

TBAG

TAMPA BAY APPLICATIONS GROUP

An Open Forum for
Transportation-Related Issues



Volume 25
October 2003



“FROM THE CHAIR”

By: Christopher Hatton, P.E., Kimley-Horn and Associates, Inc.
2003 Chairman for the Tampa Bay Applications Group

WE DID IT!!! The August 21, 2003 TBAG Meeting, “TransCAD Software Demonstration,” exceeded the “century mark” for the first time in TBAG history! To be exact, **104 members were in attendance** for this historic meeting. Remember to keep your ticket stub...it may be a collector’s item one day.

With the recommendation earlier this year to select TransCAD as the new FSUTMS software engine, the TBAG Board decided to focus the entire August meeting on this transition. **Paul Ricotta, Caliper Corporation**, opened the meeting with a very enlightening demonstration of several unique and interesting features of the TransCAD 4.5 software.



Hey Paul, where is YOUR tie?

In addition, Paul was kind enough to donate the tie he was wearing for a drawing to celebrate our great attendance. **Bud Whitehead, Hillsborough County MPO**, was the lucky winner.



Bud shows off his new “TransCAD” tie.

Our next TBAG meeting, “Transportation and Land Use”, will be held on October 30, 2003. Scheduled topics and speakers for this always exciting topic are featured on page 5.



Bob smiles for the camera.



Kasey and Christopher are amazed and happy with 104 members in attendance.

ATTENTION!!!

Next TBAG Meeting
Transportation and Land Use
October 30, 2003

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Tampa Bay Regional Transportation Analysis and Model Validation Study: Unique Aspects of the Truck Trip Characteristics Survey

By: Seongsoon Yun and Myung Sung, Gannett Fleming, Inc.

Over the past several months, the Florida Department of Transportation (FDOT), District 7, has conducted travel characteristic surveys as part of the Tampa Bay Regional Transportation Analysis and Model Validation Study. The types of surveys selected were based upon a review of the adequacy of existing available data and the need for additional data collection to support the enhancement, update and validation of the Tampa Bay Regional Planning Model (TBRPM). A variety of surveys have been completed including the following:

- ✓ Truck Trip Characteristics Survey
- ✓ Cordon Line Travel Survey
- ✓ Household Trip Rate Verification Survey
- ✓ Bus/Highway Speed Relationship Survey
- ✓ College Dormitory Survey



The design, methodology and implementation for each of these surveys have been documented, and the analysis is underway. Over the coming months, interesting aspects of these surveys will be

highlighted in a series of short articles. This article summarizes the innovative approach developed for the Truck Trip Characteristic Survey, which was conducted from March 17, 2003 to May 2, 2003.

The purpose of the Truck Survey was to study and develop a recommended model structure for truck trips that accurately reflects the volumes, patterns and characteristics of truck movements in the Tampa Bay region. Various approaches have been developed for incorporating truck trip characteristics in regional travel demand modeling efforts. The key aspects to be explored in the survey were as follows:

- ✓ Could a more refined set of truck trip generation coefficients be determined?
- ✓ What is the trip length and geographic distribution for light and heavy truck trips?
- ✓ What are the route preferences and factors that influence route choice for trucks?

Recognizing the difficulty in obtaining detailed information necessary for the model, the methodology selected consisted of a unique combination of

surveys. This innovative approach was developed in order to conduct a comprehensive overview of the truck movement patterns in the region and to take into account the differences in truck traffic. The survey had three basic data collection tracks based upon whether they were truck trip producers or attractors: places where trucks were housed (producers), employment locations where trucks made deliveries (attractors), or residential neighborhoods (attractors). The basic methods and data collected for each survey type are summarized below.

