



## ATOP-R&D

### Human Factors Newsletter # 05-09

May 6, 2005 – May 20, 2005

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**FAA Human Factors Job Announcement:** The Federal Aviation Administration is seeking applicants for a Scientific and Technical Advisor for Human Factors position at FAA Washington Headquarters Region, Air Traffic Organization, Operations Planning Service Unit, ATO-P. This position is located in the Director of Research & Development, Human Factors Research and Engineering office. The closing date for this announcement is July 1, 2005. Salary range is \$62,745 to \$118,648. The incumbent provides advice, expertise, and technical support on the planning, design, development, and conduct of a variety of human factors projects in support of the research, acquisition, and operation of air traffic control systems. The incumbent will be required to identify and assess existing or potential issues, risks, and solutions involving the human factors engineering aspects of air traffic control, plan evaluations and conduct analyses, collect and evaluate data, identify trends, and identify current or potential risks. The incumbent will also be required to identify alternative solutions and coordinate proposals with supervisors, managers, contractors, operating officials, and acquisition teams to resolve or mitigate human performance issues. A copy of the job announcement is attached to this newsletter. (G. Hewitt, ATO-P R&D)

**Technical Note:** William J. Hughes Technical Center personnel coauthored a paper to be presented at the Human Factors and Ergonomics conference later this year.

Giroto, S., Perez, A. M., Sethumadhavan, A., Bleckley, M. K., Durso, F. T., Truitt, T. R., Della Rocco, P., Manning, C. A., & Hunt, R. R. (August, 2005). *Toward Measuring Information Complexity: Reconstructive Information Complexity Index (RICI)*, American Psychological Association, Washington, DC.

Abstract: Modern industrial processes require increasingly complex displays to monitor and control those processes. Those displays, driven by high-speed computers and the desire to present all possibly relevant information to the user, may present too much information to the operator. At best, the additional information will be ignored, but at worst the additional information can make it difficult or impossible to find the right information at the right time. The Federal Aviation Administration (FAA) is interested in developing metrics for determining information complexity to apply to their new air traffic control (ATC) tools. In our view, information complexity does not depend uniquely on the environment. Because information is the result of interaction between the person and the environment, the metrics to be developed should not take into consideration only the display, but also the operator. In this study, we present two experiments to explore the viability of the Chase and Simon (1973) task as a measure of information complexity. In their research aimed at gaining a better understanding of expert chess players, Chase and Simon used a task in which chess players saw a particular configuration of pieces on the board for five seconds and then were asked to recall it. The view/recall sequence continued until the position was recalled perfectly.

*This research supports the Administrator's Flight Plan Goal for Increased Safety, Objective 7: Enhance the safety of FAA's air traffic systems.*

Point of Contact: E. Stein, WJHTC

**Technical Note:** William J. Hughes Technical Center personnel presented a paper at a Mini-Conference on Human Factors in Complex Socio-Technical Systems held at the Technical Center.

Ahlstrom, V., & Allendoerfer, K. (2005). *Human Factors Usability Study on a Prototype Portal*

Abstract: This paper describes the results of a human factors usability study conducted in 2004 on a prototype information portal. The portal was intended as an applications and content management system for Federal Aviation Administration employees and managers at the William J. Hughes Technical Center. The main focus of this study was to evaluate the organization and layout of the portal content. Six users representing a cross section of the target user population participated in the study. First, participants were asked to indicate their top ten most frequently used items from a list of the portal contents. Second, participants were given items of information and asked to find the item. They were asked to talk aloud while finding the item in the portal. The researchers recorded the path taken by the participants to find the information, the number of clicks it took to find the information, and comments made by the participants while performing the task. The results of this study identified high priority items

and items that were difficult to find in the tested organization. Recommendations were made to improve the usability of the portal based on the results and participant comments.

*This research supports the Administrator's Flight Plan Goal for Organizational Excellence, Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.*

Point of Contact: E. Stein, WJHTC

**Award:** Kenneth Allendoerfer was named one of two winners in the Emerging Technology-Graduate Student category at the 2005 Drexel University Research Day for his work on "PlayMaker: An Application of Case-Based Reasoning to Air Traffic Control Plays." Mr. Allendoerfer, in addition to his work as an engineering research psychologist at the William J. Hughes Technical Center, is a doctoral student in the Drexel College of Information Science and Technology. He conducts research on human-computer interaction, artificial intelligence, and information visualization. Drexel Research Day is an annual university event where students and faculty present their research and scholarly work. In the Emerging Technology-Graduate Student category, there were 99 posters presented from many disciplines across the university.

