

From the Editor's Desk...

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Back to the Future Past

Have you been giving any thought to the future of system safety or the future of the International System Safety Society (ISSS)? Someone recently told me that they think the ISSS is outdated and on the path to extinction. They think it's dead because — they say — we have nothing relevant to offer and the cost of membership is too high. In addition, they think we are an aerospace-only discipline that does not apply to other industries and, therefore, expansion and growth are not possible.

Having been with the ISSS since 1966, I have seen many trends, fads and changes take place over the years. As I see it, the current trend seems to be one of lax ethics — ethics in people, society, government and corporations. It's easy to see a lack of ethics in our government. You can see a lack of ethics in manufacturing also, as exemplified by the recent GM recall debacle. It seems to me there is a direct link between ethics and the amount of system safety engineering that is applied to a product. System safety is not dead; it's just being ignored. A highly ethical company should want to invest in system safety to proactively prevent accidents, rather than avoid a safety program and let accidents and the legal system drive consumer safety.

Trying to “sell” system safety is a difficult job. Why aren't people and corporations passionate about safety? When the pay-off for system safety is so huge, why aren't companies pushing and implementing system safety to a higher level? Look at auto safety, where thousands of lives are lost every year. You would think there would be a high motivation to save lives, even if there is an investment cost. But it doesn't seem to work that way. One sad fact is that people tend not to notice safety too much when accidents happen to people one accident at a time, unless those accidents happen to them or to a family

member. People become immune to traffic deaths (and safety) because so many accidents occur every day. Have corporations become immune also? Can we get out of the “aerospace” rut and make system safety universal?

What do you think? I would like some opinions.

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The first technical paper in this issue, “A Review of Functional Safety Models for Public Safety Management Systems” by S. B. Aanandh, Dr. Chinmaya Kar, and Dr. Nihal Siddiqui, reviews various models used for enterprise process management systems and public safety systems. These models include probabilistic functional safety models, accident models like Sequential Event-Based Models, systematic models such as FMEA, reliability models, systemic models such as the STAMP model, cognitive models, etc. These models, along with their advantages and disadvantages, are

discussed in detail. The existing public safety management system and enterprise process management system are also compared.

The second technical paper in this issue, “System Safety Approach to Collision Reduction” by Michael Conlon, Brenda Himrich and Sharon Feiner, discusses a safety program implemented by the Metro Transit system in the Minneapolis/St. Paul metropolitan area. It illustrates how a comprehensive framework of education and outreach put in place in 2009 and 2010 has led to improvements in customer perceptions of safety, a 6.5 percent annual reduction in collisions and a \$582,282 annual savings in risk management claim payments.

In his “System Safety in Healthcare” column, Dev Raheja looks at how “Reducing Work-related Risks for Healthcare Workers is Bound to Improve Patient Safety.” Nursing ranks among the worst occupations in terms

of work-related injuries, and studies have shown that in a given year, nearly half of all nurses will struggle with lower back pain. When nurses suffer, so do their patients. The costs to hospitals are enormous. Extrapolating the individual costs of these lapses in care to a national level, researchers estimate that medication errors and patient falls that occurred as a result of nurses' health issues incurred as much as \$2 billion annually in expenses to the health care system. This article discusses these problems and how to mitigate them.

In his "TBD" column, Charles Hoes discusses a familiar topic — risk. As system safety engineers, most of us are familiar with risk and risk assessments. In this article, Hoes identifies and discusses many of the complexities and misunderstandings dealing with the topic of risk. His insights are interesting.

In the "Unintended Consequences" column, Terry Hardy discusses lessons learned from a helicopter crash that occurred on August 5, 2008. In this accident, a Sikorsky helicopter operated by the U.S. Forest Service crashed into trees and terrain while transporting firefight-

ers near Weaverville, California. Nine people were killed in the crash, including seven firefighters, and four others were seriously injured.

In the "Design-Based Safety" column Dave MacCollum discusses "Cybernetics Automation Technology." Cybernetics Automation Technology (CAT) is on the threshold of providing workerless mining, railroads, sawmills, ships, steel mills and all sorts of production facilities — perhaps even management functions. The development of complex electronic control systems appears to be combining with mechanical machines to create automation that needs fewer people. The overall result of this new paradigm will be fewer human jobs and a possible increase in safety problems, as MacCollum discusses.

Remember, if you wish to opine, send me an email at journal@system-safety.org.

Until next time,
Clif