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# CHARACTERIZATION OF VISUAL SEARCH PATTERNS AND AIRCRAFT CONTROL STRATEGIES (HF003)

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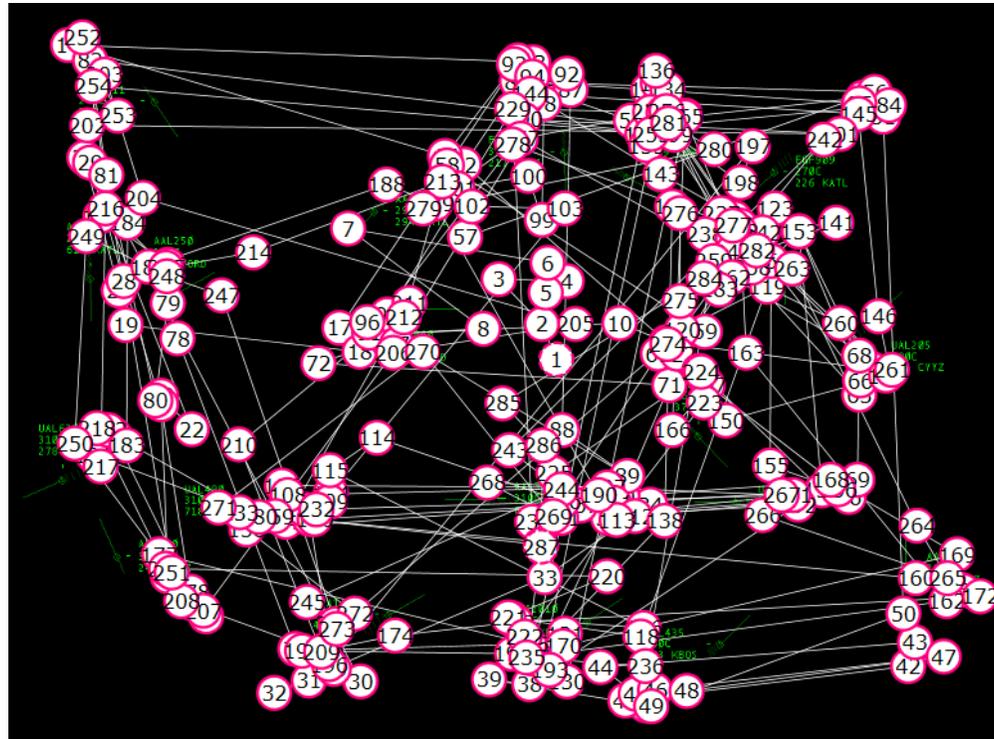
COE SOAR MEETING 3  
MARCH 1-2, 2017



# PROJECT OVERVIEW



- Description: Investigate expert ATCOs' visual search and aircraft control strategies in a realistic environment, and utilize the findings as a learning method .



Visual scanpath (orderd eye fixations and saccades) overlaid on to enroute radar display

# TIMELINE / DURATION



Requirement analysis and scenario development



Experiments



Visual search pattern analysis



Aircraft control strategy analysis



Develop designs



## MILESTONE DETAILS



### Milestone

### Planned Due Date

**Perform requirement analysis and develop scenarios.**

4 months after awarded date

Perform experiments.

7 months after awarded date

Characterize and classify expert ATCO's visual search patterns.

10 months after awarded date

Characterize and classify expert ATCO's aircraft control strategies.

12 months after awarded date

Develop designs to provide the characterization and classification results.

14 months after awarded date

# PROGRESS UPDATE



- Are you on target for your deadlines?

Dependent on the survey clearance and interview scheduling processes. The interviews (planned between March and May) and experiments (planned between June and August) will be held with the FAA Academy instructors or contract/retired controllers. The interview results will be used to refine the requirements analysis document and the experiment scenarios.

- If not, will you need an extension?

If the clearance and scheduling processes are delayed, then we will need to request no-cost extension of approximately two to three months.

# PROGRESS UPDATE



- What progress have you made/goals have you met?

Requirements analysis and scenario development:

1. Finished developing detailed interview questions (e.g. considering geometry, traffic, and special situations).
2. Performed literature review on pattern analysis methods.
3. Completed writing a draft of a pattern analysis method. Planned to be submitted as a journal paper.
4. Coordinated with FAA CAMI on scenario development and experiment procedures.
5. Currently scheduling multiple visits to the FAA Academy and FAA CAMI between March and August.
6. Preparing requirements analysis document and IRB document. (waiting for survey clearance)

# PROGRESS UPDATE



- What are your future plans?
  1. Continue literature review.
  2. Submit journal paper.
  3. Finalize scheduling interviews.
  4. Finish requirements analysis.
  5. Obtain IRB consent.
  6. Conduct interviews with the FAA Academy instructors or contract/retired ATCOs upon receiving survey clearance.
  7. Develop scenarios based on interview results.
  8. Start scheduling experiments.