Allendoerfer, K.R., Weber, R. *Playmaker: An Application of Case-Based Reasoning to Air Traffic Control Plays*. Department of Information Science and Technology, College of Information Science and Technology, Drexel University

**Abstract:** When events such as severe weather or congestion interfere with the normal flow of air traffic, air traffic controllers may implement "plays" that reroute one or more traffic flows. Currently, plays are assessed and selected based on controllers' experience using the National Playbook, a collection of plays that have worked in the past. This paper introduces PlayMaker, a prototype using case-based reasoning (CBR) that replicates the Playbook and models how controllers select plays. CBR is an artificial intelligence method in which the system compares stored previous experiences, known as cases, to novel situations. To the extent that a stored case matches the novel situation, the solution used during the previous experience can be applied to the current situation. The CBR technique very closely matches the technique already used by controllers in selecting plays. This paper describes the PlayMaker design and presents a validation of the model in which its responses were compared to those of a human expert. In most situations, PlayMaker was able to make recommendations that would be deemed reasonable from a controller's perspective. In two situations, however, PlayMaker could not make a recommendation due to the complexity of the air traffic situation and the limitations of the prototype. The paper discusses improvements necessary for a full-scale CBR tool for this application, including ways to resolve these more difficult situations."

*This research supports the Administrator's Flight Plan Goal for Increased Safety, Objective 7: Enhance the safety of FAA's air traffic systems. This research also supports the Administrator's Flight Plan Goal for Organizational Excellence, Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, safer, diverse workforce.*

Point of Contact: E. Stein, WJHTC

**UAVs:** On May 25-26, Kevin Williams and Dennis Beringer will participate in the 2nd Annual Human Factors of Unmanned Aerial Vehicles (UAVs) Workshop in Mesa, AZ. The workshop brings together a variety of government, academic, and business participants interested in the transition of unmanned aircraft into the National Airspace System. Discussion issues include control interface standards, operator certification requirements, operator medical requirements, see-and-avoid equivalency, and a variety of other topics. The FAA is one of the sponsors of the workshop. *This research activity supports the Administrator's Flight Plan Goal for Increased Safety, Objective 2: Reduce the number of fatal accidents in general aviation.* (D. Schroeder, CAMI)

**DoD Research and Engineering Portal:** The Office of the Director, Defense Research and Engineering, and the Defense Technical Information Center (DTIC) are pleased to announce that the R&E Portal is now available to government employees and government contractors/grantees. Registered STINET users can access the portal at <https://rdte.osd.mil/>. New users can register at: <http://www.dtic.mil/dtic/registration/index.html>

A working research tool, the portal provides a centralized location for information about federally-funded R&D. It provides a taxonomy-based search capability across multiple databases to answer questions like what is the DoD doing in R&D, when will the work be completed, why is the work being done, and who is the point of contact for more information? For more information about the portal, point to: [mailto:rdte\\_help@dtic.mil](mailto:rdte_help@dtic.mil)

**Flight Symbology:** On May 3-4, 2005, Volpe National Transportation Systems Center researchers Divya Chandra and Michelle Yeh attended a meeting of the Society of Automotive Engineers (SAE) G-10 Committee for Aerospace Behavioral Engineering Technology, Aeronautical Charting Subcommittee in Montreal, Canada. Meeting attendees included representatives from the FAA, International Civil Aviation Organization, and industry. The Volpe researchers presented a review of two recent human factors studies related to the usability and comprehension of symbols that represent aeronautical navigation information on electronic displays. The Aeronautical Charting subcommittee is updating Aerospace Recommended Practice (ARP) 5289 on "Electronic Chart Symbols," which provides guidance to manufacturers on symbols for electronic aeronautical charts. The Subcommittee is especially interested in this research because of its potential implications during the recommendation and validation process. *This research supports the Administrator's Flight Plan Goal for Increased Safety, Objective 1: Reduce the commercial fatal accident rate.* (D. Chandra and M. Yeh, VNTSC)