TRUCK TRIP PRODUCTIONS

Truck trip producers are places where trucks typically originate. Generators of this type have their own truck fleet, lease vehicles or are distribution centers. Data targeted from these sites included trip generation to/from the site by vehicles associated with the site, deliveries to the site by other trucks (i.e. service or delivery calls for goods and services consumed on-site), and trip distribution/trip length characteristics. Various data collection methods were used at these sites including:

- ✓ Manual Observation/ Traffic Counts
- ✓ On-site Trucker Interviews
- ✓ Collection of Shipper Trip Logs

The shipper trip logs were utilized to take advantage of information that had already been collected and recorded. When possible, trip logs maintained by shippers for all or several of the shippers' trucks were obtained to provide daily trips, beginning and ending times, odometer readings, addresses, land uses and activity at each trip end.



TRUCK TRIP ATTRACTIONS TO EMPLOYMENT SITES

To understand truck trips attracted to businesses (deliveries and service calls), a survey of local businesses was conducted through the collection of business delivery logs. The delivery log sheets were

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An Exercise In TransCAD

By: Daniel Macmurphy, Willson Miller, Inc.

TransCAD comes with a number of file import and export features ready for your use. Of particular interest to Florida modelers are TIGER/Line files created from the Census Bureau's TIGER (Topologically Integrated Geographic Encoding and Referencing) database of selected geographic and cartographic information.

The TIGER/Line files contain data describing three major types of features:

* **Line features**

- 1) Roads
- 2) Railroads
- 3) Hydrography
- 4) Miscellaneous transportation features and selected power lines and pipe lines
- 5) Boundaries

* **Landmark features**

- 1) Point landmarks such as schools and churches
- 2) Area landmarks such as parks and cemeteries

* **Polygon features**

- 1) Geographic entity codes for areas used to tabulate the Census 2000 statistical data and current geographic areas
- 2) Locations of area landmarks

In this exercise we will download TIGER data from the 2000 U.S. Census web site and then make a data layer in TransCAD:

- 1) Go the Census web site:
<http://www.census.gov/geo/www/tiger/tiger2002/tgr2002.html>
- 2) If you know the numeric code for the county you are interested in, scroll down the page to where it says:

click on the appropriate state/state equivalent area to download the files.

If you do not know the numeric code for the county, go to **Appendix A** and scroll down.

APPENDIX A-STATE AND COUNTY CODES AND NAMES

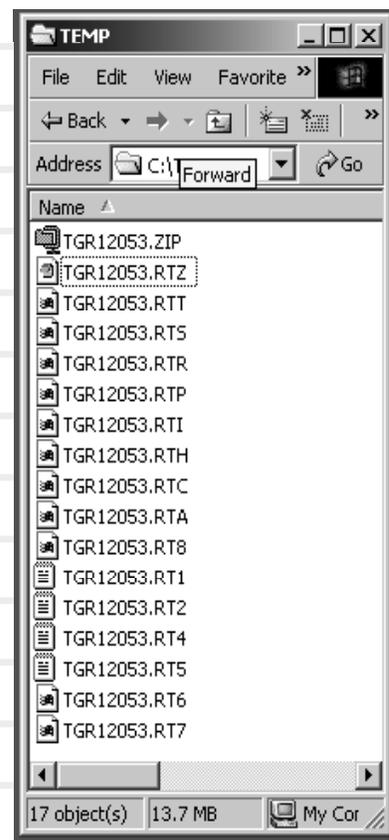
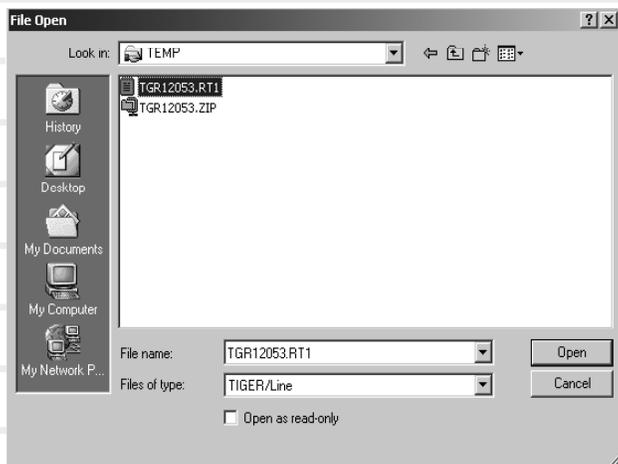
FIPS	County	State
12 049	Hardee	FL
12 051	Hendry	FL
12 053	Hernando	FL

Continued On Page 4

3) Click on the appropriate ZIP file. For this example, we will download TGR12053.ZIP, this is the file for Hernando County. You will get a dialogue box allowing you to save the file to your computer. Save the file to a directory (for this example we will use: C:\TEMP).

