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## Podcar City Washington, MTI Report S-13-03

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# Podcar City Washington

Co-Sponsored by the Mineta Transportation Institute

October 23-25, 2013 – Washington DC  
George Mason University



MTI Report S-13-03



# MINETA TRANSPORTATION INSTITUTE

The Norman Y. Mineta International Institute for Surface Transportation Policy Studies was established by Congress in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The Institute's Board of Trustees revised the name to Mineta Transportation Institute (MTI) in 1996. Reauthorized in 1998, MTI was selected by the U.S. Department of Transportation through a competitive process in 2002 as a national "Center of Excellence." The Institute is funded by Congress through the United States Department of Transportation's Research and Innovative Technology Administration, the California Legislature through the Department of Transportation (Caltrans), and by private grants and donations.

The Institute receives oversight from an internationally respected Board of Trustees whose members represent all major surface transportation modes. MTI's focus on policy and management resulted from a Board assessment of the industry's unmet needs and led directly to the choice of the San José State University College of Business as the Institute's home. The Board provides policy direction, assists with needs assessment, and connects the Institute and its programs with the international transportation community.

MTI's transportation policy work is centered on three primary responsibilities:

## Research

MTI works to provide policy-oriented research for all levels of government and the private sector to foster the development of optimum surface transportation systems. Research areas include: transportation security; planning and policy development; interrelationships among transportation, land use, and the environment; transportation finance; and collaborative labor-management relations. Certified Research Associates conduct the research. Certification requires an advanced degree, generally a Ph.D., a record of academic publications, and professional references. Research projects culminate in a peer-reviewed publication, available both in hardcopy and on TransWeb, the MTI website (<http://transweb.sjsu.edu>).

## Education

The educational goal of the Institute is to provide graduate-level education to students seeking a career in the development and operation of surface transportation programs. MTI, through San José State University, offers an AACSB-accredited Master of Science in Transportation Management and a graduate Certificate in Transportation Management that serve to prepare the nation's transportation managers for the 21st century. The master's degree is the highest conferred by the California State University system. With the active assistance of the California

Department of Transportation, MTI delivers its classes over a state-of-the-art videoconference network throughout the state of California and via webcasting beyond, allowing working transportation professionals to pursue an advanced degree regardless of their location. To meet the needs of employers seeking a diverse workforce, MTI's education program promotes enrollment to under-represented groups.

## Information and Technology Transfer

MTI promotes the availability of completed research to professional organizations and journals and works to integrate the research findings into the graduate education program. In addition to publishing the studies, the Institute also sponsors symposia to disseminate research results to transportation professionals and encourages Research Associates to present their findings at conferences. The World in Motion, MTI's quarterly newsletter, covers innovation in the Institute's research and education programs. MTI's extensive collection of transportation-related publications is integrated into San José State University's world-class Martin Luther King, Jr. Library.

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REPORT S-13-03

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Staff

A publication of

**Mineta Transportation Institute**

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College of Business  
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San José, CA 95192-0219



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## Overview

The Mineta Transportation Institute (MTI) co-presented a two-and-one-half day conference offering insights, strategies, and opportunities for cities to develop personal rapid transit (PRT) systems in their jurisdictions. These PRT systems are also known as automated guideway transit (AGT) or “podcars.” They are small driverless cars (4-6 passengers) that operate on an automated guideway system. Typically, they are used to transport passengers for first- and last-mile trips, such as between a transit station and an airport. However, they may be used for longer distances within or between neighborhoods or commerce centers.

The International Institute of Sustainable Transportation (INIST) was the primary producer for the conference. Along with MTI, other co-producers included the U.S. Department of Transportation’s Federal Transit Administration (FTA), the Swedish Transportation Administration, George Mason University, Advanced Transit Association (ATRA), and Kompass. Sponsors included Encitra, Lea+Elliott, and Citizens for PRT.

## Synopsis

The annual Podcar City Conferences are about transportation and innovation – more than just a better car, bus or timetable. People need true inventiveness in transportation. This means a “next generation” that will be safer, faster, more reliable, more efficient, and even fun to use.

