Arkansas Business

Larry W. Fullerton: World Class Innovator

by Gwen Moritz
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Larry Fullerton has been compared to Thomas Edison by so many technology publications that it is beginning to sound like a cliché.
Born in Fayetteville on Dec. 11, 1950, to John Robert and Nell Creason Fullerton, now of Heber Springs, and reared on military bases around the world, Fullerton is a 1974 graduate of the University of Arkansas College of Engineering. While still a student, he became captivated with the idea that radio signals might be transmitted in pulses across a range of frequencies.

Fullerton worked for ITT Telecommunications in Corinth, Miss., and then was attracted to Huntsville, Ala., in 1979 by the presence of the NASA space program. It was there that he founded Time Domain Inc. in 1987, the same year he received the first of dozens of patents that would allow practical use of what was previously just a theory: an entirely new form of wireless communication called "time modulated ultra-wideband."

Instead of signals sent and received on a single, precise frequency, the technology Fullerton calls PulsOn transmits digital data by sending it across many frequencies in millions of pulses per second that can only be interpreted by a receiver precisely tuned to the same time schedule.

By the time he started attracting venture capital in the mid-1990s — particularly from Peter Petroff, the NASA engineer who developed the Pulsar watch, and his family — Fullerton had developed prototypes for using UWB transmissions for voice, global positioning devices and radar that can see through walls.

In March 2001, Fullerton received Aviation Week & Space Technology magazine's prestigious Laureate award. But more practical validation came on Sept. 11, when the House Armed Services Committee called to see if Time Domain would bring some of its portable scanning devices to help look for survivors in the rubble of the World Trade Center.

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