TRANSIMS Version 4.0.6a

Software changes between 4.0.5 and 4.0.6a

Change Log edited: 12/11/2009

SysLib

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

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 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. Major bug fixed to the recent change to the time period processing for a link delay file. The Performance data class was updated to implement the new time period control parameters. Min_Value and Max_Value methods were added to the Lookup_Data class. The read processing methods for link delay and performance files was modified to apply minimum and maximum time range values to the time period calculations. A division by zero error was fixed when reading link delay or performance files with time range data.

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).

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

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. Time difference distributions were modified to create a true zero difference cell to avoid reporting the 85 percentile as a one minute difference when all of the trips actually have no difference. The trip summary report and time difference report classes were enhanced to avoid integer overflow errors caused by very large application regions. A bug was fixed in the 85th percentile and average index calculations in the time difference output utility. The time difference reports were

modified to include a total user benefit calculation. The time difference reports were expanded to generate generalized cost reports as well.

Activity Problem Data class was added to summarize and report activity related problem types by mode and trip purpose.

The Smooth Data method was expanded to include smoothing values at floating point increments interpolated from input data points. The Smooth Data method was expanded to include additional control parameters for smoothing a variable length list of input records and duplicating rather than distributing input data to output bins when the number of subdivisions is greater than one. This is needed for speed smoothing. An additional parameter was added to the Smooth Data interpolation method to control how the interpolated values are output -- consistent with the input units or normalized to the same total as the input units.

The Output Speed Bin class was modified to calculate the number of bins based on the cell size and generate a warning message if the control key does not include speeds up to 80 mph.

The Traveler data and array classes were added.

The warning/error message about missing signal coordinator records when reading the signalized node file was reclassified as a simple warning to enable the signal data to be processed.

Driver_Process was modified to avoid a potential null pointer problem when the path link-node combinations are node included in the network.

OUTPUT_SUMMARY_VEH_TYPES_# key was added to the filter the data stored in a link delay or performance file to a specified set of vehicle types.

OUTPUT_RIDERSHIP_ALL_STOPS_# key was added to the output processing class to enable the Microsimulator to save all stop / run records in the ridership file even if the stop does not have any boardings, alightings or riders.

The RELATE field was added as a default field in the population file and data structures

An additional calling option was added to the vehicle shape function to enable the procedure to draw vehicles with more than two shape points.
The lane use processing logic now checks the lane number against the link file.

The problem file format was modified to include a new ROUTE field to store the transit route number for the problem. This data was previously stored in the LINK field.

The vehicle type data class was modified to permit loading rates greater than 10 boardings per second (i.e., loading rates less than 0.1).

Time_Stamp, Minute, Second, Day, and Time functions were added to the user program functions to convert a time string to a time stamp and extract time components. The script compiler was enhanced to permit the same text string to be used for function names and variable names.

Transit Capacity and Transit Dwell problem messages were added to record instances when a transit traveler is unable to board a bus or train due to vehicle capacity or maximum wait time constraints.

The Line data class was expanded to include an impedance penalty for selected runs and stops of a route.

The Event file and output service and the Problem file were expanded to include the trip leg number. The event file structure was modified to reduce file size in text (~25%) and binary (40%) formats.

Data range class was modified to accept zero as a range.
AB and BA methods in Link Data file class were changed from private to public.

ActGen 4.0.36

ACTIVITY_PROBLEM_REPORT was added to summarize problem types by mode and trip purpose. MAXIMUM_WALK_DISTANCE key was added to modify the way activity locations are selected within the selected destination zone. If the travel mode is walk (1), the algorithm gives preference to activity locations closer to the origin location rather than further away as it does by default for all motorized travel modes. Activity locations that are further away than the maximum walk distance (default is 2000 meters) are not considered. Activity locations that are less than the maximum are weighted by subtracting their distance from the maximum walk distance. TIME_SCHEDULE_VARIANCE key was added to include random variance in the activity schedule assigned to each synthetic household.

ActivityPattern 4.0.2

TIME_SCHEDULE_VARIANCE key was added to include random variance in the activity schedule assigned to each synthetic household.

ArcNet 4.0.22

Errors in the transit driver path for a given route were changed to warning messages to continue processing the routes that include valid data.

ArcRider 4.0.6

ARCVIEW_RUN_CAPACITY_FILE and SELECT_TIME_INCREMENT keys were added to generate shapefiles for the transit route segments that are over capacity in specified time periods. The VEHICLE_TYPE_FILE key was added to determine the vehicle capacity.

