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The year 1966 saw the debut of a little-watched TV series about space exploration. Although it lasted only about three seasons, it offered an exciting glimpse of the future, albeit through the eyes of science-fiction writers. Communicators, phaser guns and holographic simulator training were part of everyday life on the show. At the core of the technology was a maintenance engineer who kept everything running. While the series wasn't very popular at the time, the seed of creativity that it planted blossomed into a huge enterprise.

Fast-forward to today: Science fiction has become reality. Cell phones, lasers and virtual worlds are facts of life. Yet, despite the many technological advancements we now enjoy—*and those that could be on the horizon*
—it's surprising to read about the growing worldwide shortage of engineers and technicians. The general lack of interest in technical fields is a problem that needs to be addressed immediately. The next-generation workforce needs to see the advantages of the engineering world and understand that it is a place where they can succeed, benefit and be satisfied.

Today's youth have spent countless hours playing video games. They've learned and mastered the shortcuts, button combinations and timing necessary to win complex games using memorization, strategy and concentration. These skills and qualities are integral to technology in industry. The excitement that gaming generates is achievable in many subjects—*and some industrial training initiatives are finally leveraging it.*

For example, the military trains personnel by putting soldiers in simulated versions of real-life situations that allow them to practice for combat without risk of injury. Similarly, commercial products allow anyone to join in virtual environments and interact via avatars with others around the world. This type of interactivity has had an impact on all industries, providing education for the next generation and helping existing workers maintain and grow their skills for relatively little cost in terms of downtime and money.

The promise of a system "with all the answers" still may not be readily available, but by all

indications, it's coming soon. In the meantime, we have to rely on humans to learn, apply skills and manage equipment and facilities in the maintenance world. The need to generate interest in the trades and train a well-prepared maintenance workforce is crucial. All it takes is one video-game-integrated person with a curiosity about the workings of a machine, coupled with the right ratio of interactive training and presto: A technician is born.

Training in the commercial world has advanced to include a combination of virtual worlds and gaming situations wherein people interact with a specified environment, make decisions and perform tasks as if they were really there. The same advanced technology can teach an operator how to run a manufacturing line or a technician how to rebuild machinery without damage or injury to either the individual or the equipment. This style of training is a sound way to capture the interests of new workers and foster their success.

Machine technology and methods of training operators and technicians have almost caught up with the visions of those sci-fi writers of the '60s. Our company believes gaming and simulations are an ideal way to pique the interests of legions of young people and help develop the next generation of "techies" that our increasingly higher-tech industries are already crying for—*and will be continuing to demand in the future*

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The opinions expressed in this Viewpoint section are those of the author, and don't necessarily reflect those of the staff and management of *Maintenance Technology* magazine.