet by teleconference to review progress on the draft interim advice memorandum. Mr. Glasscock will send committee members a poll for their teleconference preferred dates during the week of November 5 or November 12.

4. Meeting Agenda

Day 1 – Wednesday, October 11

- a. Opening Remarks by Committee Chairman Bob Denaro and Committee Vice Chairman Dr. Hans Klein.
- b. ITS JPO Briefing
- c. Welcoming Remarks by Research and Innovative Technology Administration (RITA) Deputy Administrator Greg Winfree.
- d. ITS JPO Briefing (continued)
- e. Technology Review
- f. Safety Pilot Deep Dive Discussion

Day 2 – Thursday, October 12

- g. Opening Remarks by Committee Chairman and Vice Chairman and Agenda Review
- h. Security/Implementation Discussion
- i. Subcommittee Breakout Meetings
- j. Subcommittee Report-outs
- k. 2012 Interim Advice Memorandum Discussion
- l. Summary and Wrap-up
- m. Adjourn

5. Summary of Proceedings

Day 1 – Wednesday, October 11

- a. Opening Remarks by Committee Chairman Bob Denaro and Committee Vice Chairman Dr. Hans Klein
 - (1) Chairman Denaro presented a high-level review of the proceedings of the ITS PAC's September 11, 2012, teleconference proceedings, and stated that the purpose of the current meeting was to take a "deep dive" into Connected Vehicle technology topics on the first day in preparation for the second day subcommittee meetings to continue defining potential areas for advice to the Secretary of Transportation.

- (2) Vice Chairman Klein reinforced Chairman Denaro's comments by describing the meetings main objectives as "listening and learning" on the first day and beginning to work on the committee's deliverable, an interim advice memorandum, on the second day.
- (3) While waiting for RITA Deputy Administrator Winfree to join the meeting by teleconference, Chairman Denaro invited Mr. Augustine to begin the ITS JPO Briefing.

b. ITS JPO Briefing

Mr. Augustine reviewed major ITS JPO and ITS Research Program activities, including:

- (1) Shelley Row, previous ITS JPO director, retired on October 1. Pending selection of her replacement, senior members of the ITS JPO management staff will assume Acting Director responsibilities for one-month-long periods on a rotating basis.
- (2) On August 21, the University of Michigan Transportation Research Institute (UMTRI) launched the Safety Pilot model deployment, which will include a 12-month test of vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) safety applications using nearly 3000 cars, truck, and buses.
- (3) On September 25 to 27, the annual Connected Vehicle Public Meeting was held in Chicago, and focused on V2V safety, the Safety Pilot Model Deployment, development of a robust V2I environment, connected vehicle deployment strategies, and preparation for NHTSA's 2013 decision.
- (4) A National Telecommunications and Information Administration (NTIA) study of risks associated with allowing frequency sharing within the DSRC 5.9 GHz frequency band.
- (5) Development of the Connected Vehicle Reference Implementation Architecture (CVRIA).

At this Point in the proceedings, RITA Deputy Administrator Winfree joined the meeting by teleconference.

c. Welcoming Remarks by RITA Deputy Administrator Greg Winfree.

Mr. Winfree emphasized the following points:

- (1) He is grateful for the time and effort that ITS PAC members are dedicating to helping move forward the ITS Research Program.

