We in the system safety discipline seem to be the worst lot for writing hazards. Sometimes I wonder if we truly understand what a hazard is, or if we each have our own unique unequivocal concept. The new ANSI standard on system safety states that a hazard description should contain three components:

- Hazard source
-Initiating mechanism
-Hazard outcome

Quite often, I find one or more of these items missing in most hazard analyses. Here are some examples of poorly worded hazards from hazard analyses that I have encountered:

- “Explosive uncontainment of gas charge used for emergency gear extension purposes.” [Comment: Uncontainment is not a valid word; what is the outcome when the gas charge is inadvertently released; what does "gear extension purposes" mean?]
- “Common mode failure of primary and secondary gear extension means.” [Comment: What is the common mode failure? What specifically are "gear extension means" and what is the hazard outcome?]
- “Inadvertent tail hike on take-off roll.” [Comment: What is a tail hike? What is the outcome?]
- “Explosive uncontainment of landing gear strut captive pressure.” [Comment: Sounds impressive, but what is uncontainment? Is the pressure being held captive? What is the outcome? "Captive pressure" could be better explained.]
- “Explosive decompression hazard servicing tires.” [Comment: This appears to be a "hazard" within a hazard; this describes nothing — instead of describing the hazard, it just states that it's a hazard. What is the outcome?]
- “High-pressure inert gas (nitrogen) hazard servicing landing gear struts.” [Comment: The intent is unclear; grammatically, it sounds like the hazard is doing the servicing.]

At a quick glance, each of these hazards seems to make sense. However, when they are scrutinized in detail, many questions arise, as noted in the comments attached to each hazard. When hazards are poorly worded, it leads reviewers to wonder about the overall credibility of the analysis. When words are engineered and typos are present, the analysis credibility must also be questioned. I think we need to be concerned about our accuracy and credibility. Perhaps then we will attain the industry acceptance that we seek.

What do you folks out in the system safety trenches think? Am I off base here, or do we need some improvement in our discipline? Please send me an email with your thoughts, opinions and hazard examples.

In this issue, we have a technical paper titled "Fast forward to a Harmonized European Risk Assessment Process" by Birgit Milius and Sonja-Lara Bepperling. This paper discusses the implications of the European Union's Commission regulation (EC) No. 352/2009 on the adoption of a common safety method for risk evaluation and assessment. This regulation is based on the set of Common Safety Methods that was originally developed by the European Railway Agency (ERA).
In his System Safety in Healthcare column, Dev Raheja discusses hazards in electronic medical records (EMR). EMRs were created to supposedly increase efficiency and reduce medical errors. This article presents the EMR concept and the hazards associated with it, such as doctors turning off annoying warning alerts.

In their Outside the Lines column, Rimson and Benner continue with "Old Habits Die Hard: Part 2" (a continuation from the July-Aug issue of Journal of System Safety). Here, they continue to discuss unexpected system behavior combined with habituated human behaviors — and the deadly consequences that often result. One interesting question they address is whether training can sufficiently overcome learned behaviors, particularly in today's complex systems.

In this issue, we also introduce a brand new column called "The Tech Fellows Corner." This is a special column written by ISSS Fellow members, with the intent to leverage their extensive knowledge and experience. This initial article is an "Open Letter to Corporate Management about Unmitigated High Risk" by Fellow Mike Allocco.

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

Until next time,
Clif