ArcSnapshot 4.0.14

CELL_SIZE key was added to adjust the occupancy cells when cell size is less than the smallest vehicle in the vehicle type file. SELECT_VEHICLE_TYPES, NEW_LINK_SUMMARY_FILE, and NEW_LINK_SUMMARY_FORMAT keys were added. The link summary file is an aggregation of the number of vehicles and passengers on each link at the time period boundary. The link summary file output was modified to include in addition to the total vehicles and persons for the selected vehicle types, the fields containing the number of vehicles and persons by vehicle type as well. The vehicle shapes for vehicles that are more than two cells long was modified to draw an articulated vehicle based on the shape of the link. ADD_PASSENGER_CIRCLE_SIZE and ADD_PASSENGER_SQUARE_SIZE keys were added to insert two new fields into the output shape files ("RADIUS" and "SQUARE") that convert the passengers to the radius of circles whose area is equal to passengers and the size of a square whose area is equal to passengers.

ArcTraveler 4.0.2

TRAVELER_FILE, TRAVELER_FORMAT, and SELECT_TRAVELERS keys were added to output traveler paths from the Microsimulator Traveler file. Logic was added to create separate share records for travelers that make multiple trips in order to accurately calculate the trip travel time and average speed.

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.

DynusTNet 4.0.4

The closest zone calculation was improved to assign a zone number to a node even if the closest zone centroid is extremely far away. SATURATION_FLOW_RATES and SERVICE_FLOW_RATES keys were added set the link capacity attributes as a function of the TRANSIMS facility type.

DynusTPlan 4.0.4

The closest zone calculation was improved to assign a zone number to a node even if the closest zone centroid is extremely far away. VEHICLE_FILE and VEHICLE_TYPE_FILE keys were added to assign trips to the auto, truck, or HOV vehicle types.

Emissions 4.0.16

SMOOTH_GROUP_SIZE, SMOOTH_TO_MOVES_SPEED_BINS, SMOOTH_SPEED_INCREMENT, PERCENT_MOVED_FORWARD, PERCENT_MOVED_BACKWARD, and NUMBER_OF_ITERATIONS keys were added to optionally calculate the VMT and VHT for output speed bins based on smoothed moving average interpolated values at user-defined speed increments. A special case is provided to automate the processing of speed bins defined by EPA's MOVES software. WEEKEND_TRAVEL_FACTOR key was added to adjust the distribution of speeds and VMT for weekend travel estimates. MOVES output data records were sorted by day of the week.

Additional refinements were included related to speed bin distribution. RATE_AREATYPE_FIELD, RATE_ROADTYPE_FIELD, RATE_AREATYPE_FIELD_#, RATE_ROADTYPE_FIELD_#, AREATYPE_NUMBER_#, ROADTYPE_NUMBER_#, ROAD_TYPE_LABELS, and ROAD_TYPE_MAP keys were added. EMISSIONS_BY_ROAD_TYPE and EMISSIONS_BY_ROAD_AND_VEHICLE reports were added. NEW_MOVES_VMT_ROAD_FILE and NEW_MOVES_VMT_ROAD_FORMAT keys were added to output MOVES road type distributions. The Activity Location file was added as an alternate method of assigning zone numbers to link segments. REGION_EQUIVALENCE_FILE key was added to equate zone numbers to region (county) codes. PRINT_LINK_EQUIVALENCIES, PRINT_ZONE_EQUIVALENCIES, and PRINT_REGION_EQUIVALENCIES reports were added. The option to provide a link data file as an alternative to speed bin files was implemented. This option includes the following new keys: VOLUME_SPEED_FILE, VOLUME_SPEED_FORMAT, VOLSPD_LENGTH_FIELD, VOLSPD_LENGTH_UNITS, VOLSPD_FACILITY_FIELD, VOLSPD_AREATYPE_FIELD, VOLSPD_PERIOD_FIELD, VOLSPD_PERIOD_UNITS, VOLSPD_SPEED_FIELD, VOLSPD_SPEED_UNITS, and VOLSPD_VOLUME_FIELD_#. HPMS_NUMBER_#, HPMS_TYPE_MAP, NEW_MOVES_HPMS_VMT_FILE, NEW_MOVES_HPMS_VMT_FORMAT, NEW_MOVES_RAMP_FRACTION_FILE, NEW_MOVES_RAMP_FRACTION_FORMAT and VOLSPD_RAMP_FACILITY keys were added to generate additional MOVES input files. The code was also reorganized to streamline the file processing and facilitate applications that include both MOVES input file generation and emissions inventory reports. NEW_MOVES_LINK_SUMMARY_FILE, NEW_MOVES_LINK_SUMMARY_FORMAT, NEW_MOVES_LINK_VEHICLE_FILE, NEW_MOVES_LINK_VEHICLE_FORMAT, NEW_MOVES_LINK_SPEED_FILE, NEW_MOVES_LINK_SPEED_FORMAT, NEW_MOVES_LINK_OPERATIONS_FILE, and NEW_MOVES_LINK_OPERATIONS_FORMAT keys were added to generate MOVES project level analysis files from data in Speed Bin files. SPEED_BIN_FACTOR, SPEED_BIN_FACTOR_#, and VOLUME_SPEED_FACTOR keys were added to adjust the volume data in the input files. NEW_SMOOTH_SAMPLE_FILE, NEW_SMOOTH_SAMPLE_FORMAT, PERCENT_SAMPLE_SIZE, and RANDOM_NUMBER_SEED keys were added to write a sample of the input and output speed bin distributions generated by the smoothing process. USE_AVERAGE_SEGMENT_SPEEDS key was added to write the link speed file using the average speed of the link segment rather than the speed bin distribution. TRAVELER_FILE and TRAVELER_FORMAT keys were added to enable the problems to process the second-by-second data for individual vehicles. These data are used to write the MOVES link speed file. The link equivalence logic was expanded to impact both the Traveler and Speed Bin input options. NEW_TRAVELER_FILE and NEW_TRAVELER_FORMAT keys were added to export the selected, sorted, and/or smoothed traveler records. The traveler processing logic was improved and corrected to properly expand the zero speed time points. Vol_Spd data and array classes were added to store data from the volume-speed input file for use in generating link-based output files. The Traveler, Volume-Speed, and Speed Bin input files now generate each of the MOVES project level (link) output files. The processing for the link operating mode file was updated for all input file formats. VEHICLE_FILE key was added for converting the Traveler vehicle IDs to vehicle types. USE_SIMPLE_INTERPOLATION key was added to control the method of allocating average

