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Notes From the Chair

Submitted by Valerie Gawron

The ASTG business meeting on Wednesday afternoon was attended by more than 100 people. Yee ha! Five thank you awards (On Great White Wings) were given to members of our 2009/2010 ASTG Executive Planning Committee – Dan Morrow Program Chair, Gloria Calhoun Secretary Treasurer, Jane Barrow Newsletter Editor, Paul Havig Web Master (who could not attend and owes Gloria big time for hand carrying that very heavy book), and Dennis Beringer historian. Finally, a big thank you to Dick Pew, Doug Wiegmann, Sherry Chappell, Nadine Sarter, Steve Casey, and Barry Goettl, who made the Lunches with Experts series a success once again!

I also made the following announcements from the HFES Executive Council (EC) meeting that had occurred over the 10/16 to 10/18 weekend and the Council of Technical Groups (COTG) meeting on 10/19.

1. Meta tags are needed for areas our ASTG to increase our relevance in all matters related to aerospace systems human factors. Please send them to Paul Havig, our web master.
2. The COTG has $52K to spend on projects that would benefit all HFES TGs. If you have any ideas, please send them to me and I will pass them along.
3. One of the ways to spend the COTG money is to buy blogging software which is currently being examined for use by all TGs. It will be third party software not integrated with the HFES web site.
4. Both the HFES EC and the COTG want to increase the HFES digital presence. Ideas for ways to do that would be most welcome. Towards that end Phil Smith – our ASTG Chair elect – will be asking for suggested ASTG webinars to be given over the next 6 months. Suggestions from the floor during our ASTG business meeting included presentations from our three student paper finalists, author “readings and discussions” of new publications including journal articles and book chapters, project descriptions, requests for help recruiting subjects, and job openings. Please send other suggestions as well as willingness to do one of the above to Phil Smith at smith.131@osu.edu. Also moving into the 21st century, Keshav Chintamani volunteered to develop an ASTG only LinkedIn group. He will be working with Paul Havig – keeper of our ASTG web site.

Finally, I am happy to announce that we met all our HFES TG requirements:

1. Conduct an annual business meeting
2. Produce at least two newsletters
3. Publish an annual budget (Gloria will have more)
4. File a report in the HFES Directory and Yearbook
5. Have at least 150 members – we have 415
6. Retain copies of correspondence for his or her successor
7. Participate in COTG affairs
Message from the Editor

Greetings once again from your newsletter editor! I hope that you enjoyed the 2009 annual meeting if you were able to go. It was a great meeting, and the ASTG was well represented in both sessions and attendees. I also want to welcome my new co-editor, Nicole Werner. Nicole was gracious enough to sign on to help me out for this coming year, and might even be willing to carry on after I move on. As always, I welcome your comments and suggestions on the newsletter in general, and for content you feel would be specifically beneficial to your colleagues. Please e-mail me at jbarrow1@gmu.edu or Nicole at nwerner2@gmu.edu if you have feedback!

Respectfully Submitted,
Jane Barrow

Notes from the Program Chair

Submitted by Dan Morrow

The HFES 54th Annual Meeting will be held at the Hyatt Regency San Francisco, Embarcadero Center, San Francisco, California, Sept 27-Oct 1, 2010. I am writing to encourage you to start thinking about submitting your research for the ASTG program for the meeting. The tentative proposal due date is Feb 19, 2010, and more information should be available soon: http://www.hfes.org/web/HFESMeetings/2010annualmeeting.html

Also, please consider reviewing submissions to the ASTG program for next year’s meeting. Submitting and reviewing papers are the lifeblood of the ASTG’s scientific mission. We had a strong program in San Antonio this year, with five paper sessions that were very well attended (SRO for several sessions). I hope we can continue the momentum for 2010!

Feel free to contact me (dgm@illinois.edu) if you would like to discuss submission ideas, or to volunteer to serve as reviewer. If you would like to review, please provide three areas of expertise.

Student Paper Award Winner

Submitted by Emily Stelzer

At the 53rd Annual HFES Meeting in San Antonio, TX, the technical group happily announced that Dr. Sang-Hwan Kim was the winner of the 2009 ASTG Student Paper Award. His paper, which was co-authored with his advisor, Dr. David Kaber, was titled, “Assessing the Effects of Conformal Terrain Features in Advanced Head-Up Displays on Pilot Performance.” Sang-Hwan, who attended North Carolina State University for his doctoral work, received a cash prize to recognize the quality of his technical work and presentation.

