The Vision of What Can Be

This month's CROSSTALK theme evokes references to *Star Wars* and *Star Trek* to remind us of the influence of science fiction on real world technology. For me, the theme triggered a trip down memory lane.

When *Star Trek* debuted in 1966, I was a freshman in college. Computers were huge mainframes housed in data processing centers, fed by 80 column cards which you were warned not to bend, fold, mutilate, or spindle or scan sheets which required a No. 2 pencil. Pocket calculators still had limited functionality and were beyond my price range. By the time *Star Wars* premiered in 1977, I was the proud owner of a Texas Instrument calculator which had about eight functions, an ATM card which allowed me to withdraw up to $60 cash if the computer wasn't down, and I had heard of the Apple computer but didn't know anyone who owned one.

So where are we today? And did science fiction get us here? Clearly real world technology has improved exponentially over the last 40 years. Unmanned combat air vehicles, precision guided weapons, global positioning system navigation, and digitization of the battlefield have transformed our warfighting doctrine. Thumb drives, cell phones, pagers, text messages, digital cameras, and wireless internet access are available to all and are affordable, enabling global communication and commerce.

Were these technological advances influenced by science fiction or merely inspired by it? The tagline for *Star Trek* to *boldly go where no one has gone before* provides the key. The technology advances of the past 40 years could not have happened if we chose to maintain the status quo. Transporter rooms, phasers set to stun or kill, and the noninvasive medical instruments used by Doctor McCoy may not be in everyday use, but they are part of our vision of what can be.

Diane E. Suchan
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Star Wars, Star Trek, and CROSSTALK

I love science fiction; *Star Wars* and *Star Trek* are two of my favorite themes. As I was studying electrical engineering (EE) in college, a friend pointed out that you cannot spell *geek* without EE. Later, I was listening to the results of a study of geeks on the radio. I tried to deny fitting the profile they presented, but I could not deny our favorite show was *Star Trek*. As a result, I truly looked forward to this issue, and enjoyed reading the articles when they were submitted for consideration.

Our first article, *The Science in Science Fiction's Artificial Men*, by Dr. Dawn MacIsaac and Dr. Kevin Englehart takes the reader from science fiction to the real-world applications, then ties these concepts into the needs of our soldiers. *A Brighter Future From Gallium Nitride Nanowires* by Dr. Kris A. Bertness, Dr. Norman A. Sanford, and Dr. Albert V. Davydov discusses how nanowires are replacing current technology. Our last theme article turns from technical issues to managerial issues in *Leadership, The Final Frontier: Lessons From the Captains of Star Trek* by Paul Kimmerly and David Webb. While too light-hearted for our theme section, the article *All We Need to Know About Software Project Management, We Can Learn From Watching Star Trek* by David Webb provides some real insights worth considering during software development.

I truly enjoyed putting this issue together partly because of my love of science fiction and partly because of the articles we received. Whether you are a true geek or just enjoy new technology, I hope you will enjoy this issue and the insights within its pages.

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