

Simmod *PLUS!* 7.3 Changes and Enhancements

Engine Change Descriptions

- **Enhanced runway exit logic.** If no gates are specified in an entry in the RUNWAY_EXITS_LINKS and RUNWAY_EXITS_PROHIBITED_LINKS inputs, the entry will apply to all gates for that entry.
- **Corrected arrival re-routing.** It was possible for a flight to re-route even though the new route did not pass through the same meter post node. Fixed and trace 70 will provide a warning.
- **Modified taxi logic.** Conflicts between the DSDPath logic and the groundlink entry checks could cause gridlocks in rare cases. Fixed.
- **Modified departure logic.** Aircraft that were blocked (SIMU26 PD code) from pushing back due to occupied ground links would not necessarily begin to move immediately after the blocking ended. Fixed.
- **Corrected taxi planning logic.** If a towed departing aircraft rolls over a taxi checkpoint, the resulting taxiplan will not properly cause the aircraft to be towed to its gate. Fixed.
- **Corrected SETGATE logic.** In cases where the optional ADistNo or DDistNo is missing, the following event in the SIMU09 would not be read properly.
- **Corrected runway crossing logic.** Taxiing aircraft whose taxiplan crosses both end nodes of a runway crossing would automatically be subjected to delays imposed on that runway crossing even if the taxiplan does not actually use that crossing. Fixed.
- **Corrected gate holding logic.** In cases where departures wait at gates due to departure queue congestion, the departures would not necessarily leave for the departure queue in the order in which they began waiting. Now, such departures pushback in the order in which they began waiting.
- **Enhanced runway inputs.** Two new fields have been added to the runway inputs — TaxiFlagP and TaxiFlagO — to indicate if taxiing is allowed on the runway when it is active. These replace the global dat entries of taxi_on_runway and taxi_on_all_runways.
- **Enhanced the SETRWY event.** A new entry has been added to the SETRWY event, that allows the analyst to change the taxi flag.
- **Enhanced the SETGATE event.** A new entry has been added to the SETGATE event, that allows the analyst to change the gate capacity.
- **Corrected runway crossing logic.** Internal variables associated with the runway crossing logic were not re-initialized with each iteration. This could cause departures in subsequent iterations to hold indefinitely. Fixed.

Network Builder, Animator, Reporter, and cdf2simu Change Descriptions

- **Network Builder and Animator:** The network layout window now automatically ensures that the east-west and north-south scales are equal regardless of the shape of the window. This can be turned off by selecting the “Allow Map Distortion” item in the under the Edit → Options menu.
- **Network Builder:** The X_COORD field in the AIRSPACE_NODE and GND_NODE tables now only allow values from -180 to +180.
- **Network Builder:** The DIRECTION_USED field in the GND_LINK table is now a child to a new parent DIRECTION_USED_FLAG_CHOICE table.
- **Network Builder:** The multiple edit feature of the database query window now allows all the fields to be changed to missing.
- **Network Builder:** When double-clicking a record from a list in a database table query window, if the “Use” button is displayed, double-clicking is the same as clicking the “Use” button, otherwise double-clicking is the same as clicking the “Edit” button.
- **Animator:** A reverse button was added to allow the Animator to replay in reverse.
- **Reporter:** The air delay in the Node2Node reporter now considers the global data input DELAY_CALCULATION when determining how an aircraft speed up (SIMU26 code SU) is tabulated.
- **cdf2simu:** The RUNWAY_TAKEOFF_OCCUP entries are now sorted so that entries that RUNWAY_TAKEOFF_OCCUP_MODELS table will take precedence over entries in the RUNWAY_TAKEOFF_OCCUP_TAMPS table. This will allow users to specify an occupancy input for an aircraft airspace group and yet have this input superseded by an occupancy input for a specific aircraft model that is a member of that group.
- **cdf2simu:** The DEPARTURE_Q_GROUP: WAIT_DQTHRESH field was not properly written to SIMU07. Fixed.