

**Department of Defense  
Human Factors Engineering  
Technical Advisory Group  
Meeting 51**



**10-13 May 2004**

**Host:  
Federal Aviation Administration**

**Trump Taj Mahal  
Atlantic City, NJ**

## **Meeting Theme**

# **HUMAN FACTORS IN NATIONAL AIRSPACE SYSTEM MODERNIZATION**

In order to meet projected increases in air traffic in a safe and efficient manner, new technologies and associated procedures are being developed and integrated into the National Airspace System (NAS). Communication, navigation, surveillance, and air traffic management capabilities are all being impacted by the introduction and integration of new technologies, automation platforms, and decision support tools. Critical to realizing the intended benefit of the new capabilities is the adequate addressal of human factors considerations.

The focus of the meeting is to highlight human factors considerations in NAS modernization, with special emphasis on those areas which have implications for both the DoD and civilian communities, for example Standard Terminal Automation Replacement System (STARS).

# PROGRAM SUMMARY

**Department of Defense  
Human Factors Engineering Technical Advisory Group  
Meeting 51: 10 – 13 May 2004, Atlantic City, NJ**

## **Monday, 10 May**

0800 - 1000	Executive Committee meeting
1000 - 1100	New member orientation
1100 - 1300	Luncheon Break
1300 - 1700	Plenary Session
1715 - 1800	User Utilization Interest Group
1800 - 2000	Mixer

## **Tuesday, 11 May**

0730 - 0830	Technical Society/Industry
0830 - 1100	Human Factors Test and Evaluation
0830 - 1100	Sustained Continuous Operations
0930 - 1000	Networking, coffee
1100 - 1230	Luncheon Break
1230 - 1430	Human Factors Standardization
1230 - 1700	Human Factors in Training Interest Group
1430 - 1500	Networking, coffee
1500 - 1700	Human Factors in Extreme Environments
1500 - 1700	Human Factors in Operation Medicine
1715 - 1830	Service Caucuses and TS/I Meeting

## **Wednesday, 12 May**

0830 - 1100	Human Modeling and Simulation
0830 - 1100	Personnel Selection
0830 - 1100	Human Factors Engineering/Human Systems Integration: Management and Applications
0930 - 1000	Networking, coffee
1100 - 1230	Luncheon Break
1230 - 1430	Design: Tools and Techniques
1230 - 1430	User-Computer Interaction
1230 - 1430	System Safety/Health Hazards/Survivability
1430 - 1500	Networking, coffee
1500 - 1700	Operating Board
1800 - 2200	Social

## **Thursday, 13 May**

0830 - 1230	Tour of the FAA William J. Hughes Technical Center
1230	Meeting Adjournment

The Workload subTAG and Controls and Displays subTAG are not meeting at TAG-51.

# SESSIONS

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## MONDAY, 10 MAY

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**Executive Committee – 0800 – 1000**

**New Member Orientation – 1000 – 1100**

**Plenary – 1300 – 1700 Diamond A/B Ballrooms**

- 1:00 - Opening Remarks and TAG Business - Dr. Jay Miller
- 1:00 – Welcome and Overview of FAA William J. Hughes Technical Center - Dr. Anne Harlan, Director, William J. Hughes Technical Center
- 1:15 - First Annual International Conference on Augmented Cognition - LCDR Dylan Schmorrow, PhD, Defense Advanced Research Projects Agency
- 1:20 - HSIAC Update – Dr. Kristen Liggett, Air Force Research Laboratory
- 1:30 - FAA Air Traffic Human Factors Research Program Overview - Mr. Dino Piccione, Air Traffic and Airway Facilities Human Factors Research Program Manager, Human Factors Research and Engineering Division, Federal Aviation Administration
- 2:00 - Human Factors in the Standard Terminal Automation System - Dr. Mike McNulty and Mr. Kenneth Allendoerfer, Acquisition Human Factors Team, NAS Human Factors Group, FAA William J. Hughes Technical Center
- 2:30 - Human Factors in the Design and Development of an Air Traffic Management Tool - Dr. Richard Lanier, NASA Ames
- 3:00 - Break
- 3:30 - Transportation Security Administration Human Factors Research and Development Program Overview - Mr. Michael Snyder, Engineering Research Psychologist, Human Factors Research and Development, Transportation Security Laboratory
- 4:00 - Military, Commercial, and General Aviation: Have We Invented New Ways to Crash Planes? - Dr. Scott Shappell, Manager Human Factors Research Branch, Civil Aerospace Medical Laboratory, Federal Aviation Administration
- 4:30 - Warfighter Training Research: From the Test Bed to Operations - Major Heather Pringle, PhD, Chief Warfighter Training Systems and Performance Branch, AFMC
- 5:00 - Adjourn

