

Decomposition Approach for Aircraft Allocation under Environmental Considerations

Abstract submitted for the 2010 INFORMS Annual Meeting in Austin, TX

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Previous work to allocate aircraft amongst 257 domestic and international airports used one large integer programming problem. Assumptions and abstractions simplified the problem to represent a majority of commercial airline operations with at least the arrival or destination airport in the US. Decomposing the problem into smaller allocation problems maintains runtimes similar to the previous model, and now includes multiple airlines, more aircraft models, and ‘one-way’ routes.

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