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Message From the Editor
Eric Stearman

I just wanted to take a moment to introduce myself. I am a doctoral candidate at the Georgia Institute of Technology. I received my Master’s of Science Degree in Psychology in August of 2012. My current research focuses on situation awareness and vigilance in dynamic environments. I often focus on potential NextGen ATC environments. I hope you enjoy the newsletter. If you have any suggestions, questions, or comments, feel free to contact me at ericjstearman@gatech.edu

Economics, Air, & Space
Submitted by: Dennis Beringer

Cessna just completed the first production version of the new Citation X. At Mach 0.935 (up from 0.92 in the previous version), it will be the fastest civilian production aircraft in the world. You can own one for a mere $22,925,000.

Virgin Galactic’s Spacehip Two went supersonic (Mach 1.2) in a test of the rocket engine in April. Backer Sir Richard Branson expects to initiate suborbital “space-tourism” flights by the end of the year, but is raising the price per seat to $250,000. So, for the purchase price of the new Cessna Citation X, one could fly on Spacehip Two nearly 100 times... (and travel at Mach 4 each time). However, the roller coasters at Knott’s Berry Farm (Buena Park, CA) or any Six Flags are probably a better deal for the investment.

Flying Magazine had a four-page centerfold in the June issue. A centerfold, eh? What was it about? The 2014 Porsche Cayman (yes, and why would you want to name a car after a reptile anyway?).

One has to wonder about the significance or apparent correlation. Is there more money to be had selling expensive cars than there is by selling GA aircraft? I don’t necessarily think it is “Can afford airplane, so can afford expensive car,” as most aircraft owners I know drive old Volkswagons, Geos, or pick-up trucks because all of their money is tied up in their aircraft and its operation and maintenance.

Treasurer’s Report
Submitted by: Angel Milan

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<td>Student papers awarded on last meeting:</td>
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<td>Alicia Fernandes</td>
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<td>Andrew Clare</td>
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It appears that we will have another good program at the 2013 meeting in San Diego, and I will leave it to Paul to supply the details. Additionally, three aerospace articles appeared in volume 55(3) of Human Factors. Thus, we are getting good participation in both venues by our 404 (as of this month) members. How does that membership number stack up against our membership historically? Our high-water mark was 571 in 1992 while our smallest size was 331 in 2005-6. Our average is 431, which we just exceeded last year (434), and which we will likely top again when we get our year-end total. According to these indices, the TG seems to be alive and well.

I had a conversation recently with Dick Jensen, editor of The International Journal of Aviation Psychology and a friend and colleague for over 40 years. We were discussing research in Aviation Psychology, and Dick posed the question, “Have we answered all of the questions in Aviation Psychology?” The answer to that question would seem to vary depending upon one’s vantage point. From the perspective of pilot-in-the-loop operation of aircraft or spacecraft, where the operator is extracting information from displays and exercising manual control over the craft (my favorite scenario until recently when I became a big fan of autopilot and V-NAV; hey, if you have the EASY button, why not use it?), we have amassed an expansive collection of data.

We have, as a discipline, also accumulated bodies of knowledge in pilot decision making (research which continues today, especially related to weather), pilot interface with automation, crew interaction, training and simulation, teleoperation (currently UAVs), and a variety of other topical areas.

Although we have gathered a plethora of human-performance data over roughly 56 years (if we use Fitts, 1947, as a rough starting point), David Meister once observed that our biggest problems in using these data are (1) access to all of the various and sundry results, some of which are either difficult to find or inaccessible and (2) integrating the many results into a usable body of knowledge that can facilitate the application of those data to the design and used of aerospace systems. These difficulties persist to this day despite on-line search engines and review articles. As was pointed out by a colleague here, we really need a means to correlate/integrate the many existing data points and to determine where there are remaining gaps in our knowledge. We usually do the latter, now, by yet another literature review. Perhaps a collection of on-line “living” literature reviews including data from the earlier days (1950s at the very least) that we could constantly update as new data become available would be a good target to pursue. How many different ones would be needed? Who would maintain and update them? What would be the inclusion criteria? There may ultimately be more questions here than answers.

Is there a paradigm shift in progress in aerospace that might influence how we would answer Dick’s question? We have seen, over several years, a progression even in General Aviation towards both recommended and actual increases in the use of semi-automated flight systems (2- and 3-axis autopilot, flight-planning software, FMS-like systems). We are also seeing the appearance of envelope-protection systems intended for GA aircraft, and systems intended to assume control of the aircraft and fly it to a suitable landing site in the event of a power plant failure.

Are these just a continued extension of the automation once reserved for military and scheduled-carrier operations, or do they represent a coming significant change in the role of the pilot? If there is any reason to believe it is the latter, then we likely will have many more questions to answer, a number of which may require a return to findings of yesteryear. As it happens, we seem to often find ourselves answering the same questions again and again with only slight variations in context. Perhaps we could benefit from a more concrete and accessible corporate memory. It seems that we have already reinvented enough wheels for the foreseeable future.
Paul Havig received his BA in Psychology from the University of California in San Diego. He went on to receive his MS and PhD in Experimental Psychology from the University of Texas at Arlington. Paul has worked at Wright-Patterson Air Force Base for the last 16 years. When Paul started working at Wright-Patterson Air Force Base in 1997 he worked as a support contractor. In 2001, Paul switched over to a civilian contractor. The following represents a question and answer session I had with Paul that should give you a better understanding of who he is and what he does as an Aerospace Human Factors professional.