Other finalists for the award included Nathan Bulkley from the University of Idaho and Peter Squire from George Mason University. Thanks to all of our student authors who presented work at the Annual Meeting, and congratulations to the finalists and awardee for this year’s award!

Upcoming Events

Each issue of the Flyer will feature a schedule of upcoming meetings, linked to a relevant webpage where applicable. If there is a meeting you would like to see highlighted here that is not included, please email jbarrow1@gmu.edu with the event name, date, location, and link if applicable.

November

November 16-17, 2009 – UAS 2009, London, UK
http://www.uavs.org

November 30 – December 1, 2009 – Human Factors in Aviation Safety, Los Angeles, CA www.viterbi.usc.edu

Cont. on pg. 4
Upcoming Events Cont.


December


January

January 4-7, 2010 - 48th AIAA Aerospace Sciences Meeting Including the New Horizons Forum and Aerospace Exposition, Orlando, FL


February


March

March 4-6, 2010 – ARSA Annual Repair Symposium, Pentagon City, VA www.arsa.org


March 24-25, 2010 – Avionics Europe, Amsterdam, Holland www.avionics-events.com

March 29-April 1, 2010 – AMC-AEEC 62nd Annual Meeting (Engineering Standards for Avionics and Cabin Systems, Improving Maintenance and Reducing Costs), Phoenix, AZ mikes.russo@arinc.com, sbuckwal@arinc.com


April

April 7-10, 2010 – Aircraft Electronics Association Convention, Orlando, FL http://www.aea.net/Convention/TX2009/future_conventions.asp


ASTG Brochure Design Contest

Submitted by Katie McGarry

Publicity for our technical group is an important way to gain new members and increase interest, and the ASTG brochure is one publicity tool that is in need of an update. Put your creativity and design skills to the test to create the ASTG’s updated brochure and win the ASTG 2010 Brochure Award! The ASTG 2010 Brochure Award has been created by the ASTG to encourage members to develop an informative and innovative brochure design to be used for publicity and distribution at conferences and meetings.

Qualifications for the Award:
To be eligible for the ASTG 2010 Brochure Award, you must be a member of the ASTG for the 2010 year. All submissions must be accompanied by proof of membership, (e.g. copy of your name and ASTG affiliation as listed in the 2010 HFES Membership Directory, statement from the HFES Office confirming membership).

Award Nomination Criteria:
To be considered for the ASTG 2010 Brochure Award, the brochure design must be submitted to Emily Stelzer at estelzer@mitre.org or Katie McGarry at kmcgarry@mitre.org on or before January 31, 2010. The designed brochure must adhere to HFES guidelines and include the pre-defined specifications of the ASTG (see below). If you have any question about these guidelines and specifications, email Emily Stelzer at estelzer@mitre.org or Katie McGarry at kmcgarry@mitre.org.

Award Criteria:
Upon reviewing the brochure submissions, the award committee and ASTG executive council will select a finalist. The selected finalist’s brochure should meet the following criteria:

- The brochure adheres to all HFES guidelines;
- The brochure captures the ASTG specifications in a compelling and concise manner; and
- The design of the brochure is equally effective in print and electronic versions.

The ASTG reserves the right to select multiple finalists, dividing the award across each of these finalists. The ASTG also reserves the right to forego the award, should none of the finalists meet the stated criteria.

Budget Allocation for the Award:
The ASTG will award the selected finalist a $100 gift certificate to Amazon. Should multiple finalists be selected for the award, this award will be divided equally across finalists.

