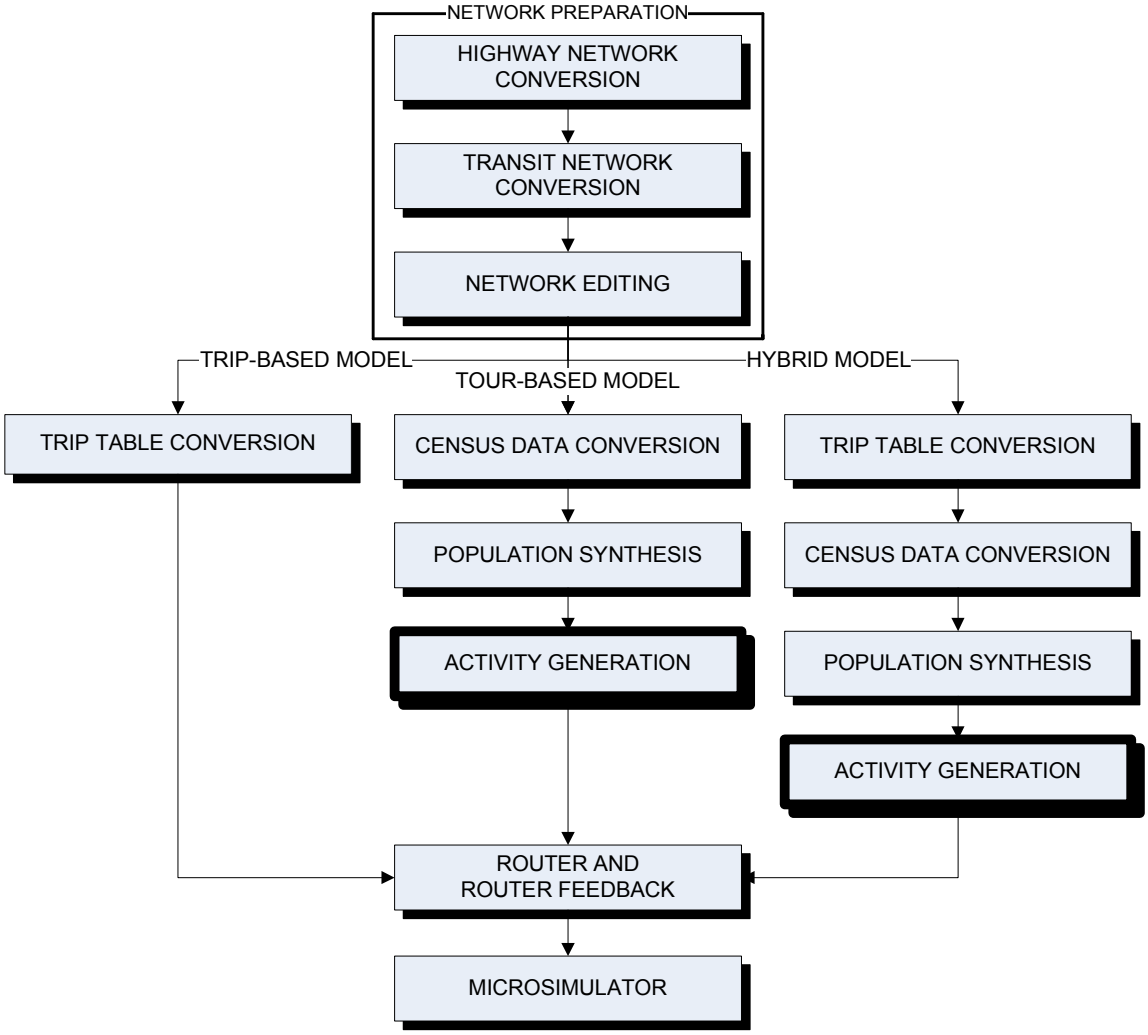
ACTIVITY GENERATOR HOW-TO

1 GENERAL

This document provides information about using an activity survey to assign activity patterns to household members and distribute them to activity locations. The synthetically generated activity records for the entire population will serve as input to the **Router**.



1.1 Revision History

12/6/2006	Created by AECOM Consult, Inc.
3/2/2007	Revised by AECOM Consult Inc.
9/12/2007	Revised by AECOM Consult Inc.
4/1/2010	Revised by RSG Inc.

1.2 Table of Contents

1.3 Type Setting

This document uses the following typesetting throughout the text:

Normal Text	To indicate normal document text
Program	To indicate a program or software such as **TRANSIMS** or **Excel**
Filename	To indicate a file such as ***PopSyn.ctl***
[Menu option | Sub-option]	To indicate a drop down menu option such as [File | Save]
<Button>	To indicate buttons or options on dialog boxes such as <Open>
|FIELD HEADER|	To indicate a field header name within a data file such as |HHOLD|
`CONTROL_KEY`	To indicate a control key or option within the control file such as `NET_DIRECTORY`

1.4 Assumptions and Prerequisites

This document assumes that the user has installed **TRANSIMS 4.0.03** on a **Windows** or **Linux** computer system and understands the basic procedures and terminology for executing **TRANSIMS** programs. Moreover, the user is assumed to have completed the Highway Network Conversion How-To and the Transit Network Conversion How-To case studies to generate the necessary network data files.

The TRANSIMS software and documentation can be downloaded from http://sourceforge.net/projects/transims/files/. Basic TRANSIMS procedures and terminology are addressed in the Installation and Testing How-To.

Text files are used to store the input and output information. A standard text editor such as **Pico**, **TextPad**, or **WordPad** (or any other software that can handle text files) is needed to manipulate the text.

This how-to document uses network information from Alexandria, Virginia, to demonstrate procedures, discuss outcomes, and describe concepts. Sample survey records have been extracted from an activity-based survey conducted in Portland, Oregon.

The Alexandria **TRANSIMS** network may be downloaded to a local hard drive from: http://sourceforge.net/projects/transims/files/ → test data → 4.03a Test Cases → Alexandria_4.0.3a.zip

Unzip the Alexandria data to the following directory depending on the platform used:

- c:\TRANSIMS\Alexandria (Windows)
- /home/TRANSIMS/Alexandria (Linux)

The survey folder contains, among other data, information about survey households, persons, and activities. The input files relevant to **ActGen** in this folder are:

- ***Survey_Activity.txt***
- ***Survey_Household.txt***
- ***Survey_Population.txt***
- ***Survey_Weights.txt***

2 ACTIVITY GENERATOR OVERVIEW

The **ActGen** program performs the following tasks:

- Assigns activities to each household member,
- Determines start and end-time of activities over the course of a day,
- Selects a location for each activity, and
- Defines the travel mode used to travel to that location.

Each of these tasks can be accomplished using a variety of methods and user-defined models. This case study focuses on simple models and procedures that demonstrate the process rather than define best practice. Most real-world applications will use more sophisticated procedures.

From the **TRANSIMS** perspective, travel is a means of accomplishing activities at different locations. "Activities" in this context consist of the things people do over the course of a typical day, such as work, shop, attend school, eat, and sleep. The activities can be performed at home or at other locations. Activities performed at home are labeled as "at home" activities, while activities performed outside the home are collectively grouped as "tours". A tour comprises all the activities that take place from the time a person leaves home until the time that person returns home. A person can conduct several tours throughout the day alone or with other household members. A person may also perform one or more sub-tours during a tour. A sub-tour is a series

of activities that start and end at a given location. The work location is often the anchor point for sub-tours. For example, if a person went out to lunch during his work activity, that would be considered a sub-tour that started and ended at the work location.

Some activities are considered flexible or discretionary, while others are fixed or mandatory. Work and school, for example, are likely to be mandatory activities that have fixed start and end times. Shopping activities, on the other hand, are typically flexible, with more variability in location and duration. **TRANSIMS** enables the user to define the time and flexibility constraints for each activity type or purpose. The program considers this information together with the travel time between activity locations when constructing a realistic activity schedule for each household member. If several household members need to coordinate their activities or their travel (for example, to drive a child to school), those constraints are considered.

The **ActGen** program uses a household activity survey to define the activity patterns, activity schedule, and travel modes for each synthetic household member generated by the **PopSyn**. A household type model allows the synthetic household to be matched with a survey household based on household demographic attributes. The activities for each person in the survey household are then assigned to an appropriate person in the synthetic household.

The household activities are allocated to activity locations based on the home location and location choice models. Location choice models are typically defined by activity purpose (work, shopping, etc…) and travel mode (walk, drive, etc…). The default model uses the straight-line distance between potential activity locations and known locations, along with location attraction factors, to select one of the potential locations for the activity. The attraction factors assigned to each activity location can vary by the purpose of the activity. For example, the attraction factors for work activities are likely to include the number of jobs at each location.

To more accurately consider mode-specific travel conditions by time of day in the location selection process, the user can incorporate location choice scripts and zone-to-zone skims by time of day and travel mode. That level of sophistication is, however, beyond the scope of this document. The user is referred to **ActGen** documentation for more information on advanced location choice procedures.

3 SURVEY DATA PREPARATION

The survey data are provided in four files: a household file (***Survey_Household.txt***), a population file (***Survey_Population.txt***), an activity file (***Survey_Activity.txt***), and survey weights file (***Survey_Weights.txt***). The household file defines the number of persons and vehicles in the household, as well as any additional household attributes needed to define household type and location choice (such as number of workers, income, and area type). The population file includes a data record for each person in the household; these records typically identify the person's age, gender, work status, and other attributes. The activity file includes the sequence of activities performed by each household member over the course of a day. The purpose, start time, end time, travel mode, vehicle number, number of passengers, and location is provided for each activity.

3.1 Survey Household File

Selected records from ***Survey_Household.txt*** are shown below.

