

GPS Tracking and Time-Geography Applications for Activity Modeling and Microsimulation

An FHWA-sponsored Peer Exchange and CSISS Specialist Meeting

10-11 October 2005

The Upham Hotel — Santa Barbara, California

Sunday 9 October 2005 Arrival in Santa Barbara

Monday 10 October Garden Room

8:30 **Welcome, Kostas Goulias and Don Janelle**

8:35 **Introductions**

8:45 **Background Issues and Objectives, Elaine Murakami**

9:00 Session I* GPS Transportation Data Collection

- **Randy Guensler, Georgia Tech, Commute Atlanta Instrumented Vehicle Data**
- **Larry Blain, Puget Sound Regional Council of Governments, GPS-Assisted Data Collection to Support Transportation Planning**
- **Panel Discussion on Data Needs from State DOT / MPO Perspectives**
 - **Ayalew Adamu, CALTRANS**
 - **Gordon R. Garry, Sacramento Area Council of Governments**
 - **Mark Schlappi, Maricopa Association of Governments (Phoenix)**
 - **William F. Yim, Santa Barbara County Association of Governments**

10:30 *Coffee Break*

10:45-11:45 Session II*

Time-Geography Perspectives on Activity Behavior and Transportation

- **Shih-Lung Shaw, University of Tennessee, Time Geography for Activity Modeling with GPS Tracking Data**
- **Mei-Po Kwan, Ohio State University, Time-Geographic Methods for Analyzing GPS Data**
- **Harvey Miller, University of Utah, High-resolution Measurement of Time Geographic Entities**
- **Ram Pendyala, University of South Florida, Collection and Analysis of GPS-based Travel Data for Understanding and Modeling Activity-travel Patterns in Time and Space**

12:00 *Lunch in garden*

1:15 Session III* Activity Modeling – Integrating GPS Data and Time Geography

- **Kostas Goulias, UCSB, Travel Data for Activity-based Travel Demand Forecasting Models**
- **Mark Bradley, Santa Barbara, Toward GPS Data Collection for Activity Based Models**
- **Helen Couclelis, UCSB, Activity Modeling with GPS Tracking Data: New Assumptions for the Age of ICT**
- **Keith Clarke, UCSB, Negative Time. A Theoretical Approach of Potential Use in Time-space Trajectory Analysis and Modeling.**

2:00 *Session IV**

GPS-based Data for System-wide Transportation Modeling and Analysis

- Terry Bills, ESRI, **GPS and Travel Behavior: A Few Research Questions**
- Mike McNally, University of California, Irvine, **The Merging of Travel Forecasting and Traffic Management Data and Models**
- Val Noronha, UCSB, **GPS and Travel Monitoring**
- Donald G. Janelle, UCSB, **Synoptic Analysis of Space-time Activity Patterns**
- Mike Goodchild, UCSB, **Potential of Dense-tracking Data**

3:00 ***Framing Key Issues***

A Plenary Discussion, Mike Goodchild, moderator

3:30 *Coffee Break*

3:40 ***Breakout Sessions*****

5:30 Plans for Tuesday

5:40 Wine and cheese, compliments of The Upham Hotel

6:30 Dinner – Opal Restaurant, 1325 State Street

Tuesday 11 October

6:00 – 8:30 Hike in Santa Ynez Mountains – optional

9:00 ***Plenary Review of Breakout Sessions*** Coach House

9:30 ***Small-group Planning Sessions *****

- The objective is to initiate drafts of “Scope of Work” for research projects that integrate transportation tracking data, time geography, and activity modeling.
- Groups may convene in the Coach House, the Board Room, or in the garden area

11:15 ***Plenary Reports from Planning Sessions*** Coach House

11:45 ***Summation and Plans*** Kostas Goulias

12:00 *Lunch – on your own in Santa Barbara*

* ***Note:***

Accept as indicated, presentations are limited to 5 minutes, followed by 5 minutes for discussion.

** ***Final Report:***

Group coordinators are requested to please submit **Breakout and Planning Session reports** to Kostas Goulias and Don Janelle. They will prepare and circulate a preliminary report on the meeting. FHWA and meeting participants will have two weeks to comment and to suggest changes for the final report.

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