



## AAR-100

### Human Factors Newsletter # 00-07

(March 25, 2000 – April 7, 2000)

- **STARS Validation and Demonstration:** Engineering research psychologists from the William J. Hughes Technical Center supported the Standard Terminal Automation Replacement System (STARS) program in a validation and demonstration of the new STARS computer-human interface (CHI) running with the Common ARTS (ARTS IIIE) flight-data processing system. Air traffic controllers from the Newark area of New York TRACON participated in a three-day activity where they controlled simulated traffic using STARS and the ARTS IIIE. The controllers completed numerous STARS and Common ARTS functions that had not been validated in earlier simulation activities. The human factors engineers analyzed user performance and reviewed mitigation strategies discussed during group caucuses to assess how successfully the new STARS CHI supports ATC operations at a high-volume terminal facility. (K. Allendoerfer, T. Yuditsky, WJHTC)
- **STARS Meeting:** STARS Human Factors researchers from the William J. Hughes Technical Center participated a STARS computer-human interface (CHI) Technical Interchange Meeting and Early User Involvement Event in Marlborough, MA. The meeting activities included a review of Full Service and Emergency Service CHI and functionality for the Full Service version of STARS. (T. Yuditsky, WJHTC)
- **DSAR1:** After a program of training on a Decision Support Automation Tool, two controllers in the Decision Support Automation Research (DSAR1) study initiated the experimental simulations. The two Full Performance Level Controllers are the first of a group of en route controllers from within the continental US that will participate in this study. During the experiment, controllers will control traffic under three levels of automation and two levels of traffic load. The study's purpose is to investigate and document how Decision Support Tools can assist controllers in the changing National Airspace System. (B. Willems, WJHTC)
- **DSAR:** Human Factors researchers from the Civil Aeromedical Institute (CAMI) participated in the data collection of R-side and D-side communication exchanges as part of a collaborative simulation study for the DSAR program at the William J. Hughes Technical Center in Atlantic City, NJ. They verified that the data collection protocol was being accurately administered. (L. Bailey, CAMI)

- **Human Factors Meetings:** A CAMI representative traveled to Washington, DC, to participate in several meetings at FAA Headquarters. The topics of the meetings included the baseline job analysis contract and plans to replace the Basic Electronics Screening Tool (BEST) and the Statistical Controller Retirements and Attrition Model (SCRAM). The researcher also conferred with HumRRO personnel regarding the Variable Item Generator (VIGOR) contract final phase of work. (D. Broach, CAMI)
- **RTCA Special Committee:** A CAMI researcher participated in and co-chaired a meeting of the RTCA Special Committee 195, Working Group 1 - Weather Display Design Guidelines that was held in Washington, DC. Additions and changes to the guidelines were presented and discussed. Assignments were made for preparing the final version of the guidelines before the document is formally sent to the RTCA for an acceptance vote. (K. Williams, CAMI)
- **Congressional Shift Work Field Study:** CAMI representatives traveled to the Pittsburgh Tower to confer with facility management and personnel from the University of Pittsburgh Medical Center regarding the Congressional Shift Work Field Study anticipated to begin in May 2000. Several issues were addressed during the meetings, including: identifying available space and furniture to conduct the testing, integrating the schedules of the volunteers for the 18-day study, ensuring union representatives of the procedures that will be used to protect the anonymity of participants, and determining the method by which the facility would be reimbursed. (T. Nesthus, H. Harris, CAMI)
- **Human Factors in Aircraft Accident Investigation Course:** A human factors researcher from CAMI provided a course on Human Factors in Aircraft Accident Investigation for the U.S. Army Aviation Accident Investigators in Ft. Worth, TX. The U.S. Army has fully adopted the HFACS accident analysis system. The researcher, a co-creator of HFACS, was asked to train their investigators on its use. He also provided lectures on sleep and fatigue. (S. Shappell, CAMI)
- **Display Certification Meeting:** A CAMI researcher participated, as a human factors representative, in a Display Certification Meeting at the Los Angeles Aircraft Certification Office (LA ACO). The group met to examine modifications to primary flight and map displays that had been requested of the applicant at a previous meeting at the Denver ACO. Additional feedback and recommendations were provided to the applicant at the meeting. (D. Beringer, CAMI)
- **Directed/Non-Directed Trace:** Personnel from the Aviation Security Human Factors Program (AAR-500) participated in a directed/non-directed trace meeting to finalize sites and dates for the first airport field testing. The first field test site is scheduled for early May in Omaha, Nebraska. (G. Embrey, AAR-3)
- **Bottle Contents Tester Meeting:** Personnel from the Aviation Security Human Factors Program participated in a bottle contents tester meeting. Discussion focused on previous test results and concentrated on future testing scheduled at McGhee Tyson Airport in Tennessee. This testing is tentatively scheduled for April 2000. (G. Embrey, AAR-3)

