Boeing: Integrated Propulsion and Control System

Introduction

During the 05/06 Clinic the Boeing Company sponsored Clinic team reduced to practice the concept of producing athwart ship forces by synchronously varying the pitch of an impeller blade. The creation of the XRT-2 demonstrated the ability to create athwart ship forces but the XRT-2 was not completely analyzed and the math model has not been validated.

Project Deliverable

Review the work done on the XRT-2, collect and evaluate the data from testing, compose a math model and propose mechanical, electrical and control system changes to the XRT-2. Using the proposed changes, write a budget & schedule for implementation of the changes and execute the proposed schedule. Based on the redesigned XRT-2, collect & evaluate new data and refine the math model.

Scope of Work

Review the data collected by the 05/06 clinic and propose a test plan for data collection from the XRT-2

1. Execute the test plan and collect data
2. Evaluate the data and compare it to the math model for the system
3. Propose changes to be made to the XRT-2
   a. Create a schedule, budget & test plan for the proposed changes
4. Execute the schedule
5. Execute the test plan & gather data
6. Evaluate the data and update the math model