HHOLD	HHSIZE	WORKERS	VEHICLES	INCOME	HHAGE	NUM_LT5	NUM_5TO15	LOCATION
200007	1	1	1	14	29	0	0	1
200009	1	0	0	1	82	0	0	1
200010	2	1	2	11	25	0	0	2
200015	1	0	0	14	82	0	0	2
200020	1	0	0	2	77	0	0	2

For example, household 200010, has 2 persons, one of which is a worker, owns 2 vehicles, and belongs to income category 11 (14 categories in total). The location field has no impact on the activity generation process since synthetic households carry are already assigned to an activity location in the **PopSyn** process.

3.2 Survey Population File

Selected records from ***Survey_Population.txt*** are shown below.

HHOLD	PERSON	AGE	GENDER	WORK	RELATE
200007	1	29	2	1	1
200009	1	82	2	2	1
200010	1	25	1	1	1
200010	2	28	2	2	1
200015	1	82	1	2	1
200020	1	77	1	2	1

For example, household 200010 has 2 records, one for each person. Person 1 is a 25 years old (|AGE| = 25) male (|GENDER| = 1) who works (|WORK| = 1). Person 2 is a 28 years old (|AGE| = 28) female (|GENDER| = 2) who does not work (|WORK| = 2). |RELATE| is a 1990 US Census acronym that indicates the relationship of a household member to the householder. It has no impact the matching process within **ActGen**.

3.3 Survey Activity File

The activity records for household 200010 are shown below.

HHOLD	PERSON	ACTIVITY	PURPOSE	PRIORITY	START	END	DURATION	MODE	VEHICLE	LOCATION	PASSENGERS	CONSTRAINT
200010	1	1	0	0	0:00	10:39	10:39	1	0	1	0	0
200010	1	2	13	0	11:10	11:25	0:15	2	2	2	1	0
200010	1	3	12	2	11:50	13:20	1:30	2	2	3	1	0
200010	1	4	15	0	13:40	14:30	0:50	2	2	4	1	0
200010	1	5	12	0	14:45	15:00	0:15	2	2	5	1	0
200010	1	6	0	0	15:21	15:51	0:30	2	2	1	1	0
200010	1	7	9	2	16:05	22:30	6:25	2	2	6	1	0

200010	1	8	0	0	22:45	1@3:00	4:15	8	0	1	1	0
200010	2	1	0	0	0:00	10:39	10:39	1	0	1	0	0
200010	2	2	13	0	11:10	11:25	0:15	2	1	2	1	0
200010	2	3	12	2	11:50	13:20	1:30	2	1	3	1	0
200010	2	4	15	0	13:40	14:30	0:50	2	1	4	1	0
200010	2	5	12	0	14:45	15:00	0:15	2	1	5	1	0
200010	2	6	0	0	15:21	15:51	0:30	2	1	1	1	0
200010	2	7	6	2	16:05	16:06	0:01	2	1	6	1	0
200010	2	8	0	0	16:20	1@3:00	10:40	2	1	1	1	0

The activity purposes can be customized for local needs, with the only restriction being that purpose zero must be home. For this dataset, the following purpose codes are defined:

0 Home
1 Work
2 Shop
3 Visit
4 Social/Recreation
5 Other
6 Serve Passenger
7 School
8 College

The mode codes are defined by **ActGen** as follows:

1 Walk
2 Drive
3 Bus
4 Rail
5 Park-and-Ride Outbound
6 Park-and-Ride Inbound
7 Bicycle
8 Magic Move (travel with non-household members)
9 School Bus
10 Two-Person Carpool
11 Three-Person Carpool, and
12 Four-Person Carpool

The vehicle codes are defined by **ActGen** as follows:

0 No auto
1 Auto, driver
2 Auto, passenger

The passenger codes represent the number of passengers besides the driver. That is a if |Vehicle| = 2 (i.e. Auto, passenger), then |PASSENGER| ≥ 1.

Location codes have meaning only for a given household. They simply tell the program to change location or to return to a previously defined location. For example, the home location is represented by location code 1. Each time the program finds a "1" in the location field, it returns to the activity location where the household is located.

3.4 Survey Weights File

Selected records from ***Survey_Weights.txt*** are shown below. For example, household 200007 has a weight of 6.2616564. Similarly, household 200010 has a weight of 4.9028446. These weights are used in the matching process to select a survey household for each synthetic household. Therefore among survey households with the same type, the probability of selecting a survey household is proportional to its survey weight.

200007	6.2616564
200009	10.073464
200010	4.9028446
200015	3.511354
200020	3.8874022
200029	49.726312

4 HOUSEHOLD MATCHING

The activity assignment process starts by matching each synthetic household to a survey household. The characteristics of the household are used to classify the household type. The program then 1) identifies all of the survey households with the same household type, 2) randomly selects one of those households, based on survey weights (***Survey_Weights.txt***); and 3) assigns its activities to the synthetic household.

Household type codes can be hard coded into the household data files or defined by a household type script. The script uses the same variables defined for the household file such as household size, number of vehicles owned, and number of workers to assign a specific household type code to the household. If the survey household file and the synthetic household file use different variable names, then a separate household type script must be used for each. The following example shows a simple household type script that uses household size and number of workers to define six household types. (A full description of the script syntax options can be found in the **ActGen** User's Guide).

```
IF (Household.PERSONS > 2) THEN
     IF (Household.PERSONS > 3) THEN
          IF (Household.WORKERS == 2) THEN
                RETURN (1)
          ELSE
                RETURN (2)
          ENDIF
     ELSE
          IF (Household.WORKERS == 1) THEN
               RETURN (3)
```

```
          ELSE
               RETURN (4)
          ENDIF
     ENDIF
ELSE
     IF (Household.WORKERS == 1) THEN
          RETURN (5)
     ELSE
          RETURN (6)
     ENDIF
ENDIF
```

Given the household type, the **ActGen** randomly selects a household from the survey dataset with the same type. It then gathers the members of the survey household for the person-matching process. The program matches each person in the synthetic household to the most appropriate person in the survey household. This is done using the age, work status, and gender fields in the population files. Each person is first assigned to an age-group, which are defined as follows:

Age Group	*Age Range*
1	0–4
2	5–11
3	12–15
4	16–20
5	21–64
6	65+

If the survey household does not have a person in the same age-group and with the same worker status and gender as a person in the synthetic household, **ActGen** will attempt to identify the best match by age-group and then work status. The program then retrieves the out-of-home activities from the survey activity file and assigns the activity sequence, activity schedule, and travel mode to the synthetic household member.

5 LOCATION CHOICE

The location choice model uses "anchor" activities to select the location for each activity in a tour. Basically, two previously defined locations, a "previous" and a "subsequent" anchor locations, are needed to select the location for the next activity in the tour. Initially the home location is the only anchor location. The program then scans all the activities included in a tour that starts and ends at home to identify the primary activity or reason for the tour. This is done as follows. If an activity type is identified as an anchor activity in the **ActGen** control file, it will be considered first. If the tour has multiple anchor activities, the program will select the anchor activity with the longest duration as the primary activity. If the tour does not include any anchor activities, the program will consider the activity with the longest duration to be the primary activity for the tour.

Once the primary activity is identified, the program uses the home location as the "previous" and a "subsequent" anchor for locating the primary activity. The time at which the trip leaves home is used to determine the impedance for the outbound trip, and the time at which the trip leaves the primary activity is used to determine the impedance for the return trip. Once the primary

activity is located, the program will locate the activities that take place between home and the primary activity based on the distance to home and the distance to the primary activity location. After the first intermediate stop is located, it becomes the anchor location for locating the next stop on the tour. The process continues until all of the activities are located.

The **ActGen** program provides two ways for estimating the travel conditions for the location choice model. The first is the default method, which uses simple distance calculations as a proxy for travel time. The second is a more advanced approach, which uses zone-to-zone skim files and a modeling script to calculate the probability of selecting a given location. Because skim data can be defined by mode and time of day and then adjusted by household attributes (such as income) or by activity purpose, the skim files can be used to implement very sophisticated location choice models. For this exercise, the default method will be used, in which the utility of selecting a given location *n* is defined by the following equation:

$$\text{Utility}_n = \text{Location\_Weight}_n \times \text{Location\_Weight\_Factor}_n \times \exp\left[\text{Mode\_Distance\_Factor}_{mode} \times (\text{Distance}_{Previous \rightarrow n} + \text{Distance}_{n \rightarrow subsequent})\right]$$

where Location_Weight is a user specified additional field in the activity location file representing the relative attractiveness of each activity location. For example, the number of jobs at each activity location can be used to increase the probability of allocating work activities to activity locations that contain more jobs. By default, all location weights are set to 1.0 (i.e., equal weight). The modeler can assign a specific weight to each activity location by introducing additional data fields into the activity location file. Each activity type or purpose can then be assigned to a specific data field. Location_Weight_Factor is an additional location weight factor defined in the control file and used to scale up or down the Location_Weight value defined above. Distance is the computed distance between previous/subsequent anchor locations and a given location *n*. Mode_Distance_Factor is a scalar parameter defined in the control file and used to adjust the distance based on the network and operation characteristics of each mode.

