



STK B-747 Aircraft Type Model Development Validation and Verification Contract Summary

Sensis Corporation performed a Validation and Verification of the aircraft flight-path modeling tool, Mission Modeler, by comparing a flight trajectory generated within STK to an externally generated trajectory model. The aircraft flight trajectory was based on a B747-200 aircraft. External to STK, Sensis generated a trajectory using known performance characteristics of the B747 aircraft type. The external trajectory was based on BADA data [N-04], energy state equations and other available literature.

Within STK, Sensis constructed a new scenario modeling a B747-200 aircraft by creating the following six performance models:

- Takeoff
- Climb
- Acceleration
- Cruise
- Descent
- Landing

The B747 aircraft flew on a mission from Seattle to Atlanta at a cruise altitude of 41,000 feet and a range of 2325 nautical miles. The evaluation compared the following performance characteristics:

CHARACTERISTICS TESTED					
Procedures tested	Airspeed	Altitude vs. true airspeed	Altitude vs. time	Mission time	Fuel consumed
Takeoff	X	X	X		
Climb	X	X	X		
Cruise	X	X	X		
Descent	X	X	X		
Landing	X	X	X		
Overall mission				X	X

According to Sensis, “The Aircraft Mission Modeler in STK provides the capability to accurately represent the flight trajectory of any aircraft based on user provided flight profile data.”

To request a copy of the complete report, e-mail vv@agi.com.