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Mystery Craft
A lot has happened in the world since the last ASTG newsletter – a new First Family (including a new First Dog), a new cabinet (with Ray LaHood as the new Secretary of Transportation), and a new set of ASTG bylaws (actually the old ones updated to reflect what we really do).

The new president has an aviation plan that includes strengthening the US transportation systems including airports and other aviation infrastructure. The funding will come from a newly created National Infrastructure Reinvestment Bank which will receive $60 Billion federal dollars over the next 10 years. Modernizing the Air Traffic Control system and improving controller working conditions are also in the plan as is the Small Community Air Service Development Program. Enhancing security (better detection of weapons at airport checkpoints and screening passengers against a complete terrorist watch list) will be made possible with increased funding and continuous evaluation of the measures put in place.

Mr. LaHood has identified two top priorities. The first is “making peace with the controllers”. He feels that having the air traffic system run by “people who like going to work every day” will increase both safety and efficiency. LaHood’s second priority was to find an FAA administrator who could supervise NextGen by implementing changes over the five to eight years leading to the NextGen Vision.

The new set of ASTG bylaws was included in the last newsletter and votes were received. I’ll leave the report of the voting to our Secretary-Treasurer, Gloria Calhoun. I also promised in the last newsletter that a second document, the ASTG Brochure, would be updated, and what better way than a contest? The brochure is distributed at the annual meeting, conferences at which HFES has a booth, and by request from the HFES central office. Our current version is included in this newsletter on page 14. It is black and white, has no graphics (except the HFES logo), and is a bit boring – hardly an inducement to join our ASTG. Hence the contest described by our awards co-chairs Emily Stelzer and Katie McGarry Peterson. The plan is to also include the brochure on the ASTG web site as a download. So please start being creative! Further, Emily and Katie will also be describing two potential new awards – best dissertation and the Stanley N. Roscoe Award – for your comments and suggestions. We’ll vote on these after the next newsletter.

Finally, our ASTG web site has been successfully been moved to the HFES Central Office and can be reached using http://www.hfes.org/astg/. Our Web Master, Paul Havig, is updating our web site to include the description of our purpose from our bylaws as our welcome (“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.”), our bylaws, the ASTG Newsletters (with help from our historian Dennis Beringer all of the newsletters will be included), and links to aerospace companies, news and information, organizations, and government sites. So sit back and read on!

Greetings from your newsletter editor! You may have noticed that there was no Winter issue, and I do apologize for that. You will find that the Spring newsletter is pretty packed, as I try to make up for missing an issue. There is a new feature in the newsletter, which is designed to highlight current work being done by researchers and practitioners in the field of aviation human factors. You will find an abstract for the first work the Flyer is featuring on page 10, with a link to the full article. You’ll also find the guidelines for how to submit your own work for future issues, should you be interested in doing so. I’d like for the newsletter to be more than just announcements, and I hope that featuring current work from ASTG members will be a nice balance. 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 if you have feedback!

Respectfully Submitted,
Jane Barrow
Call for Nominations

Submitted by Frank Durso

I am writing to encourage you to nominate your colleagues or yourself for one of the two elected positions in the TG: the TG Chair and the Program Chair. For both of these positions, the successful candidate will serve in an “elect” position beginning this October. The “elect” position is an official position and part of the Executive Council (EC), replacing the past TG chair (Frank Durso) and past Program chair (Amy Alexander). Even though it’s an official EC position, it is a year with training wheels where the chairs-elect can get the lay of the land, make plans, and so on learning from the current chair (Val Gawron) and current program chair (Dan Morrow). After a year as chair-elect, the successful candidate serves as chair for two years, and then past-chair for one.

The TG chair is the capo de tutti capi (think Orville Corleone). He or she will lead the TG as it slips the surly bonds of earth. He or she will head one of the nation’s largest groups dedicated to aerospace systems human factors. The TG chair appoints all the other elect-positions, who will help the TG chair-elect run the organization when he or she becomes TG chair. The Program chair manages the TG’s presence at the annual meeting. The HFES automation has transformed this position from one with a lot of managerial overhead, to one of primarily visionario intelletuale and shaper of the future (think Wilbur Da Vinci).

Nominees must be full members of the TG and of HFES. If you are interested in giving back to the organization and the discipline, I encourage you to nominate yourself. If you know of someone who would make a contribution to the TG in one of these positions please send me their names and email address. It would be greatly appreciated if you could ensure their willingness to serve, but this is not necessary. I will follow up. If you nominate yourself, I will assume you checked on willingness to serve. Feel free to make multiple nominations, but please include emails so I can follow up with your list.