### **Electronic Flight Bags (EFB)**

- Volpe researchers Michelle Yeh and Divya Chandra published a technical report titled *Electronic Flight Bag (EFB): 2005 Industry Review* (DOT-VNTSC-FAA-05-06). The report will soon be available at the Volpe EFB website, [www.volpe.dot.gov/opsad/efb](http://www.volpe.dot.gov/opsad/efb). EFBs are electronic information management devices for use by pilots in performing flight tasks. Development of EFBs has accelerated rapidly in the past few years. Today, EFBs are in use during operations at many airlines both in the United States and in Europe. The EFB industry review provides a primer on who is involved in the EFB industry and describes their efforts. The document also provides information about EFB systems, software and hardware currently on the market or in active development. (D. Chandra and M. Yeh, VNTSC)

Abstract: The Electronic Flight Bag (EFB) market has accelerated rapidly in the past few years. The purpose of this industry review is to provide a primer on who is involved in the industry and what their efforts are. This informal summary of EFB technology provides a picture of the current state of EFB development as of February, 2005. It is an update to a 2003 EFB industry review (see Appendix A of Chandra, Yeh, Riley, and Mangold (2003)). This review provides information about EFB systems, software/content, and hardware that are currently on the market or in active development. The material was gathered through industry contacts, demonstrations, websites, brochures, and trade journal reports. For each product, the manufacturer's website is provided where more recent information can be found. *This research supports the Administrator's Flight Plan Goal for Increased Safety, Objective 1: Reduce the commercial fatal accident rate.*

- On May 3, 2005, Volpe researcher Divya Chandra met with International Civil Aviation Organization (ICAO) representatives regarding the EFB project. She provided an overview of Volpe's EFB research program to Captain Dan Maurino, ICAO's Director of Flight Safety and Human Factors Programme, and to Colleen Donovan (FAA), who is currently on detail to ICAO. The focus of the EFB project is to develop tools that FAA Aircraft Certification and Flight Standards can use for human factors evaluations. ICAO is interested in Volpe's EFB research as it is beginning to develop international recommendations for EFB human factors evaluations. *This research supports the Administrator's Flight Plan Goal for Increased Safety, Objective 1: Reduce the commercial fatal accident rate. This research also supports the Administrator's Flight Plan Goal for International Leadership, Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.* (D. Chandra, VNTSC)

**En Route Automation Management (ERAM):** William J. Hughes Technical Center personnel from the NAS Human Factors Group attended a May 16, 2005 briefing and demonstration of the En Route Automation Management (ERAM) display system at Lockheed Martin Transportation and Security Solutions, Rockville, MD. They collected requirements documents, examined displays, and met with personnel from the ERAM program office and the Air Traffic Design System Replacement Evolution Team. Topics of discussion involved use of the ERAM interface as a baseline for comparison with the Future En route Workstation, development of display system metrics for the ERAM operational test and evaluation, and the possible use of simulation to evaluate the ERAM interface for operational effectiveness. *This research supports the Administrator's Flight Plan Goal for Greater Capacity, Objective 3: Increase on-time performance of scheduled carriers.* (M. McAnulty, A. Clark, WJHTC)

**Laboratory Tour:** On May 16, 2005, William J. Hughes Technical Center personnel conducted a briefing and tour for members of AeroThai (Aeronautical Radio of Thailand) concerning current human factors research. AeroThai provides air traffic services for Thailand. Weather displays in terminal airspace, virtual reality, and the Future En Route Workstation concept were discussed. *This activity supports the Administrator's Flight Plan Goal for International Leadership: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.* (E. Stein, A. Clark, WJHTC)

**Aerospace Medicine:** CAMI researchers participated in the 76<sup>th</sup> Annual Scientific Meeting of the Aerospace Medical Association, Kansas City, MO. The Association's annual scientific meeting provides a multi-faceted forum for all aerospace medical disciplines and concurrently provides continuing education credits for those attending the meeting. Lectures, seminars, panels, poster presentations, workshops, and technical and scientific exhibits present data on the latest results of clinical and research studies. The meeting brings together a diverse group of specialists - clinical health care directors, physicians, scientists, and nurses from the armed services, civil and military aviation, academia, and industry, plus many private practitioners in all clinical specialties. There is also international representation among both program participants and attendees. CAMI representatives chaired several scientific sessions, presented one workshop prior to the meeting, and authored/co-authored 13 papers that were presented during the meeting. Scott Shappell served as chair of the Scientific Program Committee for the meeting.

