# TRANSIMS Version 4.0

## *March 2008 Release*

Change Log edited: 2/27/2008

### SysLib

Several memory delete calls were replaced with free calls.

Transit stop and route (line) file and data classes and the network read services were expanded to include transit stop and route (line) name processing if the Notes_Name_Flag is true. Line data and file classes now support both a name and notes field.

Time Difference output services were modified to ignore records with negative time of day.

EXTERNAL was added to the Transit Stop types to enable subarea transit networks.

The Transit Schedule service was enhanced to properly handle transit routes that loop through the first stop on the line multiple times.

The Transit Ridership service was enhanced to synthesize schedule data for records with a schedule value of zero.

Linux compiler warning messages addressed.

Z coordinates were added to the node data class and non-Version 3 node file formats.

Line equivalence class was added for transit line (route) group summaries.

### ProblemSum 4.0.1

A bug was fixed in printing the summary increment value. The increment value was also changed from seconds to minutes to be consistent with other summary programs. A bug was fixed in the selection logic for situations were the problem density report, select links, and select polygons were not specified.

### ArcProblem 4.0.1

The time increment value was changed from seconds to minutes to be consistent with other summary programs. The logic was changed to require an activity location file when the problem file does not include a link field. A bug was fixed in the activity location offset calculation.

### PlanSum 4.0.36

The skim and trip table summary logic was modified to avoid printing warning messages when processing incomplete transit trips. A bug was fixed in the path based selection logic for node-based paths with zero nodes. Transit distance and travel time calculations were refined for routes that pass through the same stop multiple times.

### ActGen 4.0.16

TRIP_PURPOSE_SUMMARY and TOUR_PURPOSE_SUMMARY reports were added. The trip purpose summary reports trip lengths and travel times by origin-destination trip purpose combinations. The tour summary reports the trip lengths and travel times by tour purpose and tour complexity (i.e., number of activities).

### Router 4.0.29

BUS_BIAS_FACTOR and BUS_BIAS_CONSTANT keys were added to implement a boarding impedance bias for buses.

### ArcNet 4.0.13

TRANSIT_OVERLAP_FLAG key was added to enable the transit drawing routines to separate routes that overlap on a link.

### ArcPlan 4.0.15

SELECT_TRANSIT_ROUTES, ARCVIEW_RIDERSHIP_FILE, ARCVIEW_STOP_DEMAND_FILE, RIDERSHIP_SCALING_FACTOR, MINIMUM_RIDERSHIP_VALUE, MINIMUM_RIDERSHIP_SIZE, and MAXIMUM_RIDERSHIP_SIZE keys were added to summarize transit ridership data on link segments and at transit stops. A TOTAL field was added to the ArcView Stop Demand file. SEGMENT, BOARD, and ALIGHT fields were added to the ArcView Ridership File. ARCVIEW_PARKING_DEMAND and SELECT_TRANSIT_MODES keys were added. Parking demand reports the number of vehicles that depart and arrive at each parking lot.

### Reschedule 4.0.4

MAXIMUM_DWELL_TIME key was added along with logic to generate warning messages if no transit schedules were updated or the dwell time keys are provided but not used. Protection was added for integer overflow and negative times of day. Schedules for routes that loop through the first stop multiple times were fixed. SELECT_TIME_PERIODS key was added to select runs for specified time periods for rescheduling.

### Microsimulator 4.0.41

The boarding index for transit routes that pass through the same stop multiple times was modified to select the last time the bus passes through the stop prior to the alighting station. A few refinements in the way transit route warning messages are generated were implemented.

### ExportTransit 4.0.1

New program to convert the Transit Stop, Route, Schedule, and Driver files to a Route Header and Route Nodes file. The route travel time was added to the route header file. SELECT_TRANSIT_MODES and SELECT_TRANSIT_ROUTES keys were added to export selected modes and routes.

### TransitNet 4.0.8

Input Transit Stop, Transit Route, Transit Schedule and Transit Driver files are now accepted for updated processing. Distance-based path building has been added to permit route coding at turn-

points only. The logic was modified to make the new transit stop file have the same fields and format as the input transit stop file. The optional Speed field on the Route_Nodes file was activated. Rail and Bus use restrictions were added to the path building logic. INTERSECTION_STOP_OFFSET key was added and the logic was modified to include the A and B node intersection setbacks in placing stops. The stop generation logic was enhanced to better utilize existing stops and generate new stops on an as needed basis. The stop placement logic was improved between stop and non-stop nodes. Lane connectivity checks were added to the path building logic. The transit route processing now copies both a name and notes field from the input to output files. The travel time field on the route header file is now used to adjust the link travel times and stop schedules to match the overall run time for the route. TRANSIT_PROCESS_LINK_TIME key was added to control the time between transit stops and transit activity locations.

### LineSum 4.0.4

STOP_EQUIVALENCE_FILE key and TRANSIT_STOP_GROUP_SUMMARY, TRANSIT_STOP_GROUP_DETAIL, and PRINT_STOP_EQUIVALENCIES reports were added to summarize stop group boardings and alightings for bus and rail by time of day. LINE_EQUIVALENCE_FILE key and LINE_GROUP_SUMMARY_REPORT, LINE_GROUP_PEFORMANCE_REPORT, and PRINT_LINE_EQUIVALENCIES reports were added to summary line group ridership by time of day.

### GISNet 4.0.6

Z coordinate reads were added to the node file processing.

### ArcDelay 4.0.12

A bug was fixed in the Link Delay bandwidth and direction processing.