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

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**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, on 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

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* **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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