- (2) ITS PAC members' expertise input is highly valued by U.S. DOT and especially by RITA and its partners in the Federal Highway Administration, NHTSA, and Federal Motor Carrier Administration.
- (3) The ITS PAC's recommendations are a major reason the ITS Research Program has reached a critical juncture in the advancement of ITS technology and why the U.S. is closer than ever to implementation.
- (4) On August 21, the U.S. DOT kicked off the Connected Vehicle Safety Pilot model deployment, which affords the opportunity to view first-hand how ITS technology works and how it can address safety challenges. Secretary LaHood and the Administration believe that the Safety Pilot will answer many of the remaining questions about how Connected Vehicle safety technology can move from research and development to wide-scale deployment in our cities and communities. Research shows that this technology will save thousands of lives and make our roads and highways much more efficient. With the wealth of data that the Safety Pilot model deployment will provide about how V2V safety communications and V2I perform under real-world conditions, we are hoping that we can lay the groundwork for tangible measures to bring that technology to our vehicle fleet.
- (5) The U.S. DOT leadership and the ITS staff are excited about where the ITS Research Program is today, and Mr. Winfree hopes the ITS PAC will share that enthusiasm for where ITS research is headed in the U.S. We are at the advent of automated vehicles, whether in the air with UAVs, or on the ground with Google vehicles and others. U.S. DOT is looking forward to the ITS PAC's thoughts on what the program's next steps should be. The committee's recommendations will probably push the future and will be greatly appreciated.

d. ITS JPO Briefing (continued)

Mr. Augustine resumed the review of major ITS JPO and ITS Program activities, including:

- (1) An overview of major ITS aspects of the new transportation authorization legislation, the *Moving Ahead for Progress in the 21st Century Act (MAP-21)*.
- (2) An update on international ITS cooperation with the Republic of Korea and Japan; on international ITS standards harmonization, and on the joint European Union – U.S. joint showcase at the October 21-26 ITS World Congress in Vienna, Austria.
- (3) The release of the *ITS Strategic Research Plan, 2010 – 2014: Progress Update 2012* and initiation of the 2014 – 2019 strategic planning process.

e. Technology Review

- (1) Mr. Fehr presented an overview of major Connected Vehicle Program technology issues, including:
 - (a) DSRC requirements/performance/robustness.
 - (b) Positioning technology requirements/performance/robustness.
 - (c) ITS JPO participation in the FCC/NTIA study of the risks associated with allowing frequency sharing within the DSRC 5.9 GHz frequency band.
 - (d) The Connected Vehicle Affiliated Test Bed concept.
- (2) During the DSRC discussion Mr. Fehr stated that an “entity” would soon announce plans to conduct a public demonstration of a commercial vehicle-oriented application using 5.9 GHz technology that could be deployed as soon as next year. Chairman Denaro requested that committee members be provided a link to the announcement when available. Mr. Augustine responded that the ITS JPO would provide ITS PAC members the link.

f. Safety Pilot Deep Dive Discussion

Mr. Schagrin introduced the subject, which included the following presentations by the individuals indicated:

- (1) Safety Pilot Model Deployment Status – Mr. Sayer.
- (2) Safety Pilot Driver Clinic Results – Mr. Lukuc.
- (3) Safety Pilot Model Deployment Experimental Design – Mr. Gay.
- (4) Safety Pilot Model Deployment Data and Evaluation – Ms. Nodine.
- (5) NHTSA 2013 Decision Support – Mr. Resendes.
- (6) Wrap-up – Mr. Schagrin.

Day 2 – Thursday, October 12

g. Opening Remarks by Committee Chairman and Vice Chairman and Agenda Review

- (1) Chairman Denaro opened the Day 2 proceedings by announcing that he would be leaving his position at Nokia at the end of the year and would continue in the industry as a consultant.

- (2) Chairman Denaro turned the proceedings over to Vice Chairman Klein who reviewed the Day 2 agenda. Vice Chairman Klein announced a modification to the published agenda to allow Chairman Denaro to describe past committee major products and subcommittee chairmen to brief their subcommittee's charter and study topics before the subcommittee breakout meetings. As scheduled, subcommittee report-outs would follow the breakout meetings.

h. Security/Implementation Discussion

This discussion included presentations on the following topics by the individuals indicated:

- (1) Technical Security Design – Mike Shulman.
- (2) Connected Vehicle Implementation and Institutional Issues – Valerie Briggs.
- (3) Vehicle-Based Data and Evaluation – Brian Cronin.

