



AAR-100

Human Factors Newsletter # 00-15

(August 12, 2000 – August 25, 2000)

OASIS: The Operational Support and Implementation System (OASIS) Human Factors Team met at the William J. Hughes Technical Center to review findings and make decisions about the OASIS consoles. One area of discussion concerned a finding that the new voice switch monitor cannot fit in the OASIS preflight consoles. The AFSS Voice Team developed a possible solution to this problem, recommending that the OASIS monitors be moved about 8 inches to one side. This was acceptable to the OASIS Human Factors Team and the design was sent forward. (Kenneth Allendoefer, FAATC)

HOCSR: A human factors researcher from the William J. Hughes Technical Center attended a design review of the Monitor and Control interface for Phase 3 of the Host and Oceanic Computer System Replacement (HOCSR) program. Software engineers presented mock-ups of the computer human interface (CHI) and discussed customization options. Over the next several months, human factors researchers will work with representatives from the field and software engineers to customize the CHI such that it best supports the users' needs and follows good human factors design principles. (T. Yuditsky, FAATC)

Evaluation of Current and Revised Training for the InVision CTX 5500. Earlier this month, representatives of the Aviation Security Human Factors Program (AAR-510) held a kick-off meeting for the award of a new delivery order to the support contractor, Federal Data Corporation (FDC). FDC is tasked to assess the alarm resolution performance of security screeners who are trained to operate the CTX 5500 under current and revised training programs. (Genia Embrey-Brock, AAR-4)

Human Factors Functional Requirements for Security Checkpoints. Representatives of the Aviation Security Human Factors Program (AAR-510) met to discuss the establishment of human factors functional requirements for security checkpoints of the future. The goal is to identify the important components of a security checkpoint and the actions required to prevent the entry of dangerous and deadly threat items into the sterile area of an airport. These functional requirements will aid in evaluating the effectiveness and efficiency of the procedures that are used by airport security personnel. (Genia Embrey-Brock, AAR-4)

Aviation Security Technology Integration Plan (ASTI). Representatives of the Aviation Security Human Factors Program (AAR-510) and the support contractor, Hi-Tec, met to discuss the role of human factors as it relates to a plan that is being developed for the Aviation Security Technology Integration Program. This plan will define the overall function of aviation security and develop a model for how the aviation security lifecycle should function. (Genia Embrey-Brock, AAR-4)

Display Alternatives for Reducing Complexity: Preparations for the study entitled "Display Alternatives for Reducing Complexity" made substantial progress with completion of the hi-fidelity DSR simulator in the William J. Hughes Technical Center's Research and Development Human Factors Laboratory. "DESIREE" software written by the NAS Simulation Branch integrates the Technical Center's Target Generation Facility to drive real-time simulations. The study was sponsored by and is conducted in collaboration with Dr. Carol Manning at the Civil Aeromedical Institute. Scheduled for the September-October timeframe, the project will investigate the reduction of cognitive complexity in air traffic control through systematic application of redundant graphical and textual cues. (T. Yuditsky, FAATC).

Shiftwork and Fatigue Study: Analyses of the Congressional Shiftwork and Fatigue Study survey data were completed in preparation for the September 2000 submission of the final report. Survey responses were received from 6,800 ATCSs, approximately 30% of the population. The report will include recommendations from the international steering group, which was convened in June to review the data. (P. Della Rocco, FAATC)

Flight Strips: A CAMI representative participated in data collection at the Atlanta Center for the Flight Strip Observation Study. Atlanta was the third and final facility where data were collected. Preliminary analyses will be conducted and reported before the end of the fiscal year. (C. Manning, CAMI)

Flight Turbulence: CAMI researchers participated in a meeting of the Turbulence Joint Safety Analysis Team. The team completed the process of intervention development and ranking. A written report of the results is the only remaining task before the process moves to the Joint Safety Implementation Team (JSIT). (K. Williams, CAMI)

AAF Workforce: A CAMI representative participated in a meeting with AAF-3 concerning the AAF workforce database. He conferred with Staffing and Compensation Policy Division (AFZ-200) staff personnel concerning the baseline AF/JTA-2000 procurement and work. He also participated in a meeting with ACE-1 (Office of the Regional Administrator-Central Region), ASO-1 (Office of the Regional Administrator-Southern Region) and others, as part of an Organizational Assessment Methodology Workgroup at the Team Technology Center. (D. Broach, CAMI)

Op-Eval 2: CAMI representatives participated in the Safe Flight 21 Op-Eval 2 Human Factors Sub-Group Meeting at MITRE/CAASD (Center for Advanced Aviation System Development). During that time, the Human Factors Subgroup developed a data collection matrix that specified Op-Eval 2 measures by flight profile, application, requirement and aircraft type. The matrix will be used to create observer forms and training, and to process data after the Op-Eval is completed. (K. Joseph, CAMI)

