ActGen Quick Reference

Version 4.0.36

Revision History
1/8/2010   Edited by AECOM Consult, Inc.
4/15/2010   Edited by RSG, Inc.

Syntax:

ActGen [-flag] [control_file] [partition]

Purpose:
1. Match synthetic households to survey households.
2. Assign survey activity patterns to individual members of the synthetic household.
3. Coordinate household activities and vehicle usage.
4. Apply location choice models to locate activities by purpose
5. Adjust activity schedules based on travel times and schedule constraints.
6. Create an activity file and a summary of activity generation problems.
7. Updated an activity file by regenerating selected household.
8. Output an activity pattern file for editing with ActivityPattern and then relocating with LocationChoice
9. Apply attraction balancing factors by zone and trip purpose.

Required Keys

NET_NODE_TABLE	[net_directory]*filename*
NET_LINK_TABLE	[net_directory]*filename*
NET_PARKING_TABLE	[net_directory]*filename*
NET_ACTIVITY_LOCATION_TABLE	[net_directory]*filename*
NET_PROCESS_LINK_TABLE	[net_directory]*filename*
HOUSEHOLD_FILE	[project_directory]*filename*
POPULATION_FILE	[project_directory]*filename*
VEHICLE_FILE	[project_directory]*filename*
VEHICLE_TYPE_FILE	[project_directory]*filename*
SURVEY_HOUSEHOLD_FILE	[project_directory]*filename*
SURVEY_POPULATION_FILE	[project_directory]*filename*
SURVEY_ACTIVITY_FILE	[project_directory]*filename*
NEW_ACTIVITY_FILE	[project_directory]*filename*
ACTIVITY_PURPOSE_RANGE_# (1)	[project_directory]*filename*

Optional Keys

TITLE	Text
REPORT_FILE	*Filename*

REPORT_FLAG	FALSE {true/false/yes/no/1/0}
MAX_WARNING_MESSAGES	100,000
MAX_WARNING_EXIT_FLAG	TRUE {true/false/yes/no/1/0}
PROJECT_DIRECTORY	*Pathname*
DEFAULT_FILE_FORMAT	VERSION3 {(2)}
ACTIVITY_FILE (9)	[project_directory]*filename*
HOUSEHOLD_LIST	[project_directory]*filename*[.partition]
TIME_of_DAY_FORMAT	24_HOUR_CLOCK {(3)}
HOUSEHOLD_TYPE_SCRIPT	[project_directory]*filename*
SURVEY_HOUSEHOLD_WEIGHTS	[project_directory]*filename*
SURVEY_TYPE_SCRIPT	[project_directory]*filename*
NEW_PROBLEM_FILE	[project_directory]*filename*
NEW_HOUSEHOLD_MATCH_FILE	[project_directory]*filename*
NEW_HOUSEHOLD_PERSON_COUNT	[project_directory]*filename*
NEW_ACTIVITY_PATTERN_FILE	[project_directory]*filename*
NEW_TRIP_TIME_FILE	[project_directory]*filename*
NEW_TRIP_DISTANCE_FILE	[project_directory]*filename*
DISTANCE_CALCULATION	STRAIGHT_LINE {(4)}
AVERAGE_TRAVEL_SPEED (8)	10, 10, 10,… meters / second (5)
ADDITIONAL_TRAVEL_TIME (8)	600, 600, 600, … seconds (5)
RANDOM_NUMBER_SEED	0 {>= 0}
MAXIMUM_WALK_DISTANCE	2000 {100..10000} meters
TIME_SCHEDULE_VARIANCE	0 {0..60} minutes
ACTIVITY_ANCHOR_FLAG_#	FALSE {true/false/yes/no/1/0}
SCHEDULE_CONSTRAINT_#	NONE {(6)}
ZONE_BASED_METHOD_#	TRUE {true/false/yes/no/1/0}
LOCATION_CHOICE_SCRIPT_#	[project_directory]*filename*
ZONE_WEIGHT_FIELD_#	*field_name*
ZONE_WEIGHT_FACTOR_#	1.0 {}
BALANCING_FACTOR_FIELD_#	*field_name*
LOCATION_WEIGHT_FIELD_#	*field_name*
LOCATION_WEIGHT_FACTOR_#	1.0 {}
SKIM_TIME_FIELD_#	SKIM#.*field_name*
MODE_DISTANCE_FACTORS_#	-0.001, -0.001, … {> 0 (5)}
MODE_TIME_FACTORS_#	-0.001, -0.001, … {> 0 (5)}
ZONE_SKIM_FILE_# (7)	[project_directory]*filename*
ZONE_SKIM_FORMAT_#	[default_file_format] {(2)}
TIME_PERIOD_EQUIVALANCE_#	[project_directory]*filename*
TRAVEL_TIME_FIELD_MODE_# (8)	SKIM#.*field_name*
SKIM_MEMORY_FACTOR_# (10)	1.0 {0.05..1.0}

