

TRANSPORTATION RESEARCH BOARD
ABJ40 TRAVEL SURVEY METHODS www.travelsurveymethods.org
Guy Rousseau, Atlanta Regional Commission, Committee Chair

Annual Committee Meeting Notes
Wednesday, January 25th, Washington, DC

I. Welcome and Introductions

Guy Rousseau started the committee meeting with a thank you to participants for attending. A signup sheet and an interest sheet were passed around the room for committee members and friends to complete. Everyone in attendance provided a brief introduction.

II. Committee Business

Paper Review Results – Rebekah Anderson provided an update on this year’s paper reviews. The committee received 40 papers which had an average of 4.34 reviews each. The Paper review team limited committee members to 3 reviews and friends to 2 reviews. 25 of the 40 papers received were accepted for presentation at this year’s annual conference. Guy Rousseau commended the paper review team for the great job they are doing in organizing the process.

Sunday TRB Workshops

Stacey Bricka provided an update on the three Sunday workshops sponsored by the committee. The 1st workshop was cosponsored with the public involvement committee. The workshop focuses on mining data from social media sites. 80 people were in attendance.

The 2nd workshop’s topic was on moving beyond quantitative attributes in stated response surveys. The 3rd committee sponsored workshop focused on the establishment of a national bike/ped clearing house. This was an all day workshop. The bike/ped folks are very interested in location data for secondary analysis.

ABJ40 is sponsoring a joint subcommittee on bike/ped data. This subcommittee will focus on research and laying the groundwork for a bike/ped data clearing house. Also includes health related research, travel behavior, and count data with regards to bike/ped.

The third workshop focused on new directions for the NHTS through a sponsored task force. The objective is to serve as a bridge between users and FHWA and promote discussion on applications and need for passenger travel data. The task force has established a listserv which focuses on progress towards the next NHTS. This summer the task forces will coordinate facilitated discussions at the various midyear meetings starting in Tampa.

Triennial Strategic Plan (TSP)

Stacey Bricka and Guy Rousseau provided an update on the Triennial Strategic Plan (TSP). Stacey Bricka has worked on the review of the plan and Guy Rousseau has completed editing. The TSP is posted on the

Travel Survey Methods website. Guy Rousseau encouraged all committee members and friends to review the TSP. Guy requested that subcommittee chairs review and provide a paragraph to update their section.

Stacey Bricka noted that in the *future directions* section of the plan, new information from the subcommittee meeting notes is included. Subcommittee chairs should review this information to make sure it is correct. Also, all please review the research needs statements and touch base with Guy or Stacey if you have a new idea for research.

Aly Tawfik suggested a data journal as one area of research that the committee may want to consider. A data journal would be a good incentive for researchers to explain and document their research, experiments, outcomes, and data applications. Aly would like the committee to consider starting and hosting the data journal.

Elaine Murakami noted that BTS has started up the Journal of Statistics again and folks may want to consider volunteering to be a guest editor.

Mailing List Update and Topics of Interest – Guy Rousseau circulated a sign in sheet to all members and friends to capture the top 3 topic preferences for paper reviews (SP, HH Travel, Transit, Freight, and New Technologies). This sheet will also update the friends and members mailing list. These updates provide contact and interest information to subcommittee chairs and the paper review panel.

Data Section and Other TRB News –

Reginald Souleyrette, our Data Section Chair, provided a few updates:

- Joe Schofer was awarded the 2001 Roy W. Crum award. Schofer is honored for his distinguished achievement in transportation research. The award recognizes outstanding leadership in the field of transportation research or research administration.
- The Data Section has a new subcommittee that is being led by the Urban Data Committee called Transportation, Computation, and Society.
- The Data Section is working on rolling up the Strategic Plan. The theme is data for decisions and discover.

Tom Palmerlee provided the following updates:

- TRB has not made publications decisions for papers from this annual meeting as of yet.
- The theme for next year is Transportation Research Board Annual Meeting is *Doing things Smarter, Better, Faster*. The focus is on communicating the value of research. Lisa Aultman-Hall voiced opposition to this because Faster is not always better and bad in terms of Safety.
- The final registration numbers are not in yet, however, the conference may break last year's record of 10,900 this year for registration.