6 PROGRAM EXECUTION

A sample control file ***Alex.2000.Act.ActGen.ctl*** for **ActGen** is provided in the Alexandria\control directory. The file can be reviewed and edited using a standard text editor. The file records are listed below.

```
TITLE                              Alexandria Activity Generator
DEFAULT_FILE_FORMAT                TAB_DELIMITED
PROJECT_DIRECTORY                  ../

#---- Input Files ----

NET_DIRECTORY                      ../network
NET_NODE_TABLE                     Node
NET_LINK_TABLE                     Link
NET_ACTIVITY_LOCATION_TABLE        Activity_Location_4
NET_PARKING_TABLE                  Parking
NET_PROCESS_LINK_TABLE             Process_Link
NET_ZONE_TABLE                     Zone_Weights
```

```
HOUSEHOLD_FILE                  demand/Alex.2000.Act.Households
POPULATION_FILE                 demand/Alex.2000.Act.Persons
VEHICLE_FILE                    demand/Alex.2000.Act.Vehicles

VEHICLE_TYPE_FILE               inputs/Vehicle_Type.txt

HOUSEHOLD_TYPE_SCRIPT           inputs/Household_Type.txt

SURVEY_HOUSEHOLD_FILE           survey/Survey_Household.txt
SURVEY_HOUSEHOLD_WEIGHTS        survey/Survey_Weights.txt
SURVEY_POPULATION_FILE          survey/Survey_Population.txt
SURVEY_ACTIVITY_FILE            survey/Survey_Activity.txt
SURVEY_TYPE_SCRIPT              survey/Survey_Household_Type.txt

#---- Output File ----

NEW_ACTIVITY_FILE               demand/Alex.2000.Act.Activities
NEW_ACTIVITY_FORMAT             TAB_DELIMITED
NEW_PROBLEM_FILE                results/Alex.2000.Act.ActGen_Problems
NEW_HOUSEHOLD_MATCH_FILE        results/Alex.2000.Act.Household_Matches

#---- Reports -----

ACTGEN_REPORT_1                 HOUSEHOLD_TYPE_SUMMARY
ACTGEN_REPORT_2                 SURVEY_TYPE_SUMMARY
ACTGEN_REPORT_3                 TRIP_LENGTH_SUMMARY
ACTGEN_REPORT_4                 TOUR_LENGTH_SUMMARY
ACTGEN_REPORT_5                 TRIP_PURPOSE_SUMMARY
ACTGEN_REPORT_6                 TOUR_PURPOSE_SUMMARY
ACTGEN_REPORT_7                 MODE_LENGTH_SUMMARY
ACTGEN_REPORT_8                 MODE_PURPOSE_SUMMARY

#---- Parameters ----

RANDOM_NUMBER_SEED              1234
TIME_OF_DAY_FORMAT              24_HOUR_CLOCK
DISTANCE_CALCULATION            RIGHT_ANGLE
AVERAGE_TRAVEL_SPEED            1.0, 15.0, 10.0
ADDITIONAL_TRAVEL_TIME          600, 900, 1800

ACTIVITY_PURPOSE_RANGE_1        1, 7, 8, 9, 11, 17, 18, 19
ACTIVITY_ANCHOR_FLAG_1          TRUE
SCHEDULE_CONSTRAINT_1           FIXED_TIME
ZONE_WEIGHT_FIELD_1             EMPLOYMENT
MODE_DISTANCE_FACTORS_1         -0.005, -0.0006, -0.007

ACTIVITY_PURPOSE_RANGE_2        2..5, 12..15
ACTIVITY_ANCHOR_FLAG_2          FALSE
SCHEDULE_CONSTRAINT_2           NO_CONSTRAINT
ZONE_WEIGHT_FIELD_2             RETAIL
MODE_DISTANCE_FACTORS_2         -0.005, -0.0006, -0.007

ACTIVITY_PURPOSE_RANGE_3        6, 16
ACTIVITY_ANCHOR_FLAG_3          FALSE
SCHEDULE_CONSTRAINT_3           PASSENGER
ZONE_WEIGHT_FIELD_3             EMPLOYMENT
```

MODE_DISTANCE_FACTORS_3 -0.005, -0.0006, -0.007

This application includes three activity generation models. The first model is an anchor-based model, in which the start and end times of the activities are fixed. This model includes the following purpose codes: 1 = work, 7 = school, and 8 = college.

The second model is for non-anchor activities with no schedule constraints. These include 2 = shop, 3 = visit, 4 = social/recreation, and 5 = other.

The third model is used for serving a passenger, in which case the constraints of the corresponding passenger's activity control the driver's schedule. For example, the driver's schedule will be constrained if the passenger's activity is time constrained.

Several keys include a list of parameters. The average travel speed, additional travel time, and mode distance factor keys can be defined by travel mode. The order of the parameters corresponds to the order of the mode codes:

1. Walk
2. Drive
3. Bus
4. Rail
5. Park-and-Ride Outbound
6. Park-and-Ride Inbound
7. Bicycle
8. Magic Move
9. School Bus
10. Two-Person Carpool
11. Three-Person Carpool, and
12. Four-Person Carpool

In this case study, mode distance factor values are provided for the first three modes: walk, drive, and bus (`MODE_DISTANCE_FACTORS_1` = -0.05, -0.006, -0.07). If the modeler provides data for fewer than 12 modes, the last value provided with the key will be used for all subsequent modes.

Travel time estimates are made to evaluate and adjust the activity schedule. The following calculation is used to determine the mode-specific travel time:

Travel Time = Distance /`Average_Travel_Speed` + `Additional_Travel_Time`

By default, the distance value is the straight-line distance between the activity location coordinates. In this case, the `DISTANCE_CALCULATION` key is set to `RIGHT_ANGLE` to make the distance equal to the sum of the absolute difference of the X and Y coordinates thus approximating movement on a grid network. The average travel speed and additional travel time are selected based on the travel mode. The additional travel time can be interpreted as the vehicle access and parking time or a time buffer to account for congestion or distance errors.

ActGen can be executed using the batch file included in the Alexandria\batch\ directory:

- ***Alex.2000.Act.ActGen.bat*** (Windows)

The printout file ***ActGen.prn*** will be created by the process, as will be a new activity file in the activity folder. Three reports are requested to summarize the results of the household type model. The end of the printout summarizes the household match and location choice problems.

```
*****************************************
|                                       |
|       ActGen - Version 4.0.32         |
|  Copyright (c) 2008 by AECOM Consult  |
|       Wed Apr 14 11:01:20 2010        |
|                                       |
*****************************************

Control File = ../control/Alex.2000.Act.ActGen.ctl
Report_File  = ../control/Alex.2000.Act.ActGen.prn (Create)

Alexandria Activity Generator

Project Directory = ../

Default File Format = TAB_DELIMITED

Network Directory = ../network
Node File = ../network\Node
Zone File = ../network\Zone_Weights
Link File = ../network\Link
Parking File = ../network\Parking
Activity Location File = ../network\Activity_Location_4
Process Link File = ../network\Process_Link

Household File = ../demand/Alex.2000.Act.Households

Population File = ../demand/Alex.2000.Act.Persons

Vehicle Type File = ../inputs/Vehicle_Type.txt

Vehicle File = ../demand/Alex.2000.Act.Vehicles
Vehicle File will be Sorted by Vehicle ID

New Activity File = ../demand/Alex.2000.Act.Activities

Time of Day Format = 24_HOUR_CLOCK

Household Type Script = ../inputs/Household_Type.txt

Survey Household File = ../survey/Survey_Household.txt
Survey Household Weights = ../survey/Survey_Weights.txt
Survey Type Script = ../survey/Survey_Household_Type.txt

Survey Population File = ../survey/Survey_Population.txt
```

Survey Activity File = ../survey/Survey_Activity.txt

New Problem File = ../results/Alex.2000.Act.ActGen_Problems
New Problem File Format = VERSION3
New Household Match File = ../results/Alex.2000.Act.Household_Matches

Distance Calculation = RIGHT_ANGLE
Average Travel Speed = 1.0, 15.0, 10.0 ... meters/second
Additional Travel Time = 600, 900, 1800 ... seconds

Random Number Seed = 1234

Activity Purpose Range #1 = 1, 7, 8, 9, 11, 17, 18, 19
Activity Anchor Flag #1 = True
Schedule Constraint #1 = FIXED
Zone-Based Method #1 = True
Zone Weight Field Name = EMPLOYMENT, Number = 8
Zone Weight Factor = 1
All Locations have Equal Weight (1.0)

Alexandria Activity Generator
Wed Apr 14 11:01:21 2010 ActGen page 2

The Location Choice Model is Distance-Based
Mode Distance Factors = -0.005, -0.0006, -0.007 ... (*meters)

Activity Purpose Range #2 = 2..5, 12..15
Activity Anchor Flag #2 = False
Schedule Constraint #2 = NONE
Zone-Based Method #2 = True
Zone Weight Field Name = RETAIL, Number = 10
Zone Weight Factor = 1
All Locations have Equal Weight (1.0)
The Location Choice Model is Distance-Based
Mode Distance Factors = -0.005, -0.0006, -0.007 ... (*meters)

Activity Purpose Range #3 = 6, 16
Activity Anchor Flag #3 = False
Schedule Constraint #3 = PASSENGER
Zone-Based Method #3 = True
Zone Weight Field Name = EMPLOYMENT, Number = 8
Zone Weight Factor = 1
All Locations have Equal Weight (1.0)
The Location Choice Model is Distance-Based
Mode Distance Factors = -0.005, -0.0006, -0.007 ... (*meters)

ActGen Reports: 1. HOUSEHOLD_TYPE_SUMMARY
2. SURVEY_TYPE_SUMMARY
3. TRIP_LENGTH_SUMMARY
4. TOUR_LENGTH_SUMMARY
5. TRIP_PURPOSE_SUMMARY
6. TOUR_PURPOSE_SUMMARY
7. MODE_LENGTH_SUMMARY
8. MODE_PURPOSE_SUMMARY

Compiling Household Type Script
Compiling Survey Type Script

Number of Survey Household Weights Records = 4562

Number of Survey Household File Records = 4562
Number of Survey Household Types = 20

Alexandria Activity Generator
Wed Apr 14 11:01:21 2010 ActGen page 3

Survey Type Summary

Type	Households	Cumulative Weight	Average Weight
1	478	2868.000000	6.000000
2	725	1957.042897	2.699370
3	91	27.357374	0.300630
4	440	4663.693869	10.599304
5	413	2198.024707	5.322094
6	59	108.455201	1.838224
7	613	2653.933515	4.329418
8	239	160.268989	0.670582
9	219	2853.240052	13.028493
10	341	2727.200331	7.997655
11	90	81.051949	0.900577
12	111	420.879519	3.791707
13	69	161.318281	2.337946
14	226	1158.728404	5.127117
15	69	350.078244	5.073598
16	91	195.675987	2.150286
17	67	247.653180	3.696316
18	127	515.738440	4.060933
19	70	144.005836	2.057226
20	24	48.444581	2.018524