**User Utilization Interest Group – 1700 – 1800 Diamond A/B Ballrooms**

**TAG Mixer – 1800 – 2000 TAG Hospitality Suite**

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## TUESDAY, 11 MAY

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**Technical Society/Industry – 0730 – 0830**

- Advanced Decision Architectures (ADA) Collaborative Technology Alliance (CTA) Progress & Plans - Sue Archer, Micro Analysis & Design

This talk will describe the work being conducted by the Advanced Decision Architectures (ADA) Collaborative Technology Alliance (CTA). The ADA CTA is a multi-disciplinary enterprise, sponsored by the Army Research Laboratory (ARL). The CTA consists of 11 industry and university partners whom are charged with conducting basic research in cognitive and computer science for the Army. In this effort, we are asking our best cognitive engineers and human performance modelers to help us conceptualize, capture in computational models, and reflect the results in a user centered approach to system design. We are asking our best computer scientists to place themselves in the network centric environment of the future force and develop fusion algorithms and knowledge engineering to help the decision maker makes sense out of everything happening in the area of operations.

### **Human Factors Test and Evaluation – 0830 – 1100**

- Application of Human Performance Measures and Data Collection Methodologies for the Littoral Warfare Environment - Mr. John Winters, Human Factors Engineer, Basic Commerce and Industries (BCI)
- Human Factors Engineering Efforts on the Family of Medium Tactical Vehicles (FMTV) with Armored Cab - Ms. Katrina Baker, Human Factors Engineer, US Army Aberdeen Test Center (ATC), Aberdeen Proving Ground, MD
- Verifying Anthropometric Accommodation - Dr. Cate Harrison, Engineering Research Psychologist, Anthropometry and Design (CARD) Lab AFRL/HEPA, Wright Patterson AFB, OH
- Progress Report: HSI in T & E Working Group - Mr. Paul Tennant, Deputy Director, Future Force Office and Chief, Virtual Proving Ground Team, Aberdeen Test Center, US Army Aberdeen Proving Ground, MD

### **Sustained/Continuous Operations – 0830 – 1100**

- ~~Pharmacological Interventions for SUSOPS: What do we know and what do we need to know? David F. Dinges, Ph.D., Professor of Psychology in Psychiatry, Chief, Division of Sleep and Chronobiology, Director, Unit for Experimental Psychiatry, University of Pennsylvania School of Medicine, Philadelphia, PA~~
- The Legal and Legislative Aspects of Driver Fatigue - Darrel Droblich, Senior Director, Government and Transportation Affairs, National Sleep Foundation, Washington, DC
- Crew Endurance Management in the Bering Sea: A Systems Approach - Carlos Comperatore, Ph.D., Pik Kwan Rivera, and Antonio Carvalhais, Ph.D. USCG Research and Development Center, Groton, CT
- HFE TAG Business
  1. Old Business
  2. New Business
  3. E-newsletter
  4. Hot Issues

### **Human Factors Standardization – 1230 – 1430**

- Introduction of Attendees
- Status Reports
  - MIL-STD-1472 (Human Engineering)
  - MIL-STD-1787 (Aircraft Display Symbolology)
  - Joint Service Specification Guide-2010
  - NASA MSIS
  - EIA HEB-1 (Human Engineering Principles and Practices)
  - HFES & ISO TC 159 (Ergonomics)
  - Data Item Descriptions
  - Index of Government Standards
- Weight Lifting Limits & Strength Data

