



Orlando International Airport Terminal Pod C & D Baggage Handling System Optimization and Scenario Analysis



Client Name: SCHENKELSHULTZ / Greater Orlando Aviation Authority (GOAA)

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Date Completed: September 2011

The Greater Orlando Aviation Authority retained TransSolutions and CAGE through SCHENKELSHULTZ to evaluate the potential capacity impacts to the Orlando International Airport baggage handling systems due to the pending merger of Southwest and AirTran airlines. Currently, Southwest Airlines shares five EDS machine matrix (known as Pod C) with TAM airlines. GOAA requested the project team evaluate the feasibility of the future use of Pod C for Southwest operations and the possibility of re-assigning airlines between Pod C and a larger matrix with seven EDS machines (known as Pod D).

The initial task of this project was a field verification of the existing operating conditions of both Pod C and D. TransSolutions and CAGE worked closely with SCHENKELSHULTZ and the GOAA engineering team in achieving the following:

1. Measurement of conveyor lengths, speeds and comparing with the “as built drawings” provided by the vendor
2. Analysis of the programmable control logic (PLC) code to incorporate the control logic in the simulation model accurately.
3. Extraction of data from the daily reports provided by GOAA. Data included:
 - a. Failure and repair patterns of the EDS machines and other locations such as power turns, verti sorters and high speed diverters
 - b. Percentage of alarm bags, error bags and lost track bags diverted to the Checked Baggage Resolution Area (CBRA)

Simulation models were created for Pods C and D with the above information to replicate as closely as possible the current operating conditions. Statistics were reported on the time bags spent in the system, die-backs to ticket counters, and stoppages of critical belts. This study was helpful in evaluating the present capability of each pod as well as identifying potential improvements to increase capacity.

These recommendations were included in the final report.