Number of Survey Population File Records = 10600

Number of Survey Activity File Records = 52923

Number of Node File Records = 2573

Number of Zone File Records = 85
Highest Zone Number = 92

Number of Link File Records = 3607
Number of Directional Links = 6774

Number of Parking File Records = 7734

Number of Activity Location File Records = 8656

Number of Process Link File Records = 15468

Number of Household File Records = 78716

Number of Population File Records = 229370

Number of Vehicle Type File Records = 14

Number of Vehicle File Records = 174389

Warning: 916 Activity Locations have a Zone Number of Zero

Alexandria Activity Generator
Wed Apr 14 11:01:23 2010 ActGen page 4

Household Type Summary

Type	Households	Surveys	Households/Survey
1	3631	478	7.6
2	12217	725	16.9
3	1708	91	18.8
4	1877	440	4.3
5	2471	413	6.0
6	535	59	9.1
7	7658	613	12.5
8	2512	239	10.5
9	7138	219	32.6
10	12933	341	37.9
11	4906	90	54.5
12	1453	111	13.1
13	1114	69	16.1
14	2395	226	10.6
15	2259	69	32.7
16	2135	91	23.5
17	1355	67	20.2
18	4986	127	39.3
19	3032	70	43.3
20	2401	24	100.0

Number of Households = 78716
Number of Persons = 229370
Number of Workers = 134074

Persons per Household = 2.91
Workers per Household = 1.70

Number of Households with Match Problems = 16164 (20.5%)
Number of Persons with Match Problems = 22884 (10.0%)

Number of Persons matched to a different Age Group = 30214 (14.6%)
Number of Persons matched to a different Work Status = 54874 (26.6%)
Number of Persons matched to a different Gender = 59509 (28.8%)

Number of Activities Generated = 1148202
Number of Activities with Problems = 50405 (4.4%)
Number of Activities Written = 1133718 (98.7%)

Activities per Household = 18.12

Activities per Person = 5.49

Alexandria Activity Generator
Wed Apr 14 11:01:43 2010 ActGen page 5

Trip Length Summary

		Distance (meters)				Time (minutes)			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
1	69389	0	10261	1482	1181	0.00	131.35	2.60	4.58
2	28996	0	10579	1471	1180	0.00	118.58	3.03	4.85
3	22552	0	10196	1586	1184	0.00	80.58	3.02	4.36
4	29439	0	9637	1303	1165	0.00	133.08	4.38	8.00
5	60105	0	9362	873	1162	0.00	141.00	3.05	6.93
6	36122	0	9706	1579	1200	0.00	90.87	2.08	3.08
7	16665	0	7928	749	752	0.00	125.00	4.23	7.25
8	19463	0	10216	1443	1140	0.00	87.25	2.23	3.40
9	57190	0	10429	1341	1124	0.00	124.90	2.16	4.09
11	10007	0	10023	1582	1198	0.00	64.90	2.96	4.14
12	41815	0	9380	1507	1110	0.00	72.00	2.95	4.25
13	22142	0	8856	1468	1093	0.00	95.85	3.50	5.23
14	45366	0	9940	1312	1049	0.00	97.87	3.54	5.54
15	30565	0	9761	1217	1086	0.00	93.78	2.87	4.95
16	35364	0	9083	1560	1159	0.00	86.65	2.14	2.89
17	5789	0	8698	1614	1210	0.00	60.83	2.76	4.04
18	27009	0	9188	1238	1134	0.00	72.62	2.04	3.10
19	1855	0	7858	1616	1213	0.00	27.97	2.45	3.07
Total	559833	0	10579	1349	1158	0.00	141.00	2.84	5.06

Tour Length Summary

		Distance (meters)				Time (minutes)			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
1	48305	0	51357	4181	3856	0.00	397.10	7.54	13.01
2	6619	0	24825	3471	2629	0.00	76.65	8.14	8.60
3	3452	146	22645	3950	2635	0.40	63.35	6.66	7.01
4	7229	43	21392	3188	2341	0.17	188.43	10.01	12.78
5	4248	0	27190	3498	2603	0.00	143.45	13.47	13.17
6	5303	155	24116	3424	2238	0.17	130.32	4.64	6.52
7	12211	0	29636	1451	1837	0.00	188.95	7.51	11.78
8	16023	0	35485	3494	3421	0.00	178.25	5.55	8.80
9	43752	35	29055	2909	2735	0.03	203.15	5.06	9.67
11	1127	861	38609	8409	4748	1.22	214.00	16.56	23.36
12	27759	33	26923	3166	2703	0.03	104.78	5.57	6.03
13	12149	0	45878	2996	3310	0.00	147.48	6.63	8.93
14	34462	0	31767	2982	2445	0.00	172.88	7.12	9.15
15	17928	0	35373	3187	2994	0.00	188.17	6.70	11.82
16	17902	0	17768	2378	2121	0.00	95.47	3.32	4.47
17	755	738	29557	7786	5052	0.80	164.63	15.70	19.42
18	19805	68	24644	3013	2927	0.07	154.85	5.39	8.53
19	392	418	24765	6888	3943	0.45	70.60	10.42	9.54
Total	279421	0	51357	3221	3051	0.00	397.10	6.44	10.19

TRANSIMS Open-Source

Trip Purpose Summary

		------- Distance (meters) --------				--------- Time (minutes) ---------			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
0-1	37821	0	8916	1560	1045	0.00	36.20	2.29	2.85
0-2	7066	0	8515	1348	980	0.00	58.58	3.96	5.54
0-3	6630	0	8546	1599	1108	0.00	34.65	2.56	3.32
0-4	8770	0	7535	1318	957	0.00	104.20	3.96	5.96
0-5	7906	0	8134	1393	1022	0.00	94.82	4.66	6.18
0-6	17343	0	8744	1405	1071	0.00	90.87	1.82	2.60
0-7	11166	31	6852	918	645	0.05	107.92	4.98	6.79
0-8	14759	0	7358	1441	1002	0.00	40.07	2.14	2.65
0-9	39029	0	10429	1515	1021	0.00	55.25	2.00	2.21
0-11	826	30	6590	1763	1164	0.05	22.33	2.12	1.91
0-12	24276	32	8043	1398	962	0.03	68.33	3.28	4.79
0-13	14072	0	8456	1397	974	0.00	95.85	3.80	5.47
0-14	31109	0	9032	1289	915	0.00	69.75	3.77	5.42
0-15	17443	0	8424	1308	927	0.00	51.88	2.88	4.28
0-16	22963	0	8753	1435	1054	0.00	59.93	2.05	2.76
0-17	631	59	8681	1757	1333	0.05	33.68	2.89	3.81
0-18	17498	0	8106	1365	975	0.00	56.57	2.20	2.94
0-19	185	34	5188	1383	992	0.03	27.25	3.46	4.86
1-0	30267	0	8867	1551	1044	0.00	79.83	2.10	2.63
1-1	1360	0	10261	1457	1442	0.00	27.45	1.93	2.65
1-2	3758	0	8877	1779	1296	0.00	112.70	3.04	5.86
1-3	6091	0	10196	1682	1238	0.00	80.58	3.26	4.81
1-4	3273	0	9208	1584	1308	0.00	100.35	3.43	6.51
1-5	13118	0	9355	995	1237	0.00	131.35	3.63	8.31
1-6	4937	0	9688	1836	1289	0.00	10.75	2.03	1.43
1-8	686	0	9230	1739	1392	0.00	10.25	1.95	1.54
1-11	4907	0	10023	1578	1184	0.00	61.17	2.46	3.44
2-0	17018	0	8977	1422	1084	0.00	59.95	2.85	4.16
2-1	1212	0	9339	1569	1256	0.00	100.10	5.22	8.22
2-2	3164	0	9010	1487	1264	0.00	43.68	2.77	4.06
2-3	1456	0	8590	1521	1183	0.00	25.45	2.53	3.30
2-4	1659	0	9536	1581	1195	0.00	29.37	2.03	2.05
2-5	1539	0	7515	1471	1150	0.00	64.27	4.22	6.02
2-6	974	0	7044	1782	1221	0.00	7.82	1.97	1.36
2-8	208	0	7356	1380	1215	0.00	32.80	6.43	6.94
2-9	919	0	8558	1695	1290	0.00	25.27	2.58	3.06
2-11	106	173	5753	1713	1156	0.18	6.38	1.90	1.28
2-17	178	91	7355	1660	1152	0.10	8.17	1.84	1.28
2-18	297	0	7764	1376	1213	0.00	29.52	5.40	6.05
2-19	88	97	4952	1460	969	0.10	13.20	1.92	1.86
3-0	8944	0	11586	1611	1138	0.00	59.83	3.30	4.74
3-1	2708	0	9574	1797	1274	0.00	111.43	2.84	5.10
3-2	1895	0	9449	1429	1241	0.00	73.12	3.36	4.81
3-3	2214	0	8426	1599	1194	0.00	32.25	2.59	3.40
3-4	756	0	6899	1527	1206	0.00	19.17	2.14	2.30
3-5	2154	0	8460	1377	1223	0.00	141.00	4.97	8.15
3-6	794	40	9198	1852	1311	0.03	15.08	2.09	1.54
3-7	85	46	6031	1203	1156	0.17	57.63	6.07	11.97

3-8	546	0	8698	1997	1604	0.00	9.65	2.23	1.77
3-9	1023	0	8630	1597	1217	0.00	28.05	2.65	3.62
3-11	850	0	7886	1848	1291	0.00	16.75	2.16	1.74
3-17	315	100	5726	1571	1066	0.13	25.53	2.33	3.25
3-18	247	0	8640	1521	1244	0.00	29.18	2.18	2.93
3-19	12	1076	3891	2223	944	1.18	4.32	2.46	1.05
4-0	12899	0	7883	1437	1066	0.00	104.88	3.92	5.65
4-1	2160	0	9389	1488	1320	0.00	47.82	4.20	5.29
4-2	1461	0	8949	1606	1188	0.00	31.80	2.47	3.25