A great deal of thought has gone into the ideas for automated transit – podcars, self-driving cars, people movers at airports, automated subways, and not least, how to link them with existing systems.

Podcar City is the world’s largest meeting on this topic, the seventh since its first gathering in Uppsala, Sweden, in 2007. The annual conference attracts professionals and interested parties who are affected by today’s transit system shortcomings and who believe they can make positive changes.

Two of the keynote speakers came from the US Congress. Hon. James Oberstar (D-MN) represented his constituents from 1975 until his retirement in 2011. He was chair of the House Transportation and Infrastructure Committee. Since 2001, Hon. Mike Honda has represented California’s 17<sup>th</sup> Congressional District, which encompasses Silicon Valley. He is Regional Whip for Northern California and Chair Emeritus of the Congressional Asian Pacific American Caucus.

During the conference, several aspects of ATNs were discussed. These included:

- The status of operational ATN systems today;
- How self-driving vehicles are emerging and how they can affect public transit;
- How the city of Arlington VA created a 50-100-year plan for its transit system;
- How new transportation solutions play into the urbanism planning processes;
- What the implications might be for a much larger network than just local feeders and distribution systems;
- Recent software developments to aid planning for automated systems;
- How local and federal governments in the US and abroad are working on changes in transit systems;
- How governments can finance new transit systems while mitigating the risks involved with innovation;
- How to change when change is difficult;
- Game-changing transit technology and its challenges;
- And many other facets of this topic.



## Program

### Wednesday, October 23, 2013

#### Opening reception at George Mason University

- Christer Lindstrom, INIST

### Thursday, October 24, 2013

#### Welcoming Remarks

- Christer Lindstrom, INIST
- Laurie Schintler, George Mason University
- Vincent Valdes, US Department of Transportation's Federal Transit Administration

#### Morning Keynote

- Hon. Mike Honda (D-CA), US House of Representatives

#### Conference Overview

Each moderator described his or her panel topic for the conference.

- ATN Projects Today – Stan Young, ATRA
- Emerging Transportation Technologies: R&D – Alain Kornhauser, Princeton University
- Urbanism & Transit: An overview – Shannon McDonald, Southern Illinois University
- A General Transportation System – Kjell Dahlström, GTS Foundation
- Planning in Practice: Examples – David Little, Lea+Elliott
- Software Tools: R&D – Ingmar Andreasson, Logistikcentrum
- Economics and Financing: New and Traditional Models – Karen Philbrick, MTI
- Swedish.US Memorandum of Cooperation: Cities for Change – Matthew Lesh, US FTA
- Station and Real Estate Transit Design: US and Sweden – Bo Olsson, Trafikverket

#### Session One: ATN Projects Today

Moderator – Stan Young, ATRA, University of Maryland Center for Advanced Transportation Technology; President, Advanced Transit Association

- Peter Muller, ATRA-IG; President, PRT Consulting – “Three Operational Automated Transit Networks: A Case Study”
- Alexander Kyllman, ModuTram – “Status of GRT Development and Implementation in Mexico;” also “Presentations of Systems: Ultra, Vectus, 2Getthere and Modutram”

#### Session Two: Emerging Transportation Technologies – R&D

Moderator - Alain Kornhauser, Princeton University

- Jerome Lutin, Former VP of Research at New Jersey Transit – “Opportunities to Leverage Advances in Driverless Car Technology to Evolve Conventional Bus Transit Systems”
- Ingmar Andreasson, Logistikcentrum – “Synergies Between PRT and Driverless Cars”
- Samuel Lott, Kimley Horn – “Evolving APMs to ATNs Using Driverless Car Technology”
- Adriano Alessandrini, University of Rome - “Evolving Today's Low-speed Driverless Shuttles to Area-wide Transit Service”

#### Lunch Session: Arlington's Long-term Plan

Speaker – Peter Bass, PLB Development Advisory Services – “Density by Desire”