- N. Milburn conducted a workshop entitled “Introduction to Biostatistical Methods”
- Bailey, L., and Xing, J. *How Could I Forget What I Didn't Know? Information Processing Disrupters of ATC Intra-team Coordination.*
- Boquet, A., Detwiler, C., Wiegmann, D., Roberts, C., Jack, D., and Shappell, S.A. *An HFACS Analysis of Maintenance-Related General Aviation Accidents.*
- Cruz, C., Schroeder, D., and Boquet, A. *The Relationship of Age and Shiftwork to Sleep, Fatigue, and Coping Strategies in Air Traffic Controllers.*
- Detwiler, C., Boquet, A.J., Wiegmann, D., and Shappell, S. *A Human Error Analysis of General and Commercial Air Tour Accidents.*
- Hackworth, C., Cruz, C.E., Goldman, S.M., Jack, D.G., King, S., and Twohig, P. *Employee Attitudes within the Federal Aviation Administration.*
- King, R. *Update on the Selection of FAA Air Traffic Control Specialists.*
- Manning, C., and Pfleiderer, E. *Relationship of Sector Activity and Sector Complexity to Air Traffic Controller Task Load.*
- Nesthus, T., Dattel, A.R., and Holcomb, K. *Test Battery Performance Changes Associated with Age, Shift Schedule, and Quick-turn Rotations for a Sample of Air Traffic Control Specialists.*
- Pfleiderer, E. *Relationship of the Aircraft Mix Index with Controller Complexity Ratings.*
- Schroeder, D., Cruz, C., and Nesthus, T. *Age and Well-Being in Air Traffic Controllers.*
- Scarborough, F., Bailey, L., and Pounds, J. *Classifying ATC Operational Errors Using the Human Factors Analysis and Classification System (HFACS).*
- Wiegmann, D., and Shappell, S.A. *The Human Factors Analysis and Classification System: Historical Overview and Content Review.*

- Xing, J., and Schroeder, D. *Color Use in Current Air Traffic Control Displays and the Associated Cognitive Factors*.

*This research supports the Administrator's Flight Plan Goals for Increased Safety and Organizational Excellence.*

Point of Contact: D. Schroeder, CAMI

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

Paul Krois  
FAA (ATO-P R&D Human Factors)



**May 23-24, 2005** – PROP Europe 2005, Frankfurt, Germany  
<http://www.turbineair.com/prop.html>

**May 23-26, 2005** – DoD TAG (Human Factors Engineering Technical Advisory Group), Marriott Bay Point Resort Golf and Yacht Club, Panama City, FL  
<http://hfetag.dtic.mil/meetschl.html>

**May 25-26, 2005** – Military Aviation Repair & Maintenance 2005, One Whitehall Place, London, UK <http://www.iqpc.co.uk/GB-2361/1010>

**May 26-29, 2005** – American Psychological Society 17<sup>th</sup> Annual Convention, Westin Century Plaza Hotel, Los Angeles, CA <http://www.psychologicalscience.org/convention/>

**June 2005** – 6<sup>th</sup> USA/Europe ATM Seminar, Baltimore, MD (note: call for papers deadline is January 28, 2005) <http://atmseminar.eurocontrol.fr/>

**June 4, 2005** – AOPA Fly-in and Open House, Frederick, MD <http://www.aopa.org/>

**June 7-9, 2005** - Europe-US International Safety Conference, Cologne, Germany, hosted by the FAA and JAA <http://www.easa.eu.int/conference2005/>.

*June 12-15, 2005 – The American Society of Safety Engineers Safety 2005 Conference, Ernest Morial Convention Center, New Orleans, LA <http://www.asse.org/>*

**June 13-19, 2005** - Paris Air Show 2005, Parc des expositions de Paris Nord - Le Bourget, 93350, France. [www.paris-air-show.com](http://www.paris-air-show.com)

**June 20-22, 2005** – 3<sup>rd</sup> Human System Integration Symposium, Sheraton National Hotel, Arlington, VA <http://www.navalengineers.org/Events/HSIS2005/HSIS05Index.html>

**June 21-23, 2005** - Center of Excellence for General Aviation, Research Annual Meeting, University of Alaska, Fairbanks, AK. [www.cgar.org](http://www.cgar.org).