Trip Purpose Summary

		------- Distance (meters) --------				--------- Time (minutes) ---------			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
4-3	224	0	7535	1484	1321	0.00	47.22	2.33	5.20
4-4	4139	0	8187	1057	1016	0.00	99.77	7.56	10.28
4-5	2413	0	7853	1133	1218	0.00	69.93	2.39	4.76
4-6	768	0	6113	1461	1087	0.00	65.88	2.23	4.71
4-7	474	0	6285	832	987	0.00	52.38	4.08	7.65
4-8	780	0	10216	1895	1649	0.00	87.25	3.52	7.29
4-9	814	0	7635	1231	1353	0.00	55.63	3.43	6.61
4-11	113	150	4814	1604	956	0.17	45.15	3.32	5.95
4-17	64	135	6753	1927	1331	0.15	7.50	2.13	1.48
4-18	688	0	8932	1466	1381	0.00	9.92	1.63	1.53
5-0	13452	0	8485	1521	1068	0.00	61.45	2.44	3.34
5-1	13497	0	9215	1002	1266	0.00	131.35	3.36	7.72
5-2	1753	0	8545	1522	1160	0.00	67.68	2.70	4.59
5-3	1423	0	7550	1126	1008	0.00	61.90	6.77	6.97
5-4	3092	0	8694	881	1187	0.00	74.05	2.16	4.96
5-5	2829	0	7150	1026	947	0.00	86.37	6.92	9.01
5-6	861	0	8694	1726	1380	0.00	79.73	3.64	6.59
5-7	3870	0	7500	171	594	0.00	125.00	1.68	7.05
5-8	1161	0	8009	662	1272	0.00	86.92	2.00	6.58
5-9	10198	0	9362	530	992	0.00	101.07	2.35	7.22
5-11	691	0	8789	1567	1265	0.00	32.38	3.40	4.76
5-17	843	0	8227	1557	1171	0.00	54.55	3.93	6.16
5-18	5610	0	8558	661	1243	0.00	72.62	1.37	3.57
5-19	41	0	3162	731	540	0.00	23.57	9.30	7.31
6-0	15146	0	8138	1448	1092	0.00	51.67	1.89	2.42
6-1	5914	0	9688	1805	1271	0.00	12.52	2.00	1.42
6-2	1496	0	7351	1644	1296	0.00	8.17	1.82	1.44
6-3	1113	0	7611	1653	1250	0.00	22.77	2.02	2.10
6-4	954	0	8802	1812	1339	0.00	77.88	2.67	4.08
6-5	944	0	8192	1650	1250	0.00	54.57	2.96	5.06
6-6	4615	0	9099	1641	1310	0.00	60.40	2.55	4.70
6-7	507	0	7928	1307	1119	0.00	15.85	2.05	1.84
6-8	796	0	8450	1882	1298	0.00	9.38	2.16	1.49
6-9	2772	0	7936	1781	1284	0.00	59.13	2.01	1.91
6-11	72	0	6163	2074	1450	0.00	6.83	2.30	1.61
6-12	42	0	4096	1748	1109	0.00	4.55	1.93	1.23
6-13	2	1007	5223	3115	2981	1.12	5.80	3.46	3.31
6-14	10	1592	5112	2633	1151	1.77	5.67	2.92	1.28

6-15	9	112	3417	1097	1061	0.12	3.78	1.21	1.18
6-17	53	114	4962	1339	959	0.12	5.50	1.48	1.07
6-18	1632	0	7300	1678	1295	0.00	22.25	2.16	2.16
6-19	21	255	5395	2009	1361	0.28	5.98	2.22	1.51
7-0	10704	0	6508	887	598	0.00	107.92	5.19	7.16
7-2	162	0	5761	1523	1155	0.00	82.28	8.80	13.71
7-3	209	0	7470	1381	1438	0.00	57.63	4.98	10.37
7-4	2461	0	8657	1108	1217	0.00	114.32	6.94	12.84
7-5	4023	0	6825	201	653	0.00	113.75	2.45	9.12
7-6	202	96	8740	1742	1346	0.18	12.35	2.39	1.92
7-7	563	0	6018	735	874	0.00	100.30	8.55	12.09
8-0	8337	0	7991	1357	990	0.00	104.20	2.48	3.82
8-1	840	0	7628	1653	1284	0.00	17.12	1.90	1.68
8-2	1101	0	10579	1904	1491	0.00	38.93	3.29	4.04
8-3	378	0	6502	1688	1291	0.00	8.40	1.95	1.45
8-4	668	0	7985	1643	1310	0.00	133.08	6.12	12.34
8-5	6419	0	8541	296	849	0.00	90.98	0.89	4.55
8-6	568	0	7109	1666	1221	0.00	27.75	2.74	3.41
8-8	326	0	5950	597	1041	0.00	19.97	1.12	2.28

Trip Purpose Summary

		------- Distance (meters) --------				---------- Time (minutes) ----------			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
8-9	662	0	7494	1037	975	0.00	124.90	5.68	13.57
8-11	10	690	2056	1111	420	0.77	2.28	1.23	0.47
8-18	305	0	9188	2066	1640	0.00	10.20	2.29	1.82
9-0	32794	0	10429	1495	1020	0.00	89.70	2.14	3.03
9-2	2940	0	8854	1762	1257	0.00	57.28	2.72	3.71
9-3	1594	0	8249	1567	1166	0.00	57.35	2.46	3.52
9-4	2175	0	9637	1529	1343	0.00	103.80	4.90	10.25
9-5	11529	0	9362	634	1078	0.00	101.07	2.07	6.12
9-6	2882	0	9706	1747	1259	0.00	55.72	2.37	3.58
9-8	135	80	8095	1646	1221	0.08	8.98	1.82	1.36
9-9	497	0	4562	360	777	0.00	64.50	1.58	6.15
9-17	2231	0	7643	1651	1218	0.00	60.83	2.79	3.96
11-0	1869	0	9633	1766	1223	0.00	116.05	4.09	6.95
11-1	3877	0	10023	1617	1212	0.00	92.13	2.48	4.46
11-2	57	40	6093	1593	1132	0.03	6.77	1.76	1.26
11-3	593	76	7736	1785	1218	0.08	8.58	1.98	1.35
11-4	206	0	7028	1386	1125	0.00	24.75	4.22	5.01
11-5	696	0	9321	1486	1137	0.00	45.40	3.30	4.99
11-6	311	0	7453	1995	1335	0.00	24.97	2.46	2.37
11-11	2432	0	9994	1422	1162	0.00	64.90	4.46	5.72
12-0	29297	0	8807	1445	1002	0.00	89.72	3.13	4.70
12-6	49	0	6059	1905	1395	0.00	6.72	2.11	1.55
12-12	5465	0	8225	1574	1257	0.00	34.02	2.14	2.54
12-13	1372	0	8246	1563	1225	0.00	26.35	2.47	3.06
12-14	2447	0	9848	1602	1245	0.00	87.37	3.08	6.12
12-15	1716	0	8652	1359	1218	0.00	33.98	2.04	2.83
12-16	1470	0	7945	1797	1255	0.00	8.82	1.99	1.39
13-0	10778	0	9165	1373	963	0.00	95.85	4.03	5.75

13-6	2	1007	5223	3115	2981	1.12	5.80	3.46	3.31
13-12	3974	0	9380	1762	1337	0.00	38.35	2.98	3.67
13-13	2189	0	8856	1561	1255	0.00	77.53	4.28	6.95
13-14	1346	0	8232	1263	1183	0.00	50.78	3.73	5.49
13-15	1862	0	8399	1577	1256	0.00	93.78	3.26	5.59
13-16	2085	0	8884	1898	1356	0.00	39.27	2.17	2.01
14-0	30382	0	8694	1318	935	0.00	81.28	3.98	5.74
14-6	10	415	5050	1370	1376	0.45	5.60	1.51	1.53
14-12	2500	0	8402	1585	1190	0.00	72.00	2.82	4.93
14-13	1499	0	7895	1382	1250	0.00	31.17	2.64	3.91
14-14	4352	0	8364	1155	1168	0.00	97.87	3.63	7.10
14-15	5618	0	8561	604	1081	0.00	66.53	1.74	5.30
14-16	2615	0	9083	1761	1327	0.00	55.07	2.16	2.48
15-0	17697	0	8424	1345	966	0.00	90.22	2.93	4.40
15-6	17	606	5998	2440	1905	0.67	6.65	2.70	2.11
15-12	2597	0	8255	1640	1277	0.00	32.12	2.14	2.40
15-13	1416	0	8263	1514	1233	0.00	50.58	2.79	4.55
15-14	3591	0	9940	1101	1247	0.00	84.17	2.53	5.23
15-15	1822	0	7748	1045	1000	0.00	81.67	6.39	8.48
15-16	1742	0	7744	1824	1257	0.00	86.65	2.71	5.37
16-0	21631	0	9245	1484	1071	0.00	109.55	2.01	2.74
16-6	16	400	4416	2203	1406	0.43	4.90	2.44	1.56
16-12	2961	0	8403	1757	1263	0.00	33.38	2.49	2.99
16-13	1592	0	7464	1923	1289	0.00	21.87	2.20	1.67
16-14	2511	0	9865	1900	1451	0.00	46.30	2.37	2.77
16-15	2095	0	9761	1818	1353	0.00	36.93	3.16	4.26
16-16	4489	0	8994	1745	1292	0.00	65.72	2.35	3.03
17-0	1964	0	7742	1917	1231	0.00	60.25	2.40	2.74
17-2	174	0	5321	1113	876	0.00	44.00	7.04	7.39

