

on safe ground

Every month, over 2,000 people are killed or seriously maimed by land mines that have been long since forgotten by the combatants who planted them. Tiffany Carboni talks to John Geiger about how he and his not-for-profit organization, On Safe Ground, are trying to reverse the terrible atrocities bestowed upon innocent people throughout the world.

It's not a surprise that a Woodside Priory graduate would go on to make us locals proud, but John Geiger's impact on the world of technology has made him a global hero as well. After being honorably discharged from the U.S. Marine Corps, where he worked on radar technology that would later be modified and upgraded to become the Patriot Missile System, he returned to California where he began his civilian career at a division of the North American Philips Corporation, eventually managing the precision optics division of Fuji Film. Much of his technical interaction was with small companies at the time that would later become Seagate, Atari, and Apple.

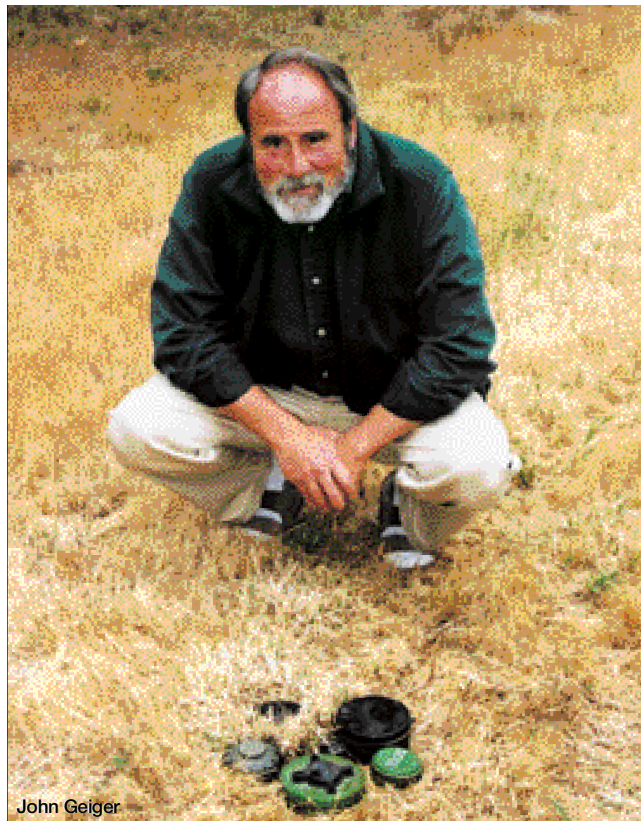
During this time, he worked on a variety of technologies that ranged from what would later become the hard drive to what is now known as the PET scanner and night vision goggles used by our forces in Afghanistan. "Once I moved back up here, I was immersed in a number of technologies, all of them embryonic, with companies that have become well-known corporations," he says. "It was a fun time."

In the early 90s, Geiger became a consultant to the government on a variety of projects. One such project was to find land mines in third world countries for the U.S. Special Forces. "The problem at the time was landing planes in these countries covertly," he explains. "In order to do so, teams needed to be dispatched to ensure potential landing zones weren't mined and if they were that the mines were dealt with. We looked at the problems and finally figured out a system that helped."

Thanks to his work with electronics and optics, Geiger was able to create the technology to find land mines, but it was the death of a friend who was killed in Angola, in sub-Saharan Africa, that drove Geiger's need to succeed.

While quite complicated, the technology is described more simply by Geiger thusly: "Think of it as a flashlight that casts a light that is farther out on the spectrum than we can see, and that energy interacts with matter in a very specific way. Those interactions become reflections and are reconstructed by a computer, which is able to decipher whether an object is a land mine versus a rock or potato, for instance."

Because some countries are so filled with forgotten land mines (Angola has approximately 9 million; Afghanistan has 16 million; Denmark has 10,000), it causes people understandable



John Geiger

anxiety and, in the case of Angola, has stopped people from working in their fields. "What I'm specifically interested in," explains Geiger, "is the detection and removal of anti-personnel mines, which are extremely difficult to detect and only meant to take a foot off and eliminate that person from the battlefield. What that does to children, who in most cases are the family members responsible for tasks such as gathering wood, is usually kill them or, at the very least, destroy their lives. By most accounts, it would take 700 years before all the existing land mines throughout the world were removed with existing technology, which is too long and too costly."

To help speed up the process in Angola, On Safe Ground intends to recruit recently demobilized combatants who have an obvious interest in the safety of their country and are familiar with where the land mines may be hiding. In return for their help, which Geiger admits is risky due to its nature, they are paid industry standard wages and are guaranteed a free four-year education that may be used by the individual or another member of his family. "We're not stopping at just finding the mines, we're trying to make a difference to the people involved," says Geiger.

While people have been detecting and removing land mines for years, the technology used by On Safe Ground promises to be more time efficient, and therefore more cost efficient. Plus, it has more uses than just mine detection. "A version of this technology is presently being developed to see through walls. Used by law enforcement officers and firefighters, it can tell where and how many people are in a building," he explains.

Whether home or abroad, John Geiger and his team are trying to make the world a safer place for people to roam freely.

For more information, or to help On Safe Ground's efforts, please call John Geiger at 831.659.2898 or visit the web site at www.onsafeground.org. ■