I think you will find working with others in the ASTG will be an incredibly rewarding experience.

I will need these nominations by July 15, 2009, sent to frank.durso@gatech.edu.

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.

June


June 29- July 2, 2009 – 8th USA/Europe ATM R&D Seminar, Napa, CA http://www.atmseminar.org/

July

July 6-9, 2009 –The Technical Women’s Organization (TWO) and the National Asian and Pacific American Association (NAPA) 2009 National Training Conference...
P

ublicity 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 2009 Brochure Award! The ASTG 2009 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 2009 Brochure Award, you must be a member of the ASTG for the 2009 year. All submissions must be accompanied by proof of membership, (e.g.: copy of your name and ASTG affiliation as listed in the 2009 HFES Membership Directory, statement from the HFES Office confirming membership).

Award Nomination Criteria:
To be considered for the ASTG 2009 Brochure Award, the brochure design must be submitted to Emily Stelzer at estelzer@aptima.com on or before July 31, 2009. 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@aptima.com 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 July 31, 2009
- Winner/finalists announced at the ASTG meeting at HFES 2009

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. 14 for an example of this information.
Hopefully many of you were able to attend ISAP 2009 in Dayton, OH – this was the 15th symposium held since the first in 1981. This year also marked a transition as Dr. Richard Jensen, the founder and organizer of ISAP for so many years, stepped down to allow John Flach to take the lead. The opening reception honored Dr. Jensen, where he told tales of ISAP in days past, and also highlighted the technological goodies found at the R.C. Appenzeller Visualization Center. The theme for the symposium was the meeting of application and theory in Pasteur’s Quadrant, which was visited in two plenary panels, each focusing on the issues facing practitioners and researchers. Additionally, everyone was treated to an excellent keynote address by Dr. Christopher Wickens, who spoke about his updated findings on pilot response to unexpected, or ‘black swan’ events. You will find an interview with Chris on page 7 of the newsletter, where he speaks more about his work and also the challenges of getting the applied and the theoretical worlds that comprise Human Factors to work together. This year, ISAP provided an alternative format of poster sessions to help facilitate discussion amongst attendees, in addition to the traditional lecture and panel sessions. The poster sessions seemed to be well attended, so hopefully they will be back in 2011!
Notes from the Program Chair

Submitted by Dan Morrow

We will have a varied and interesting ASTG program at this year’s HFES meeting, to be held Oct 19-23 at the Grand Hyatt Hotel, in San Antonio, TX. My thanks to those who submitted proposals for the program. We had a total of 32 submissions: 29 lectures, two posters, and one demonstration (including 7 student submissions). There will be five paper sessions at the meeting, in addition to the posters and the demonstration.

Of course, the program would not be possible without the effort of those of you who reviewed the submissions. I would like to thank the following people for serving as reviewers. Your efforts made my job easier, and often improved the papers!

Jane Barrow
Peter Batsakes
Dennis Beringer
Sylvain Bruni
Ernesto Bustamante
David Cades
Gloria Calhoun
Regan Campbell
Divya Chandra
Tom Chidester
Jerry Crutchfield
Paula Desmond
Birsen Donmez
Frank Durso
Daniel Eksuzian
Ric Ferraro
Ferne Friedman-Berg

Barry Goettl
Juliana Goh
Manohita Gurram
Sechchang Hah
Michelle Harper-Sciarini
Paul Havig
Alan Jacobsen
Pat Jinkins
Janeen Kochan
Kara Latorella
Michael Lenne
Carol Manning
Lori McDonnell
Don Means
Peter Moertl
Kathleen Mosier

Randall Mumaw
Paul Picciano
Lance Prinzel
Esa Rantanen
Vic Riley
John Ruffner
Arathi Sethumadhavan
Phil Smith
Mike Snow
Emily Stelzer
Mark St. John
Lisa Thomas
Gerard Torenvliet
Mike Vidulich
Kevin Williams
Glenn Wilson
Xidong Xu

Many thanks to Amy Alexander, past ASTG Program Chair, who provided constant guidance this year as I assumed chair responsibilities. Full program details will be provided in the summer edition of the ASTG newsletter. Looking forward to seeing you all in San Antonio!