speeds to MOVES speed bins. Additional refinements to the way zero speed bin data was read and processed by the VHT smoothing process. General improvements were made in the way project level link data are processed. Emission rates are applied to the traveler data for emissions summary reports. REPORT_TRAVEL_UNITS and REPORT_EMISSIONS_UNITS keys were added to control the units in the output emissions reports. Options for Travel units include MILES, KILOMETERS, METERS, and FEET. Options for Emissions units include KILOGRAMS and GRAMS. The default is KILOMETERS and KILOGRAMS. The VMT and VHT generated by the speed smoothing process was normalized to equal the VMT and VHT generated by speed bin seconds and cell sizes. Protection was added for zone files that don't include all of the zone numbers.

EventSum 4.0.8

The Event data and sort index and the travel time file were expanded to include the trip leg. SELECT_TRIP_MODES and SELECT_PLAN_MODES keys were added to filter the trip and event records that are processed. SELECT_HOUSEHOLD_RANGE key was added limit processing to a range of household IDs. COMBINE_EVENT_LEGS key was added to enable plan leg events to be collapsed into a single trip record. Logic was added to convert plan modes to trip modes and then use the trip mode to select records to include in the output travel time file. The size of the internal event data class was reduced to require less memory. The event file processing was modified to support the reduced event file size.

ExportTransit 4.0.5

The logic was adjusted to correct problems caused by rounding run offsets to minutes that result in offset values equal to the length of the time period.

GISNet 4.0.9

UPDATE_LINK_LENGTHS key was added to simplify the options for replacing the link length data with the calculated length of the link shape.

IntControl 4.0.19

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

LineSum 4.0.11

NEW_RUN_SCHEDULE_FILE key was added to summarize the number of transit runs that start and end by time period increment. NEW_RUN_CAPACITY_FILE key and CAPACITY_CONSTRAINED_RUNS_# reports were added to summarize the number of runs in each route and time period that have ridership demand that exceeds transit vehicle capacity. The VEHICLE_TYPE_FILE key was added to determine the vehicle capacity. Added logic to summarize the transit ridership in link group reports.

LinkDelay 4.0.9

The logic was expanded to include processing of link delay files with partial, uneven, or aggregate time periods.

LinkSum 4.0.28

A bug was fixed for link group selection criteria that include the positive and negative orientation of a link in the same link group. NEW_PERFORMANCE_DATA_FILE and NEW_PERFORMANCE_DATA_FORMAT keys were added to enable the user to write the Performance Detail Report information to a file that can more easily be imported to spreadsheet analysis software.