**June 27-30, 2005** – TRB 3<sup>rd</sup> International Driving Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design, Rockport, Maine

**June 28-30, 2005** – AAMI Human Factors, Ergonomics, and Patient Safety for Medical Devices, Capital Hilton, Washington, DC <http://www.aami.org/meetings/hf/>

**June 28-30, 2005** – Airport 2025 Conference, Washington, DC [www.sskies.org](http://www.sskies.org)

**July 22-28, 2005** – HCI International 2005, 11<sup>th</sup> International Conference on Human-Computer Interaction, Caesars Palace, Las Vegas, NV [hci2005@ecn.purdue.edu](mailto:hci2005@ecn.purdue.edu)

**July 25-31, 2005** – EAA AirVenture Oshkosh 2005, Oshkosh, WI <http://www.airventure.org>

**August 15-18, 2005** - 43rd AIAA Aerospace Sciences Meeting and Exhibit, Hyatt Regency San Francisco at Embarcadero Center, San Francisco, CA <http://www.aiaa.org/>

**August 18-21, 2005** - 113<sup>th</sup> Convention of the American Psychological Association, Wash, DC <http://www.apa.org/convention>

**August 22-26, 2005** – SAE G-10 (Behavioral Engineering Technology Committee Meeting, Washington, DC [http://forums.sae.org/access/dispatch.cgi/TEAG10\\_pf](http://forums.sae.org/access/dispatch.cgi/TEAG10_pf)

**September 12-16, 2005** – Interact 2005, Tenth IFIP TC13 International Conference on Human-Computer Interaction, Rome, Italy <http://www.interact2005.org/>

*September 15-18, 2005 - Conjoint Meeting of the Australasian Society of Aerospace Medicine and the Asia Pacific Federation of Aerospace Medical Association, Gold Coast, Queensland, Australia. [www.asam.org.au](http://www.asam.org.au).*

**September 19-23, 2005** – ANA 2005 Aviation Conference and Exhibition, Connecticut Convention Center, Hartford. CN <http://www.aerospace-na.com/ace2005.asp>

**September 20-21, 2005** - R,E&D Advisory Committee Meeting (joint meeting with NASA's Aerospace Research Advisory Committee), Bessie Coleman Auditorium, FAA Headquarters, Wash., DC [Gloria.dunderman@faa.gov](mailto:Gloria.dunderman@faa.gov)

**September 21-23, 2005** - Cargo Facts 2005- 11th Annual Aircraft Symposium, Sheraton Hotel & Towers, Seattle, Washington [ashoemaker@cargofacts.com](mailto:ashoemaker@cargofacts.com)

**September 25-28, 2005** - 11th Ka and Broadband Communications Conference and 23rd AIAA International Communications Satellite Systems Conference 2005 (organized by IIC), Aurelia Convention Center, Rome, Italy <http://www.aiaa.org/>

**September 26-28, 2005** - AIAA 5th Aviation, Technology, Integration, and Operations Forum (ATIO), Hyatt Regency Crystal City, Arlington, VA <http://www.aiaa.org/>

**September 26-28, 2005** - AIAA 2nd Intelligent Systems Conference (IS), Hyatt Regency Crystal City, Arlington, VA <http://www.aiaa.org/>

**September 26-30, 2005** – Human Factors and Ergonomics Society 49<sup>th</sup> Annual Meeting, Royal Pacific Resort at Universal Orlando, Orlando, FL <http://hfes.org/meetings/menu.html>

**October 3-6, 2005** – SAE 2005 AeroTech Congress and Exhibition, Gaylord Texan Resort and Convention Center, Dallas/Fort Worth Airport Area, Texas  
<http://www.sae.org/events/conferences/aerospace/>

**October 6-9, 2005** – Aviation North Expo Conference, Fairbanks Princess Riverside Lodge, Fairbanks, AK [www.AviationNorth.org](http://www.AviationNorth.org)

**October 24-25, 2005** – National Academies Institute of Medicine Annual Meeting, National Academy of Sciences, Washington, DC <http://wwwsearch.nationalacademies.org/>

**October 24-26, 2005** – 43<sup>rd</sup> SAFE Symposium, Grand America Hotel, Salt Lake City, UT  
<http://www.safeassociation.org/symposium.htm>

**October 30-November 7, 2005** – ATCA 50<sup>th</sup> Annual Conference and Exposition, Dallas, TX  
[http://www.atca.org/event\\_items.asp](http://www.atca.org/event_items.asp).

