

## **TRANSIMS Version 4.0**

### ***December 1, 2007 Release***

Change Log edited: 12/1/2007

#### **SysLib**

The time label processing routines were modified to detect and correctly process labels 24 hour clock format (i.e., 0:00..24:00).

The Link Data file class was expanded to support time range (e.g., AB\_0:00..24:00) and time label (e.g., AB\_000\_2400) field names.

Speed Bin data and file classes were added to the demand files.

A bug was fixed in the user program math function for negation at the beginning of a logic statement.

Map\_Veh\_Type method was added to the Network\_Code class.

Speed Bin data, file, and output classes were added. The Speed\_Bin\_Output was made a friend to the Network\_Service and Demand\_Service classes.

The User Program if-then nesting levels were increased from 50 to 100.

The string buffer in the time formatting method used an internal buffer to avoid potential string overflows of the input string pointer. TIME\_BUFFER was added to the system defines and all data files with time fields were modified to use this value when creating the field size.

Total time flag and method was added to the Skim File class and Time Skim data array was added.

Warning method was added to the Report\_Service and Show\_Warning method was added to the Message\_Service along with a new WARNING exit code and counter.

Syntax and control key help services were added to all programs. The -H[elp] flag writes a list of control keys available to a given program to the screen. This required changes to the Control\_List, Execution\_Service, Network\_Service, and Demand\_Service classes.

The time units in Ridership file processing were fixed.

The -P[ause] and -N[oPause] flags were added to the command line logic to control how the pause process is handled for error messages and program exit.

The Enable\_Partitions method was added to Report\_Service to clarify the syntax message and provide a warning when a partition number is provided to a program that does not accepted partitions.

TOD\_Use method was added to Link\_Use\_Data class to improve processing efficiency of cell blocking actions within the Microsimulator.

The copyright date was changed from 2006 to 2007.

The order of the parameters for the Schedule method within the Line\_Data class was changed to be consistent with the Rider\_Data class methods.

The -K[eyCheck] flag was added to the command line to display warning messages for unrecognized keys in the control file. The Control\_List class was expanded to capture unrecognized keys and provide First\_Skip\_Key and Next\_Skip\_Key methods to retrieve the key text.

The -B[atch] flag was added to the command line logic to modify screen message behavior.

The Version 3 time codes were integrated into the Time\_Step class to facilitate sub-minute times for lane blockages.

#### **PlanSum 4.0.31**

The TRANSIT\_LINK\_GROUP\_SUMMARY report was added to summarize transit riders crossing a link screenline by time of day. SKIM\_TOTAL\_TIME key was added to minimize memory and file size for large skim files.

#### **PlanCompare 4.0.19**

The time period summary and difference distribution reports were changed to limit the comparisons to plans with the same origins and destinations.

#### **EventSum 4.0.5**

The time period summary and difference distribution reports were changed to limit the comparisons to events with the same origin and destination links. To accommodate this comparison, the origin and destination link numbers were added to the trip time file. If trip or activity files are input, the activity location file is needed to convert activity locations to origin and destination link numbers.

#### **Validate 4.0.10**

The traffic count file processing was expanded to support time range (e.g., AB\_0:00..24:00) and time label (e.g., AB\_000\_2400) header formats.

#### **Router 4.0.27**

The select origin and destination logic was modified to permit the user to enter "All" for both the origin and destination keys. The activity file processing logic was modified to check that the

time constraint was greater than the average end time plus END\_TIME\_CONSTRAINT and the upper bound of the end time field.

#### **ArcNet 4.0.10**

VISUALIZER\_GUIDEWAY\_FILE was added to generate the lane shape file needed by the Output Visualizer. DRAW\_ONEWAY\_ARROWS, ONEWAY\_ARROW\_LENGTH, ONEWAY\_ARROW\_SIDE\_OFFSET keys were added to draw arrows at the end of each directional lane or link.

#### **Microsimulator 4.0.36**

OUTPUT\_SPEED\_FILE\_x, OUTPUT\_SPEED\_FORMAT\_x, OUTPUT\_SPEED\_VEHICLE\_TYPE\_x, OUTPUT\_SPEED\_FILTER\_x, OUTPUT\_SPEED\_TIME\_FORMAT\_x, OUTPUT\_SPEED\_INCREMENT\_x, OUTPUT\_SPEED\_TIME\_RANGE\_x, OUTPUT\_SPEED\_LINK\_RANGE\_x, OUTPUT\_SPEED\_SAMPLE\_TIME\_x, OUTPUT\_SPEED\_BOX\_LENGTH\_x, OUTPUT\_SPEED\_NUM\_BINS\_x keys were added to output speed distribution by link segments for input to emissions calculations. Improvements were made in the cell blocking (Lane Use) logic to better handle multiple blocks on the same lane at the same time. Additional checks were added to keep vehicles from passing through blocked cells during a high speed movement.

#### **Reschedule 4.0.0**

New program to adjust the transit route schedules based on link and turning movement travel times found in a Link Delay file.

#### **LineSum 4.0.0**

New program to summarize transit data from a Ridership file.

#### **ActGen 4.0.11**

The ZONE\_BASED\_METHOD\_\* key was added to simplify the location choice model logic and enable the user to automatically include zone or location field weights in the location choice script implementation. Logic was added to avoid problems caused by anchor-based tours that do not return home.

#### **Documentation:**

Microsimulator user manual and quick reference were updated to include the Speed Bin keys. The ActGen user manual was updated to include the new key options enabled by the ZONE\_BASED\_METHOD\_# key.