LocationChoice 4.0.6

ACTIVITY_PROBLEM_REPORT was added to summarize problem types by mode and trip purpose. MAXIMUM_WALK_DISTANCE key was added to modify the way activity locations are selected within the selected destination zone. If the travel mode is walk (1), the algorithm gives preference to activity locations closer to the origin location rather than further away as it does by default for all motorized travel modes. Activity locations that are further away than the maximum walk distance (default is 2000 meters) are not considered. Activity locations that are less than the maximum are weighted by subtracting their distance from the maximum walk distance.

Microsimulator 4.0.75

Changes were made to the way maximum dwell times are implemented at transit stops. If the vehicle is unable to leave the stop after the maximum dwell time is reached, it will no longer open its doors to permit additional passengers to board. 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. A bug was fixed in the origin and destination stop IDs written to the problem file for a transit passenger trip. For these problems, the LINK file is also now populated with the transit route number to help identify the transit leg where the problem occurred. Logic was added to constrain the offset and length of lane use restrictions to the cells between the setbacks at both ends of the links. This eliminates problems caused by lane connectivity / lane use conflicts when entering a new link. OUTPUT_SUMMARY_VEH_TYPES_# key was added to filter the data stored in a link delay or performance file to a specified set of vehicle types. The data processing logic was updated to pass vehicle type codes into the output summary class methods. A bug was fixed in the way diagonal lane changes are processed for multi-cell vehicles. Start and end events for transit boardings and alightings are now processed. In situations where two lanes are blocked using lane use restrictions, the parking access logic will attempt to load the vehicle to the first unrestricted lane. The problem file processing was modified to save the transit route number in the new ROUTE field rather than the LINK field. The transit departure time problems now store the link ID of the origin transit stop in the LINK / DIR fields. A bug was fixed in the way transit boardings were loaded onto the first stop of a route. Changes were implemented to minimize wait time problems for transit vehicles. These changes relate to lane-use restrictions, the end of line departure lane, and lane change requests during link changes. The logic was updated to enable transit boarding rates greater than 10 per second. The procedure for setting the maximum wait time for a transit vehicle was modified to handle early and late arrivals more

realistically. Transit Capacity and Transit Dwell problem messages were added to record instances when a transit traveler is unable to board a bus or train due to vehicle capacity or maximum wait time constraints. The Event output service, traveler plan data, and problem messages were expanded to include the trip leg number. The person code for transit driver events was changed to zero to avoid conflicts with household persons. Process and save walk legs in the event file. A bug was fixed in the way the first walk leg of multiple trips for a given traveler was output to the event file. Logic was added to avoid completing the walk leg of an auto trip while the traveler is waiting to load onto the network from the origin parking lot. OUTPUT_RIDERSHIP_ALL_STOPS_* key was included to save all stop / run records in the ridership file even if the stop does not have any boardings, alightings or riders. The event file processing was modified to support the reduced event file size.

PlanCompare 4.0.35

NEW_START_DIFFERENCE_FILE and NEW_END_DIFFERENCE_FILE keys were added to summarize the plan time or cost values and differences by origin location and/or destination location (activity location or parking lot). A COUNT field was added to the start and end difference files to store the number of observations included in the cumulative times/costs and differences. INDEX_BY_COMPARE_LOCATION key was added to control which location is used for indexing the difference files when the IGNORE_LOCATION_DIFFERENCES key is true. Logic was added to compare transit paths as well as drive paths. The dump path changes report now lists the transit stops and route for each transit leg. A bug was fixed in processing the first input plan when the traveler ID is less than the first compare plan. The logic was modified to base the selection on each trip rather than each traveler. This means that the traveler's trips that did not change are no longer selected for output if one of the traveler's trips did change. This only impacts travelers that make multiple trips. New gap statistics were added to report the total, percent and average absolute travel time difference for those travelers that are not considered "nearly equal". COMPARE_GENERALIZE_COSTS key was added to base the difference comparison on generalized data rather than travel time data. SELECT_BY_RELATIVE_GAP key was added to select plans based on the percent difference in their input and compare travel times. This key is only active is SELECT_BY_PERCENT_DIFFERENCE key is false. NEW_COST_DISTRIBUTION_FILE key and generalized cost reports were added. The new report names are: PERCENT_GENERALIZED_COST_CHANGE, DUMP_COST_CHANGES_GREATER_THAN_*, GERNERALIZED_COST_DISTRIBUTION, COST_DIFFERENCE_DISTRIBUTIONS, and COST_PERIOD_SUMMARY. The new difference report now reports generalized cost differences if the compare generalized cost key is true. SELECT_TRAVELERS key was added to restrict the plan comparison to a range of traveler IDs.

PlanPrep 4.0.12

A bug caused by a recent change to the plan file data structure to support generalized cost updates and plan re-skimming was fixed. This bug impacts subarea merges of HOV trips. A bug was fixed in the new *.def files when updating the partitions for link-based plan files.

