TRANSIMS Version 4.0

November 1, 2006 Release

Change Log edited: 11/1/2006

SysLib

The traveler ID was added to the stop data class.

Toll file and data classes were added to the network service to implement tolls by time of day and vehicle type (e.g., HOT lanes).

Turn file and data classes were updated to include a time penalty and vehicle type (use) restriction by time of day.

Enhancements were made to the Trip data, file, and services classes. The CONSTRAINTS field is included by default.

The transit driver service will now check if the mode specified in the corresponding transit route record is compatible with the vehicle type specified in the transit driver file.

Diurnal file and data classes were moved from ConvertTrips to SysLib.

Microsimulator 4.0.14

Transit plan processing was added. The ridership output class generates stop departure times and board, alight, and load passenger counts for each stop. Transit vehicles are also capacity constrained and demand-based boarding and alighting times are included in the stop dwell time.

SmoothPlans 4.0.1

This is a new program to apply an iterative moving average smoothing process to the plans expected on a list of links by time of day. Checks for negative times of day were added.

PlanSum 4.0.12

The schedule units were corrected for the transit ridership summary.

Router 4.0.14

The new toll service was included in the highway path building algorithm in order to model HOT lanes. Turn penalties and restrictions for specific vehicle types were implemented in the highway path building algorithm. The key END_TIME_CONSTRAINT was included to add a time buffer to the end of a trip to control the time constraint sensitivity. The key ADD_WAIT_TO_TRANSIT_LEG was added to control where the waiting time for a transit vehicle is stored. The default behavior adds the waiting time to the walk access leg prior to the transit leg. If this key is TRUE, the wait time is included in the transit leg. This may be necessary to enable the Microsimulator to properly load passengers at stops that are not time point controlled.

ConvertTrips 4.0.7

The diurnal distribution probability function is converted internally to a one minute cumulative distribution based on smoothed transitions between user-provided time periods. This helps to address the stair step start times found in the original procedure. The demand for each minute is also constrained to minimize over allocation to a given minute. The time control point is used to populate the CONSTRAINTS field in the output trip file.

PlanTrips 4.0.2

This program was modified to optionally adjust the schedules of the trips generated by the program. The trip duration included in the plan file is used along with the trip scheduling constraints included in an input trip file to set the start and end times for the trips written to the output trip file. The TIME_SHIFT_SUMMARY report was added to summarize the number of trips that were shifted by increments of five minutes.

LinkSum 4.0.8

The SUMMARY_TIME_INCREMENT parameter now accepts zero to summarize data into a single increment (i.e., 24 hour totals).

SmoothData 4.0.2

Numbering gaps in the input file sequence are now handled properly. The diurnal file and data classes were used to control the input and output data files. The smooth procedures were expanded to include individual controls for each file group. The option to generated time increment (e.g., 60 second) diurnal distributions based on time period (e.g., 30 minute) data was implemented.

Documentation

The user guides for the Router, Microsimulator, and ConvertTrips were updated.