- Plain Language
- Election of Chair Select – November Meeting
- New Business

### **Human Factors in Training Interest Group – 1230 – 1700**

- 1230-1300 - After Action Review Challenges for Dismounted Soldiers - Bruce W. Knerr & Donald R. Lampton, U.S. Army Research Institute for the Behavioral and Social Sciences
- 1305-1330 - After Action Review Challenges with Networked Command and Control Systems - John Barnett and Larry Meliza, U.S. Army Research Institute for the Behavioral and Social Sciences
- 1330-1345 – Break
- 1345-1405 - Cognitive Demands of Warfighter Analysis and Readiness System for Mission Unit-Level and Package-Level Planning/Briefing (WARM-UP) - Anna Castillo, AFRL/HEA, Warfighter Training Research Division
- 1405-1430 - A CRM Debriefing Tool for Cheyenne Mountain Operations Center Crews - Bob Nullmeyer, AFRL/HEA Research Division Warfighter Training
- 1430-1500 – Break
- 1500 – 1600 - The Research, Development, and Acquisition of Instructional Technologies for Navy Aviation Distributed Simulation-Based Training - NAVAIR Orlando Training Systems Division
  - Debriefing Distributed Simulation Based Exercises (DDSBE) - Joan H. Johnson
  - Tactical Warfare Instructional Support Environment (TacWise) - Paul Radke
  - Common Distributed Mission Training Station (C-DMTS) - Melissa M. Walwanis Nelson
  - The Combined Arms Command and Control Training Upgrade System (CACCTUS) - Robert Allen
  - Navy Aviation Simulation Master Plan (NASMP) - Danielle Merket
- 1600-1700 (possible follow on discussions over snacks) - Brief/Debrief IPT Working Group Discussion - All government representatives welcome

### **Human Factors in Extreme Environments – 1500 – 1700**

- Work Performance and Altitude Illness Aspects of Military Operations in High Mountainous Regions - Dr. Stephen Muza, U.S. Army Research Institute of Environmental Medicine (USARIEM), Natick, MA
- Human Factors of the High G Environment on Spatial Disorientation" by Dr. Bill Albery, Air Force Research Lab, Wright Patterson AFB, OH
- Human Performance Upgrades on the MK-V High Speed SEAL Insertion Craft - Eric Pierce, Naval Surface Warfare Center, Panama City, FL

### **Human Factors in Operational Medicine – 1500 – 1700**

This meeting will consist of a small-group 'round-table' discussion of the scope and focus of the SubTAG. The session is open to all government personnel. The agenda items to be discussed are:

1. Review of Current Charter.
2. Definition of the scope and purpose of the SubTAG.
3. Discussion of its unique and complementary role relative to other operational medicine organizations.
4. TAG 52 Agenda format and content discussion.
5. Recommended Charter Changes.

## **Technical Society/Industry - 1715 – 1800**

- Old business: Discussion with Standardization Sub-Tag on hot topic to update/append MIL-STD-1472 lifting limits/guidelines with more recent and scientific limits/guidelines set by NIOSH. Need to notify Mr. Lee Gray since 1472 is up for review this year. Note: many CAD anthro programs utilize NIOSH (or like) algorithms. Do we need to verify transferability from NIOSH to DoD populations?
- Present business: Reports from TS/I representatives, brief summary of activities in various TS(s) or Industries (non-company specific) trends dealing with HFE that are relevant to the DoD.
- New business: TS/I “pinging” and roster update. Do we contact TS(s) and have them re-establish reps? Do we set an absentee policy (need to attend min. once every other year (25%))?
- Open floor

## **Air Force Caucus - 1715 – 1800**

## **Army Caucus - 1715 – 1800**

## **Navy Caucus - 1715 – 1800**

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## **WEDNESDAY, 12 MAY**

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### **Human Modeling and Simulation – 0830 – 1100**