- **L3 Communications Equipment Training:** Personnel from the Aviation Security Human Factors Program (AAR-510) participated in 2 days of training on the operation of the L3 Communications equipment at the Aviation Security Laboratory (ASL). An evaluation of the L3's training program will be conducted at Dallas/Fort Worth International Airport. (G. Embrey, AAR-3)
- **Runway Incursion Workshop:** Over 220 people, including human factors scientists from NASA Ames, AAR-220, Volpe Center, and AAR-100, attended the Western Pacific Region's Runway Incursion Workshop. During the three-day workshop, participants discussed strategic initiatives and heard presentations from members of ALPA, ATA, RAA, NATCA, and the FAA's Runway Safety Program Office. (G. Embrey, AAR-3)

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

Mark Rodgers  
FAA (AAR-100)



**April 24-28, 2000-** FAA/Eurocontrol Action Plan 5 Technical Meeting on Operational Concept Validation, FAA William J. Hughes Technical Center, Atlantic City, NJ e-mail:

[Paul.Krois@faa.gov](mailto:Paul.Krois@faa.gov)

**April 25-27, 2000-** 45th Corporate Aviation Safety Seminar (CASS), The Adam's Mark Hotel, San Antonio, TX [http://www.flightsafety.org/cass00\\_cfp.html](http://www.flightsafety.org/cass00_cfp.html)

**May 9-10, 2000-** InterAgency Integrated Product Team Technical Meeting on Human Factors in Acquisition, FAA Headquarters, Washington, DC e-mail: [Paul.Krois@faa.gov](mailto:Paul.Krois@faa.gov)

**May 9-11, 2000-** General Aviation Technology Conference and Exposition, Century II Convention Center, Wichita, KS <http://www.sae.org/calendar/gat00/index.htm>

**May 10-12, 2000-** 3rd International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, FL <http://students.db.erau.edu/~siva/conference.html>

**May 15-18, 2000-** 4<sup>th</sup> Joint DOD/FAA/NASA Conference on Aging Aircraft, St. Louis, MO <http://www.aging2000.com>

**May 22-25, 2000-** The Future of Free Flight NASA Distributed Air/Ground Workshop, NASA Ames Research Center, Moffett Field, CA <http://www.asc.nasa.gov/aatt> e-mail: [aboyle@mail.arc.nasa.gov](mailto:aboyle@mail.arc.nasa.gov)

**May 23-26, 2000-** FAA Eurocontrol Action Plan 6 Technical Meeting on Departure Clearances, Amsterdam, Netherlands e-mail: [Paul.Krois@faa.gov](mailto:Paul.Krois@faa.gov)

**May 31, 2000-** *Commercial Space Transportation Advisory Committee Meeting, Bessie Coleman Conference Center, FAA Headquarters, Washington, DC* <http://ast.faa.gov/>

**June 3, 2000-** *AOPA Fly-In and Open House, AOPA Headquarters, Frederick, MD* <http://www.aopa.org/special/fly-in/2000/>

**June 6-8, 2000-** Digital Human Modeling for Design and Engineering (DHM) Conference and Exposition, Hyatt Regency, Dearborn, MI <http://www.sae.org/calendar/dhm00/index.htm>

**June 13-16, 2000-** 3<sup>rd</sup> International Air Traffic Management R&D Seminar, "ATM-2000", Napoli, Italy <http://atm-seminar-2000.eurocontrol.fr>

**June 14-15, 2000-** *Fourth GAIN World Conference, Le Meridien Montparnasse Hotel, Paris, France* <http://www.asy.faa.gov/gain/conferences/gain4/gain4info.html>

**June 20-22, 2000-** Threats, Countermeasures, and Situational Awareness: Teaming for Survivability, The Virginia Beach Pavilion and Convention Center, Virginia Beach, VA [http://corp-nt20.nawcad.navy.mil/nawcad/news/sit\\_aware/2000/](http://corp-nt20.nawcad.navy.mil/nawcad/news/sit_aware/2000/)

**July 30 – August 4, 2000-** 14th Triennial Congress of the International Ergonomics Association and the Human Factors and Ergonomics Society 44rd Annual Meeting "IEA 2000/HFES 2000", San Diego Marriott Hotel and Marina, San Diego, CA <http://iea2000.hfes.org/>

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

**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>

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



Comments or questions regarding this newsletter?

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