Air traffic operations analysis on a global scale.

GATOR ingests flight data from a wide variety of sources such as published airline schedules, repetitive flight plan data, and actual air traffic control (ATC) surveillance data. The **GATOR** tool plots and displays a flight's location at any given instant in time. Where actual flight data is available, that position information is used. Otherwise, **GATOR** will calculate the four-dimensional position based on the flight plan or by calculating the Great Circle route and time based on the schedule.

Air Traffic Statistical Analysis:
JTA uses **GATOR** in the performance of much of its air traffic statistical analysis. JTA is able to quickly ascertain the types of aircraft and frequency of operations for a given area of interest, such as a specific airport or a selected airspace.
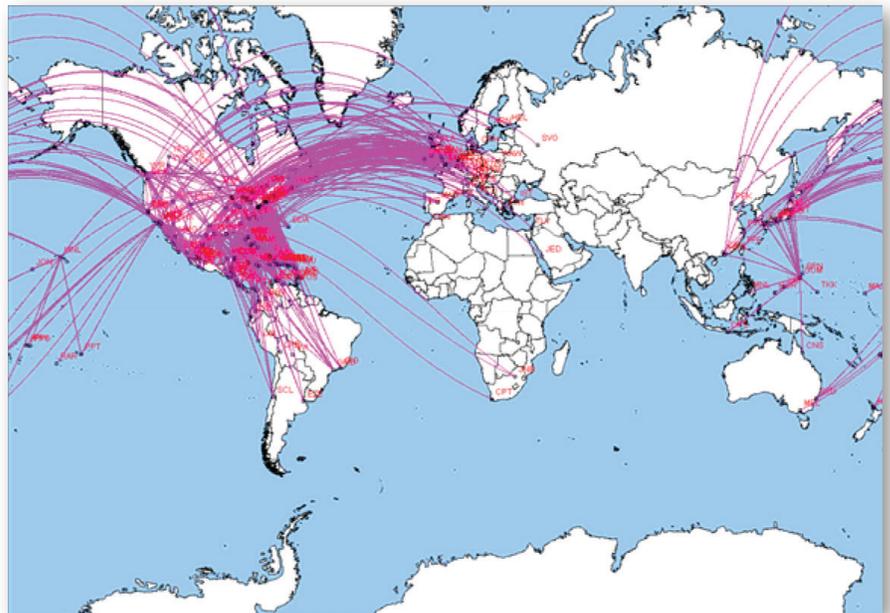
Macroscopic Airspace Analysis:
With **GATOR**, JTA airspace system planners and designers gain a macroscopic perspective of air traffic operations on a regional or global scale, and for hourly, weekly, or monthly timelines. JTA is able to analyze the effects on air traffic such as:

- Air traffic growth
- Airspace redesign

The GATOR tool supports sophisticated air traffic operations analysis and simulation, such as peak airspace system traffic load.

This image depicts all of the international scheduled passenger flights originating or terminating in the U.S.

Air Traffic Operations Simulation: GATOR conducts simulations of air traffic operations in model-time set at any multiple or fractions of real time. **GATOR** is able to perform extremely sophisticated simulations with the availability of actual data or with flight plans augmented with detailed operational parameters including:

- Aircraft performance
- Upper air winds