4) Go to C:\TEMP and double-click on the zip file to unpack the file. You should see the files shown to the right.

5) Now for the easy part: launch TransCAD and go to **File, Open**. You will get the dialogue box shown below:



6) Where it says "Look in:" at the top of the dialogue box, select **C:\TEMP** and where it says "Files of type:" at the bottom of the dialogue box, use your mouse to scroll down and select **TIGER/Line**. Then highlight the file **TGR12053.RT1** and click on **Open**.

7) Now you will get a dialogue box for the import process. There are many features that may be created by choosing from the list "features to import". For this example, let's leave the default **Road Features** and click on **OK**. You will get a dialogue box for the location of your TransCAD file. Let's enter **Test of Hernando Roads** and click on **OK**. You will get a progress bar dialogue box and when the import process is finished, a map of road features.

Fortunately, TransCAD comes with a number of files ready for your use. Some of these files may have been loaded onto your computer as part of the installation process and are in the ccDATA directory. Of particular interest to Florida modelers are the files supplied to you on the Caliper data CD labeled "State Data CD with Census 2000 data Version 2 – Florida". Next time, we will explore how we can use some of these files.

FSUTMS Model Calibration Workshop *(Postponed to February 2004)*

FSUTMS/TransCAD Workshop #3-A

Hotel: Adams Mark, Daytona Beach

Dates: November 3-7, 2003

FSUTMS/TransCAD Workshop #4

Hotel: Sea Turtle Inn, Atlantic Beach

Dates: December 8-12, 2003

FSUTMS/TransCAD Workshop #5

Hotel: Hilton Garden Inn, Orlando

Dates: January 26-30, 2004

For registration information, go to www.dot.state.fl.us/planning, click "training" under the "General Info" tab, and then go to "Modeling Workshops." Terry Corkery is also available for questions about these and other upcoming workshops at (850) 414-4903 or e-mail at terrence.corkery@dot.state.fl.us.

ATTENTION



Tampa Bay Applications Group

October 30, 2003

*FDOT District Seven Office from 12:00 p.m. to 2:00 p.m.
(Auditorium Opens at 11:30 a.m.)*

TRANSPORTATION AND LAND USE

Ned Baier, Hillsborough County and Randy Kranjec, TBE Group, Inc.
Hillsborough County Transportation Corridor Plan

In 1993, the Florida Supreme Court decided on a landmark corridor right-of-way preservation case upholding the constitutionality of a local government thoroughfare (corridor) plan when adopted as part of a comprehensive plan. Hillsborough County has initiated a study to identify rights-of-way for future roads, utilities, and other public uses. The study is unique because it looks beyond the typical 20-year planning horizon and identifies where the County should widen roads, extend roads, or build new roads with the least impact to the community.

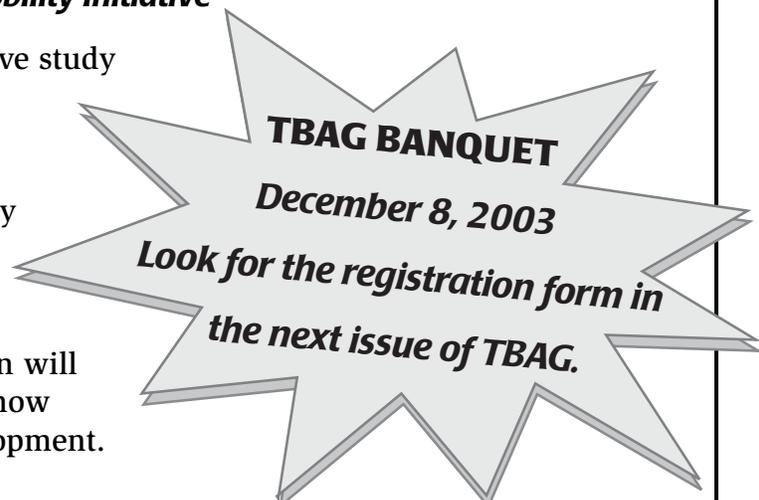
This presentation will consist of a short video describing the project, provide results of travel demand forecasting for "build-out" in the County, and demonstrate the GIS analysis used for determining impacts of the proposed roads.

