FINAL TECHNICAL REPORT FOR
NASA AMES RESEARCH CENTER GRANT
NAG 2-716

SITUATIONAL AWARENESS ISSUES IN THE
IMPLEMENTATION OF DATALINK

Shared Situational Awareness in the Joint Flight Deck-ATC Aviation System

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Technical Summary

MIT has investigated Situational Awareness issues relating to the implementation of Datalink in the Air Traffic Control environment for a number of years under this grant activity. This work has investigated:

- The Effect of "Party Line" Information.
- The Effect of Datalink-Enabled Automated FMS on Flight Crew Situational Awareness.
- The Effect of Cockpit Display of Traffic Information (CDTI) on Situational Awareness During Close Parallel Approaches.
- Analysis of Flight Path Management Functions in Current and Future ATM Environments.
- CDTI of Datalink-Based Intent Information in Advanced ATC Environments.
- Shared Situational Awareness between the Flight Deck and ATC in Datalink-Enabled Environments.
- Analysis of Pilot and Controller Shared SA Requirements & Issues.
- Development of Robust Scenario Generation and Distributed Simulation Techniques for Flight Deck – ATC Simulation.
- Methods of Testing Situation Awareness Using Testable Response Techniques.

The work is detailed in specific technical reports that are listed in the following bibliography, and are attached as an appendix to the master final technical report.
Publications Supported by NASA Grant No. NAG 2-716

Journal Articles and Conference Papers:


MIT Research Reports:


Appendix

A Collection of 34 Technical Papers and Reports
Resulting from Work Performed Under
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