Trip Purpose Summary

		------- Distance (meters) --------				---------- Time (minutes) ----------			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
17-3	186	107	6111	1740	1362	0.12	26.20	2.79	3.62
17-4	232	35	5520	1412	1062	0.23	38.57	7.03	7.47
17-5	208	0	7758	1325	1240	0.00	50.05	2.95	5.39
17-6	275	0	5933	1622	1127	0.00	6.58	1.83	1.23
17-9	1276	0	9406	1657	1317	0.00	25.63	2.68	3.46
17-17	1474	0	8698	1528	1193	0.00	27.42	2.28	2.95
18-0	12845	68	8106	1486	1009	0.07	91.32	3.38	6.41
18-2	3800	0	7301	917	806	0.00	118.58	1.95	4.15
18-3	426	0	7722	1349	1101	0.00	53.82	4.71	6.70
18-4	1010	0	6978	1165	1210	0.00	60.85	3.21	6.47
18-5	5891	0	8558	669	1227	0.00	72.62	1.73	4.43
18-6	1478	0	7096	1766	1310	0.00	7.88	1.99	1.44
18-8	66	111	3827	1093	795	0.22	39.72	8.16	8.80
18-18	332	0	4792	356	774	0.00	5.32	0.47	0.92
18-19	1171	0	7858	1690	1241	0.00	22.93	1.93	1.57
19-0	434	93	7464	1745	1152	0.10	24.07	2.63	2.89
19-2	169	59	6214	1546	1052	0.05	13.13	1.94	1.58
19-3	15	177	2840	1251	759	0.18	26.97	4.24	6.98

19-4	44	170	4902	1681	1077	0.18	5.43	1.86	1.20
19-5	436	0	8293	1654	1143	0.00	9.20	1.83	1.27
19-6	20	111	5028	1960	1392	0.12	5.58	2.17	1.55
19-18	400	0	5661	1405	1134	0.00	25.02	2.87	3.66
19-19	337	0	6355	1590	1271	0.00	27.97	3.03	3.92
Total	836291	0	11586	1377	1117	0.00	141.00	2.87	4.89

Tour Purpose Summary

Purpose	------- Distance (meters) --------				---------- Time (minutes) ----------			
-Stops	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
1-1	16866	0	11780	1859	1352	0.00	61.60	2.88	3.64
1-2	8828	66	19638	3729	2309	0.23	61.80	4.99	4.15
1-3	10075	0	24221	4097	2878	0.00	267.48	7.85	13.38
1-4	5994	150	26209	6221	3506	0.32	230.87	10.71	12.90
1-5	3229	651	34725	6750	4058	0.72	208.20	16.13	19.63
1-6	1483	970	42068	9364	5013	1.17	397.10	22.24	29.78
1-7	928	2501	39745	11144	5733	3.40	144.65	26.06	27.22
1-8	601	3094	31160	12918	5178	3.38	109.27	18.37	14.15
1-9	130	4131	28775	12983	4491	7.07	126.18	31.48	22.27
1-10	55	8220	33029	17740	5966	9.03	36.63	19.63	6.63
1-12	80	8750	51357	24274	10630	9.63	57.00	26.88	11.81
1-14	36	13131	30677	20496	4716	14.52	33.97	22.68	5.23
2-1	4425	63	12125	2501	1466	0.23	60.47	7.75	8.68
2-2	1290	0	15980	4566	2514	0.00	37.78	5.32	3.29
2-3	552	1054	15386	5212	2700	1.70	64.60	13.61	10.20
2-4	223	2337	20688	7748	3432	3.27	76.65	16.20	12.97
2-5	117	3781	24825	10764	4459	4.17	27.53	11.92	4.95
2-6	2	4558	6068	5313	1068	7.45	8.88	8.17	1.01
2-11	10	9095	22813	14599	4936	9.98	25.27	16.11	5.50
3-1	1968	146	10238	2869	1499	0.40	63.35	6.11	7.37
3-2	677	556	15176	4311	2433	0.60	51.50	7.90	8.60
3-3	714	537	22645	5913	2977	0.58	25.13	6.54	3.31
3-4	69	2402	15031	8042	3112	2.65	16.67	8.90	3.46
3-5	9	3701	12569	7952	3093	4.07	13.92	8.79	3.43
3-7	15	7192	22265	14785	4554	7.93	24.67	16.37	5.05
4-1	4878	43	11502	2655	1529	0.17	102.23	6.76	8.24
4-2	1339	145	18756	3207	2199	0.55	98.12	15.40	15.80
4-3	505	438	18238	5420	3065	0.47	188.43	15.37	16.89
4-4	282	320	18418	5978	3780	1.58	105.15	20.95	19.43
4-5	144	460	21392	4645	3925	4.30	99.25	23.55	21.33
4-6	68	1863	21284	9997	4236	4.78	93.60	19.22	18.82
4-7	12	1027	2741	1663	499	17.12	45.68	27.71	8.32
4-8	1	7281	7281	7281	0	23.32	23.32	23.32	0.00
5-1	1953	214	12822	2580	1483	0.23	52.97	7.06	7.46
5-2	1632	0	16192	3517	1847	0.00	80.03	19.24	12.75
5-3	360	712	18538	4995	2813	0.75	73.72	17.56	16.08
5-4	202	626	17948	5321	3651	1.03	143.45	21.31	23.63
5-5	27	4742	21864	11530	4071	5.22	24.25	12.77	4.53
5-6	73	2564	27190	12238	5936	3.40	42.80	14.59	7.77
5-8	1	3854	3854	3854	0	4.90	4.90	4.90	0.00

TRANSIMS Open-Source

6-1	4120	155	12344	2876	1685	0.17	48.70	3.75	3.69
6-2	1051	790	15743	5204	2616	0.85	130.32	7.83	12.03
6-3	132	1623	24116	6336	3889	1.78	26.77	7.01	4.32
7-1	6996	34	7121	934	670	0.05	107.92	5.33	7.83
7-2	1395	39	15592	1937	1721	0.05	119.85	10.55	14.84
7-3	2314	0	19068	1676	1988	0.00	188.95	8.25	13.66
7-4	885	152	15711	2131	1693	0.42	104.77	12.24	14.51
7-5	288	31	16445	3467	3155	0.27	100.33	16.25	15.16
7-6	205	215	29636	2357	3083	0.35	150.88	13.61	27.35
7-7	38	380	12786	2406	2248	6.00	66.78	27.06	13.04
7-8	84	4490	23942	12759	4574	5.53	26.55	14.18	5.01
7-9	6	8483	16306	11826	3608	9.37	18.07	13.09	4.01
8-1	6438	58	14560	1825	1471	0.05	111.13	3.13	4.67
8-2	5770	70	14348	3190	1663	0.07	62.83	3.84	2.89
8-3	1336	73	16312	3544	2746	0.12	178.25	9.35	14.85
8-4	652	0	15938	5645	3502	0.00	98.07	12.94	14.16
8-5	891	483	35485	9036	5186	0.80	42.50	11.02	5.78

Tour Purpose Summary

Purpose	------- Distance (meters) --------				---------- Time (minutes) ----------				
-Stops	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
8-6	633	1812	28647	8701	4135	1.97	131.37	13.15	15.43
8-7	89	1232	20796	5625	3718	6.52	150.47	43.45	35.40
8-10	214	7072	34331	15672	5080	7.82	38.07	17.34	5.64
9-1	22528	35	13351	1783	1306	0.03	57.05	2.56	3.47
9-2	5396	59	17254	3295	2143	0.08	124.90	4.93	6.31
9-3	10110	35	22970	3220	2595	0.05	203.15	5.96	9.90
9-4	2710	168	29055	5267	3226	0.18	193.40	9.38	13.98
9-5	2003	183	23435	6624	4057	0.30	183.63	15.11	22.64
9-6	587	1314	27426	7894	4249	1.43	110.22	18.73	19.50
9-7	336	2353	27063	10433	4403	2.57	98.17	24.84	21.27
9-8	20	6014	24392	12273	5638	6.62	85.85	20.10	17.57
9-9	55	6803	26610	13745	4261	7.50	61.97	23.43	14.39
9-11	7	11051	23583	16238	4667	12.20	26.13	17.96	5.19
11-2	44	1110	13661	4971	2476	1.22	15.15	5.50	2.75
11-3	111	1170	24091	6451	3952	1.28	26.73	7.14	4.39
11-4	518	861	22126	7156	3570	1.43	66.18	9.33	7.89
11-5	118	1609	38609	9363	4692	2.95	93.80	15.03	16.19
11-6	40	2089	6522	4467	1138	34.82	108.70	74.45	18.97
11-7	63	3924	20828	10635	4351	4.32	101.20	14.04	13.18
11-8	194	2670	33139	12029	5315	5.37	214.00	33.76	38.66
11-9	33	4762	23855	13542	4822	5.23	26.43	14.97	5.36
11-10	6	10856	26996	16898	5913	11.97	29.93	18.70	6.58
12-1	19359	33	13131	2195	1497	0.03	64.97	4.92	5.88
12-2	4220	203	20348	4046	2423	0.30	51.58	5.51	4.76
12-3	2413	694	18984	5568	2947	0.87	71.03	7.40	6.22
12-4	953	1255	23178	7451	3870	1.58	70.68	9.86	7.11
12-5	488	1726	23730	8530	3692	1.88	26.32	9.51	4.03
12-6	247	3673	22786	11081	3970	4.02	25.28	12.39	4.45
12-7	68	5528	22331	11466	3644	6.10	24.73	12.68	4.05
12-8	7	8386	26923	13016	6645	9.25	29.87	14.41	7.38

