

NCSU/Aptima – NASA NRA-07 Research

1/15/07

Team Members: Alexander, Bailey, Hsiang, Kaber, Kim, Stelzer

Guests: Cowley, Kaufmann (Psychology)

Agenda:

Review of action items from December meeting and research progress:

- Identification of critical HUD features for phases of landing (Kaber)

 - Review of Keller et al., Schnell report, and HUD spec.

- Functional grouping of SVS/EVS HUD features (Kim and Kaber)

 - Relevance of groups to phases of approach.

- Dependent variables to be observed in 1st study (e.g., preferences for pairs of terms, characterization of displays, survey responses):

 - Potential subjective/objective responses on experiment trials (Hsiang)

 - Draft overview of experimental protocol (including suggestions for DVs for Experiment 1; Bailey)

 - Ratings of 16 stimuli not presented in trials – within context of scenario or not?

- General flight scenarios for 1st study

 - General Reno scenario information (Alexander)

- Schedule for presentation of stimuli during trials.

 - DRAFT set of display configurations to use for experimental approaches (by Stelzer)

- Development of subjective survey forms - Based on flight scenarios/stimuli.

 - Pilot demographics questionnaire (Bailey)

 - Discuss formatting for and use of Scantron

 - Semantic pairs rating questionnaire (Bailey)

 - Rating scale – 4 or 5 point (Likert)

 - Overall Ranking and Rating questionnaire (Bailey)

 - Ranking of all pairs vs. selection of relevant pairs.

 - Rating scale – 4 or 5 point (Likert)

Open-ended comments questionnaire (Bailey)

Used in conjunction with structured interview form?

Structured interview instrument (Bailey)

When will this be delivered?

Overlap with open-ended questionnaire (need)?

New business from the floor

Issues/Tasks Addressed:

- Defined reduced set of semantic descriptor terms for display evaluation (Kim)
- Drafted schedule for presenting stimuli during approaches (Stelzer) – Identified display features that would/would not be presented based on stage of approach.
- Drafted protocol, subjective survey forms and structured interview measure for 1st study (Bailey)

Current Issues:

- Summarize: (a) Keller et al. CTA; (b) Schnell report and paper; and (c) HUD specification. Identify importance of specific HUD features for each phase of landing (Kim and Kaber) – 1/30/07.
- Need images of various display configurations to be tested in experiment based on draft set of stimuli to use in scenarios (Prinzel, R. Bailey) – 1/31/07
- Identification of combination of SVS, EVS, TCAS, tunnel guidance and symbology that is least likely to be used by pilots (Prinzel, R. Bailey) – ASAP or 1/30/07
- Arrange for expert/test pilots for evaluation of clutter descriptive terminology in experiment at NCSU (Prinzel, R. Bailey) – Sometime between 1/31-2/15/07
- Develop prototype displays for first study and setup for experiment (Kaber, Hsiang, Kim) - After 1/31/07
- Schedule seminars by Aptima researchers at NCSU during visits for participation in experiments – Carolinas HFES Chapter (<http://www.hfescarolina.com/calendar2007.htm>), ISE Graduate Student Seminar Series (<http://www.ise.ncsu.edu/seminars/spring07.html>).