## Gift or Letter Bomb?

*"The crew of the space shuttle Challenger honored us by the manner in which they lived their lives. We will never forget them, nor the last time we saw them, this morning, as they prepared for their journey and waved goodbye and 'slipped the surly bonds of Earth' to 'touch the face of God.'"*

—Ronald Reagan

This past January marked 28 years since the Challenger Space Shuttle disaster shockwave reverberated around the world. The shuttle program had completed 24 successful missions prior to this one fateful launch. But as far as the public was concerned, all of the successful missions leading up to Challenger had been cancelled out—much like a zero in a long multiplication problem will cancel out all the other multipliers regardless of their value.

In his critical appendix to the Challenger accident report Richard Feynman stated that, "certification criteria used in (Shuttle) Flight Readiness Reviews often develop a gradually decreasing strictness. The argument that the same risk was flown before without failure is often accepted as an argument for the safety of accepting it again. Because of this, obvious weaknesses are accepted again and again, sometimes without a sufficiently serious attempt to remedy them, or to delay a flight because of their continued presence."

On the other hand, he stated that the avionics (software) development system effectively employed, "…an independent verification group, that takes an adversary attitude to the software development group, and tests and verifies the software as if it were a customer of the delivered product."

Glenair has been blessed in our 50 plus years as a high-reliability interconnect supplier that we have never had to face a life-and-death disaster that resulted from the failure of our technology. And we have every intention of going another 50 years with our record intact. One way we can ensure our ongoing success, is to accept Feynman's wisdom that planned oversight and criticism in the development process is a desirable thing and is in fact the key to ensuring reliable technology performance.

The trick for us, I think, is to deliver criticism and oversight in ways that make it "a gift and not a letter-bomb" for the receiver. And of course it helps if the receiver views criticism in the same manner—as something as normal and desirable as having an editor review a written work, or a quality engineer measure and inspect a part. When we give and accept criticism in our work in a manner that indicates we recognize its value and welcome its role, we are on the right path to preventing early mistakes in a development process from turning into disasters down the line. Feynman's model of having a second independent team doing verification testing is currently used in many organizations—particularly in outfits known for outstanding results—please join me in encouraging its use here at Glenair.

*Chris Toomey*