12-10	4	5283	6287	5701	421	88.05	104.78	95.02	7.02
13-1	7758	34	10312	1801	1381	0.05	95.85	5.46	6.62
13-2	2418	0	12853	3255	2223	0.00	56.02	6.17	6.85
13-3	989	434	18410	5227	2881	0.47	93.78	6.96	6.64
13-4	463	953	16633	7077	3048	1.03	97.77	13.68	14.85
13-5	193	611	15702	7019	3399	1.02	17.42	7.91	3.61
13-6	48	0	21588	8639	4169	0.00	67.72	12.90	12.70
13-7	38	2622	8849	5195	1590	43.70	147.48	86.58	26.51
13-9	228	6832	45878	17536	7257	7.52	50.87	19.41	8.06
13-10	6	354	1411	772	388	0.58	2.35	1.28	0.65
13-12	8	13827	21113	17812	2829	15.25	23.38	19.69	3.15
14-1	23070	31	12519	2212	1465	0.03	110.50	6.46	7.81
14-2	5835	0	18522	4037	2405	0.00	98.02	5.82	5.78
14-3	3386	0	21715	4210	2927	0.00	98.00	7.45	8.24
14-4	1053	64	19995	6475	3447	0.10	129.18	10.45	10.59
14-5	406	0	31767	4633	4802	0.00	98.23	17.78	17.01
14-6	509	0	28120	6549	4799	0.00	161.92	25.09	22.81
14-7	122	0	23162	9069	4885	0.00	172.88	34.37	38.18
14-8	7	807	12485	6310	5096	8.90	21.73	14.20	4.64
14-9	54	1876	24181	10553	6480	7.10	35.58	17.18	6.08
14-10	11	0	5179	3738	1357	0.00	86.32	62.30	22.62
14-11	9	7342	24412	15232	5270	8.08	27.08	16.85	5.86
15-1	12026	41	12504	2186	1474	0.03	63.28	4.85	6.23
15-2	3172	0	14329	3398	2080	0.00	77.37	5.00	5.43
15-3	1112	158	19056	4818	2988	0.25	72.13	7.68	7.71
15-4	585	888	21939	7552	3669	1.43	94.45	10.45	9.81
15-5	93	1297	12626	6233	2890	3.63	153.30	25.46	23.45

Tour Purpose Summary

Purpose	------- Distance (meters) --------				---------- Time (minutes) ---------			
-Stops	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
15-6	805	1587	35373	10756	5319	3.93	150.97	25.48	25.75
15-7	119	0	15991	6917	4131	0.00	188.17	67.93	59.14
15-8	3	9956	27995	16099	10304	10.97	31.05	17.81	11.47
15-9	12	8571	20027	15027	3887	9.43	22.17	16.62	4.32
15-12	1	596	596	596	0	9.93	9.93	9.93	0.00
16-1	14789	0	12742	1891	1412	0.00	53.98	2.62	3.18
16-2	2030	165	16203	3398	2187	0.18	86.03	5.77	8.14
16-3	872	592	17768	6779	3075	0.65	43.75	7.91	4.40
16-4	122	3033	17028	7730	3134	3.33	18.88	8.56	3.48
16-5	8	3706	13881	8351	3757	5.65	95.47	21.51	30.16
16-6	81	3290	17441	9694	3814	3.62	19.33	10.72	4.24
17-2	123	801	15053	5145	2618	0.88	16.70	5.70	2.91
17-3	184	738	18691	4653	3031	0.80	66.10	9.70	11.29
17-4	22	2393	10519	5933	2507	2.62	11.65	6.56	2.79
17-5	169	1076	20578	7994	3621	1.72	164.63	13.93	19.87
17-6	72	1751	23632	6616	3694	11.63	86.48	40.44	17.47
17-7	19	5558	19053	10934	3886	6.13	21.13	12.10	4.32
17-8	166	3945	29557	13396	5445	5.48	158.42	22.44	24.41
18-1	7254	68	11112	1806	1334	0.07	56.57	3.44	4.97
18-2	5326	136	14765	2401	1878	0.18	70.33	3.77	4.10

18-3	3910	83	23732	2998	2644	0.08	89.23	5.67	8.18
18-4	1042	387	18961	5242	3281	0.45	129.83	9.80	14.09
18-5	1160	369	24644	6011	3875	0.60	154.85	10.87	13.38
18-6	938	1104	22259	8803	4102	1.80	86.45	11.09	7.90
18-7	82	2014	21751	9324	3994	2.20	24.13	10.32	4.44
18-8	36	2571	6565	4059	1063	23.03	64.62	39.65	11.52
18-9	57	2918	17211	7843	3491	29.58	117.40	69.43	22.45
19-2	25	2100	13623	5365	2960	2.32	16.72	6.72	3.68
19-3	192	418	14063	6222	2752	0.45	15.60	6.88	3.06
19-4	54	1077	14834	5227	3101	3.45	52.78	16.09	13.95
19-5	60	1340	24765	6314	4537	1.95	70.60	15.52	16.18
19-6	8	3743	9381	6606	2065	4.12	10.37	7.30	2.29
19-7	52	4317	21349	12516	3725	4.97	23.90	14.00	4.24
19-8	1	6726	6726	6726	0	7.40	7.40	7.40	0.00
Total	279421	0	51357	3221	3051	0.00	397.10	6.44	10.19

Mode Length Summary

		------- Distance (meters) --------				---------- Time (minutes) ----------			
Mode	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
1	138397	0	8460	504	600	0.00	141.00	8.41	10.00
2	613101	0	11586	1650	1133	0.00	12.87	1.83	1.26
3	28128	0	7470	777	468	0.00	12.45	1.29	0.78
4	4227	0	7246	940	765	0.00	12.07	1.56	1.27
5	113	163	2969	896	427	0.27	4.93	1.49	0.71
7	9676	0	6573	763	396	0.00	10.95	1.26	0.66
8	30487	0	9633	856	673	0.00	16.05	1.42	1.12
9	12162	0	6380	866	574	0.00	10.63	1.44	0.96
Total	836291	0	11586	1377	1117	0.00	141.00	2.87	4.89

Mode Purpose Summary

Mode-		------- Distance (meters) --------				---------- Time (minutes) ----------			
Purpose	Trips	Minimum	Maximum	Average	StdDev	Minimum	Maximum	Average	StdDev
1-0	27593	0	6963	825	478	0.00	116.05	13.75	7.97
1-1	10320	0	7881	402	634	0.00	131.35	6.70	10.56
1-2	3447	0	7115	728	572	0.00	118.58	12.14	9.54
1-3	2572	0	4835	701	495	0.00	80.58	11.69	8.25
1-4	8308	0	7985	655	765	0.00	133.08	10.92	12.75
1-5	33086	0	8460	239	549	0.00	141.00	3.98	9.14
1-6	745	0	5452	969	784	0.00	90.87	16.16	13.07
1-7	7703	0	7500	445	580	0.00	125.00	7.41	9.67
1-8	1562	0	5235	445	591	0.00	87.25	7.41	9.85
1-9	9351	0	7494	245	572	0.00	124.90	4.08	9.53
1-11	1147	0	3894	669	461	0.00	64.90	11.15	7.69
1-12	4756	0	4320	712	454	0.00	72.00	11.86	7.57
1-13	3648	0	5751	727	500	0.00	95.85	12.12	8.33
1-14	9416	0	5872	637	534	0.00	97.87	10.62	8.91
1-15	7611	0	5627	385	528	0.00	93.78	6.42	8.80

1-16	1160	0	5199	792	532	0.00	86.65	13.20	8.87
1-17	499	0	3650	714	533	0.00	60.83	11.89	8.88
1-18	5357	0	4357	191	383	0.00	72.62	3.19	6.39
1-19	116	0	1678	668	394	0.00	27.97	11.13	6.57
2-0	214318	0	11586	1612	1070	0.00	12.87	1.78	1.19
2-1	54689	0	10261	1732	1159	0.00	11.40	1.92	1.29
2-2	21876	0	10579	1712	1230	0.00	11.75	1.89	1.37
2-3	19074	0	10196	1735	1199	0.00	11.32	1.92	1.33
2-4	17688	0	9637	1665	1214	0.00	10.70	1.84	1.35
2-5	23046	0	9362	1768	1256	0.00	10.40	1.96	1.40
2-6	33736	0	9706	1627	1210	0.00	10.78	1.80	1.34
2-7	1727	105	7928	1786	1132	0.12	8.80	1.98	1.26
2-8	14544	0	10216	1699	1170	0.00	11.35	1.88	1.30
2-9	41150	0	10429	1679	1098	0.00	11.58	1.86	1.22
2-11	8636	0	10023	1713	1216	0.00	11.13	1.90	1.35
2-12	35218	0	9380	1653	1136	0.00	10.42	1.83	1.26
2-13	17631	0	8856	1654	1124	0.00	9.83	1.83	1.25
2-14	32396	0	9940	1564	1097	0.00	11.03	1.73	1.22
2-15	20434	0	9761	1581	1104	0.00	10.83	1.75	1.23
2-16	33661	0	9083	1599	1169	0.00	10.08	1.77	1.30
2-17	5045	0	8698	1738	1227	0.00	9.65	1.92	1.36
2-18	16552	0	9188	1730	1153	0.00	10.20	1.91	1.28
2-19	1680	0	7858	1715	1227	0.00	8.72	1.90	1.36
3-0	10770	0	6143	776	423	0.00	10.23	1.29	0.70
3-1	2254	34	4655	784	384	0.05	7.75	1.30	0.64
3-2	3051	0	3286	711	451	0.00	5.47	1.18	0.75
3-3	379	0	7470	758	600	0.00	12.45	1.26	1.00
3-4	465	0	6202	856	621	0.00	10.33	1.42	1.03
3-5	1057	0	4930	869	682	0.00	8.22	1.44	1.14
3-6	617	0	5632	959	809	0.00	9.38	1.59	1.35
3-7	227	0	5681	837	608	0.00	9.47	1.39	1.01
3-8	2076	0	5632	833	550	0.00	9.38	1.38	0.92
3-9	3146	0	5201	776	451	0.00	8.67	1.29	0.75
3-11	55	30	1671	637	374	0.05	2.78	1.05	0.62
3-12	546	0	3196	757	374	0.00	5.32	1.25	0.62
3-13	413	0	1900	716	353	0.00	3.17	1.19	0.59
3-14	663	0	4036	757	467	0.00	6.72	1.25	0.78
3-15	659	0	1945	717	353	0.00	3.23	1.19	0.59
3-16	39	35	1651	729	446	0.05	2.75	1.21	0.74
3-17	86	76	1861	698	397	0.12	3.10	1.16	0.66
3-18	1625	0	3644	741	406	0.00	6.07	1.23	0.68
4-0	1835	0	5454	773	423	0.00	9.08	1.28	0.70

