Dear Colleagues,

I trust that everyone is doing well and planning to attend the conference in San Antonio. It’s going to be a busy week and I’m looking forward to hearing the research as well as the intriguing conversations that will take place throughout the week of October 19th – 23rd. I’ve been engaged in a new design team responsible for porting the user interface of several products to a newer and cleanly looking design. In the beginning, this was truly a challenge because we have 200+ products. However, with the emergence of these smartphones and social networking, it has heightened my awareness and thoughts on how to seamlessly integrate a huge number of tasks and still maintain ease of use.

Speaking of smartphones, after several months of going back and forth, talking to friends and reading reviews, I finally purchased an iPhone. As stated during my February newsletter, the iPhone was the main talking point for middle school students during National Engineers Week. To date, its popularity hasn’t slowed down amongst teenagers as well as adults. I must say, I am quite pleased with how easy it is to navigate around and still maintain a sense of awareness. It is obvious that someone at Apple places a huge emphasis on “system design”. Once again, this proved that, if done correctly, systems can be designed to meet or exceed the end user expectations without showcasing the complexity used by engineering professionals. Thus far, I’ve learned 3 lessons from my experience with the iPhone, which can be generalized across every industry.

Lesson #1: Scenario-driven design must be the most frequent road traveled
Lesson #2: Link information, designing user-friendly technology devices and finding ways to improve people's interaction
Lesson #3: Make complexity invisible

If you haven’t already, you should get engaged in our LinkedIn group to share your ideas and the projects that you are leading. This is another avenue that we can use to give strength to our technical group which is needed to continue its strong presence. ♦♦♦
Revamping Our Documents Web Page

By: Teresa Alley

The SDTG Website has a Documents page:

http://www.hfes.org/sdtg/sdtg_documents.html

The last section is "Articles/References." It is old and possibly not even useful. But a different possibility, or even a new page, might be publications of SDTG members. This section might include titles (with authors) of journal articles, papers, books, theses, etc. If the publication is available for download, a link would be provided. If it is available from a publisher, the link to the citation on the publisher's website would be provided. If it is available in some other form, that information would be provided. If it is not available, the title can still be listed since it demonstrates the interest and expertise of the SDTG member.

I would like everybody's thoughts on this idea. Would it be useful or at least interesting? Would you, yourself, contribute links to your publications?

Please contact me with your thoughts and ideas.

Teresa Alley, SDTG Webmaster, talley@dticam.dtic.mil: 619-545-7384

Our LinkedIn Group is growing. We now have 44 Group members out of a total SDTG membership of 172. We have already had a few discussions within LinkedIn. In addition to discussion it is a place we will be posting job openings from members. If you can think of other uses for our LinkedIn Group, do it! And join us.

Happy summer to all! We are looking forward to convening in October.

If you have any questions or ideas, please contact your SDTG officers:

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urquhart4@nc.rr.com

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Melissa Weaver
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Hello! I am most excited to announce that we have amended the SDTG’s By-laws and voted off on them. Much gratitude goes out to those who reviewed the draft and later voted on the final amendment. The vote was unanimous and so we have adopted a revised By-laws! The By-laws will be posted in our web site [www.hfes.org/sdtg](http://www.hfes.org/sdtg) in PDF format.

In addition to the By-laws, now we must work on elections! Yes, it is that time again and we are seeking nominations for the following positions:

- SDTG Newsletter Editor, and
- SDTG Program Chair-Elect.

The Newsletter Editor will serve for a one (1) year term and the SDTG Program Chair - Elect will become the Program Chair the following year serving a term of two (2) years. You may nominate yourself to any of the vacant positions or nominate your colleagues. You will have until Monday, August 10, 2009 to submit your nominations to me (Ailer.C.Kochan@L-3Com.com) with copy to our Chair, Ryan Urquhart (urquhart4@nc.rr.com).

If you have any questions do not hesitate on contacting me at your leisure.