Important Dates
• Brochure design due by January 31, 2010

Brochure Guidelines and Specifications
The following information must be included in the HFES ASTG brochure in order to be eligible for consideration:

1. A general overview of the Aerospace Technical Group (ASTG)
2. The technical focus of the ASTG
3. Membership information
4. Benefits of membership
5. A general overview of the Human Factors and Ergonomics Society (HFES)

See pg. 8 for an example of this information.
In the Spotlight

How would you like to see your work highlighted in the ASTG newsletter? Each newsletter will feature current work done by an ASTG member in the field of aviation human factors. The work need not be research in the academic sense – we are also open to user studies, interface designs, or anything else that is currently being done in the field. Papers will be chosen by the EPC as a whole based on if it fitting the criteria below and additional criteria such as relevance, originality, and clarity of writing. The paper receiving the highest overall score will be put on the website, with the abstract being featured in the newsletter. There are a few qualifications:

1) You must be a current member of the ASTG (we will be checking).
2) Your work must be somehow applicable to our statement of purpose: “The ASTG works to further the application of human factors to the development, design, certification, operation, and maintenance of human-machine systems in the aviation and space environments. The group addresses issues relevant to civilian and/or military systems.”
3) You must submit a complete paper including an abstract. It doesn’t have to be formatted in any particular way, or of any particular length, but it should be a complete report of your work, preferably under 20 pages total.

Please submit your paper to jbarrow1@gmu.edu by January 31, 2010. Late papers will not be considered.

This Issue’s Spotlight is ...

Human Factors Taxonomy

Abstract

This taxonomy provides a structure for identifying human factors for the purpose of scientific research and system test and evaluation. The information contained in this document is provided as guidance, not mandated as direction. This taxonomy can be considered during the planning, conduct, and analysis of human factors. The objectives of this taxonomy are to: (1) identify an extensive list of human factors, (2) promote commonality in nomenclature and units of measurement, and (3) enable the development and use of a common human-factors taxonomy for data collection and data processing.

The purpose of this Guide is to aid the reader in identifying human factors. The reader is assumed to have a basic knowledge of experimental design, statistics, and human performance.

This Guide may also be used for task analysis. The purpose of analyzing performance of selected tasks, subtasks, and task elements contained in the task inventory by addressing the lowest taxonomic level specified by the procuring activity is to describe task performance in terms of human performance time and accuracy. The product of the analytic effort is intended for use in support of equipment design, testing and evaluation, training requirements identification, manning and workload assessment, development of training and maintenance manuals, and other documentation and reporting.

This guide was written by members of a MORS working group chaired by Valerie J. Gawron, Ph.D. and expanded by members of the Human Factors and Ergonomics Society:


The full article can be found online at the ASTG website, http://www.hfes.org/astg
University Teaching Positions Available

Human Factors and Applied Cognition Program, George Mason University - The Department of Psychology has a tenure-track, junior-level professorship available to begin in Fall 2010. We seek cognitively oriented human factors researchers who closely integrate theory and application. The position is open to a variety of research specializations, as long as the research advances cognitive theory in the context of real-world problems. We particularly seek researchers working on applications in areas such as, but not limited to, transportation, medical systems, and human-computer interaction. The successful candidate will be part of the Arch Lab, which consists of 8 full-time faculty, 6 adjunct faculty, and about 35 graduate students. Arch Lab members conduct research in attention, audition, biological motion, eye movements, imagery, memory, and visual perception as applied to such domains as automation, aviation, driving, robotics, and human-computer interaction. Work in the lab is primarily focused on behavioral and computational methods of research, but convergent evidence from cognitive neuroscience (ERPs, fMRI, TMS) plays an integral role in many of our research programs. See http://archlab.gmu.edu. Candidates for higher ranks may be considered if they are able to bring external research funding with them. Candidates must demonstrate scholarship capable of attracting external funding and strong teaching potential/experience at both undergraduate and graduate levels. Applicants must apply online at http://jobs.gmu.edu and write in position number F9235z. Applications should include (a) cover letter, (b) a vita, (c) research and teaching statements, and (d) three representative research reprints. [Non-electronic reprints may be mailed to Ms. Ridley]. In addition, three letters of reference should be submitted, either online to sridley@gmu.edu or via regular mail to Ms. Susan Ridley, Human Factors and Applied Cognition Search Coordinator, George Mason University, MS 3F5, Fairfax, Virginia 22030-4444. The search committee will begin reviewing applications on October 1, 2009, and continue until the position is filled.