**Question:** What made you want to pursue the career path you have taken? Was there a critical incident that led you to this career path?

**Answer:** No critical incident per se. My training was more basic research but I always enjoyed thinking how it would be applied. When I got to the AFRL [Air Force Research Laboratory], I really enjoyed the applied aspect of the job.

**Question:** What is Aerospace Human Factors to you? Why does Aerospace Human Factors matter?

**Answer:** For me it is direct support to Air Force customers. Some of my previous research was more "in the cockpit" looking at helmet-mounted displays, symbology, etc. More recently the AF customer has focused to the analyst role.

**Question:** What struggles do you typically face as a Aerospace Human Factors professional?

**Answer:** The fact that human factors is often considered "at the end" and we are asked to "help" or "fix" the problem!

**Question:** Where do you see Aerospace Human Factors in 15-20 years? What questions will Aerospace Human Factors be trying to answer? What will be the research focus?

**Answer:** I think NextGen will be huge and the role of uninhabited vehicles and autonomy will be ubiquitous with research.

**Question:** What questions are you trying to answer with your research?

**Answer:** What is the optimal way to present information for a specific user given a specific task.

**Question:** What outlets do you use for your research?

**Answer:** Conferences and journals.

**Question:** What is the most exciting incident or research you have been a part of?

**Answer:** I actually have gotten the most out of helping students with MS and PhDs. It is great seeing folks flourish when the find a topic they love and do great research.

**Question:** Is there any advice you would give to a person wanting to pursue a career in Aerospace Human Factors?

**Answer:** Always be ready for change. Don't expect to do the exact same research for your entire career. Be flexible!
Upcoming Events

HCI International:  July 21-26, 2013 Las Vegas, Nevada
Go to http://www.hci2013.org/ for more information

HFES Annual Meeting:  September 30—October 4 San Diego, California
Go to http://www.hfes.org/Web/HFESMeetings/2013annualmeeting.html for more information

IEEE Aerospace Conference:  March1-7, 2014 Big Sky, Montana
Go to http://www.aeroconf.org/ for more information

Aerospace Medical Association Annual Meeting:  May 11-15, 2014 San Diego, California
Go to http://www.asma.org/annual-meetings/future-annual-meetings for more information.

SAE International Aerospace Events can be found at http://www.sae.org/events/aerospace/
For more conferences and meetings go to http://www.hfes.org/web/calendar/calendar.html

Air Shows. Feel like catching an air show. Go to http://www.milavia.net/airshows/ for a calendar of events

Minutes From the 2012 ASTG Business Meeting at HFES

The annual business meeting of the HFES ASTG was held at the 56th Annual Meeting of the Human Factors & Ergonomics Society on Wednesday, October 24.

43 people attended the meeting.

Officers for the term starting with this meeting were:
Newsletter editor - Eric Stearman (Durso student)
Sec/Treas - Angel Millan (CAMI)
Historian - Valerie Gawron
Webmaster - Joseph Ott
Awards chair (student papers) - Jason Kring
Program Chair - Paul Havig
Chair—Dennis Beringer

Following the installation of new officers several discussions ensued which included:

TG sponsorship:  The TG was currently sponsoring the student lounge. It was suggested that we could have mentors present in the student lounge to interact with students. Alicia suggested that the mentor relationship might be extended after graduation. This situation already appears to be present frequently in many academic environments.

Student paper award:  Winner: Alicia Fernandes ($200+registration).
Finalists: Andrew Clare ($150 registration reimbursed) Kimberly Jackson (award not granted due to no HFES membership)

Student lunches (Lunch with the Experts...): Haydee Cuevas (cuevash1@erau.edu) volunteered to organize the effort for 2013, and Valerie Gawron volunteered to assist and/or participate as a luncheon host.

Student grants, proposals:  A discussion followed involving student grants, proposals, the detail of which were not recorded.

The meeting was adjourned at the conclusion of the scheduled time.
Fear of Flying: After the Fact  
Submitted by: Dennis Beringer

A 32-year-old man popped the over-wing exit door on a flight taxiing to the gate at Toronto/Pearson airport and departed the aircraft. No explanation was given for his behavior. Perhaps he didn’t want to pay another hour on his airport parking and had no checked baggage…

In a related story, a 23-year-old man tried to open an exit door on an Alaska Airlines flight while it was airborne. Taken together, these are either an indication that airline service has hit an all-time low, driving passengers out of the plane before it even stops, or that there is a renewed interest in the exploits of D. B. Cooper.

“...and departed the aircraft.”

Know It All:  
Aerospace Trivia

Who was on the SECOND Apollo mission to land on the moon?  
Who was the mission commander?  
Where, exactly, did that lunar lander set down on the moon's surface?  
(Question Submitted by Dennis Beringer)

Everyone that can correctly answer all parts to this trivia question will be acknowledged in the next edition of the newsletter. However, the first person that correctly answers all parts to this trivia question will receive a special prize

Please email responses and ideas for new trivia questions to:
ericjstearman@gatech.edu

Please write “ASTG Trivia” in the subject line.

Information on Submissions to the ASTG for the HFES Conference

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<td>Posters accepted</td>
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<td>Demos accepted</td>
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<td>Panels accepted</td>
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