



## AAR-100

### Human Factors Newsletter # 00-14

(July 29, 2000 – August 11, 2000)

- **Air Carrier Training:** Representatives from AAR-100, AFS-230, and the University of New Mexico met with Delta Air Lines pilot training management and ALPA representatives in Atlanta. The FAA and Delta are interested in adapting the AAR-100 developed instructor calibration system from its focus on Line Oriented Evaluation assessment to include evaluations of technical maneuvers. One of the objectives of this research is to insure that the training performance data submitted to the FAA is reliable. This system will be available to all air carriers FY 2001. (E. Edens, AAR-100)
- **Air Carrier Training:** Human factors researchers from the University of Texas visited Singapore and gave six lectures covering Line Operations Safety Audit, Aviation Safety Action Partnership (ASAP), and the Threat and Error Management Model. The audience included Singapore Airlines senior management, the Civil Aviation Authority of Singapore, the Singapore Air Force and ALPA-Singapore. There was considerable enthusiasm for the programs and their adoption to the Singapore culture. The talks were also attended by other air carriers in the region and led to an invitation to do the same series for Malaysia in Kuala Lumpur. (E. Edens, AAR-100)
- **AGIE:** Researchers at the William J. Hughes Technical Center involved with the Air-Ground Integration Experiment (AGIE) are conducting their final organizational meeting to reach consensus on data display and reporting. The goal is to have a draft report out next month. Representatives from NASA and Volpe are also involved in this activity. (E. Stein, WJHTC)
- **Technical Information Exchange Meeting:** Representatives of the Aviation Security Human Factors Program (AAR-510) and the William J. Hughes Technical Center's Human Factors Branch (ACT-530) participated in a technical information exchange with the U.S. Army Human Research Engineering Directorate. Discussion topics included 3-D audio, cognitive engineering, stress measurement, job assessment software, task workload analysis software, advanced workload modeling tools, and high performance computing. A follow-on technical information interchange is scheduled for the early fall at the Technical Center. (G. Embrey-Brock, AAR-1)

- **Human Factors and Ergonomics Society Annual Meeting:** Scientists from CAMI participated in the Human Factors and Ergonomics Society's (HFES) Annual Meeting in San Diego, CA. Dr. Shappell served in the capacity of Colloquium Chairperson at the annual meeting and made a workshop presentation entitled "A Human Error Analysis of General Aviation Controlled Flight Into Terrain Accidents". Dr. Williams chaired a session at the

HFES Annual Meeting and made a presentation entitled "Impact of Aviation Highway-in-the Sky Displays on Pilot Situation Awareness." Dr. Beringer made a presentation entitled "Development of Highway-in-the-Sky Displays for Flight-Path Guidance: History, Performance Results, Guidelines". (S. Shappell, CAMI)

- **American Psychological Association Meeting:** Several presentations were made by CAMI personnel during the 108<sup>th</sup> annual conference of the American Psychological Association in Washington, DC. This included: Dr. Beringer "Review of Measures and Techniques used in the Assessment of Pilot Performance in Flight Simulations"; Dr. Manning "Methods of Assessing Performance in Air Traffic Control"; Dr. Shappell "Human Factors Approach to the Investigation and Analysis of Air Traffic Control and Flight Deck Incidents and Accidents (Dr. Pounds as co-author); Dr. Thompson "Correlates of Organizational Cynicism" and "Organizational Change: An Assessment of Cynicism and Trust"; Dr. Heil "Computerized Selection Tests: Investigating the Role of Prior Computer Experience"; Mr. Farmer "Latent Trait Theory Analysis of Changes in Item Response Anchors". Dr. Schroeder chaired one of the scientific sessions and served as secretary/treasurer during the executive committee meetings of the Division of Applied Experimental and Engineering Psychology. (D. Schroeder, CAMI)
- **Air Traffic Shift Work and Fatigue Study:** Researchers from CAMI and the William J. Hughes Technical Center participated in an initial site visit at the Houston Air Route Traffic Control Center (ARTCC) associated with the Congressional Shift Work and Fatigue Field Study. During the visit, they provided an overview briefing describing the Congressional appropriation for this line of research. Management and union personnel were extremely helpful in identifying space required for the conduct of the study and in providing scheduling information. There appears to be considerable initial interest on the part of the controller staff in participating in the study. (T. Nesthus, CAMI)
- **Employee Attitude Survey:** CAMI representatives participated in the final meeting with the AHR (Assistant Administrator for Human Resource Management) Core Compensation Evaluation Team in Washington, DC. They also conferred with AHR personnel regarding the Employee Attitude Survey. The EAS is scheduled for printing in August and distribution in September. (R. Thompson, CAMI)
- **Screening Readiness Test Cutoff Score Data Collection:** Representatives of the Aviation Security Human Factors Program (AAR-510) completed field data collection of new screener performance on the Screening Readiness Test (SRT). The SRT is a computer-based test in support of the proposed rule for Certification of Screening

Companies, which assesses screener mastery of initial x-ray training. The field data collection, which included more than 100 screeners from multiple U.S. airports, was completed at the end of June. Data analysis and a forthcoming report will be used to determine optimal screener performance scores prior to checkpoint duties. (G. Embrey-Brock, AAR-1)

- **Networked SRT:** Representatives of the Aviation Security Human Factors Program (AAR-510) developed a version of the SRT that will be available for administration via a secure Internet connection. The Networked SRT (NSRT) is a computer-based test in support of the proposed rule for Certification of Screening Companies, which assesses screener mastery of initial x-ray training. The NSRT is intended for use at more than 400 airports across the United States to further enhance civil aviation security. (G. Embrey-Brock, AAR-1)
- **Aviation Security:** Representatives of the Aviation Security Human Factors Program (AAR-510) met with a producer from the Discovery Channel and provided information about advanced technologies, interventions, and procedures in civil aviation security. The information will be used to plan an anticipated one-hour Discovery Channel program on aviation safety and security. (G. Embrey-Brock, AAR-1)
- **Process Improvement Generic Practices:** Representatives of the Aviation Security Human Factors Program (AAR-510) attended an overview and training presentation to familiarize the team with the FAA's integrated capability maturity model. This overview is the first step in the assessment of current processes and the demonstration of repeatable, planned, and tracked processes in aviation security human factors. (G. Embrey-Brock, AAR-1)
- **Strategic Implementation Plan Status:** Representatives of the Aviation Security Human Factors Program (AAR-510) participated in the FY 2000 third quarter status briefing for the Strategic Implementation Plan (SIP). The Human Factors Program has been working on 15 efforts and products included in the FY 2000 SIP. The current status was discussed with AAR-1 and AAR-2. A preview of key human factors efforts for FY 2001 was also presented. (G. Embrey-Brock, AAR-1)

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

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FAA (AAR-100)



**August 22-24, 2000-** 2<sup>nd</sup> Workshop on Risk Analysis and Safety Performance Measurement in Aviation, William J. Hughes Technical Center, Atlantic City, NJ <http://www.rci.rutgers.edu>

**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>

**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-** 13<sup>th</sup> 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-** 21<sup>st</sup> American Society of Engineering Management National Conference on Technical Management: Key to Enterprise Success in the 21<sup>st</sup> 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 30-November 1, 2000-** Aviation 2000 Exhibition and Conference, Omni Shoreham Hotel, Washington, DC <http://www.aviationtoday.com/aviation2000>

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

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

**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?  
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