### Session Three-A: Urbanism and Transit: An Overview

Moderator: Shannon McDonald, Southern Illinois University

- Michael Gray, Public PRT Consortium (PPRTC) – “How PRT Will Change the World”
- Magnus Hunhammar, IST – “Experience from the Past: Underground in London and Ideas for the Future with Podcars”
- Brian O’Looney, Torti Gallas and Partners – “Automated Vehicles and Economic Externalities of Design: The Reimagining of Infrastructure”
- Nathan Koren, Podaris Ltd. – “Design Practices for Urban Transit Networks”

### Session Three-B: A General Transportation System

Moderator: Kjell Dahlström, GTS Foundation

- Kjell Dahlstrom, Architect GTS Foundation – “What Is GTS?”
- Jan-Erik Nowacki, Professor, KTH – “Development of GTS Technology”
- Arne Muñoz, Require AB – “Analysis and Fulfillment of Transportation Objectives”
- Per Ahlstrom, Journalist – “How Habit Keeps Our Thinking in a Box”

### Session Four-A: Planning in Practice

Moderator: David Little, Lea+Elliott

- Michele Jacobson
- Mike Hewitt
- Jefferson Davis, Lea+Elliott
- Fred Payne

### Session Four-B: Software Tools for Planning

Moderator: Ingmar Andreasson, Logistikcentrum

- Prof. W. Choromanski, University of Warsaw, Poland – “ECO Mobility in Poland: PRT Development and Modeling”
- Bengt Gustafsson, Beamways – “An Idea for Adaptive ATN: Concept and Modeling”
- Sam Lott, Kimley-Horn – “Simulating ATN Ridership on Multimodal Travel Paths”
- Nathan Koren, Podaris – “Collaborative Network Design with Web-based Podaris”



### Afternoon Keynote

- Hon. James L. Oberstar (ret), Chairman, House Committee on Transportation and Infrastructure (2007-2011)



### Session Five: What Are Cities Doing Now?

Moderator: Hon. James L. Oberstar

- Laura Stuchinsky, Director of Transportation, City of San Jose CA
- Gösta Norén, Director of Planning, City of Upplands Väsby, Sweden
- Fred Payne, County Commissioner, Greenville SC
- Bo Andersson, Center Party Transportation Spokesperson, County of Stockholm
- Christer Lindvall, Chairman, Umeå Social Democrats, City of Umeå. Sweden



**Friday, October 25, 2013**

### Morning Keynotes

- Håkan Jansson, Swedish Ministry of Enterprise, Energy and Communication
- Howard Jennings, Mobility Lab, Arlington

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Session Six: The Swedish-US Memorandum of Cooperation – Current Projects and Initiatives

- Christer Lindstrom, INIST
- Matthew Lesh, US Department of Transportation
- Laura Stuchinsky, City of San Jose CA
- Gösta Norén, City of Upplands Väsby, Sweden
- Fred Payne, City of Greensboro SC
- Bo Andersson, City of Sigtuna, Sweden

Session Seven: Financing & Risk Management - New and Traditional Models

Moderator: Dr. Karen Philbrick, Mineta Transportation Institute

- Sanjeev Shah, Strategic Project Development, Lea + Elliott
- Christer Lindström, Co-founder, INIST
- Peter Muller, CEO, PRT Consulting



Session Eight: HSR, Stations, Transit, Bicycles: Connected Systems and Ideas

Moderator: Susanne Ingo, Trafikverket

- Seth Garland, Associate Principal at KGP Design Studio – “Bicycles and Transit Lead the Way to a More Livable Community”
- Paul van Doninck, Architect at Jernhusen – “Stations in Sweden”
- Elisabetta Troglia, Researcher, KTH School of Architecture – “From Regional Visions to Local Modal Change Points: Challenges in Sweden”

Session Nine: ATN: A Game Changer

- Presenter: Dr. Buff Ferman, San Jose (CA) State University – “A Study of the State-of-the-Industry for Automated Transit Networks”
- Presenter: Gene Nishinaga, TCS – “A Future Project with San Jose State University”

Closing Session: Solar Skyways Prize

- Winner: Ron Swenson, INIST

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