TRANSIMS Version 4.0

July 2009 Release

Change Log edited: 7/1/2009

SysLib

AB and BA methods in Link Data file class were changed from private to public.

Projection_Flag, Set_Projection, and Get_Projection methods were added to the network service. If a projection is defined, the default node, zone, and shape processing uses the projection method to converts the XY coordinates.

The projection service classes were reorganized to minimize the data overhead for projection functions in network service.

A warning message was added to the link delay processing method when the period size and the start time are not aligned on an even period boundary.

The user program syntax logic was enhanced to permit if-then statements without requiring parentheses around the logical test (e.g., "if (x < y) then" and "if x < y then" are accepted syntax).

The projection service and ArcView file methods were modified to avoid pointer warning messages on Linux operating systems.

Time_Range class was modified to make the Add_Breaks method process "None" as 0..24:00 rather than max integer.

Check_Message method was added to network service to report data error messages as warning messages if the Check_Data flag is null.

Household record file now inherits from Ext_Header rather than Db_Header

The Lookup_Size, Connect_Time_Array, and TTime_Array classes were modified to include additional controls over the Period_Size methods. The new parameters control the minimum and maximum times and the time wrap flag to facilitate direct control for partial day or multiple day data allocation and period referencing schemes.

A few minor changes were made to the memory allocation and deleting procedures in the time_diff_output class to protect against potential segment faults in Linux.

TripSum 4.0.16

The SUMMARY_LENGTH_INCREMENT key was activated to control the summary increments for trip length reports.

Validate 4.0.16

A warning message was added to the Link Data file processing when the field time ranges do not fit within the summary time periods and increments specified in the control keys.

PlanSum 4.0.48

The trip length skim was corrected in situations where the summary time periods do not span the full travel time of the trip.

PlanTrips 4.0.11

CREATE_INDEPENDENT_TRIPS, VEHICLE_FILE, and NEW_VEHICLE_FILE keys were added to enable the program to convert each trips encountered in an input Plan file to a separate household and vehicle.

ConvertTrips 4.0.19

DISTANCE_WEIGHT_FLAG_# key was added to locate the destination activity locations with or without consideration of the distance between the origin and each activity location in the destination zone.

Microsimulator 4.0.61

Logic was added to provide additional incentives for bus and HOV vehicles to make discretionary lane changes to take advantage of improved travel times in special use lanes on a link. The Msim_Vehicle class was modified to use a dynamically allocated data pointer for vehicle position tracking rather than a large vehicle array. This reduces memory requirements for time period simulations and avoids single array memory limits on 32bit systems to enable simulations with more than 24 million vehicles.

TransimsNet 4.0.24

Coordinate projection keys were added to convert the input node, zone, and shape coordinate data to meters. KEEP_ZONE_CONNECTORS_AS_LOCALS key was added to include internal zone connectors in the TRANSIMS network as local streets. REPLICATE_MPO_NETWORK key was added to convert a traditional travel demand forecasting network with zone connectors to TRANSIMS. One activity location is inserted for each zone centroid in order to replicate the way a traditional network loads trips between centroids. This network can also be used to conveniently generated zone-to-zone skim files. If the KEEP_ZONE_CONNECTORS_AS_LOCALS key is false, trips through the zone centroid are prohibited. If true, lane connectivity is included that makes it possible to build paths through the centroid node. If a coordinate projection is provided, the input zone centroid coordinates will now be written to the output zone file with converted XY coordinates.

DynusTNet 4.0.3

The closest zone calculation was improved to assign a zone number to a node even if the closest zone centroid is extremely far away.

DynusTPlan 4.0.3

The closest zone calculation was improved to assign a zone number to a node even if the closest zone centroid is extremely far away.

PlanSelect 4.0.27

The destructor was modified to call the Clear methods for the select nodes and link links rather than the delete command to avoid exception errors on Linux operating systems. NEW_HOUSEHOLD_RECORD_FILE and NEW_HOUSEHOLD_RECORD_FORMAT keys were added as an alternate output to the household list. This option selects records based on unique household, person and trip combinations. SELECT_FACILITY_TYPES key was added to select paths that travel through links of specified facility types. Logic improvements were added for compound selections involving V/C ratios, time ratios, and time differences.

SmoothPlans 4.0.5

The option to smooth plan files based on the start time of the plan rather than the list of links the plans travel through was added.

IntControl 4.0.19

A bug was fixed in the internal index size for updating / editing phase detector information.