*In order to meet projected increases in air traffic in a safe and efficient manner, new technologies and associated procedures are being developed and integrated into the National Airspace System (NAS). Communication, navigation, surveillance, and air traffic management capabilities are all being impacted by the introduction and integration of new technologies, automation platforms, and decision support tools. Critical to realizing the intended benefit of the new capabilities is the adequate addressal of human factors considerations. Specifically, Human Modeling and Simulation Technologies will play a pivotal role in this effort. This panel will look at the degree to which these technologies can be used to both model and predict ATC performance, and how they may be applied to developing unique, simulation-based solutions for increasing ATC performance.*

- Cognitive Modeling of Air Traffic Managers - Dr. Steven Estes
- Air Traffic Control Conflict Prediction: An Investigation into Human/Automated Judge Interaction - Dr. Ellen Bass
- Modeling for Success: Understanding Human Error in Air Traffic Controllers - Dr. Kevin Corker
- Using Intelligent Agents to Prevent Error in Air Traffic Management - Dr. Pratik Jha
- Simulation Based Training: A Means to Train Team Skills - Ms. Wendi Buff

### **Personnel Selection – 0830 – 1100**

- Development of Parallel Forms of the Aviation Selection Test Battery (ASTB) - LT Henry Phillips, NOMI
- Enlisted Navy Computer Adaptive Personality Scales (ENCAPS) - William Farmer, NPRST
- Collaborative Air Traffic Controller Selection Research between the FAA and the US Army, Navy, and Air Force - Ray King, FAA

## **Human Factors Engineering/Human Systems Integration: Management and Applications - 0830 – 1100**

- Verifying Anthropometry throughout the Acquisition Lifecycle - Dr. Cate Harrison, Engineering Research Psychologist, Anthropometry and Design (CARD) Lab AFRL/HEPA, Wright Patterson AFB, OH
- The Effect of Cognitive Load on Shooting Performance - Mr. David Scribner, Research Psychologist, US Army Research Lab
- Navy Accession Job Task Analysis (JTA) - Ms. Mary Beth Papadakis, Human Performance Detachment, Naval Service Training Command, Great Lakes, Human Performance Analyst
- Human Factors Engineering E-Learning and Knowledge Management Initiatives - Ms. Desiree Tryloff, General Dynamics, Program Manager E-Learning and Knowledge Now Initiatives, Wright Patterson AFB, OH

## **User- Computer Interaction – 1230 – 1430**

- Introduction, LT Phil Fatolitis, Aerospace Experimental Psychologist, NAMRL, Pensacola
- Quantifying Human Information Processing - Dylan Schmorow – Defense Advanced Research Projects Agency, Dennis McBride – Potomac Institute for Policy Studies, Russell Shilling – Office of Naval Research
- The Unified Systems Manual - A Case Study in Enterprise Content Management - Brian Hopkins, XO Systems, Inc.

## **Design: Tools and Techniques – 1230 – 1430**

- Developing an En Route Controller Workstation Around Operator Needs and Future System Capabilities - Steve Fadden, Associate, Human Center Systems Engineering, Booz Allen Hamilton, McLean, VA
- FAA Human Factors Knowledge Portal – Dino Piccione, Human Factors Air Traffic Research Manager, Federal Aviation Administration, Washington, DC
- Automating Human Risk Analysis with Relex Human Factors PFMEA - Vince Elias, Reliability Account Manager, Relex Software, Inc., Greensburg, PA
- HFE TAG Business
  - Old Business
  - New Business
  - Charter Review
  - Hot Issues

## **System Safety/Health Hazards/Survivability – 1230– 1430**

## **Operating Board – 1500 – 1700**

**Social – 1730 – 2030 – Transportation will be provided. Meet in the Lobby at 1730. We will return after dinner and socialization.**

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## **THURSDAY, 13 MAY**

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## **Tour of the William J. Hughes Technical Center – 0830 – 1230**

- Research, Development, and Human Factors Laboratory (RDHFL)