I am hoping everyone is enjoying their summer and I am looking forward to seeing you in San Antonio! ♦♦♦

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“It’s the latest innovation in office safety. When your computer crashes, an air bag is activated so you won’t bang your head in frustration.”

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With the 52nd Annual Meeting of HFES in San Antonio, TX the week of October 19, 2009 approaching, the SDTG needs to elect new officers. This year, we are seeking nominations for the positions of Technical Program Chair – Elect and Newsletter Editor.

If you would like to serve in any of these positions, you are welcome to nominate yourself. If you believe a colleague would make a good Technical Program Chair - Elect or Newsletter Editor, please nominate them AFTER determining that they are interested and willing to serve if elected. If you have any questions, please contact either the SDTG Chair – Ryan Urquhart or the Secretary-Treasurer – Ailer Kochan.

Officer Responsibilities

Technical Program Chair - Elect: This is a two year position. The Technical Program Chair - Elect shall serve during the 2009-10 year as an understudy to the Technical Program Chair, maintain regular contact with the Technical Program Chair, perform whatever SDTG-related duties the Technical Program Chair may assign, and shall be a member of the SDTG Executive Council. During the 2010-11 year, this person will step into the role of the Technical Program Chair. As the Technical Program Chair, this person should solicit, review, select and organize, as appropriate, proposals for lecture papers, symposia, panels, and other events and activities to be sponsored by the SDTG. The Technical Program Chair shall also be responsible for defining criteria for and then selecting, with assistance from reviewers chosen by the Technical Program Chair, the best technical paper presented at SDTG-sponsored sessions of the Annual Meeting, and making the presentation of the “David Meister Best SDTG Paper Award” at the annual meeting.

Newsletter Editor: This is a one year position. The Newsletter Editor shall be responsible for the collection of information and activities relevant to members of the SDTG, and shall prepare and distribute not less than two (2) regular issues of the SDTG Newsletter per year. One of the newsletters shall provide a report summarizing results of the annual business meeting. The Newsletter Editor also may be utilized in assisting the Secretary-Treasurer and Nominations and Election Committee in its responsibility to issue a call to all voting members of the SDTG for the nomination and election of SDTG officers. The call for nominations and election may be issued via regular or special issues of the Newsletter. The Newsletter Editor may assemble and maintain a group of volunteers to assist in the production of the SDTG Newsletter.

Nomination Process

Please send your nominations to me, Ailer Kochan, at Ailer.C.Kochan@L-3Com.com in an email message with “SDTG Nominations” in the subject line. Please also copy the current Chair, Ryan Urquhart, at urquhart4@nc.rr.com. In your message, note the position, nominee name, and nominee phone number and email. Nominations are due no later than Monday, August 10, 2009. The election ballot will be distributed in early September, with ballots due one month later. ♦♦♦
INCOSE Annual International Workshop (IW) was held in San Francisco, CA in January of 2009. The Human Systems Integration Working Group (HSIWG) held a series of meetings to discuss current efforts, potential future efforts, and HSI work in which others are engaged.

The IW is different from the Annual International Symposium (IS) in that the IW is working meeting. Working groups are formed to address issues, challenges or questions within systems engineering and produce products that promote INCOSE goals and activities.

Over the course of the four day workshop, members of the HSIWG attended the meetings and participated in other working group meetings. In addition, members of other working groups participated in part of the HSIWG meeting. Initial activity focused on sharing information about other ongoing HSI activities including reports of the activities of the Human Factors and Ergonomics Society Meeting, the Human Systems Integration Symposium, NDIA Systems Engineering Committee Human Systems Integration Subcommittee, GEIA G47 Committee (Systems Engineering), and IEEE as well as the upcoming INCOSE IS 2009 to be held in Singapore in July.