Mode Purpose Summary

Mode-Purpose	Trips	Distance (meters) Minimum	Maximum	Average	StdDev	Time (minutes) Minimum	Maximum	Average	StdDev
4-1	865	39	7246	1174	1041	0.05	12.07	1.95	1.73
4-2	59	81	1915	695	385	0.13	3.18	1.15	0.64
4-3	20	66	1561	656	430	0.10	2.60	1.09	0.72
4-4	62	112	2119	773	396	0.18	3.52	1.28	0.66
4-5	333	144	7246	1855	1364	0.23	12.07	3.08	2.27

4-6	15	296	1915	1233	437	0.48	3.18	2.05	0.73
4-7	20	252	1747	664	313	0.42	2.90	1.10	0.52
4-8	96	139	1901	772	360	0.22	3.17	1.28	0.60
4-9	646	63	3209	790	397	0.10	5.33	1.31	0.66
4-11	8	150	709	550	204	0.25	1.17	0.91	0.33
4-12	9	279	1407	742	431	0.45	2.33	1.23	0.72
4-13	19	196	1503	658	436	0.32	2.50	1.09	0.73
4-14	25	449	1580	790	281	0.73	2.63	1.31	0.47
4-15	82	183	1772	750	370	0.30	2.95	1.24	0.62
4-17	1	420	420	420	0	0.70	0.70	0.70	0.00
4-18	132	185	1907	753	362	0.30	3.17	1.25	0.60
5-0	36	163	2969	1020	544	0.27	4.93	1.69	0.90
5-1	1	328	328	328	0	0.53	0.53	0.53	0.00
5-9	76	277	1765	844	347	0.45	2.93	1.40	0.58
7-0	4071	24	3953	763	374	0.03	6.58	1.26	0.62
7-1	145	15	2521	763	387	0.02	4.20	1.26	0.65
7-2	109	24	2587	703	429	0.03	4.30	1.16	0.72
7-3	9	138	1449	660	447	0.22	2.40	1.09	0.75
7-4	661	33	6573	802	555	0.05	10.95	1.33	0.93
7-5	472	0	1924	758	367	0.00	3.20	1.26	0.61
7-6	10	15	1145	485	371	0.02	1.90	0.80	0.62
7-7	323	35	3943	775	424	0.05	6.57	1.28	0.71
7-8	706	103	3953	756	428	0.17	6.58	1.25	0.71
7-9	1613	73	2587	754	358	0.12	4.30	1.25	0.60
7-12	599	94	2506	765	378	0.15	4.17	1.27	0.63
7-13	69	198	1914	811	346	0.32	3.18	1.35	0.58
7-14	542	0	2266	748	360	0.00	3.77	1.24	0.60
7-15	158	0	1876	770	359	0.00	3.12	1.28	0.60
7-16	46	198	3497	1024	827	0.32	5.82	1.70	1.38
7-18	136	8	1815	742	377	0.00	3.02	1.23	0.63
7-19	7	185	817	505	235	0.30	1.35	0.83	0.39
8-0	12760	0	9633	868	621	0.00	16.05	1.44	1.04
8-1	1014	0	7677	853	809	0.00	12.78	1.42	1.35
8-2	435	0	5669	893	751	0.00	9.43	1.48	1.25
8-3	431	0	7839	1065	1063	0.00	13.05	1.77	1.77
8-4	1630	0	8657	1066	1059	0.00	14.42	1.77	1.76
8-5	1975	0	7677	921	891	0.00	12.78	1.53	1.48
8-6	963	0	8694	830	781	0.00	14.48	1.38	1.30
8-7	1002	0	6453	813	612	0.00	10.75	1.35	1.02
8-8	267	0	4019	597	559	0.00	6.68	0.99	0.93
8-9	1207	35	5701	885	739	0.05	9.50	1.47	1.23
8-11	60	0	2514	765	554	0.00	4.18	1.27	0.92
8-12	670	0	6422	790	570	0.00	10.70	1.31	0.95
8-13	362	34	4931	878	709	0.05	8.22	1.46	1.18
8-14	2291	0	5437	827	555	0.00	9.05	1.37	0.92
8-15	1574	0	5896	804	522	0.00	9.82	1.33	0.87
8-16	439	0	3417	731	426	0.00	5.68	1.21	0.71
8-17	148	94	4332	977	807	0.15	7.22	1.62	1.35
8-18	3207	0	5150	739	380	0.00	8.58	1.22	0.63
8-19	52	39	1493	683	347	0.05	2.48	1.13	0.58
9-0	5075	35	6078	815	461	0.05	10.12	1.35	0.77
9-1	101	188	4284	1832	1020	0.30	7.13	3.04	1.70

Mode Purpose Summary

Mode-Purpose	Trips	Distance (meters) Minimum	Maximum	Average	StdDev	Time (minutes) Minimum	Maximum	Average	StdDev
9-2	19	192	1562	645	455	0.32	2.60	1.07	0.76
9-3	67	155	6031	1575	1254	0.25	10.05	2.62	2.09
9-4	625	0	6380	1208	1010	0.00	10.63	2.00	1.68
9-5	136	32	4001	964	661	0.05	6.67	1.60	1.10
9-6	36	82	2261	765	408	0.13	3.77	1.27	0.68
9-7	5663	0	6031	831	515	0.00	10.05	1.38	0.86
9-8	212	128	5224	850	538	0.20	8.70	1.41	0.90
9-9	1	766	766	766	0	1.27	1.27	1.27	0.00
9-11	101	188	4284	1832	1020	0.30	7.13	3.04	1.70
9-12	17	226	1500	920	377	0.37	2.50	1.53	0.63
9-14	33	252	2319	826	479	0.42	3.85	1.37	0.80
9-15	47	336	1768	887	344	0.55	2.93	1.47	0.57
9-16	19	122	2854	893	786	0.20	4.75	1.48	1.31
9-17	10	364	1791	948	717	0.60	2.98	1.57	1.19
Total	836291	0	11586	1377	1117	0.00	141.00	2.87	4.89

Number of Households with Problems = 20587 (26.2%)

Total Number of Problems = 50405
Number of Time Schedule (#2) Problems = 13186 (26.2%)
Number of Vehicle Access (#7) Problems = 472 (0.9%)
Number of Activity Location (#27) Problems = 195 (0.4%)
Number of Vehicle Passenger (#28) Problems = 10613 (21.1%)
Number of Activity Duration (#29) Problems = 2907 (5.8%)
Number of Walk Location (#33) Problems = 18 (0.0%)
Number of Transit Location (#35) Problems = 130 (0.3%)
Number of Person Match (#36) Problems = 22884 (45.4%)

Wed Apr 14 11:01:43 2010 -- Process Complete with 1 Warning (0:00:23)

7 TROUBLESHOOTING

The number of household match problems is significant.

> *Household match problems are most often caused when relatively few household types are used. As a result, a synthetic household could be matched to a survey household that has very different household characteristics (e.g., number of persons, number of workers, or number of vehicles). This makes it difficult to match the household members by age-group, work status, and gender.*
>
> *One solution is to add household types in the script described in Section 4.0. This can be done as long as there are an adequate number of survey responses to support the increased level of specificity. A minimum of 10 survey responses per household type is recommended to minimize response bias.*

The number of activity generation and location choice problems is significant.

> *Problems reported by the ActGen program fall into two general categories: fatal problems and information problems. Fatal problems involve issues that the program cannot resolve on its own and that may require corrections to the survey or household data. Fatal problem households are not saved to the output file.*
>
> *Information problems involve issues that the program can address, allowing it to continue processing the record. The solution may not always be desirable, and the modeler may choose to make corrections to the survey or household data to reduce the potential distortions generated by the default solution.*
>
> *Vehicle access and activity location problems are the most frequent type of fatal problems. A vehicle access problem basically means the household was allocated an insufficient number of vehicles to satisfy all of the drivers. One potential solution could be to make a vehicle available for every adult in the household.*
>
> *Activity location problems suggest that the location choice model may be too restrictive or that too many of the activity location weights are zero. A zero activity location weight designates that the activity location should be excluded from the location choice.*
>
> *The information problems include vehicle passenger and activity duration problems. A vehicle passenger problem means that there is no driver available to transport the passenger. The default solution is to assign the passenger to a "magic move," which essentially means that someone outside the household drove the passenger to the activity.*
>
> *Activity duration problems are best addressed by ignoring them. This type of problem is generated when the estimated travel time between the trip origin and the trip destination is longer than the allotted time between activities. If both activities are time constrained, the software cannot shift the activity schedule to provide adequate travel time. Because the travel time is based on a simple distance-based calculation, it may not be very*

accurate. When the Router builds the path, it may, however, find that the activity schedule is reasonable after all.

8 FREQUENTLY ASKED QUESTIONS

Why would I ever want to use the default distance-based location choice model?

The distance-based model is at least 10 times faster than a skim-based script model. It requires far less data, and the data take less time to prepare. On the other hand, it does not consider time of day, mode, or path—considerations that will be very important in any detailed study in a complex region. But even in those types of applications, it may be desirable to run the distance-based model to help debug the travel survey. Most travel surveys do not go through the types of logic and internal consistency checks that are required for the activity generator to perform efficiently. For example, drivers and passengers may not be traveling at the same time or going to the same locations. A driver may be expected to pick up a vehicle at a location where it was not previously parked, or a person who used transit to get to work may make a drive subtour at lunch time. A distance-based model can be helpful in identifying and fixing these types of problems.

Is it possible to borrow an activity survey from a different region?

The answer is yes, but only with care. The region should have similar travel options, spatial density, overall congestion levels, demographics and auto ownership characteristics. One option might be to combine surveys from several regions to generate enough samples to support additional household types. This might be important for applications that plan to add new travel modes to the region.