

# North American Simmod User Group

Sunnyvale, CA

Presented to: NASUG

By: John Zinna, FAA

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Federal Aviation  
Administration



# Model Release

- **FAA engine version 2.7 to be released late September 2006**
  - Window version
  - Linux version
- **Received 4 requests for the FAA's engine**
- **send bug reports and desired enhancements to:**
  - [john.zinna@faa.gov](mailto:john.zinna@faa.gov)

# Model Maintenance

- **Fixed bug that prevented aircraft from switching taxipaths when the airport plan changes (when using AFPLANS, SETPLAN, GATERWY, and TAXIPATHS)**
- **Enhanced output for the staging area tables**
  - separate tables now exist listing iteration values and cumulative values for each replication
- **Fixed aircraft passing bug on ground links that prohibit passing**
  - two opposing aircraft will now stop head-to-head, alerting user to take corrective action

# Model Maintenance

- **Corrected runway exit selection logic that caused engine to enter infinite loop**
- **Fixed ground holding error that caused infinite loop when two aircraft attempted to enter a node at the exact same instant with no advancement in simulation time**
- **Corrected infinite loop bug when an aircraft was attempting to cross a runway**

# Model Maintenance

- **Fixed high speed runway exit bug that caused aircraft to select a prohibited exit when TAMPs group (instead of a/c models) is used in the RUNWAYS\_EXITS\_PROHIBITED\_LINKS card**
- **Enhanced high speed exit logic to prevent aircraft exiting to wrong side of runway relative to its gate location**
  - added code so the model “knows” which side of runway each gate and exit is located

# Model Maintenance

- **New input option to mark a runway as “inactive”**
  - can be used for taxiing on runway without having to use the global “taxi\_on\_runway”
  - Inactive runway may be used as an exit for an arriving aircraft from an intersecting runway
  - Animation software will display the inactive runway as an active runway, not as a taxiway

# Model Maintenance

- **Enhanced MULTARR function to be able to define turnaround flights**
  - turnaround time determined from probability distribution
- **Added option to write to file the flights created internally by MULTARR and MULTDEP**
  - flight data is in SIMU09 format
  - assists the user in building the SIMU09 event file
  - can specify reference to lateness distribution
  - new output file : SIMU46

# Future Work

- **DSDPath logic failing under certain circumstances**
- **MULTDEP gate selection when using the wildcard (“?”) option needs to be analyzed**
- **Allow aircraft to taxi on specific active runways (to be a SET command)**



- **FAA email:**
  - [john.zinna@faa.gov](mailto:john.zinna@faa.gov)