ASTG Bylaws Revised

Submitted by Gloria Calhoun

The results are in and it was a landslide vote – the proposed revisions to the ASTG By-Laws were unanimously approved! (Only a little over 8% of the ASTG membership cast a vote. Not bad considering our limited campaign budget!) This revision was long overdue. For example, now our Bylaws refer to the “Human Factors and Ergonomics Society” rather than the “Human Factors Society”! Other changes were made to ensure the ASTG Bylaws are in compliance with the revised HFES Operating Rules, detail our election procedures, and describe the duties of each officer and chair position. The ASTG Bylaws are available for continued reference on the ASTG Website. Direct any comments on the bylaws to the ASTG Chair for consideration in future updates.
An Interview with Dr. Christopher Wickens

The Flyer continues to feature interviews with influential individuals in the field of aviation. I am always looking for suggestions for whom to interview next, so if there is someone that you think would make a good interviewee, please contact me at jbarrowl@gmu.edu.

Chris Wickens received his B.A. from Harvard University in 1967, and his Ph.D. from the University of Michigan in 1974, where he studied under Dick Pew. He taught as a professor of psychology at University of Illinois, Urbana-Champaign for almost 10 years before becoming head of the Aviation Human Factors Division at UIUC’s Institute of Aviation. In 2005, he retired from UIUC and began working as a consultant for Alion Science in Boulder, CO. Chris Wickens’ research has focused on both basic psychological properties and human factors application. His interest in human attention has led him to develop multiple theoretical models of attention, and also to study the design of displays and automation in terms of the effect on human attention and performance. Chris Wickens has published over 200 articles and authored 8 books in the field of experimental psychology and human factors. When not studying human attention and behavior or mentoring students in the field, he spends his time mountain climbing.

What led to your interest in aviation psychology?

It was fate, really. I started in basic experimental psychology at the University of Michigan. My advisor, Dick Pew, was very interested in manual control and a lot of the manual control work at the time emanated from aviation control. I developed my own interest in attention theory during that same time, and the more I became interested in attention, the more I became interested in the challenges to attention. Flying an airplane is the ultimate exercise in multi-tasking, so it really captured my interest. When I went to Illinois, I was rapidly taken under the wings of Stan Roscoe, and he offered me summer support for my first year as faculty to work in the Aviation Research Lab. During that first summer, the relationship between my models of attention and flying managed to get the attention of the Office of Naval Research, which provided me with research support to develop the Multiple Resource Model for aviation applications. I did that over the next eight years. The next increment in my interest in aviation human factors came when I applied for and got the position as the head of the Aviation Research Lab. I moved from being a full time psychology professor to someone who was responsible for rebuilding the lab with the explicit target of doing aviation human factors work. Ever since then, I’ve become more and more fascinated with the applications of attention to the multi-tasking of pilots and to the design of aviation displays. So, since 1984, I think my trajectory in this area has been predestined.

You recently transitioned from academia to industry when you retired from the University of Illinois in 2005 and started work with Alion. Was this a difficult transition or a natural progression in your career?

For me, it wasn’t much of a transition. I’m a consultant with Alion, so I don’t feel like my livelihood depends on my ability to get contracts, which is where the pressure usually comes from. It’s like having the best of both worlds – I can pursue working with people within the company, doing the research I want to, but I don’t feel like if it fails that I’m letting down students, or I’m not paying my own salary. It helped that in 2002, when I started to think about retirement from academia, I was already doing some collaborative research with Micro Analysis and Design, which became Alion. I was mostly working in the UAV area at the time, and had been doing some modeling work with Stephen Rice focusing on automation reliability. Additionally, Micro Analysis and Design had based a lot of their workload model on the original Multiple Resource Theory, so I also had a connection with them through their modeling of workload. My wife and I had already decided to retire to Colorado to indulge my passion for mountain climbing (you just can’t do that in Illinois), so it was natural when I came out to Boulder to ask them if I could get an office there and continue our affiliation, which they agreed to do. I no longer had a lab facility, but that has been okay because I’ve been interested in

Continued pg. 8
computational modeling which you can do anywhere. We’re taking other people’s data and we’re trying to model it, whether it is through meta-analysis or through the conflict alert data that I talked about during my keynote address at ISAP 2009. It’s been a wonderful opportunity for me, and a natural transition from the academic world.

What is your favorite aspect of the work that you’re doing right now at Alion?