The theme for IS 2009 is The Human Dimension of Systems Engineering. In preparation for IS 2009, INCOSE received 220 papers, 37 tutorials, and 9 panels. All the HSI paper submissions received all the required reviews. This is excellent progress for a maturing working group – both for having so many papers submitted and for having the reviewers required for all the papers.

Other exciting news shared at the meeting included the ongoing work to cement a codified relationship between HFES SDTG and INCOSE HSIWG. Mike Mueller and Jen Narkevicius, Co-Chairs of the HSIWG met with HFES’s Lynn Strother and Deborah Boehm-Davis during the HFES annual meeting to further the process. After IW09, INCOSE agreed to the Memorandum of Understanding. Therefore the MOU has gone back to HFES for finalization. The MOU sets out the relationship between the organizations and strengthens the liaison between the technical practices supporting HSI. In April 2009, a special Cognition issue of INSIGHT was published. Further, HSIWG comments were included to update the HSI appendix of the INCOSE 2010 Systems Engineering Handbook.

There were a number of speakers throughout IW 09, bringing HSIWG members up to speed on work in the practice. LTC Scott Nemmers presented ongoing work sponsored by the Air Force to develop an HSI Thesaurus. The Thesaurus is developed and maintained by DTIC and is designed to act like Wikipedia in that anyone can offer items but not everyone can edit. The wiki will act as a central repository for the variety of definitions for terms and the intent is for it to act as a lexicon.

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Sessions focused on methods and tools, economics, HSI knowledge, and working group projects. Methods and tools included continued work with the Model-Based Systems Engineering (MBSE) working group, the identification SE/HSI Tools, analysis tools and quantification for HSI. In economics, the MIT team presented their leading indicators work and efforts to incorporate HSI. HSI knowledge tackled the thorny questions of whether HSI is a discipline, a practice, or something else and what that meant in terms of codification of a profession. Working group projects were reviewed and refined and new projects were added to reflect the need for products. Projects include the notional Walk-thru for commercial sector and for defense, development of an HSI Body of Knowledge, identification of HSI core competencies, and continued pursuit of adding HSI to the SE certification.

IS09 will be held shortly in Singapore. In addition to HSI papers and a tutorial being presented, the HSIWG will meet. This is a great opportunity to bring HSI practitioners from the Pacific Rim, many of whom have not been able to participate in previous meetings up to speed on HSIWG activities, including bringing them on to project teams. The meeting will help HSIWG continue to grow and develop products that fill INCOSE and other HSI practitioner needs.

SDTG 2009 Schedule for the HFES Annual Meeting

Session 1, Lectures:
Tuesday, October 20, 2009 10:30am - 12:00pm

SD1 - Human Factors Impacting Design
Chair: Jim Pharmer, Co-Chair: Debra Clark

Assessing the Human Factors of a Human Engineering Standard
Hope Nesteruk (Army Research Laboratory)

Incorporating Social and Organizational Factors into Defense Human Factors Integration
Georgina Fletcher (Systems Engineering and Assessment Ltd.), Eleanor Forest (Systems Engineering and Assessment Ltd.)

Concepts of Operations Storyboard Tool
Carroll Thronesbery (S&K Aerospace), Debra Schreckenghost (TRAC Labs Inc.), Arthur Molin (S&K Aerospace)

A Task Analysis of the Task Analysis Process
Les Ainsworth (Synergy Consultants)

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SDTG 2009 Schedule for the HFES Annual Meeting, continued from page 6

**SDTG Annual Business Meeting**
Tuesday, October 21, 2009 5:00 pm – 6:00 pm

Session 2, Lectures and Alternate Format:
Wednesday, October 21, 2009 8:30am- 10:00am

**SD2 - Focus on Human Systems Integration**
Chair: Shannon Foley, Co-Chair: Melissa Weaver


- **Beyond User Centered Design: Applicable Concepts for Complementary Approaches**
  Raegan Hoeft (Lockheed Martin), Helena Mentis (Lockheed Martin)