**October 30—November 3, 2005** – 24<sup>th</sup> Digital Avionics Systems Conference, Hyatt Regency Crystal City, Wash., DC <http://www.dasconline.org>

**November, 2005** – DoD TAG (Human Factors Engineering Technical Advisory Group) Meeting, Baltimore, MD <http://hfetag.dtic.mil/meetschl.html>

**November 3-5, 2005** - AOPA Expo, Tampa, Florida [www.aopa.org](http://www.aopa.org)

**November 6-9, 2005** - ACI World / Pacific Conference and Exhibition, Auckland, New Zealand.  
[www.auckland-airport.co.nz](http://www.auckland-airport.co.nz)

**November 7-10, 2005** – Flight Safety Foundation 58<sup>th</sup> Annual International Air Safety Seminar, Moscow, Russia [http://www.flightsafety.org/iass05\\_cfp.html](http://www.flightsafety.org/iass05_cfp.html)

**November 8-10, 2005** – Aerospace Testing Expo, North America: Scientific Conference and Technology Forum, Long Beach Convention Center, Long Beach, CA  
<http://www.aerospacetesting-expo.com/northamerica/conf+forum.html>

**November 10, 2005** - 34th Annual Meeting of the Society for Computers in Psychology, Toronto, Ontario, Canada <http://www.scip.ws>

**November 10 - 13, 2005** - 46th Psychonomic Society Annual Meeting, Toronto, Ontario, Canada <http://www.psychonomic.org/meet.htm>

**November 15-17, 2005** - National Business Aviation Association's 58th Annual Meeting & Convention, New Orleans, LA [www.nbaa.org](http://www.nbaa.org)

**November 16-17, 2005** – IEE Human Factors Engineering Professional Network/MoD Human Factors Integration Defense Technology Center “People and Systems Symposium: Who Are We Designing For?”, Grange City Hotel London, UK <http://conferences.iee.org/pas2005>

**January 9-12, 2006** - 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno Hilton, Reno, NV <http://www.aiaa.org/>

**January 22-26, 2006** – TRB 85<sup>th</sup> Annual Meeting, Washington, DC <http://trb.org/calendar/>

**March 22 - 25, 2006** - Society for Behavioral Medicine Annual Meeting and Scientific Sessions, San Francisco, CA [www.sbm.org/annualmeeting/index.html](http://www.sbm.org/annualmeeting/index.html)

**March 23-25, 2006** - 17th Annual International Women in Aviation Conference, Opryland Hotel Nashville, TN <http://www.wai.org/>

**April 4-10, 2006** – Sun ‘n Fun, Lakeland, FL <http://www.sun-n-fun.org/content/>

**May 1-4, 2006** - 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference; 14th AIAA/ASME/AHS Adaptive Structures Conference; 7th AIAA Gossamer Spacecraft Forum; 2nd AIAA Multidisciplinary Design Optimization Specialist Conference; 1st AIAA Non-Deterministic Approaches Conference, Hyatt Regency Newport, Newport, RI <http://www.aiaa.org/>

**May 14-18, 2006** - 77<sup>th</sup> Annual Scientific Meeting of the Aerospace Medical Association, Caribe Royale Hotel, Orlando, FL <http://www.asma.org/>

**May 25-28, 2006** – American Psychological Society 18<sup>th</sup> Annual Convention, New York Marriott Marquis, New York City, NY <http://www.psychologicalscience.org/convention/>

*June 11-14, 2006 – The American Society of Safety Engineers Safety 2006 Conference, Washington State Convention and Trade Center, Seattle, WA*  
<http://www.asse.org/2006pdcallforpapers.pdf>

**July, 2006** - 26th International Congress of Applied Psychology, Athens, Greece  
[dgeorgas@dp.uoa.gr](mailto:dgeorgas@dp.uoa.gr) ,  
[http://www.erasmus.gr/dynamic/conventions.asp?conv\\_id=21r/dynamic/conventions.asp?conv\\_id=21](http://www.erasmus.gr/dynamic/conventions.asp?conv_id=21r/dynamic/conventions.asp?conv_id=21)

**July 24-30, 2006** – EAA AirVenture, Oshkosh, WI <http://www.airventure.org/>

**August 10-13, 2006** – American Psychological Association Annual Meeting, New Orleans, LA  
<http://www.apa.org/convention05/future.html>

*September 10-14, 2006 - 54th International Congress of Aviation and Space Medicine, Bangalore, India. A preliminary registration form may be found at <http://www.isam-india.org/conference44/newreg.php>.*

**October 23-25, 2006** – 44<sup>th</sup> Annual SAFE Symposium, Reno Hilton Hotel, Reno, NV  
<http://www.safeassociation.org/symposium.htm>