Developing attentional models. I include both the multiple resource models of multi-tasking and the “N-SEEV” model of selective visual attention and noticing in that. We’ve been developing those and then using them to predict existing data, so we’re doing a lot of database work. I enjoy seeing how well our models predict the data, and then determining how the models need to be altered to do a better job of prediction. The models are extremely important, as they allow us to help define the research agenda for the people who are still collecting human-in-the-loop simulation data. We can tell them that their experiments need to start taking into account specific variables that our models can’t predict because nobody has the data for us to do it. It’s a really exciting challenge for me, because it clearly links things that are important to aviation and transportation safety, which is the primary drive for me. This kind of work helps link the basic research community with the more applied community, pulling these two communities together in a way that they don’t naturally seem to gravitate, which I think is vitally important.

As you’ve alluded to, there is a symbiotic relationship between the academic research community and the professionals in industry and government, but the worlds that they live in are so different that it is sometimes difficult to get them to work together. Do you have thoughts on how we can bridge this gap?

Yes, I do. Sitting in the middle between these two communities, I have pointed remarks to make to both sides. I think my more pointed remarks are to the basic researchers, even those who try to be more applied. Many of these researchers are so paradigm driven – they have their paradigm to investigate a phenomenon, and they will do anything to design experiments to utilize that paradigm. Those paradigms often come from models, and there is sometimes a view in the research community that “my model” is the correct one, and therefore “my paradigm” to test the model is the correct one to use. This leads to a sort of myopic focus on what is a fairly small piece of the puzzle in terms of the bigger context. So, I want to shake the basic researchers and say, “You don’t need to abandon your paradigm entirely, but think about how that’s only part of the puzzle of what really matters to a driver who is trying to multi-task, or a pilot who is trying to monitor a wide range of things.” A good example is paradigms in visual search. There are probably a million studies done on visual search but visual search is only a very small part of a pilots’ visual task. A pilot is monitoring dynamic variables that most visual search models don’t account for, and while they’re required to notice unusual, black swan events, this is not a search task, because the pilot is not actively looking for a black swan event. I would like to see basic researchers thinking about how their paradigms fit into the broader context. The other piece of the equation is of course the funding agencies, and the journals. When you work in a university setting, you know the journals where they’ll publish your research paradigms, and you keep doing that because publication in the basic journals is considered highly prestigious. We’ve got to change the mindset in the field to say that publication in the more applied journals is equally important, but we also have to change the mindset of the funding agencies, so that there is money in the research that links these complex worlds. On the other side, I think the issue is to convince the practitioners that there is real value in both theory as well as generalizable research paradigms that address questions like ‘what system is better than what system’, and ‘what will reduce the workload to acceptable levels.’ There are unique individuals out there in the applied world who know and appreciate the value of research and are then able to help translate between the languages of each world, but we need more of them.

What advice do you have for students or those who have recently graduated, who might be looking for their niche in this field?
For those going the academic route, I would encourage them to find a position at a university that values publications in Human Factors and would not treat the Human Factors Journal as second tier. The International Journal of Aviation Psychology also falls into this category. The other issue is to keep your mind in both of these two camps – the mind of understanding the theory and the mind of understanding at least some aspect of the practice of aviation. You should always try to look for ways in which the theory you deal with maps directly onto your aviation domain of interest, so you can express the theory in the language of the practitioner, and thereby reach the people at the FAA who may be looking to serve pilots or air traffic managers with the products of your research. You need to speak the aviation language so that you can convince them why your research, your theory-based research, is going to address their questions. Academic language tends to be obscure; it tends to exploit obscure words and terms just the way the applied language likes to exploit acronyms. In a sense, vocabulary is power, and we often feel that if we speak a vocabulary that others can’t understand, it elevates us above them. I think that this is exactly the wrong approach to foster the connections I have been speaking about and I encourage students to think about being able to express a concept in two different ways. For example, I talk to theorists about multiple resources but I talk to the applied people about the ability to multi-task listening and seeing. You need to be able to talk the language of theory to convince your psychology peers that you’re doing important science, but then you also need to be able to talk the language of the practitioner to convince the funding agencies to give you the money to do it. And if you’re versatile in both languages, just like any bilingual person, you’re going be able to link those two and achieve success.

Where do you see the future of aviation research going?