Jim Baxter, FDOT, District 1, Planning and Dan Macmurphy, Wilson Miller, Inc.
Transitioning to TransCAD: Current and Future Plans

Although the total conversion of several models to TransCAD is still down the road, many public and private transportation professionals have purchased the software and are in the process of getting trained. This presentation will demonstrate ways to use TransCAD for data development and manipulation, as well as other applications, which are currently underway within District 1. In addition, the District's current and future plans for implementing TransCAD will be discussed.

Brian Smith, Pinellas County and Michael Crawford, Grimail Crawford, Inc.
Transit and Land Use Planning for the Pinellas Mobility Initiative

The Pinellas Mobility Initiative is a comprehensive study of transportation alternatives in Pinellas County. The central element of the system would be a 38-mile monorail system, supported by a network of express bus, local bus, and trolley circulators in key areas. Analysis of land use trends, patterns, and compatibility was a key part of the route planning analysis for the project, and it provided a foundation for project viability. This presentation will discuss the project issues related to land use, and how land use planning influenced overall project development.



TRUCKS continued from Page 2

placed at the reception desk of the business, and the delivery person was asked to complete the delivery log sheets. Information collected included date/time of delivery, origin/destination, and truck (delivery vehicle) type. The logs were maintained for five business days.

TRUCK TRIP ATTRACTIONS TO RESIDENTIAL SITES

To analyze residential truck trip generation, residential neighborhoods were cordoned off and classification counts were collected during the 2003 household trip rate verification survey. This survey was used to estimate the coefficient for the household variable in the truck trip generation model.

CONCLUSION

The survey was designed to cover several aspects of the trucking industry with only minimal effort by

participants and in so doing was very successful. The previous TBRPM validation efforts indicate truck travel patterns in the Tampa Bay region are reasonably well modeled. However, a scarcity of empirical data and classification count locations has made a detailed assessment difficult to complete. The 2003 Truck Survey was the first large-scale survey of truck travel characteristics in the Tampa Bay region. As such, it provided significant insight into trip generation, trip distribution and route choice characteristics of truck traffic in the area. The goal of increasing the accuracy of truck trip forecasts, while simultaneously simplifying the truck trip data requirements, was realized through this survey.

As mentioned previously, analysis and validation efforts for the TBRPM are underway. For additional information, please contact Seongsoon Yun, Gannett Fleming, Inc., at (813) 882-4366, or Danny Lamb with the FDOT, Planning Division at (813) 975-6000.

The Tampa Bay Applications Group Newsletter is published under contract to the FDOT District Seven Planning Office in Tampa. FSUTMS users and TBAG members contribute all information and material contained in the newsletter. Please contact the editors to submit articles for future issues or to get on the mailing list.

Co-editor: Christopher Hatton
Kimley-Horn and Associates, Inc.
1220 Tech Boulevard
Tampa, FL 33619
(813) 620-1460 • Fax (813) 620-1542
christopher.hatton@kimley-horn.com

Co-editor: Kasey Cursey
Gannett Fleming, Inc.
9119 Corporate Lake Drive • Suite 150
Tampa, FL 33634
(813) 882-4366 • Fax (813) 884-4609
kcursey@aol.com

FDOT - District Seven
Planning & Programs
11201 North McKinley Drive
Tampa, FL 33612



**FDOT
Planning & Programs District 7
11201 North McKinley Drive
Tampa, FL 33612**