The System Safety Society
Organized 1962
Incorporated 1973
Professionals Dedicated to the Safety of Systems Products and Services

Tennessee Valley Chapter

http://www.isss-tvc.org/

June 2012

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President's Corner

Happy 50th Anniversary to the ISSS. The System Safety Society was organized in 1962. There are at least 82 members that have been members for 25 years and five of these are members of the TVC Chapter – John Rankin, John Frost, Robert Jenkins, Fred Lurwig, and Pat Clemens.

Secretary's Meeting Minutes

18 January 2012 meeting was held at A-P-T Research. Mr. Don Swallom lead a guided discussion on the "Use (and Misuse) of System Safety Terms" in the spirit of Pat Clemens' presentation "A Charlatan's Guide to Quickly Acquired Quackery". The discussion addressed the matrix terms catastrophic, critical, marginal, negligible, improbable, remote, occasional, probable, and frequent and suggested simple using Severity 1, 2, 3, 4 and Probability A. B, C, D, E with numerical and non-numerical descriptions. The discussion also dealt with the terms hazard, risk, and causal factor and how causal factor seems to confuse the analysis of hazards in a hierarchy of "effect, mishap, hazard, causal factor" when causal factor is simply another word for hazard. Hazards should be broken down to the level where you will apply mitigation. The discussion also looked at the word criticality (Is is severity or risk?) and what is "acceptable risk" (Is it based on history, personal experience, or public pressure OR is based on optimizing risk with the constraints of the program?). Finally the discussion looked at "hazards" versus "failure conditions" (an FAA term). Pizza and drinks provided by A-P-T. Seventeen members and 4 guests attended.

15 February 2012 meeting was held at the New Greenbrier BBQ Restaurant with 10 members and 7 guests. Chapter Vice President Greg Turgeon opened the meeting. Under new business the Chapter Executive Committee has modified the budget and purchased a projector and screen for TVC SSS meetings. Special events coordinator Jim Blanteno briefed the members on the January 14th Future City Competition and Moonbuggy Race to be held April 6 and 7, at the U.S. Space & Rocket Center. Jim is soliciting someone to replace him as the Chapter's Special Events Coordinator. Greg Turgeon then introduced the Decatur/Austin Robotics Coalition (DARC) team members and teachers. Sara Grace Mitchell and Zach gave background of DARC, highlighting Dr. Mitchell boosting Engineering and Technology for the last 20 years and for the last 5 years the DARC team has been housed at the

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Decatur Calhoun Community College campus. The high school students presented their efforts to promote system and occupational safety in their robotics competitions. At the beginning of the school year as the DARC team forms, the members do team building exercises to construct a unified team that will build a better product. They have dedicated efforts to promote safety during their robotics competitions and during the robot building process. They take the Robots to Elementary Schools. Each year, DARC conducts product safety training and "employees" sign a safety contract and have their parents sign it also. There are 12 hubs in Alabama. This year's competition theme was "Bugs Buster". They compete in a national competition called BEST which is now moving into Canada and Mexico.

Check out www.darc.com

21 Mar 2012 meeting was held at QinetiQ North America. QinetiQ provided both drinks and lunch for 18 members and 24 guests. Jon Henshey opened the meeting and announced that TVC members need to acknowledge their coworkers/colleagues and nominate them for TVC Chapter and National Awards. Office nominations will soon be announced. Dave West noted that as the ISSC technical chair for this year's conference in Atlanta, the date to have abstracts in has been extended due to only receiving 67, to date. John Livingston said he needs session chairs for the ISSC. Neal Petry, QinetiQ, welcomed the speaker, Mr. Dave Cripps from the Army Aviation Engineering Directorate. Mr. Cripps noted that the Chief of Staff was concerned on how long it takes to test and qualify a military system. Mr. Cripps is one of six G-4 delegated Airworthiness Proponents. Mr. Cripps discussed US Army Airworthiness Qualification. Three elements of airworthiness are system design meeting the airworthiness standards, production in compliance with original design and continued airworthiness to remain compliant with the approved design. In the traditional qualification process, the system component level qualification is reviewed and the risk rolled up to system level. The first data that is provided for review is data from CDRLS, so they are not predictive. In the traditional qualification process, all components are tested and qualified; however this is time consuming and expensive. A standardized methodology is needed which focuses on the Warfighter. A Safety Case structure will show that a system is designed to be safe and this safety is preserved during production, use and disposal. A safety case structure accounts for all elements of a system from the scope of the system, requirements, legislation, standards and policies that show what must be complied with to ensure risks are identified, controlled and any residual risk accepted. Mr. Cripps discussed the pros and cons of a safety case. A safety case is the functional decomposition based on user and regulatory requirements with system level probabilities of failure. To maintain competency, the key elements of the safety process need to exist in all organizations and a traceable equivalent level of safety must stem from the same regulatory requirements basis within a multilateral accord or to recognize reciprocal acceptance. The bottom line is the total system design should be effective, efficient and soldier focused.