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



Comments or questions regarding this newsletter?  
Please contact Bill Berger at (334) 271-2928  
or via e-mail at [bill.ctr.berger@faa.gov](mailto:bill.ctr.berger@faa.gov)



## **AMENDMENT**

This Document Produced on 05/31/05

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**Department of Transportation  
Federal Aviation Administration  
External Vacancy Announcement  
Vacancy Announcement Number: AWA-TOP-05-PGB1106-  
78812M**

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**Open Date:** May 26,2005  
**Close Date:** Jul 01,2005

**Position:** Scientific & Technical Advisor for Human Factors,FV-0101-I or J, Job Category:Technical

**Salary Range:** \$62,745 to \$118,648

**Duty Location(s):** Washington, District of Columbia

**Organization Location:** FAA Washington Headquarters Region, Air Traffic Organization, Operations Planning Service Unit ,ATO-P

**PCS:** No PCS Expenses will be paid.

**Area of Consideration:** All Sources

**Duties:** This position is located in the Director of Research & Development, Human Factors Research and Engineering office. The incumbent provides advice, expertise, and technical support on the planning, design, development, and conduct of a variety of human factors projects in support of the research, acquisition, and operation of air traffic control systems. The incumbent will be required to identify and assess existing or potential issues, risks, and solutions involving the human factors engineering aspects of air traffic control, plan evaluations and conduct analyses, collect and evaluate data, identify trends, and identify current or potential risks. The incumbent will also be required to identify alternative solutions and coordinate proposals with supervisors, managers, contractors, operating officials, and acquisition teams to resolve or mitigate human performance issues.\* The level of supervision is less for the J band.

**Amendment Date:** May 26,2005

**Amendment Note:** AMENDS THE CLOSING DATE TO: 07/01/05.

**Notes:** 1. Salary listed above does include the 15.98% locality pay for the Washington, DC area. 2. This announcement may be used to fill other similar positions within the Air Traffic Organization (ATO) subject to the approval of the Personnel Services Division. 3. All, some, or none of the applicants may be interviewed.

**NOTE:** It is preferred, but not required that all candidates possess an advanced degree in the field of human factors, experimental psychology, industrial psychology, industrial engineering, ergonomics or related field.

**QUALIFICATION REQUIREMENTS:** BASIC REQUIREMENTS: A. Degree: Behavioral or Social Science; or related disciplines appropriate to the position. OR B. Combination of education and experience - four years of appropriate experience, or a combination of education and experience which provides applicants with knowledge of one or more of the behavioral or social sciences equivalent to a major in the field. OR C. Four years of appropriate experience which demonstrates that the applicant has acquired knowledge of one or more of the behavioral or social sciences equivalent to a major in the field. In addition, all applicants must demonstrate one year of specialized experience equivalent to the next lower grade in the Federal government. SPECIALIZED EXPERIENCE is experience which is in or directly related to the line of work of the position to be filled and which has equipped the applicant with the particular knowledge, skills, and abilities to successfully perform the duties of the position. To be creditable, specialized experience must have been equivalent to the next lower grade in the normal line of progression for the occupation in the organization.

**Evaluation criteria:** Eligible candidates may be ranked based on the knowledge, skills, abilities, and other characteristics (KSAO's), described below.

**1.Knowledge, Skills and Abilities(KSA'S):** 1. Ability to apply human factors, human engineering, or ergonomics science, specifications, and best practices to the design and conduct of applied human factors engineering or applied research related to systems, procedures, and job design. 2. Skill in managing (i.e., planning, coordinating, developing, executing, and sustaining) civil aviation-related human factors research, acquisition, or engineering support projects including identifying requirements, developing plans and analyses, coordinating with sponsors, defending budgets, establishing cooperative and leveraged projects, and disseminating results. 3. Experience in aviation systems and operations, especially civil aviation.

**Excepted Service:** The FAA is an excepted service agency. Basic Federal employee benefits remain the same as other Federal agencies.

FAA's CORE COMPENSATION PLAN This position is covered by the FAA Core Compensation plan. Additional information about core compensation is available [here](#).

**HOW TO APPLY:**

**FAA Form 3330.42** "Request for Promotion Consideration and Acknowledgement" FAA Form 3330.42 should be completed and placed on top of the application package. This form is used to notify applicants of the status of their application.