PlanSelect 4.0.31

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. A bug was fixed in the way high V/C ratio paths were selected. Logic was added to check that the new household list or new household record files can be partitioned if the plan file is partitioned. The SELECT_TRAVEL_MODES key processing logic was enhanced to detect and report errors in mode number ranges and mode string inputs. A bug was fixed in the link and node selection procedures for transit legs.

PlanSum 4.0.52

The trip length skim was corrected in situations where the summary time periods do not span the full travel time of the trip. For applications that re-skim and update plan travel times, the estimates for the generalized cost value are also updated. A bug was fixed in the offset to the destination parking lot used for travel time updates of link-based plan files. The transit load factor is now calculated when a vehicle type file is provided. OUTPUT_ALL_TRANSIT_STOPS key was added to output new ridership file records when the stop does not have boardings or alightings.

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.

ProblemSum 4.0.5

The logic was modified to detect if a network link and node files are provided before attempting to read the link data.

Progression 4.0.5

Logic was added to improve the protection against infinite loops in building progression corridors.

Relocate 4.0.12

Additional pointer checks and warning messages were added to protect against compatibility problems between the plan file and the old network data.

Reschedule 4.0.12

RANDOM_SCHEDULE_SHIFT and RANSOM_NUMBER_SEED keys were added to randomize the start times between routes. A bug was fixed in the travel time calculation for far side stops. Logic was added to limit negative random adjustments so the first run does not start before time zero. RUN_START_TIME_FILE key was added to update the stop schedules for a

route based on the difference between the departure times for the first stop of each run. This is designed to synchronize the run start times between transit networks. TRANSIT_SERVICE_FACTOR key was added to increase or decrease the number of runs on selected routes or modes during selected time periods. Corrected the time offset for the service factoring. Added capability to factor multiple time ranges in the same application. TIME_PERIOD_METHOD key was added to control the way routes are associated with time period ranges. SEGMENT_SCHEDULE_FACTOR and LINK_EQUIVALENCE_FILE keys and PRINT_LINK_EQUIVALENCIES report were added to adjust transit schedule based on a travel time factor on specified roadway segments.

RiderPrep 4.0.0

New program to merge subarea ridership file from the Microsimulator with regional ridership files generated by PlanSum.

Router 4.0.63

A bug related to the way the Router manipulates the time period calculations was fixed to be compatible with the new lookup table logic. LINK_DELAY_START_TIME and LINK_DELAY_END_TIME keys were added to control the way time periods in the input link delay file are used for travel time calculations. By default, volume and travel time after midnight are added to the corresponding early morning time periods and trips on the network after midnight use these early morning travel times. The new keys can be used to extend the time period processing beyond 24 hours. A minor improvement was made to the way minimum wait time was implement for transit path building. TRANSIT_PENALTY_FILE key was added to input impedance penalties for combinations of stop, route, and/or run to adjust the likelihood that a stop will be included in a path based on the capacity constraints of the transit service. A bug was fixed in the stop impedance penalty. The logic was also modified to make the stop number optional (i.e., the penalty can be applied to all stops on a route and/or run). UPDATE_PLAN_RECORDS key was added to re-skim the travel time and impedance components of existing plan records while building paths for other records. The processing checks were modified to permit the plan update to be executed without a household list or an input trip and/or activity file. The printout now includes a message about the number of updates that were made. PRINT_UPDATE_WARNINGS key was added to control the warning messages sent to the print file.

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.

SubareaNet 4.0.11

A bug was fixed in the schedule calculation for the starting boundary stop on transit routes.

SubareaPlans 4.0.33

A bug was fixed in the schedule calculation for the starting boundary stop on transit routes. The fare zone number assigned to the new subarea boundary stop at the end of the line was corrected.

TransimsNet 4.0.25

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. CELL_SIZE key was added for adjusting the maximum speed and minimum link length calculations.

TripPrep 4.0.0

New program for manipulating trip and activity files using selection variables or user program scripts.

TripSum 4.0.18

The SUMMARY_LENGTH_INCREMENT key was activated to control the summary increments for trip length reports. CREATE_INDEPENDENT_TRIPS, NEW_HOUSEHOLD_LIST, STARTING_HOUSEHOLD_ID, STARTING_VEHICLE_ID, and NET_PROCESS_LINK_TABLE keys were added to break the trips in an activity file into single trip household/vehicle records. The logic to convert an activity file to independent trips was modified to properly convert the auto driver and passenger modes in the activity file to the SOV, HOV2, HOV3, and HOV4 codes used in a trip file.

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.