18 April 2012 meeting was held at A-P-T Research in Research Park, Huntsville. APT provided pizza and drinks. Greg Turgeon presented to 9 members and 15 guests. Mr. Greg Turgeon provided a presentation on the changes for recently released RTCA DO-178C and the new supplemental documents. This standard is used for approval of airborne software for civil aircraft and is increasingly being used on military aircraft.

9 May 2012 meeting was held at SAIC, 6723 Odyssey Drive in the Gemini Room in conjunction with the TechAmerica G48 System Safety Committee meeting. Pizza and drinks were provided by SAIC. Don Swallom chaired the meeting. Mr. Bob Schmedake, Executive Vice President, International System Safety Society, spoke on "Starting with Why" previewing his presentation to the Australian System Safety Conference 2012, 23-25 May, in Brisbane, Australia. "Starting with Why" refers to the

book "Start with Why: How Great Leaders Inspire Everyone to Take Action" by Simon Sinek. Mr, Schmedake pointed out that any organization can explain what it does; some can explain how they do it; but very few can clearly articulate why. A study of the leaders who've had the greatest influence in the world, reveals that they all think, act, and communicate in the same way-and it's the complete opposite of what everyone else does. Leaders like Martin Luther King Jr., Steve Jobs, and the Wright Brothers all started with why. Schmedake's presentation applied these concepts to our efforts to advance the safety of systems, products and services in all areas of human endeavor. Mr. Swallom presented Schmedake with an ISSS TVC Coffee Mug in thanks for his presentation. Meeting was attended by 11 ISSS TVC members and 9 guests.

ISSC Conference

The 30th International System Safety Conference to be held in Atlanta, Georgia at the Loews Atlanta Hotel on August 6-10, 2012. The theme this year is "**Think Outside the Box".** The conference will have four types of papers:

Technical Papers include Aviation, Safety Review Boards, System Safety Education/Lessons Learned, Defense Systems, Hazard/Risk Management, Human Factors/Worker Safety, Process Safety (Nuclear Plants, Other Facilities), Software, Space Systems, Four Sessions on Different Techniques, Chemical Demilitarization Facility, Health and Patient Safety and New to the ISSC this year are Security Related Tracks. Technical Papers are published in the conference proceedings and presented to conference attendees.

Panels/Roundtables - Discussion-oriented forums in which either a series of related presentations are delivered by a small number of experts (panelists), or a general topic is discussed somewhat informally by any or all participants. Discussions are led by a facilitator.

Tutorials - Educational presentations delivered by one or more instructors and intended to give practical information.

Workshops - Conference forums conducted in an interactive setting and intended to give participants problem-solving experience.

Keynote speaker is Christopher A. Hart, National Transportation Safety Board.
Luncheon speakers include Michael Appel, M.D., Northeast Georgia Health System and Dave Eherts, Sikorsky Aircraft Corporation.

The Conference also includes a Wolfgang Puck Dinner at the Georgia Aquarium.
Deadline for pre-registration is July 28, 2012.
For more information visit: http:/ /issc2012.system-safety.org/

Special Events Corner

2012 Annual Moonbuggy Race. Teams from several area high schools, as well UAHuntsville, Alabama A & M University, and J.S. Drake Technical College competed with nearly 100 other returning

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and rookie teams from around the world in the 19th-annual NASA Great Moonbuggy Race, April 13-14, at the U.S. Space & Rocket Center in Huntsville.

The competition hosted more than 500 high school, college and university students from 20 states and several other nations who raced their specially crafted lunar rovers or "moonbuggies" over a half-mile course that includes craters, rocks, lava, ridges, inclines and soil, similar to the moon's surface.

The NASA Great Moonbuggy Race is one of many educational projects and initiatives the agency conducts each year to attract and engage America's next generation of scientists, engineers and explorers.