ABJ40 Midyear Meeting-

This committee's midyear meeting will be held at the 2012 Innovation in Travel Modeling Conference in Tampa, Florida April 30-May2nd. Guy will set up a teleconference for those members and friends who cannot travel and would like to participate.

TRB 2013 Annual Meeting –

Please coordinate with Guy Rousseau if you have any suggestions/plans for workshops, sessions, or call for papers. A few ideas were suggested in the meeting:

- Elaine M. – Smart phone applications
- Jimmy A. – Data needs
- Tomas – travel surveys and networks
- Matthew – Surveys associated with the supply chain
- Stacey B. – hard to reach populations, long distance travel data gaps and justification, other applications for travel survey data. Heather Contrino supported the idea for a long distance travel session.
- Promod C. – basics in sample design in coordination with the statistical methods committee. Ken Cervenka expressed support for this idea to help transportation professionals get an understanding of sample size and data needs for different objectives. Sudeshna Sen also supported this idea, especially in the context of mixed mode surveys.

Travel Surveys Manual Update

Lei Zhang provided an update on the Travel Surveys Manual including summary statistics for this year:’

- Website was up for 364 days this year
- 2801 visitors. 60% were new visitors. 75% from US. France, China, England Germany Japan and Spain,
- Manual has been the outcome of so much work from many, many people.
- Elaine M is working on adding a new chapter on smart phone and smart phone apps.
- Remember that there is survey documentation there.

Elaine Murakami noted that one professor has assigned the travel survey manual as a homework assignment.

Guy Rousseau encouraged members and friends to contribute to the manual update. If you would like to do so, please let Guy and Lei know.

Lei Zhang will add a link on the Wiki site to the travel survey data archive site.

Committee Website Update

Guy Rousseau started by thanking Elizabeth Greene, RSG, for her work in keeping website updated.

Elizabeth Greene provided an update and summary statistics:

- Average time on website -2.5 minutes.
- 3.37 pages per visit.
- About 140 unique visits over the past couple of weeks.
- New conferences and announcements are posted on the website regularly
- Right now the functionality is clearly information for members and friends.

Elizabeth noted that if anyone has something to post, please let her know.

Stacey Bricka commented that she would like to see if the website could be set up to send out alerts to members and friends when new information is on the website.

III. TSDC Update (Transportation Secure Data Center)

Jeff Gonder provided an update on the TSDC which included the following information:

- The TSDC is part of the DOE National Laboratory
- FHWA has contributed to the support of this secure data center
- The TSDC is a place to archive and to access detailed data – especially applicable to GPS data that has a high level of resolution.
- The repository increases research access and returns while safeguarding the data, creating a balance between privacy protection and maximum utilization.
- The protocols at the TSDC for access and data storage are consistent with the national research council recommendations on privacy protection.
- An advisory committee has been created that represents data provider and users, and industry, academia, and government.
- There are three distinct types of data/data areas – (1) Secure enclave for raw data with no external access, (2) cleansed data for download which is publically accessible, (3) controlled access data where approved users can work with the data off site using a secure password and machine. With this access, there the data cannot be downloaded, copied, or saved and printing of analysis is on a case by case approval only.
- The TSDC has agreements with both users and providers.

Ken Cervenka recommended that the Center track the users and uses of the data to compile the applications of the data.

Other points provided by Jeff Gonder include:

- User manuals are also included with the data sets so there is fairly comprehensive metadata.
- Niche of center is GPS data but the Center is useful for any data that is of use but may be highly detailed and creates a privacy issues.
- Basic household travel data is at the travel data archive.
- The lab where this is housed is considered a research lab and is not subject to FOIA.

GPS in Travel Surveys: Case Studies from a Spectrum of Options

Jean Wolf, GeoStats, provided an update on the different types of GPS augments that are being done with HH Travel Surveys.

In the beginning GPS was used in a dual approach as an augment to household diary studies (2000-2005 timeframe). In-vehicle implementation was primary and the units were not deployed for long period of time since you needed to quickly redeploy units. California Statewide, Kansas City, Washington, DC, ST. Louis are some examples. Typically, the studies included just one day of data collection. Primary purpose was to obtain trip rate correction factors.