The National Airspace System (NAS) Human Factors Group conducts research to develop methods for measuring air traffic control (ATC) specialist, airway facilities (AF) maintenance specialist, and pilot performance; to evaluate proposed system and procedural operations concepts; and to provide human factors support in the development and acquisition of new ATC systems. The Group is located in the Research, Development, and Human Factors Laboratory (RDHFL) at the Federal Aviation Administration William J. Hughes Technical Center on the Atlantic City International Airport. The RDHFL is a state-of-the-art, multipurpose research facility staffed by engineers, computer scientists, and other personnel from the R&D Labs Group who support the activities of the NAS Human Factors Group. The lab has four reconfigurable experiment rooms, each with its own experiment operator station. Each experiment room has extensive prototyping, simulation, and data collection capabilities. The RDHFL also has specialty areas, such as a virtual reality modeling laboratory and an audiometric booth. RDHFL staff have developed a high fidelity ATC simulation capability, called the Distributed Environment for Simulation, Rapid Engineering, and Experimentation that can emulate both terminal and en route operations, using today's or tomorrow's ATC systems. We can connect to external systems, such as the Technical Center, NASA Ames, and Boeing cockpit simulators. We are also able to take our simulation capabilities to field sites to evaluate site-specific procedures.

During the RDHFL tour, the leads for the ATC Ops Concept, AF Ops Concept, and Acquisition Support teams will give you brief overviews of their programs. We will then demonstrate our terminal and en route prototyping and simulation capabilities, our virtual reality modeling, our work on the Enhanced Traffic Management System, and the use of our audiometric booth to develop a Transmit Status Indicator for a future digital air-ground communication system. CD copies of the Human Factors Design Standard will be available if desired. If time allows, we will also walk through the Integration and Interoperability Facility, which is collocated with the RDHFL.

- Transportation Security Human Factors Program - Security Optimization Human Factors Integration and Evaluation (SOHFIE) Laboratory

The Transportation Security Human Factors Program strives to optimize person-machine system effectiveness and efficiency to ensure that terrorist threats against the transportation system are mitigated. The program focuses on security screener performance enhancements, equipment and procedure design, device usability, ergonomics, human factors interventions, long-term research, and test and evaluation. As the terrorist threat against aviation has evolved and advanced technologies have developed, the consideration of human factors and operator performance is tantamount to the effectiveness of the aviation security system.

The basic philosophy, concept, and functional design of the Security Optimization Human Factors Integration and Evaluation (SOHFIE) laboratory is to support transportation security human factors research and development.

The SOHFIE laboratory enables researchers to conduct a wide variety of experiments and studies in a re-configurable environment. The areas of investigation include screener selection, monitoring, certification, training, and performance. The SOHFIE Laboratory has enabled the Transportation Security Administration (TSA) to have the in-house capability at the William J. Hughes Technical Center to conduct research on these important topics.

## EXECUTIVE COMMITTEE

Chair (Air Force)	Dr. James Miller	(210) 536-3596 DSN 240 jcmiller@brooks.af.mil
Vice Chair (Army)	Ms. Dawn Woods	(508) 233-5069 DSN 256 dawn.woods@natick.army.mil
Immediate Past Chair (Navy)	LCDR Sean Biggerstaff	(301) 757-8135 DSN 757 sean.biggerstaff@navy.mil
Army Representative	Mr. Benjamin Gibson	(210) 221-1622/DSN 471 <a href="mailto:ben.gibson@amedd.army.mil">ben.gibson@amedd.army.mil</a>
Navy Representative	LT Walter Carr	(619) 553-0479/DSN 553 <a href="mailto:carr@nhrc.navy.mil">carr@nhrc.navy.mil</a>
Air Force Representative	Dr. Kristen Liggett	(937) 255-8251 DSN 785 kristen.liggett@wpafb.af.mil
NASA Representative	Ms. Faith Chandler	(202) 358-0411 fchandle@hq.nasa.gov
FAA Representative	Dr. Thomas McCloy	(202) 267-7167 tom.mccloy@faa.gov
TAG Coordinator	Ms. Sheryl Cosing	(703) 925-9791 scosing@comcast.net

