

TASK # HF006-07-08. HF AND SCENARIO BASED TRAINING W/ADVANCED WEATHER & TRAINING OF PILOTS AND AIR TRAFFIC CONTROLLERS IN WEATHER-RELATED DECISION MAKING USING PROBABILISTIC HAZARD INFORMATION DISPLAYS

PROJECT AT-A-GLANCE

- UNIVERSITIES: Embry-Riddle Aeronautical University, University of Akron, University of Wisconsin-Madison
- PRINCIPAL INVESTIGATORS: Dr. Chen Ling (UA), Dr. Doug Wiegmann (UWM), Dr. Mike Wiggins (ERAU)
- STUDENTS: David Toon (ERAU), Ali Alshaqah (UA), Harry Harris (UA)

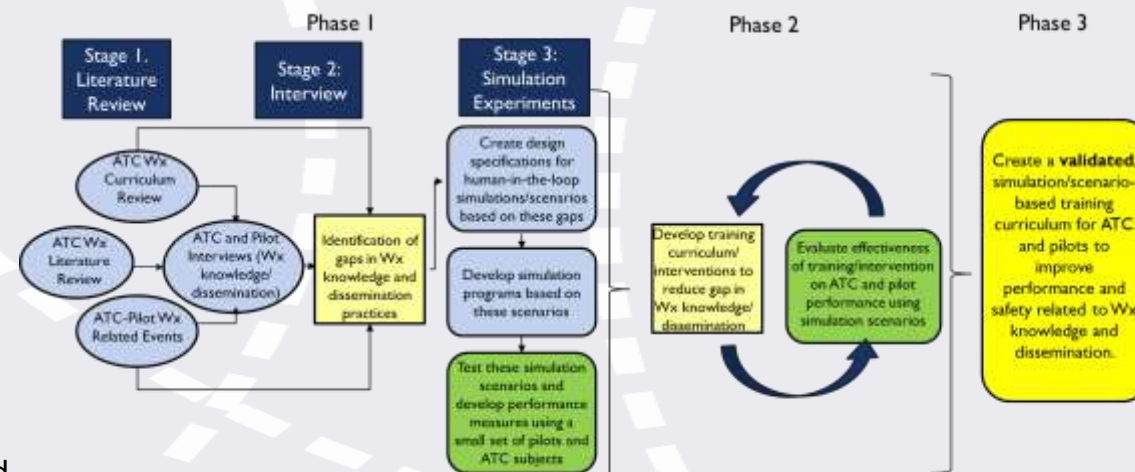
RELEVANCE TO TECHNICAL TRAINING AND HUMAN PERFORMANCE

- The objective of this study is to discover if scenario-based training can enhance decision-making capabilities of air traffic controllers and pilots to enhance safety while reducing weather delays.

STATEMENT OF WORK

1. Determine the extent to which gaps in weather-related training exist, and understand if the problem is institutional, regional, national and/or international. –literature review, interview SME
2. Determine if scenario-based simulation (integrated and non-integrated) with advanced weather modeling can bridge gaps in weather-related training. – literature review, interview SME
3. Prepare for weather scenarios for initial testing –computer programming to develop representative scenarios for use in ATC labs and computer aviation training devices.
4. Study pilots decision making when encountering severe weather situations –Human performance experiment- Simulations will be conducted at ERAU on a computer aviation training devices.
5. Study air traffic controller decision making when encountering severe weather situations –Human performance experiment- Simulations will be conducted in the ERAU ATC simulation labs.

Project Overview



STATUS

- Phase 1, Stage 1 complete and Phase 1, Stage 2 is underway.

FUTURE WORK

- Phase 2 will involve developing, testing, and validating training curriculum and/or interventions to reduce the gap in weather knowledge and dissemination using simulated scenarios.
- Phase 3 will create validated simulation/scenario-based training curriculum for ATC and pilots to improve performance and safety related to weather knowledge and dissemination

Publications, Presentations & Awards

- Publications: none
- Presentations: none outside of COE meetings
- Awards: none