Call for Submissions to Upcoming Conferences

**10th AIAA Aviation Technology, Integration, and Operations Conference**

September 13-15, 2010 (Forth Worth, TX)

Follow this link for the Call for Papers: http://www.aiaa.org/events/mao/09-0577_final%202010%20CFP.pdf

Abstract Submission Deadline: February 8, 2010
Final Manuscript Deadline: August 26, 2010

**4th International Conference on Research in Air Transportation - ICRAT 2010**

June 1-4, 2010 (Budapest, Hungary)

Follow this link for more information: http://www.icrat.org/

Paper Submission Deadline: January 31, 2010
Tutorial Proposal Deadline: February 19, 2010
Notification of Acceptance: March 19, 2010
AEROSPACE SYSTEMS TECHNICAL GROUP (ASTG)

The Aerospace Systems Technical Group is concerned with the application of human factors to the development, design, certification, operation, and maintenance of human-machine systems in aviation and space environments. The group addresses issues for civilian and military systems in the realm of performance and safety.

TECHNICAL FOCUS

Human factors practitioners working in the field of aerospace are engaged in basic research, advanced system design, and improvement of current operational systems. The human factors practitioner is the primary user advocate during system development, testing, and operation. Specific areas of emphasis include the following:

- Crewstation design - single and multi-operator
- Control and display technology
- Operator-computer interface-software design
- Training devices and protocols, system usability evaluations
- Anthropometric measurement
- Environmental effects on human performance
- Human performance analysis and subjective Assessment

The government, industry, and academia conduct research related to human factors in aerospace systems. Most of this research is involved with military and civilian aircraft, air traffic control or space systems. Some of the areas of research conducted by members of the ASTG include:

- Effects of fly-by-wire systems on general aviation pilot performance
- Development of an automated measure of air traffic controller workload
- Information requirements of en route air traffic controllers
- Luminance requirements for helmet-mounted displays
- Seating for military aircraft

MEMBERSHIP

The ASTG has about 400 members. They work for the military services, universities, NASA, and FAA, as well as for aerospace contractors and consulting firms engaged in human factors research related to aerospace systems.

BENEFITS OF MEMBERSHIP

The Aerospace Systems Technical Group, like other technical groups within the Human Factors and Ergonomics Society, performs a variety of functions and services for its members. In addition to sponsoring technical sessions at the Annual Meeting of the Human Factors and Ergonomics Society, the ASTG conducts and/or cosponsors special symposia on topics of interest to members. Human Factors and Ergonomics Society, the ASTG conducts and/or cosponsors special symposia on topics of interest to members. A newsletter is sent to all members about four times a year. Annual dues are $6. Additional information on the ASTG is available on the HFES Web site athttp://hfes.org. It is not necessary to belong to the Human Factors and Ergonomics Society in order to join the Aerospace Systems Technical Group.

HUMAN FACTORS AND ERGONOMICS SOCIETY

The Human Factors and Ergonomics Society is an international, multidisciplinary, nonprofit organization of close to 5,000 members involved in the human factors field. HFES is the largest organization of human factors professionals in the world.

HFES members are concerned with the safety, usability, and maintainability of systems and products that involve the human as an operator or maintainer. Since its formation in 1957, the Human Factors and Ergonomics Society has promoted the discovery and exchange of human factors knowledge, as well as the education and training of students and practitioners. The Human Factors and Ergonomics Society is a member of the International Ergonomics Association.
Congratulations to Kyle Dooley, who was the first to correctly identify last issue’s mystery craft as the Bell X-22. The Bell X-22 was designed in response to the US Navy’s demand for aircraft with V/STOL capability, and made its maiden flight on March 17, 1966. The prototype was extremely successful in being able to transition from hovering to horizontal flight, but crashed later in the year due to prop control failure. A second prototype was built, and the craft was considered extremely successful, but the program was cancelled nonetheless. The second prototype is currently on display in the Niagara Aerospace Museum in New York.

Can you identify this issue’s Mystery Craft? E-mail Jane Barrow at jbarrow1@gmu.edu if you can - the first person to correctly identify the craft will be given credit in the next issue of the Flyer and will receive a $5 Starbucks gift card. Please note that from here on out, only the first person to correctly identify the craft will receive a confirmation e-mail. If you don’t get an e-mail response, check out the next issue of the Flyer to see if your identification was correct. Can you think of a particularly arcane or unusual aircraft? Wondering if your colleagues would be able to identify it? Please e-mail any suggestions to Jane Barrow at jbarrow1@gmu.edu.

Submitted by Kyle Dooley