One direction it should be going, and I mention this even though it is not my own area of interest, is the area of training and, particularly, the transfer of training. Good training research is very hard to do, it is very expensive, and it’s time-consuming, particularly transfer of training research. Whether it is in air traffic management, or flight management systems with high levels of automation, more training research is needed. However, the community of learning theorists operate several steps removed from these real world applied issues of training and transfer of training. This needs to change. Now, my own areas of interest lie more with display design and design of procedures, which are proliferating with NextGen, but I’m optimistic that the FAA and NASA’s budgets for the future years are really going to open up for human factors funding in these other areas. I think there are enough responsible people in government that say you can’t neglect human factors when you start building NextGen systems, and that will keep human factors research fairly high on the priority list of the FAA. The fact is, the concern is now no longer will there be money available for research, but are there enough qualified people out there to do the research.

One last question. You mentioned before your passion for mountain climbing. What is the best climb you’ve ever done?

That’s difficult. We climbed Imja peak in the Himalayas, which is just over 20,000 ft, and that was the highest I’ve ever reached, and was the most exciting climb I’ve ever done, even as a guided climb. So from the point of view of the kind of global satisfaction of climbing, that’s probably the most rewarding. But there are so many attributes to climbing. If I were to use a combination of challenge and just plain beauty as criteria, I would have to say Capital Peak in Colorado, which is a multi-day climb that is long and rich and it’s just absolutely spectacular. Doing the Grand Teton when I was 12, ranks right up there too. Those would be my top three picks.
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 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 July 31, 2009. Late papers will not be considered.

DIFFERENCES IN IN-FLIGHT UNUSUAL ATTITUDE RECOVERY PERFORMANCE AND WORKLOAD

Valerie J. Gawron
General Dynamics

Randall E. Bailey
NASA Langley Research Ctr

Adam Randall
BOCES

Abstract

A critical use of Primary Flight Displays (PFDs) is Unusual Attitude Recovery (UAR). Due to cost and safety considerations, very little in-flight data exist for UARs and even less for UARs in transport category aircraft. This paper describes such UAR performance data. Specifically as part of an in-flight evaluation of proposed upgrades to the C-141 PFDs, UARs were performed in the Air Force Total In-Flight Simulator (TIFS) aircraft. The UAR task consisted of an automatic set-up maneuver followed by manual recovery. Initial conditions varied from +15 to -20 degrees pitch attitude combined with +45 to -60 degree roll attitude at 1800 or 230 KIAS. The participants were four current C-141 Air Force pilots and two current Air Force test pilots. Each flew five sorties. The first sortie was for training followed by four sorties for data collection. The training sortie followed a profile similar to that of a data flight but the TIFS crew interacted with the participant to ensure that the participant was fully cognizant of the test conditions, operational test procedures, and the test and data objectives. Two of the four data flights were used to evaluate one of the display configurations (current baseline or proposed upgrade). Five years after the initial data collection, the objective data from the UARs were analyzed using multivariate analysis of variance (MANOVA) as a function UAR and pilot. The dependent variables were aircraft state during the recovery, reaction times (RTs), percent correct control inputs, recovery time, pitch controller movement, roll controller movement, throttle movement, and SWAT ratings. There was a significant effect of pilot on aircraft state, reaction time, percent correct control inputs, recovery time, pitch control movement, roll control movement, and SWAT rating. There was a significant UAR effect for the two nose-high UAR initial conditions: the percent correct of pitch inputs was significantly less than that exhibited for the nose-low UAR conditions.

The full article can be found online at the ASTG website, http://www.hfes.org/astg
Future ASTG Awards

Submitted by Emily Stelzer and Katie McGarry

To acknowledge the contributions that the members of the ASTG make to the field of human factors, the ASTG awards committee proposes two awards, designed to recognize research and development in our field by leading researchers and students.

The Stanley N. Roscoe Award
The ASTG awards committee proposes to establish The Stanley N. Roscoe Award to recognize authors of books or book chapters that significantly contribute to the field of aviation human factors and aviation psychology. The award will acknowledge excellence in writing and the application of basic scientific and engineering principles to the design and/or testing of an aerospace system.

The ASTG Student Dissertation Award
The committee also proposes to establish an ASTG Dissertation Award to acknowledge excellence in scientific research and the application of scientific theory to aerospace system design and evaluation by a graduating doctoral student member.

To be eligible for these awards, the committee proposes that candidates must submit an application to be reviewed by a pre-established panel of judges. Recipients of these awards will be given plaques in recognition of their accomplishment. We will be working over the coming months to refine the criteria, submission, and award procedures for these awards. Please send any ideas or feedback you have about the general notion of these awards and the criteria and procedures associated with them to Emily Stelzer at estelzer@aptima.com or Katie McGarry at kmcgarry@mitre.org.