TRANSIMS
Open-Source

BALANCING_FACTOR_FILE	[project_directory]*filename*
BALANCING_FACTOR_FORMAT	[default_file_format] {(2)}
NET_DIRECTORY	*Pathname*
NET_ZONE_TABLE	[net_directory]*filename*
NET_TRANSIT_STOP_TABLE	[net_directory]*filename*
NET_DEFAULT_FORMAT	[default_file_format] {(2)}
NET_NODE_FORMAT	[net_default_format] {(2)}
NET_LINK_FORMAT	[net_default_format] {(2)}
NET_PARKING_FORMAT	[net_default_format] {(2)}
NET_ACTIVITY_LOCATION_FORMAT	[net_default_format] {(2)}
NET_PROCESS_LINK_FORMAT	[net_default_format] {(2)}
NET_ZONE_FORMAT	[net_default_format] {(2)}
NET_TRANSIT_STOP_FORMAT	[net_default_format] {(2)}
NEW_DEFAULT_FORMAT	[default_file_format] {(2)}
NEW_ACTIVITY_FORMAT	[new_default_format] {(2)}
NEW_PROBLEM_FORMAT	[new_default_format] {(2)}
NEW_ACTIVITY_PATTERN_FORMAT	[new_default_format] {(2)}
SURVEY_HOUSEHOLD_FORMAT	[default_file_format] {(2)}
SURVEY_POPULATION_FORMAT	[default_file_format] {(2)}
SURVEY_ACTIVITY_FORMAT	[default_file_format] {(2)}
ACTIVITY_FORMAT	[default_file_format] {(2)}
HOUSEHOLD_FORMAT	[default_file_format] {(2)}
POPULATION_FORMAT	[default_file_format] {(2)}
VEHICLE_FORMAT	[default_file_format] {(2)}
VEHICLE_TYPE_FORMAT	[default_file_format] {(2)}

Reports

ACTGEN_REPORT_#	HOUSEHOLD_TYPE_SCRIPT
	HOUSEHOLD_TYPE_STACK
	HOUSEHOLD_TYPE_SUMMARY
	SURVEY_TYPE_SCRIPT
	SURVEY_TYPE_STACK
	SURVEY_TYPE_SUMMARY
	LOCATION_CHOICE_SCRIPT
	LOCATION_CHOICE_STACK
	LOCATION_CHOICE_DETAILS_#
	TIME_PERIOD_EQUIVALENCE
	HOUSEHOLD_MATCH_REPORT
	TRIP_LENGTH_SUMMARY
	TOUR_LENGTH_SUMMARY

TRANSIMS
Open-Source

	TRIP_PURPOSE_SUMMARY
	TOUR_PURPOSE_SUMMARY
	MODE_LENGTH_SUMMARY
	MODE_PURPOSE_SUMMARY
	ACTIVITY_PROBLEM_REPORT

Notes

1	Each activity purpose group is comprised of up to 12 keys.
2	{VERSION3, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, LANL, SQLITE3}
3	{HOURS, SECONDS, 24_HOUR_CLOCK, 12_HOUR_CLOCK}
4	{STRAIGHT_LINE, RIGHT_ANGLE, SIMPLE_AVERAGE, WEIGHTED_AVERAGE}
5	`1=Walk`, `2=`Drive, 3=Bus, 4=Rail, 5=Park-&-Ride Outbound, 6=Park-&-Ride Inbound, 7=Bicycle, 8=Magic Move, 9=School Bus, 10=2 Person Carpool, 11=3 Person Carpool, 12=4 Person Carpool, 13=Kiss-&-Ride Outbound, and 14=Kiss-&-Ride Inbound
6	{NONE, FIXED, START, END, DURATION, PASSENGER, NO_CONSTRAINT, FIXED_TIME, START_TIME, END_TIME
7	Zone skim groups are optional. They are used for travel time-based models and fields.
8	Travel time field by mode groups are used to specify the field in the zone skim file that is used for the travel time calculation for a given mode. This overrides the default distance-based travel time estimate. The additional travel time key is added to either estimate to schedule activities.
9	An input activity file is used to update or regenerated activities for selected households
10	Initial memory allocation for the skim file is zones * zones * periods * factor. The factor is used to estimate the relative density of the skim matrix (e.g., the percentage of cells with data). Allocating sufficient memory up front has significant performance benefits for processing the skim file.

TRANSIMS Open-Source