## SUBTAG CHAIRS

Controls and Displays	Dr. Henry Williams	(301) 342-9275 DSN 342 henry.williams@navy.mil
Design: Tools and Techniques	Major Joe Menchaca	(937) 255-7777 x3313 DSN 785 joe.menchaca@afit.edu
Human Factors and Operational Medicine	LT William Carr	(619) 553-0479/DSN 553 <a href="mailto:carr@nhrc.navy.mil">carr@nhrc.navy.mil</a>
	LCDR Sean Biggerstaff	(301) 757-8135 DSN 757 sean.biggerstaff@navy.mil
Human Factors Engineering / Human Systems Integration: Management and Applications Human Factors in Extreme Environments	Mr. Adrian Salinas	(210) 536-4428 DSN 240 <a href="mailto:adrian.salinas@brooks.af.mil">adrian.salinas@brooks.af.mil</a>
	Mr. Brad Collie	(850) 234-4744 colliebe@ncsc.navy.mil
Human Factors Standardization	Mr. Alan Poston	(202) 493-4519 <a href="mailto:alan.poston@faa.gov">alan.poston@faa.gov</a>

Human Factors Test and Evaluation	Mr. Adrian Salinas	(210) 536-4428 DSN 240 <a href="mailto:adrian.salinas@brooks.af.mil">adrian.salinas@brooks.af.mil</a>
	Mr. Edward George	(661) 277-0800x2297 DSN 527 <a href="mailto:edward.george@edwards.af.mil">edward.george@edwards.af.mil</a>
Human Modeling and Simulation	LT Joseph Cohn	(202) 253-1291 <a href="mailto:cohn@ait.nrl.navy.mil">cohn@ait.nrl.navy.mil</a>
Personnel Selection and Classification	LT Henry Phillips	(850) 452-2257x1091 <a href="mailto:hjphillips@nomi.med.navy.mil">hjphillips@nomi.med.navy.mil</a>
Sustained/Continuous Operations	Dr. Thomas Nesthus	(405) 954-6297 <a href="mailto:tom.nesthus@faa.gov">tom.nesthus@faa.gov</a>
	LT Walter Carr	(619) 553-0479 DSN 553 <a href="mailto:carr@nhrc.navy.mil">carr@nhrc.navy.mil</a>
System Safety/Health Hazards/Survivability	Mr. Benjamin Gibson	(210) 221-1622 DSN 471 <a href="mailto:ben.gibson@amedd.army.mil">ben.gibson@amedd.army.mil</a>
	Mr. Stephen Merriman	(214) 316-7071 <a href="mailto:scmerriman@comcast.net">scmerriman@comcast.net</a> <a href="mailto:Stephen.c.merriman@boeing.com">Stephen.c.merriman@boeing.com</a>
Technical Society/Industry	Mr. William Lytle	(303) 971-8972 <a href="mailto:william.b.lytle@lmco.com">william.b.lytle@lmco.com</a>
User-Computer Interaction	LT Phillip Fatolitis	(850) 452-3287x1173 DSN 922 <a href="mailto:pfatolits@namrl.navy.mil">pfatolits@namrl.navy.mil</a>
Workload and Stress	CDR Karl VanOrden	(619) 767-4556 DSN 524 <a href="mailto:vanordern@nhrc.navy.mil">vanordern@nhrc.navy.mil</a>
Human Factors in Training Interest Group	Dr. Bob Nullmeyer	(480) 988-6561 x283 <a href="mailto:robert.nullmeyer@mesa.afmc.af.mil">robert.nullmeyer@mesa.afmc.af.mil</a>
User Utilization Interest Group	Mr. Fred Oberman	(301) 227-0033 <a href="mailto:frederick.oberman@navy.mil">frederick.oberman@navy.mil</a>

# ABSTRACTS

If you are presenting at the plenary session, please bring your half page summary for inclusion in the Minutes or send it to the TAG Coordinator in advance. If you are presenting in a subTAG session, please send your summary to the subTAG chair of the session in which you are presenting.

## GENERAL GUIDELINES

Font: 11 or 12 point type, Arial (san serif) font. Margins: 1.0 inch left, right, top and bottom.

Submission: Electronic format is preferred: PC-readable disk or e-mail in Word format. If that is not possible, submit hardcopy that meets all the format requirements.