Human Factors/Ergonomics Practitioner Survey

You are invited to participate in a web-based survey that aims to examine Human Factors/Ergonomics practitioners’ application of research findings published in scientific journals. The survey is directed at practitioners who apply an understanding of HF/Ergonomics to the design of interactions in real settings. The total time to complete the survey is approximately 15-20 minutes.

You do not need to identify yourself in this survey - you can choose to remain anonymous. Once the research findings are available, a summary will be provided to all participants who wish to be informed of these findings.

The survey can be accessed at http://tinyurl.com/shorrock or https://www.surveymonkey.com/s.aspx?sm=ADqhaSwIloNTeSjUrCPjjg_3d_3d

Thank you in advance for your help. Your response can help to benefit the profession.

Steven Shorrock, PhD (Registered Ergonomist)
The University of New South Wales, Australia
s.shorrock@unsw.edu.au
The ASTG is in great shape when compared to the other 22 HFES Technical Groups! Despite being the seventh largest TG in terms of number of members (the three largest ones are Cognitive Engineering, Safety, and Product Design), we have the second largest bank account! This is due in part to last year’s $8K income from the NextGen Conference. Thus, the ASTG is postured well to support new aerospace outreach efforts, now that revised HFES operating rules have relaxed spending restrictions.


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| Balance as of 12/31/08 | $24,051.23 |

**ASTG Membership Report**

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Upcoming Events Con’t


July 27 – August 1, 2009 - XXXVI International Congress of Physiological Sciences (IUPS), Kyoto, Japan http://www.iups2009.com/


August


August 9, 2009 - 5th Biennial Unmanned Systems Demonstration, Webster Field, St. Inigoes, MD http://www.auvsi.org/events/


September


September 14-17, 2009 – IEEE System Readiness Technology Conference, Anaheim, CA www.autotestcon.com

September 14-18, 2009 – Human Factors in Aviation Safety, Los Angeles, CA www.viterbi.usc.edu

September 15-20, 2009 - National Black Coalition of Federal Aviation Employees (NBCFAE) 33rd Annual National Training Conference, Kansas City, MO www.nbcfae.org


September 29-30, 2009 – ADS-B Symposium, Ashburn, VA http://www.sae.org/events/training/symposia/adsb/
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.

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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 at http://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.
Seeking Aviation Human Factors Researchers

Submitted by Paul Krois, Ph.D., Acting Program Director, Human Factors Division, Office of Research & Technology Development, Air Traffic Organization, Federal Aviation Administration

In anticipation of future research needs related to NextGen, we are compiling a list of academic and non-profit researchers who have experience and capabilities in aviation human factors involving flight desk and/or ATC domains. We invite human factors aviation researchers having such experience and capabilities to provide the following information.

Name
Title (Professor, Dean, Director, Program Manager, etc.)
Academic Institution and Department or Non-profit Institution
Mailing Address
Phone Number
E-mail Address
Website, if any
Brief summary of research experience and capabilities (150 words or less)

You may send the information to michelle.whetstine@faa.gov. We would appreciate receiving this information by July 17, 2009.

This notice is a market survey. The FAA will not pay for any expenses incurred in responding to this market survey. The FAA is not seeking or accepting unsolicited proposals.

Mystery Craft

Congratulations to Sally Stader, who was the first to correctly identify last issue’s mystery craft as the Meyers 145! For the first time since I have been newsletter editor, Sally was the ONLY person to correctly identify the craft, and received a $5 Starbucks gift card for her efforts. The first Meyers 145 prototype was destroyed during spin testing in the late 1940s, but six months later, an improved prototype was built and successfully tested, eventually receiving its Type Certificate. Only 20 of these planes were ever produced, but the design was the basis of the Meyers 200, of which there were approximately 100 produced (5 different variants). Each of the 145s was custom-built for a specific customer, so each is slightly different, making them rare, unusual, and difficult to identify for the casual observer! I’d like to extend a special thanks to Janeen Kochan, who submitted a picture of her own Meyers 145 as last issue’s mystery craft. Janeen, you get the honor of having submitted the most mysterious mystery craft that the Flyer has seen!

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. I’m always interested in suggestions for the Mystery Craft - 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.