used to just sell products. Now it's a product plus a video, a seventeen-page hookup guide, and example firmware on three different platforms to get you up and running faster. We have gotten better because we had to in order to compete. As painful as it is for us, it's better for the customers."

SparkFun parts are available on eBay for lower prices. But people come directly to SparkFun because SparkFun makes their lives easier. The example code works; there is a service number to call; they ship replacement parts the day they get a service call. They invest heavily in service and support. "I don't believe businesses should be competing with IP [intellectual property] barriers," Nathan said. "*This* is the stuff they should be competing on."

SparkFun's company history began in Nathan's college dorm room. He spent a lot of time experimenting with and building electronics, and he realized there was a void in the market. "If you wanted to place an order for something," he said, "you first had to search far and wide to find it, and then you had to call or fax someone." In 2003, during his third year of college, he registered sparkfun.com and started reselling products out of his bedroom. After he graduated, he started making and selling his own products.

Once he started designing his own products, he began putting the software and schematics online to help with technical support. After doing some research on licensing options, he chose Creative Commons licenses because he was drawn to the "human-readable deeds" that explain the licensing terms in simple terms. SparkFun still uses CC licenses for all of the schematics and firmware for the products they create.

The company has grown from a solo project to a corporation with 140 employees. In 2015, SparkFun earned $33 million in revenue. Selling components and widgets to hobbyists, professionals, and artists remains a major part of SparkFun's business. They sell their own products, but they also partner with Arduino (also profiled in this book) by manufacturing boards for resale using Arduino's brand.

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SparkFun also has an educational department dedicated to creating a hands-on curriculum to teach students about electronics using prototyping parts. Because SparkFun has always been dedicated to enabling others to re-create and fix their products on their own, the more recent focus on introducing young people to technology is a natural extension of their core business.

"We have the burden and opportunity to educate the next generation of technical citizens," Nathan said. "Our goal is to affect the lives of three hundred and fifty thousand high school students by 2020."

The Creative Commons license underlying all of SparkFun's products is central to this mission. The license not only signals a willingness to share, but it also expresses a desire for others to get in and tinker with their products, both to learn and to make their products better. SparkFun uses the Attribution-ShareAlike license (CC BY-SA), which is a "copyleft" license that allows people to do anything with the content as long as they provide credit and make any adaptations available under the same licensing terms.

From the beginning, Nathan has tried to create a work environment at SparkFun that he himself would want to work in. The result is what appears to be a pretty fun workplace. The U.S. company is based in Boulder, Colorado. They have an eighty-thousand-square-foot facility (approximately seventy-four-hundred square meters), where they design and manufacture their products. They offer public tours of the