- **Human Systems Integration Modeling Using Systems Modeling Language**
  Tareq Ahram (University of Central Florida), Waldemar Karwowski (University of Central Florida)

Session 3, Discussion Panel:
Thursday, October 22, 2009 8:30am- 10:00am

**SD3 - Panel: Human Factors Across Business Sectors: Similarities and Differences**
Chair: Rebecca Grier

- **Human Factors across Business Sectors: Similarities and Differences**
  Rebecca Grier (U.S. Navy, Naval Sea Systems Command), Gretchen Lizza (U.S. Navy, Naval Sea Systems Command), Aaron Bangor (AT&T Labs), Michael Patterson

Session 4, Discussion Panel:
Thursday, October 22, 2009 3:30pm- 5:00pm

**SD4 - Requirements: The Starting Point for Good Human Factors**
Chair: Rebecca Grier

- **Human Factors Requirements: Being Involved in the First Stage of Systems Development**
  Rebecca Grier (U.S. Navy), Gretchen Lizza (U.S. Navy), Michael Linegang (Federal Aviation Administration),

The meeting was hosted by the Army, and the theme was Human Interactions with System of Systems. The following highlights were selected as items of potential interest to SDTG membership.

The primary plenary speaker, Mr. John Geddes of PM Soldier Warrior in Fort Lewis, described the developmental history of the Ground Soldier Ensemble and the processes by which equipment items were integrated into and evaluated by the Army's Stryker Brigade Combat Teams. The key design challenges faced in delivering these capabilities were size, weight, power, and interoperability. One of the most effective mechanisms developed to support equipment fielding was the use of "Unit System Integrators." Typically experienced former soldiers, these individuals were able to have quick but meaningful dialog with the soldiers using the equipment. In addition to having credibility with the end users, they were able to effectively convey design changes to the engineering staff.

Also during the plenary session, Stuart Booth from the Systems and Software Engineering (SSE) Directorate of the Office of the Deputy Under Secretary of Defense for Acquisition and Technology provided an update on human systems integration (HSI) in the DoD in general and in his office in particular. Management responsibility for HSI in the DoD has been delegated to the SSE Directorate. The human has been recognized as a common "blind spot" in systems engineering, and it is expected that a coming revision of the DoD Systems Engineering Plan Preparation Guide will address this issue.

During the plenary and selected SubTAG sessions, Hope Nesteruk of the Army Research Laboratory and Dr. Daniel Wallace of Naval Sea Systems Command briefed an ongoing effort for update of MIL-STD-1472F. Both a "G" and an "H" revision have been mapped out, with the near-term "G" revision focused on deleting outdated information, adding information on new technologies, reorganizing the standard, and incorporating critical information from MIL-HDBK-759C. An online survey has already been conducted to evaluate the organizational structure of the standard, and the proposed new structure was distributed at the meeting. A full draft of the "G" revision is expected to be completed by late 2009.

The HFE/HSI: Management and Applications SubTAG included a briefing by the Air Force Human Performance Optimization Division on their current work to develop a guide to aid government employees in specifying HSI for the development of systems via contractual agreements and source selection documentation. The working title for this guide is the "Human Systems Integration (HSI) Language in Source Selection and Contract Documents Guide," and it is scheduled for release in November 2009. The guide will provide recommendations aimed at ensuring HSI issues are effectively incorporated in systems development contract efforts to cover the entire range of the systems acquisition processes. This guide will include adaptable examples for use and recommendations for incorporating HSI issues into the contract documents such as Statement of Objective (SOO), Statement of Work (SOW), Performance Work Statement (PWS), Source Selection Evaluation Criteria, Work Breakdown Structure (WBS), Integrated Master Plan (IMP), Integrated Master Schedule (IMS), Systems Performance Specification, and Contract Data Requirements List (CDRL). Anyone with examples or who would be willing to review this document prior to publishing please contact Curtis Fey at Curtis.Fey@brooks.af.mil.