i. Subcommittee Breakout Meetings

- (1) As previously announced by Vice Chairman Klein, in advance of the subcommittee breakout meetings, Chairman Denaro reviewed past major ITS PAC products. He began his discussion by recommended that ITS PAC members read the book titled, Reinventing the Automobile: Personal Urban Mobility for the 21st Century by Bill Mitchell, Chris Borroni-Bird, and Larry Burns. Chairman Denaro describing the book as a “fun read” on what the future of the automobile should be – high on electrification, connectivity, etc.
- (2) Chairman Denaro projected the ITS PAC webpage in the ITS JPO website at <http://www.its.dot.gov/itspac/index.htm>, which contains documentation from all past ITS PAC meetings, including read-ahead materials, minutes, and transcripts. Chairman Denaro described the content of the most recent ITS PAC advice memorandum and the U.S. DOT Report to Congress on ITS PAC recommendations. In response to Mr. Rajkumar's question, Chairman Denaro confirmed that the ITS JPO website is a public website and, therefore, so is the ITS PAC webpage.
- (3) Chairman Denaro next reviewed the current subcommittee membership status, emphasizing that not all committee members had volunteered to serve on a subcommittee, and that a couple of the subcommittees did not have sufficient members.
- (4) Subcommittee chairmen reported on the state of development of their subcommittee's charters and major study topics.
- (5) Subcommittees conducted their breakout meetings to discuss charter and study topic development.

j. Subcommittee Report-outs

- (1) Subcommittee chairmen presented a brief summaries of their subcommittee's breakout discussions on refining their charters and study issues.
- (2) Following the report-outs, there was a general discussion of the committee's future products. Chairman Denaro summarized the discussion, stating that the committee will produce three documents.
 - (a) The first document will be an interim advice memorandum that will delivered in December 2012 and that will describe at a high level the major issues that the committee believes the ITS Research Program should focus on.
 - (b) The second document will be an informal memorandum that will be delivered in the June 2013 timeframe that will describe issues the committee strongly believes should be considered during the NHTSA 2013 regulatory decision making process.
 - (c) The third document will be a final advice memorandum to be delivered at the end of 2013 with specific recommendations on the issues that will have been identified in the 2012 interim advice memorandum (5.b.(2)(a) above).

k. 2012 Interim Advice Memorandum Discussion

- (1) Chairman Denaro requested committee members' recommendations on the specificity and content of the 2012 interim advice memorandum.
- (2) There was general consensus that the interim advice memorandum should address issues at a high level.
- (3) During the subsequent discussion of potential issues to be included in the interim memorandum, the committee developed the following tentative outline:
 - Public/Private
 - Backend
 - Standards
 - Policy Development
 - Privacy
 - Speed Deployment
 - Incentivize Private
 - Cost
 - Market Launch/Facilitation
 - Communication Strategy
 - Focus – “It's Safety Stupid”
 - Institutional Issues

(4) Chairman Denaro requested volunteers to begin drafting the interim advice memorandum – a paragraph or two for each issue of the tentative outline. Mr. Steudle volunteered to draft the Communications Strategy section and Mr. Berg volunteered to do the Speed of Deployment section. Chairman Denaro stated that he would distribute the tentative outline to the committee and coordinate the drafting of the remaining memorandum sections by email.

1. Summary and Wrap-up

- (1) Input for the interim advice memorandum should be submitted by email in time for development of a draft memorandum that will be discussed during a committee teleconference to be scheduled in the week of November 5 or November 12, based on responses to a meeting poll that Mr. Glasscock will send committee members.
- (2) There will not be a follow-on committee meeting or teleconference to reach final consensus on the interim advice memorandum. Rather, final consensus will be coordinated by email.
- (3) Committee face-to-face meetings in 2013 tentatively will be held in Washington, DC in February, May or June, and in the fall in a month still to be determined.

m. Adjourn

The meeting adjourned at 3:29 p.m., October 11.

We certify, to the best of our knowledge, that the foregoing minutes are accurate and complete.

John Augustine
Managing Director, Intelligent Transportation
Systems Joint Program Office
Research and Innovative Technology
Administration
U.S. Department of Transportation

Robert P. Denaro
Committee Chairman
Vice President
Nokia