Starting in Chicago in 2006, person based GPS became available. Often it was in conjunction with a vehicle based augment. Typically the wearables were for a 7-day data collection period. This is when the researchers started extending the deployment period for both in-vehicle and hand held GPS units.

Over last four years, the emphasis has been on person based GPS. Typically a dual method with both diary and GPS is used. More recently, researchers and agencies are starting to use person based and vehicle based GPS for different objectives. This started in Denver and Atlanta and CA Statewide have

adopted this approach. Secondary uses are also becoming more evident. This includes route choice, mode choice, congestion and travel times, and active transportation management.

Jean Wolf also noted that one of the ways to get around using a travel diary and still get trip information is to do a prompted recall study where you get GPS with no diary, go back and process, and then do a prompted recall interview to fill in the gaps. The first of these was in NY metro in 2010-2011 where respondents could do prompted recall via phone or internet. Other examples are Jerusalem (100% GPS and prompted recall) and Ohio (100% GPS with prompted recall subsample).

Other GPS applications include using wearable GPS with accelerometers to measure physical activity. Currently, Nashville is doing this and going into the field this year with 10% (n=600) participating in the physical activity sub-study for 4 days.

- Some important GPS trends include:
- longer deployment durations,
- larger GPS samples,
- more common to do only GPS studies, and
- Increased understanding of use and value of the data for other applications.

In the future, Jean projects that multiple modes of data collection will be needed. We will see more GPS and more GPS with prompted recall. In addition, there will be more mining of large data sets to fill information needs (e.g. personal navigation companies, traffic data vendors, etc.)

Transit On-Board Surveys

Chris Tatham, ETC Institute, provided an overview of new methods to address the challenges in transit on-board studies.

The common challenges include:

1. Inadequate development and management of the sample. Not a lot of work is done to look at overall ridership, (time of day, route to route, etc.) in the design stage. Sampling plans are too simplistic and agencies risk ending up with a sample that doesn't really mirror the ridership in the system.
2. Very little effort to gather supplemental data and expansion factors. In transit studies, major stops are usually under-represented and end of line stops are over represented. There needs to be an increased use in supplemental data such as park and ride locations data which is often available
3. Self-administered surveys – perceived to be the cheapest and most efficient way to do things. Pass out a form to bus riders and off you go. Issue is that the data is of poor quality with low participation rates. High rates of geocoding failure and illogical/incomplete records. Also bias in the people

Methods and Solutions being implemented by ETC include:

- Management of the design and distribution of the sample. Obtaining good supplemental data up front and assemble data on ridership (APCs, fare gates, etc.) to help develop and manage the sample.
- Setting detailed sample goals for each route/station, including specific types of trips, specific locations along the route, and time of day and direction.
- Managing goals while in the field.

- Using scan cards to capture boardings and alightings on bus routes. This was tested and used in Honolulu. Using tablet PCs for personal interviews. This provides increases accuracy, completeness, and higher levels of response and representativeness. More representative because the tablet PCs provide a better random process for selecting people to participate. Other advantages of tablet PCs include preloaded street networks, interface with Google maps, real time data collection management, reduced administration time. Pilot tests in Atlanta, Phoenix, and Nashville show significant improvements in completeness, geocoding rates, etc.
- Careful planning of the data expansion plan. Control the data expansion at the least aggregate level possible. Have good control totals so that the expanded data is representative.

Chris also noted that the cost for PC personal interviews is running about \$40 per completed interview and they have preloaded multiple language capabilities.

Travel Behavior Panel Surveys: Methods and Sample Development

Margaret Petrella, Volpe, provided an update on the panel surveys being implemented to research the outcomes of two large scale projects that were implemented under the US DOT Urban Partnership Agreements. Information provided by Margaret included:

- Volpe is conducting two travel behavior panel studies on road pricing in Atlanta and Seattle and working with RSG to conduct field work for these studies.
- Household level panel survey at both sites with before and after data collection.
- In Seattle – floating bridge tolling, variable pricing based on time of day, have also put in active traffic management, increased transit investment, and more telecommuting programs.
- In Atlanta – HOV2 converted to dynamically-priced HOT lane. Also changed to HOV-3 to be toll exempt and have enhanced transit services along the corridor (I-85).