En Route ATCS Working Environment: On August 31st, CAMI researchers and ONMI representatives will be at the Fort Worth Air Route Traffic Control Center in Ft. Worth, TX. The purpose of the facility visit is to familiarize the researchers with the en route ATCS working environment and job requirements. The researchers are involved with projects related to human causal factors and ATC operational errors. This facility visit will enable the researchers to gain a higher level of knowledge about the ATC environment. (J. Pounds, CAMI)

Aviation Psychology: A CAMI representative will be in Crieff, Scotland, September 1-9, to participate in the 24th European Association for Aviation Psychology Conference, and to present a paper entitled "The Impact of Previous Computer Experience on Air Traffic Selection and Training (AT-SAT) Test Performance." (M. Heil, CAMI)

More information on human factors research can be found at the FAA Human Factors (AAR-100) web site <http://www.hf.faa.gov>

Mark D. Rodgers
FAA (AAR-100)



August 27-September 1, 2000- 22nd International Council of the Aeronautical Sciences (ICAS) Congress, Harrogate, UK <http://www.aiaa.org/calendar/icas00cfp.html>

August 28-31, 2000- SAE G-10 Meeting, Shelter Point Hotel, San Diego, CA

August 29-30, 2000- Partnering for Transportation Safety: Human-Centered Systems: Operator Fatigue Management, Sheraton Premiere Hotel, Tyson's Corner, VA [mail to: Thomas.Raslear@fra.dot.gov](mailto:Thomas.Raslear@fra.dot.gov)

September 12-14, 2000- The International Avionics Exhibition, Parc des Expositions de Toulouse, Toulouse, France <http://www.spearhead.co.uk/>

September 18-21, 2000- Sixth Annual Flight Simulator Engineering & Maintenance Conference, Centre De Congres, Toulouse, France <http://www.arinc.com>

September 19-22, 2000- 13th International Technology Meeting, Institute of Navigation, Satellite Division, Salt Lake City Convention Center, Salt Lake City, UT <http://www.ion.org/>

September 25-26, 2000- Human Systems Integration Technologies, Tools, and Techniques (HSIT3) Seminar, Doubletree Hotel, Arlington, VA [mail to: rebecca.singer@wpafb.af.mil](mailto:rebecca.singer@wpafb.af.mil)

September 25-27, 2000- International Conference on the Global Implementation of Aeronautical Datalink, The Institution of Electrical Engineers, Savoy Place, London, UK
<http://www.atnconference.com/>

October 4-6, 2000- RTCA 2000 Annual Symposium, Sheraton Premiere Hotel, Tyson's Corner, VA (no Web site)

October 5-7, 2000- 21st American Society of Engineering Management National Conference on Technical Management: Key to Enterprise Success in the 21st Century, Washington Marriott Hotel, Washington, DC <http://www.gwu.edu/asemconf>

October 10-12, 2000- World Aviation Congress and Exposition, Town and Country Hotel, San Diego, CA <http://www.sae.org/calendar/wac00/index.htm>

October 15-19, 2000- Human Performance, Situation Awareness & Automation: User-Centered Design for a New Millennium, Marriott Riverfront, Savannah, GA
<http://www.ie.msstate.edu/hpsaa/index.html>

October 22-26, 2000- ATCA 45th Annual Technical Program and Exhibits, Taj Mahal Resort, Atlantic City, NJ <http://www.atca.org/>

October 30-November 1, 2000- Aviation 2000 Exhibition and Conference, Omni Shoreham Hotel, Washington, DC <http://www.aviationtoday.com/aviation2000>

October 31-November 2, 2000- 10th International Aviation Security Human Factors Technical Advisory Group Meeting at SEATAC Airport, Washington.

November 6-9, 2000 - DOD HFE TAG-45, El Paso, Texas.
<http://dticam.dtic.mil/hftag/index/html>

November 15-16, 2000- Avionics 2000, 14th Annual Conference and Exhibition, Renaissance London Heathrow Hotel, UK <http://www.era.co.uk/conf/confpage.htm>

March 31 – April 5, 2001- CHI 2001, Seattle, WA <http://www.acm.org/chi2001>

June 3-8, 2001- Society for Information Display, International Symposium, Seminar & Exhibition, San Jose Convention Center, San Jose, CA [mail to: pdrzaic@elink.com](mailto:pdrzaic@elink.com)

October 2001- Annual Cabin Safety Research Technical Group Meeting, Taj Mahal Hotel and Casino, Atlantic City, NJ

Note: Calendar events in Italics are new since the last Newsletter



Comments or questions regarding this newsletter?
Please contact Bill Berger at (202) 267-8532
or via e-mail at bill.ctr.berger@faa.gov