### **Do not include classified, acquisition sensitive, or proprietary information.**

You may wish to have your sponsor's approval before briefing at the TAG. The summaries will be included in Minutes published on the TAG website.

## SESSION ABSTRACTS FORMAT

**TITLE:** Full presentation title.

**PRESENTER:** Name, title, organization, complete mailing address, phone number, DSN (if applicable), email (optional). Separate with commas on two or three lines to leave as much space for narrative as possible.

**SYNOPSIS:** Narrative. Briefing slides will not be published. Address all important points of your presentation in a succinct manner. Abstracts should be no longer than one-half page (4.25 inches in height or 25 lines maximum). Note general format above.

### For presentations discussing results of research and applications:

Concentrate on completed research or interim results which have not been previously reported at the TAG. Include a general statement to orient the reader to the problem under study, the findings, and the recommendations.

### For presentations discussing programs in progress:

Acquaint others with on-going work, so we may know what others are doing. Mention participating individuals, phone numbers, organizations, and the portion of work each is addressing so they may be contacted for more information. Mention joint-service participation and dual-use technologies. If the program is producing a product, mention what it will do; and identify the intended user community.

## General Information

### ATTENDANCE POLICIES

Attendance at the **DoD HFE TAG** is open to:

- US Military/Government employees
- Official technical society/industrial association representatives
- Employees of National Laboratories or Federally contracted research centers
- Specifically invited plenary presenters/guests
- Students majoring in human factors and related disciplines

All others must have a written invitation to attend. Contact the TAG Coordinator for additional information.

### ACCOMMODATIONS

A block of rooms has been reserved for the TAG at the Trump Taj Mahal, 1000 Boardwalk at Virginia Avenue, Atlantic City, NJ 08401.

The room rate for this meeting is \$109. The rate is exclusive of tax and can be extended on a pre or post meeting on a space-available basis.

The cut off date for the TAG rates is 8 April 2004. Reservations made after that time will be on a space available basis. You may wish to book your reservation now and cancel if your plans change. Cancellation requires 48-hour notice prior to arrival to avoid penalty.

Cutoff date: 8 April 2004  
TAG rates: single \$109

The above rates are exclusive of tax. The current state and city sales and luxury taxes are 13%. The Atlantic City Casino Hotel room use fee is \$2/room/night and there is a \$3 occupancy tax/room/night.

Check-in: 1600 hours      Check out: 1200 hours

Reservations: (800) 225-7777 or (609) 449-1000 - reference the FAA/DoD HFE TAG

**No BOQ** arrangements in the Atlantic City area have been made for the TAG.

### TRANSPORTATION

**Transportation:** Go to <http://www.atlanticcitynj.com> for information on rail, air, and car travel to Atlantic City. *From Philadelphia Airport:* One way transportation to the Taj Mahal can be arranged with Royal Airport Shuttle at (888) 824-7767. *From Atlantic City International Airport:* Taxicabs to the hotel are \$27/one way. *By rail:* Call (800) 772-2222. New Jersey Transit Rail runs direct from Philadelphia's 30<sup>th</sup> street station to the Atlantic City Rail Terminal with local stops. Free shuttle service is available between the Atlantic City Rail Terminal and all casinos. Call 1-800-626-RIDE.

### REGISTRATION

Registration can be done online at the TAG web site: <http://hfetag.dtic.mil/register.html> or by submitting the registration form in this packet.

Please remember that you must be badged before attending any SubTAG/Plenary session.

<b>Registration Desk is open</b>	Monday	1100 – 1430
	Tuesday	0800 – 1430
	Wednesday	0800 – 0830
	Thursday	0800 – 0830

## PAYMENT

**Credit card:** *The TAG accepts payment for registration by credit card using PayPal only. The online registration form must be used in order to accept a credit card payment.*

**Checks or money orders:** Are accepted. Purchase orders are not accepted. Please do not mail cash. Enclose payment with the registration form, or send separately if registering online.

**No registrations will be accepted after 23 April 2004.** If you are unsure whether you will be able to attend the meeting and this deadline presents a problem, call the TAG Coordinator.