**Documentation for Veterans Preference** Documentation showing entitlement to veteran's preference, e.g., copy of honorable discharge, DD-214. Applicants claiming ten-point veteran's preference (i.e., disability, widow, or mother preference) must submit Standard Form 15 with documentary proof. (Do not submit original documents.)

**Identification Form (Optional)** A completed SF-181, Race and National Origin Identification Form.

**The Application Package:** Your Application for Federal Employment, SF-171 (6/88 or later edition); Optional Application for Federal Employment, OF-612; or any written application must contain your name, mailing address, phone number, social security number, country of citizenship, and veterans preference. In addition, it must contain information about your current position, education (high school, colleges, or universities), other work experiences, and any other qualifications you may possess. Basic eligibility for the position will be determined from your application package which must be complete and up-to-date.

On a separate sheet of bond paper, you may provide additional information regarding your possession of the KSAO's for this position. (Optional - Not required, however, it provides applicants the opportunity to describe portions of their experience, training, education, etc., which are directly related to the KSAO.) The information will be used for ranking of applicants after basic eligibility is determined. For each KSAO listed above, provide the following information: 1) Work Experience: Describe the tasks you have performed which demonstrate the KSAO, giving the dates, places, and positions where you did this. 2) Education, Training and/or Awards: Describe training, education, and/or awards you have received which demonstrate the KSAO, including the dates you received the training, education, and/or awards. 3) Other Information: Such as volunteer experience, hobbies, etc., which demonstrates the KSAO, giving the dates and places where you did this.

**WHERE TO SEND APPLICATIONS:** Federal Aviation Administration Personnel Services Division, AHP-200 Room 523 800 Independence Avenue, S.W. Washington, D.C. 20591

**Applications may be faxed to:** Applications may be faxed to either (202) 267-7032 (local) or 1 (866)-291-3009 (toll free). We will not be able to accept faxed applications to any other FAA fax numbers. PLEASE LIMIT YOUR FAX TO A MAXIMUM OF 20 PAGES. YOU ONLY NEED TO SUBMIT THOSE ITEMS REQUIRED ON THE ANNOUNCEMENT. DO NOT FAX ITEMS SUCH AS POSITION DESCRIPTIONS, TRAINING CERTIFICATES, PERFORMANCE APPRAISALS AND OTHER SIMILAR DOCUMENTS. ALL FAXED APPLICATIONS MUST BE RECEIVED NO LATER THAN THE CLOSE OF BUSINESS (5 P.M. EASTERN TIME) ON THE CLOSING DATE OF THE ANNOUNCEMENT. Because we cannot guarantee timely receipt and assume responsibility for the quality or legibility of the faxes, illegible applications will result in loss of consideration. Be sure to list your name, social security number and vacancy announcement number on each page of your submission.

**Receipt of Applications:** All applications must be received by the closing date of this announcement.

**Hand Delivery of Applications** Applications may be hand-delivered to Room 523.

**For additional information:** Please call (202) 267-8012.

**Contact Information:** Pamela Bennett (202) 267-7407

**Financial Disclosure** The person selected for this position may be required to file a financial disclosure statement within 30 days of entry on duty. FAA policy limits certain outside employment and financial investments in aviation-related companies.

**Privacy Act Requirements:** Collection of personal identification data is authorized under the Privacy Act (P.L. 93-579).

**Equal Employment and Reasonable Accommodation:** The FAA does not discriminate on the basis of political affiliation, race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or any other characteristics not bearing on job performance. On an individual case basis, this agency also makes reasonable accommodations for applicants with disabilities. If you need accommodation in any part of the application or hiring process, please notify the agency contact listed elsewhere in this announcement.

**Prohibition on Personal Use of Government Postage-Paid Envelopes:** Use of postage-paid Government envelopes to file job applications is a violation of Federal laws and regulations. Applications submitted in postage-paid Government envelopes will not be considered.

**FAA vacancy information and certain application forms are now available on the FAA's World Wide Web site at: <http://jobs.faa.gov> or by calling our Faxback system at (405)954-0250.**

**Non-citizens** We are not accepting applications from non-citizens.

What [resume](#) must contain is detailed here.

The following [forms](#) are electronically attached for your convenience:

[OF-612](#) :Application for Employment

[OF-510](#) :Applying for a Federal Job

[OF-306](#) :Declaration for Federal Employment

[FAA-3330-42](#) :Request for Promotion Consideration & Acknowledgement