ArcSnapshot Quick Reference

Version 4.0.14

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

Syntax:

ArcSnapshot [-flag] [control_file]

Purpose:

1. Create ArcView shapefiles from selected records in TRANSIMS snapshot files.
2. Create ArcView shapefiles from selected records in TRANSIMS occupancy files.
3. Vehicle lane-offset locations can be drawn as polygons or points layers.
4. Output new snapshot files with X, Y, and bearing data updated based on the lane shape.

Required Keys

ARCVIEW_SNAPSHOT_FILE (10)	[project_directory]*filename.shp* (1)
NET_NODE_TABLE	[net_directory]*filename*
NET_LINK_TABLE	[net_directory]*filename*
VEHICLE_TYPE_FILE	[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 {(4)}
NET_DIRECTORY	*Pathname*
NET_SHAPE_TABLE	[net_directory]*filename*
SNAPSHOT_FILE (8)	[project_directory]*filename*
SNAPSHOT_FORMAT	[default_file_format] {(4)}
OCCUPANCY_FILE (8)	[project_directory]*filename*
OCCUPANCY_FORMAT	[default_file_format] {(4)}
NEW_SNAPSHOT_FILE (10)	[project_directory]*filename*
NEW_SNAPSHOT_FORMAT	[default_file_format] {(4)}
NEW_LINK_SUMMARY_FILE (15)	[project_directory]*filename*
NEW_LINK_SUMMARY_FORMAT	[default_file_format] {(4)}

CELL_SIZE	7.5 meters {4.0..9.0} (14)
SELECT_TIME_PERIODS	All (3)
SELECT_TIME_INCREMENT	60 seconds {1..3600}
SELECT_SUBAREA_POLYGON	[project_directory]*filename.shp*
SELECT_VEHICLE_TYPES	All {1..20} (13)
TIME_PROCESSING_METHOD	AT_INCREMENT {(9)}
TIME_OF_DAY_FORMAT	24_HOUR_CLOCK {(5)}
LANE_WIDTH	1.0 meters {0.0..25.0}
CENTER_ONEWAY_LINKS	FALSE {true/false/yes/no/1/0}
DRAW_VEHICLE_SHAPES (2)	FALSE {true/false/yes/no/1/0}
TIME_STEPS_PER_SECOND (11)	1 {1..25}
ADD_PASSENGER_CIRCLE_SIZE	FALSE {true/false/yes/no/1/0} (16)
ADD_PASSENGER_SQUARE_SIZE	FALSE {true/false/yes/no/1/0} (17)
PAD_FILE_TIME_LABEL (12)	FALSE {true/false/yes/no/1/0}
INPUT_COORDINATE_SYSTEM	System, Code, Units (6)
INPUT_ADJUSTMENT_FACTORS	X offset, Y offset, X factor, Y factor (7)
OUTPUT_COORDINATE_SYSTEM	System, Code, Units (6)
OUTPUT_ADJUSTMENT_FACTORS	X offset, Y offset, X factor, Y factor (7)
OUTPUT_XYZ_SHAPES	FALSE {true/false/yes/no/1/0}
OUTPUT_XYM_SHAPES	FALSE {true/false/yes/no/1/0}
NET_DEFAULT_FORMAT	[default_file_format] {(4)}
NET_NODE_FORMAT	[net_default_format] {(4)}
NET_LINK_FORMAT	[net_default_format] {(4)}
NET_SHAPE_FORMAT	[net_default_format] {(4)}

Notes

1	*.shp, *.shx, *.dbf, and *.dbf.def files are created based on the filename. A separate file is created for each time increment. The corresponding time value is automatically added to the filename (i.e., *filename*.HH.MM.SS.*shp*).
2	If draw vehicle shapes is true, the vehicles will be drawn as a polygon pointing in the direction of travel. If false, a point is entered 1.5 meters back from the front of the vehicle.
3	Time Range (e.g., 0:00..6:00, 18:00..23:00)
4	{VERSION3, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, LANL, SQLITE3}
5	{HOURS, SECONDS, 24_HOUR_CLOCK, 12_HOUR_CLOCK}
6	System options include: UTM, STATEPLAN, and LATLONG Code is the FIPS code number for the system (e.g., Oregon North = 3601) Unit options include: FEET, METERS, MILES, KILOMETERS, DEGREES, and MILLION_DEGREES.
7	X and Y offsets are added to the coordinate values X and Y factors are multiply the coordinate values

8	A Snapshot or an Occupancy file must be provided
9	AT_INCREMENT, TOTAL, MAXIMUM
10	A new snapshot file will have the X and Y coordinates and bearing adjusted based on the shape of the link and lane offset. Since the Microsimulator does not include link shapes, the coordinates in the standard output are based on the straight line centerline position. If a new snapshot file is generated, an output ArcView snapshot file is not required.
11	This key is needed to generate ArcView snapshot files for intervals of less than one second. The input snapshot file should include sub-second data from the Microsimulator. This option can be used to generate smoother vehicle movements for visualizing tools.
12	If visualizing tools process a set of ArcView shapefiles to generate a traffic animation, it is often desirable to have a fixed format for the time stamp added to each output file to keep the files in order. This key pads the time stamp with zeros to ensure that all time stamps have the same digits.
13	Vehicle Type Range (e.g., 1,2,3..6)
14	Cell Size can be used to adjust the occupancy cells when cell size is less than the smallest vehicle in the vehicle type file.
15	The new link summary file is an aggregation of the number of vehicles and passengers on each link at the time period boundary. The file also includes the fields containing the number of vehicles and persons by vehicle type in addition to the total vehicles and persons for the selected vehicle types.
16	A new field named “RADIUS” is added to the output shape file(s) that converts the passengers to the radius of a circle whole area is equal to passengers.
17	A new field named “SQUARE” is added to the output shape file(s) that converts the passengers to the size of a square whose area is equal to passengers.