



The International System Safety Society (ISSS) is still suffering from the impacts of the 2011 Budget Control Act that imposed “sequestration” measures within many members of the Society’s government contractor customer base. The Act resulted in immediate, and significant, decreases in membership and attendance at the annual Conference. Over a period of several years our member base was reduced by almost two thirds, going from approximately 1,200 paying members to about 500. Many system safety programs were “defunded,” forcing people to move to new fields where a Society membership no longer seemed necessary. In addition, funding cuts and an apparent distaste for “conferences” by government agencies slashed budgets supporting engineers’ Conference attendance.

At the same time, I began to receive queries from large corporations wanting to know where they could find both training and qualified system safety engineers. I heard they had lots of training budget, but no conference budget. Out of desperation, many companies began to rely upon on-the-job training (OJT) by people who themselves are beginners in the subject. The story I keep hearing is that the availability of properly trained and qualified system safety personnel rapidly declined from about 2008 to the present.

We are in an interesting position where our “traditional” government contractor customers are unable to fund their system safety programs as they did in the past. Funding for conference attendance has also dried up, yet there is a large demand for training. In addition, the field of system safety has begun to “grow legs” within other industry sectors, creating an even greater deficiency of appropriately educated, trained and qualified people.

For the past couple of years I have been writing about our work with Arizona State University (ASU) to find effective ways to introduce system safety concepts and ethics into all engineering curricula. There is a growing understanding at the university and professional level that system safety (often called “safety through design” by these organizations) is a critical

aspect of the engineering profession. There is a desire to ensure that engineers know it is their responsibility to ensure safety through their designs, rather than expecting that others will be able to figure out how to use their designs safely. However, to achieve this goal, university engineering faculty need to be knowledgeable in the field of system safety. That requires a significant effort to “train the trainers” so they can appropriately teach the subject in their classes.

Funding for this effort is currently non-existent because there is no infrastructure to support it. Universities have funding to train the trainers, and it is possible that organizations might be willing to provide scholarship money for this effort; however, this will not occur until the training is made available. It is a bit of a “chicken-and-egg” dilemma where funding isn’t available until materials are available and materials can’t be available until funding comes through.

As the new Director of Conferences, I have been trying to figure out how to use the resources available at the Conference more effectively to achieve the Society’s goals of creating a more effective approach to doing business, as well as introduce the system safety concept into all engineering and development projects worldwide and provide education and training for system safety engineers. In many ways we have been providing the elements needed to achieve these goals, but perhaps we haven’t been promoting them properly.

The four initiatives that we introduced two years ago are key stepping stones toward achieving these long-term goals. Those initiatives are:

1. **Create a high-level source standard defining and describing the system safety approach.** The intent is to create a standard that can be used as the basis for industry-specific system safety standards, and can be used as the basis for auditing the content of these specific standards.
2. **Ensure that appropriate training, mentoring and education is available.** This effort would be for



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those who are involved in implementing and managing a system safety program (for both technical and management issues).

3. **Develop a means to introduce system safety concepts into all engineering curricula.** A key element in achieving this goal is to provide courses and materials intended to “train the trainers” in key concepts and techniques of the system safety profession so that they have the knowledge and skills necessary to introduce the subject effectively in their standard course materials.
4. **Provide an industry-accepted certification or certificate process.** Perhaps this begins with a simple certificate indicating that the holder has attended a prescribed set of courses. Providing a fully vetted certification program, such as that provided by the Board of Certified Safety Professionals (BCSP), is currently beyond our abilities but we can at least provide evidence of a person having been exposed to certain key concepts and techniques.

Our Conferences are the ideal place to work toward achieving the last three items. We already provide a wide variety of classes and workshops designed to provide high-quality educational opportunities on a wide range of system safety topics, ranging from basic introductory courses to specialized courses and workshops on many of the engineering tools and approaches found to be most useful in our profession. In addition, we provide dozens of peer-reviewed papers on many emerging topics, including approaches to analysis and management.

The fact that the Conferences bring together many of the global leaders in the profession at the same time and place creates a wonderful opportunity to work toward the first item on the list — creating a document that represents consensus on the what, where, how, why and when of our professional activities. To achieve a true global consensus, it is important to bring together a wide representation of the needs of many industries. We offer the opportunity for many seemingly divergent or independent industry sectors



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to come together and influence the future of system safety. It should be noted here that “system safety” is a broad term that includes, as a logical subset, the “new” field of “design for safety” as used in the worker safety context of Occupational Safety and Health Administration (OSHA) regulations.

It is clear that our system safety Conferences currently provide high-quality training useful for new or experienced system safety engineers, managers and educators. “Formal” educational opportunities are offered through multi-day courses, various workshops and technical presentations. There is also a valuable opportunity to meet and discuss mutual problems and interests through a range of networking opportunities. Conferences provide a great opportunity for implementing focused sessions on topics such as “introducing system safety concepts into engineering curricula.” In addition to the opportunities already available through our Conferences, with sufficient funding and support, we could expand into providing training such as webinars, regional training seminars and, perhaps, an actual brick-and-mortar system safety institute.

It is my goal to work toward rebranding our Conferences as educational opportunities so it is clear they are a great place to send people to obtain system safety-related education and training. The 1991 “Tailhook” scandal in Las Vegas may have made a permanent black mark against conferences of all types. That event seems to have forever tied these types of events to a “party” stereotype and potential trouble. I am hoping that we can make it known that we are dedicated to providing high-quality *training*, as well as a venue to share important and emerging system safety science and engineering practices.

Conferences are not party opportunities. Rather, they are critical venues for ensuring the health and growth of our profession. We need to get the word out that our Conferences are not merely social and networking opportunities, but in fact are the best place to get education and training, and to keep up to date on the latest developments through our many peer-reviewed paper presentations and peer-to-peer networking opportunities and discussions. ●