MSD
MOTION SYSTEM DESIGN

Did you know

Bill and Vieve Gore launched the company in their basement. Associates were paid partly in Gore stock, establishing a tradition of employee ownership and equality.

Bill and Bob Gore

This month, we review the lives of Bill and Bob Gore, innovators in the polymer and cabling industry, for inspiration and ideas.

Wilbert (Bill) L. Gore was born in 1912, in Meridian, Idaho and spent most of his younger years in Salt Lake City. He earned engineering and chemistry degrees during the depression, and later went to work at the Dupont Co. He had a passion for innovative thinking and liked tinkering, no matter the outcome — in his spare time, developing experimental paint that he tried on the family car (which peeled off) and designing a rain-collecting roof to cool the family's home (which formed an algae pool that ran down and stained the house green).

The seeds for Bill's real success were planted when he decided to commit himself completely to his own innovations, and leave DuPont. He felt there were many untapped uses for the polymer called *polytetrafluoroethylene* (PTFE), so on January 1, 1958, with his wife of 23 years, Gore founded a small PTFE company out of the basement of his home. He called it W. L. Gore & Associates.

Soon, Gore and his oldest son Robert (Bob) discovered how to apply PTFE tape to insulate wire and cables, used most heavily in defense applications and the burgeoning computer industry.

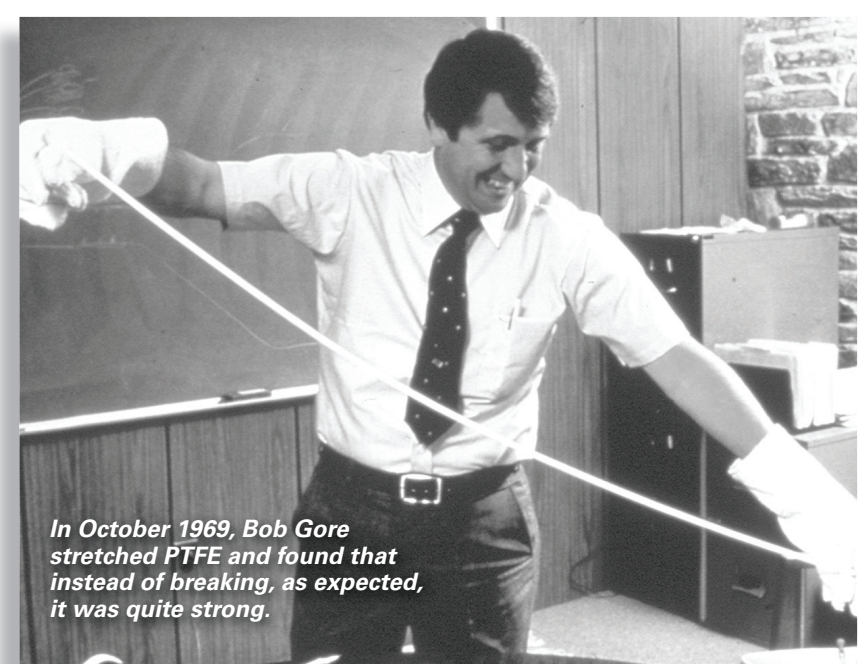
The company's first product and patent (U.S. 3,082,292) was Bob Gore's multiconductor wiring strip — an innovation he suggested to his father while a sophomore in college.

Then in 1960, Gore received its first major order — for 7.5 miles of insulated ribbon cable (for the city of Denver, Colo.) Soon after, the company moved to a manufacturing plant.

1969: The big kahuna arrives

The 1960s were years of continued success; Gore even supplied cables for NASA Surveyor missions. But then, Bill's son Bob made a terrific discovery.

Born in Salt Lake City, Bob had already discovered the PTFE cable insulation process, and completed his Ph.D. in Chemical Engineering. During experiments in October 1969, Bob decided to subject heated rods of PTFE to rapid stretching, to see what would happen. Instead



In October 1969, Bob Gore stretched PTFE and found that instead of breaking, as expected, it was quite strong.

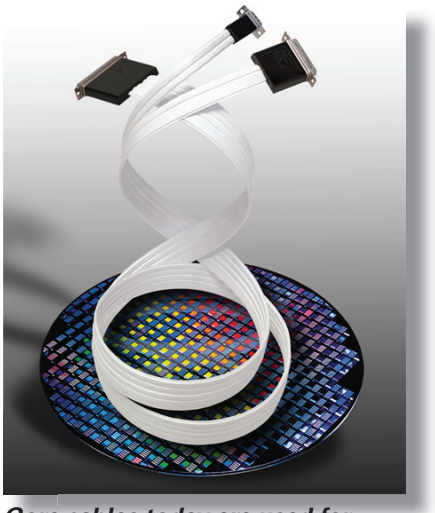
of breaking, as he expected, the expanded PTFE was strong. In fact, the inert resin could even be stretched enough to laminate fabric. With its unique chemical properties, expanded PTFE (or ePTFE, as it came to be called) opened up a new world of possibilities, including cardiovascular devices, efficient fuel cell assemblies, and most famously, fabrics of a windproof, waterproof, and breathable kind.

Given the name Gore-Tex, the porous yet strong fabrics were made into the first laminate (a tent) in 1976. Later, in 1989, the international team traversing Antarctica wore Gore-Tex outerwear for its resistance to temperature extremes, and one explorer even credited the fabric with saving his life.

To infinity, and beyond

"I started with the company as a young engineer right out of college," says current president and CEO Terri Kelly. "What is remarkable to me is that during that time we've found so many novel applications for this one base material." Cross-market innovation is a key strength: "We might invent something to boost electronic signal integrity, reliability, or longevity. Well, that invention might help our medical division improve a material property as well," Kelly explains.

Above, high strength toughened fluoropolymer (HSTF) and ePTFE boost flexure and lower abrasion during routing, tracking, and sterilization in medical applications.



Gore cables today are used for linear motion, vision, geophysical, hand-held tool, and harbor-crane applications, to name a few.

The 50-year enterprise sells many fluoropolymer products, including Gore-Tex, Elixir guitar strings, and industrial cables.

For more information, visit gore.com.