### Fees:

Regular registration	\$100.00
Special student fee (applies to full-time students)	\$ 5.00
Social - per person (optional)	\$40.00

## FUNCTIONS

**Social:** A networking, social event will be held on Wednesday evening, 12 May. We will depart the Taj at 6pm. We'll enjoy a dinner boat cruise of Historic Gardner's Basin.

**Tour:** On Thursday, 13 May 2004, the Federal Aviation Administration will host a tour of the human factors laboratories at the William J. Hughes Technical Center. Transportation will be provided by the TAG.

## MISCELLANEOUS

**Travel Orders:** All technical meetings will be held at the Trump Taj Mahal. For networking purposes and for meeting changes/updates, it is desirable that you stay at the Trump Taj Mahal. Have your orders written to Atlantic City, NJ.

**Clearances:** All briefings are unclassified: no clearances are necessary for U.S. citizens for any of the scheduled meetings.

**Messages:** Non-emergency messages will be kept at the TAG registration desk. Emergency messages will be delivered during the meeting. For incoming calls, use (609) 449-1000, referencing the TAG.

**Military Dress:** Check with your Service Representative.

**Abstracts:** Presenters at any of the sessions should provide a summary of their presentation to their subtag chair prior to the meeting for inclusion in the Minutes of the meeting. An electronic version is preferred. For format and detailed instructions, refer to the Abstracts section of this packet.

**New Members:** If you are new to the TAG, you should plan to attend the new member orientation session on Monday, 10 May 2004 from 1000-1100 hours. New attendees are also encouraged to participate in their specific caucus meetings.

**Caucus Meetings:** If you work for one of the military services (uniform or civilian), you should plan to attend your service caucus meeting. These meetings are intended to provide you with the opportunity to participate in TAG decisions and discussions concerning service-specific issues.

**Materials Storage:** The Trump Taj Mahal will accept small packages for storage at no cost. Label the items:

ATTN: DoD HFE TAG/S. COSING  
TRUMP TAJ MAHAL  
1000 BOARDWALK AT VIRGINIA AVENUE  
ATLANTIC CITY, NJ 08401

**DEPARTMENT OF DEFENSE  
HUMAN FACTORS ENGINEERING  
TECHNICAL ADVISORY GROUP (TAG)  
Meeting 51: 10-13 May 2004**

**REGISTRATION**

**Use this form or register online: <http://hfetag.dtic.mil/register.html>**

1. Mailing Information (including military rank or title, ie., Dr., Ms., Mr.):  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Telephone \_\_\_\_\_ DSN \_\_\_\_\_ FAX \_\_\_\_\_  
Email \_\_\_\_\_
  
2. Badge Information:  
Name \_\_\_\_\_  
Organization \_\_\_\_\_
  
3. Status (See "Attendance Policies" for information)  
( ) military/government ( ) GOCO ( ) other \_\_\_\_\_  
( ) official (credentialed) TS/I member representing \_\_\_\_\_
  
4. If called the week prior to the TAG, do you have a 15-30 minute briefing you could present?  
( ) plenary session or \_\_\_\_\_ SubTAG session
  
5. Dinner Cruise of Historic Gardner's Basin on Wednesday, 12 May:  
\_\_yes \_\_no \_\_\_\_\_guests
  
6. Tour of FAA Technical Center on Thursday, 13 May:  
\_\_yes \_\_no \_\_\_\_\_guests
  
7. Enclose check/money order made out to the **DoD HFE TAG** for the following:  
Regular registration \$100.00 \_\_\_\_  
Student registration \$ 5.00 \_\_\_\_  
Boat Trip Gardner's Basin \$40.00 \_\_\_\_  

**TOTAL** \_\_\_\_\_

**Return this form and payment by 4/23/04 to:**

Sheryl Cosing  
10822 Crippen Vale Ct.  
Reston, VA 20194  
Phone (703) 925-9791 FAX (703) 925-9694  
scosing@comcast.net  
TAG Web Site <http://hfetag.dtic.mil>