The primary evaluation questions included in the study are:

1. How did travel time, VMT, daily travel budgets change at the household level?
2. Were there (and what are they?) shifts in departure times, modes, o-d patterns?
3. Has there been a reduction in trips? If so, where did they go? What happened to the HOV-2 people in Atlanta?
4. What are the equity impacts of both projects?

Volpe collected initial data before the pricing projects and is going back to collect the “after” data. The population of interest includes:

Drivers – used license plate capture methodology

Transit – in person intercept to recruit and establish panel

Vanpool – sent email to registered vanpools to get participation

Volpe conducted full pilots in both Seattle and Atlanta. Among auto had 8-10% response rate and among transit 18-19% response rate. Did some little fixes to the studies as a result of the pilot which included added response categories, reduced questionnaire length, increase automation, a clarified error messages/instructions. A \$15 gift card was used as an incentive. Different incentive levels were tested prior to the survey. Margaret stated that the survey is very representative when compared with other benchmark data with the exception of having fewer larger households.

Evaluating Household Credit Reports as a Replacement for Episodic Travel Surveys

Greg Macfarlane, Georgia Tech, provided an overview of work he and Josie Kressner are doing at GA Tech. The project includes the mining of large credit report data for applications in transportation research. This study represents future trends in the use of alternative data sources.

Details of the study include:

- Purchased credit report data about a year ago – 500,000 (HHs) records in the Atlanta area
- Data included HH demographics, Individual demographics for up to 4 HHMs, property information, Lifestyle Clusters (26 clusters, e.g., already affluent, home hoppers, zero mobility), neighborhood characteristics, address history (person level – up to 6),
- The data set provides very detailed data at HH and person level – much more than surveys are able to obtain.
- Sample frame was registered vehicles - leased vehicles not in database. High level of “missingness” in the credit data – high credit ratings tend to have better data quality than do those with lower ratings. For example, credit records are missing the 1 & 2 children HHs, blacks, etc.
- Greg is planning to augment the data with data sets such as the ACS journey to work data.
- Greg would like assistance from the committee is recommendations for other surveys that they should be linking to in their research.

The 2012 Research Challenge

Cynthia Augustine, RTI International, provided an update on the RTI 2012 research challenge.

The challenge ended on Monday, January 30th.

For the challenge, submit a research proposal that includes 10 questions that the main survey should include. The main survey is an omnibus survey of households in Chicago. More information will be on the Survey Post Blog off the website.

IX. Subcommittee and Liaison Reports

The subcommittees provided a brief report on activities. They are as follows:

Freight Surveys – Matthew Roorda

Presentations on long haul trucker and urban goods movement models were made in the subcommittee meeting.

In the subcommittee, there is consensus that there is a research need for more directed methods for supply chain model. The subcommittee will be putting together a research needs statement on this topic.

HH Travel Surveys – Jimmy Armoogum

The HH Travel Surveys subcommittee met that morning at 8am. There were approximately 50 people in attendance. The subcommittee is working on writing some research statements and calls for papers for next year’s annual meeting.

New Technologies – Elaine Murakami

There were 25 people in attendance at the New Technologies subcommittee meeting. The focus of the meeting was on smart phones; specifically what kind of location technology is best used or combined to

determine the route that people are using? There is some common work in this area going on across the University of California. The subcommittee will be setting up a webinar on this topic.

Stated Response – Eric Molin

The subcommittee meeting included a discussion on ideas for new workshop topics. The subcommittee would like to organize 1 workshop every year. They are also working on write-ups for a few more research statements.

Transit Travel Surveys – Kevin Tierney

Kevin Tierney was not in attendance. Cheryl Stecher, PTV NuStats, presented on the LA MTA survey which was partially funded by FTA. They are also applying new methods on the Fort Worth Study. Full reports on both studies will be available next year.

Martin Lee-Gosselin provided an update on the ISCTSC Chile Conference which was held in November of 2011 at the Millennium Institute in Santiago. Updates included:

- Participants gave the conference a 4.4 out of 5.0 rating which was very good.
- Emerald Insights will be putting together a peer reviewed book on conference papers and outcomes.
- The next ISCTSC Conference will be in Australia in 2014.