FOSS on the front lines of business

Working Smarter

Start-ups, resource-poor enterprises, and nimble organizations turn to Free and Open Source Software to help solve their business problems. *By Jon "maddog" Hall*

A universal truth operates in countries around the world: Small and medium-sized businesses generate between 80 and 90 percent of the private sector industrial wealth (i.e., non-government, non-military, non-agricultural). Although large companies that manufacture such things as cars or provide such services as telephone communications employ lots of people, the greatest number of people employed and the greatest amount of products produced and services provided come from companies employing one to 500 people.

Many of these companies last only a few years before going bankrupt, merging, or being bought, but during their existence, they generate jobs, develop products, and inspire others. They are the core of business enterprise. Using an example from the automotive industry, these companies manufacture many of the parts that go into the creation of the cars – and a generous set of replacement parts for the aftermarket.

Many of these companies use software to run their businesses, as well as to help design and develop their products. Unfortunately, the start-up costs, both direct costs to purchase the software and tailoring costs to customize the solution to their needs, can block or hamper the success of these companies.

Free and Open Source Software (FOSS) can help the development of small to medium-sized businesses in three ways.

• First, businesses that are trying to get started can typically use FOSS and avoid paying the royalty charges associated with proprietary software. Although these charges might seem trivial compared with other start-up costs, when you are counting every penny as a young enterprise, those charges can mount.

• Second, with the ability to modify FOSS, small businesses can integrate their processes better than they could with proprietary software through fast "prototyping."

• Third, modifying FOSS software scales economically for small to medium-sized businesses. If you are a small business in Vietnam or India, you probably cannot afford the programming support fees of a US-based company. However, you might be able to locate a programmer or a college student in your own country with the skills required to make changes to the software, and this person would work for costs much closer to your own economic scale.

I have encountered many people who have exploited one or more of these FOSS advantages. For example, a steam turbine test facility in St. Petersburg, Russia, has engineering customers from all over the world that design steam turbines. The test facility could have used a proprietary package of software to run their facility, but they decided to write their own, using FOSS tools such as PostgreSQL and GNUplot, among others. When their customers request a small change to the software, they can usually create that change overnight, giving their customers much better service than they could with a proprietary software package.

As another example, I met a man in Minas Gerais, Brazil, who owns three stores. He would have had to pay R$ 200,000 (about US$ 100,000) for software to run his stores, but the real issue was trying to get this proprietary software to deal effectively with the changing Brazilian tax structures. I told him about some of the enterprise resource planning (ERP) software available as FOSS and suggested that the local merchant association orchestrate a collective to pull down this software and tailor it to meet the needs of Brazilian business and tax requirements, sharing the customizing costs between the members of the association. The association could then make the software available to new businesses trying to get started and reduce at least one frustration. I also suggested that the Brazilian government could create a "tax module" for this FOSS, encoding the rules that they were creating, which could then be made available to users of the FOSS ERP system. This setup would ensure that the complicated tax requirements were implemented properly.

I gave a talk at an early Atlanta Linux Fest. In the audience was a young man who wanted to start a consulting company. He had tried to buy PBX software for his fledgling company but realized that it would cost US$ 20,000-30,000, so he decided to write his own. He also decided to license his PBX software under the GPL and eventually focused on that as his business. His name is Mark Spencer, and his software is named Asterisk.

Finally, three young men started a business in their apartment with nothing more than some telephone lines and old computers. All of the software they used was FOSS; eventually, their business made them all multimillionaires. Today, they call that company Red Hat, and it is no longer "small" or even "medium-sized." ■■■