

Geek Pride

It's 2006, but some e-retailers find compelling reasons to build their systems rather than buy.

By Elizabeth Gardner

It's 2:00 p.m. and Jon Simes, the chief programmer at ThinkGeek.com, is asleep on a couch. It's a typical day for him, says Jen Frazier, one of the company's founders. Stoked with caffeine, he keeps late, long hours. "We have to force him to take vacation," she adds. And it's just as well, because he and an equally hard-working colleague, Buddy Burden, tend an e-commerce system that's completely homegrown, just like the good old days of the 1990s.

Build-it-yourself retail sites are rarer now, as the second wave of e-commerce software brings greater sophistication and flexibility to commercial packages. "Most early adopters had to build their own systems, or at least highly customize the packages that were out there," says Rob Garf, analyst with AMR Research, Boston. "It was a challenge to find an application that would do 80% of what you needed. Then there wasn't a lot of buying in 2001 and 2002. Now we're at a point where the first-generation commerce sites realize that the hodge-podge of code and software they have in place needs to be revamped to cater to a true multi-channel environment."

Surviving and hunkering

About one in three companies with e-commerce operations are planning at least minor software upgrades in 2006, according to a recent report from Forrester Research, Cambridge, Mass., and about 2% are buying their first-ever commercial software. "There are very few e-commerce sites that I would recommend build their own systems today," says Forrester analyst Tamara Mendelsohn. "The software companies that survived the crash hunkered down and made significant investments, and they've spent the past five years improving functionality. The products are no longer just a platform or a toolset, but complete packaged applications, and they're a good starting point for almost anyone."

But not for everyone. Idiosyncratic regulations, a need for quick turnaround on custom features, or just simple geek pride still lead some sites to roll their own.

U.S. Cavalry operates two retail stores, one near Ft. Knox in Radcliff, Ky., and the other near Ft. Campbell in Oak Grove, Ky. But they're dwarfed by its online operations, which cater to the law enforcement, military, and homeland security markets. For a bayonet, a handcuff case or a portable shelter against environmental contaminants, USCavalry.com is the first stop for many online shoppers.

But its merchandise can't just be plopped in a box and shipped out, says e-commerce director Mike Nuss. "We have equipment that's restricted to military and law enforcement personnel," he says. "We have knives that can't be shipped to California. Night scopes can't be shipped internationally. There are a large number of restrictions as a result of 9/11. There is no off-the-shelf software that has the elaborate restriction checking that we need."

So U.S. Cavalry went the do-it-yourself route—sort of. Online since 1995 with brochureware, the company started e-commerce in 1997 and, after experimenting with commercial software, took the whole operation in-house. "We started off with a commercial package and used a third party to customize it," says Nuss. "With the Internet the way it is and the way things change, we needed to take development in house to respond effectively. Fortunately, we had the source code."

Only some new wheels

In 2003 the company moved to Microsoft's .NET platform. "Even when you're self-developing, it's important not to reinvent the wheel," says Nuss. "Dot-NET opens us to a large pool of developers, and we can purchase components relatively cheaply and use them within our own program. Almost right away, we found a shopping cart engine that was already written."

U.S. Cavalry has four in-house programmers, plus an art department that can produce static HTML pages. The four handle not only the web site, but also the back-end system, which deals with web orders, mail orders, and contract business-to-business operations. The retail stores are the least of their worries. "They don't change as fast as the Internet," Nuss says. While he won't share information on his programming costs, he says he sold the in-house idea as an economy measure. Now he's convinced it's also increasing revenue. "If you're adding features to increase sales, you want to implement them as soon as possible," he says.

Sewell Direct, Provo, Utah, took a convoluted route into the computer hardware and home electronics business, beginning in 1983 as a software company devoted to connectivity issues. Naturally its customers needed cables, so the company started selling them along with the software. Then, the commercial Internet came along and the light went on. "We realized we could sell just cables, without the software," says Preston Wily, vice president of business development. A niche online retailer was born. Connectivity products still dominate its offerings, but now the web site also features iPod accessories, mice, keyboards, storage devices and a host of other odds and ends, and is poised to branch out even further.

The audience is still very techie, though, and so is the staff. Its background in software design isn't necessary for an Internet retailer, but "it's a huge advantage," Wily says. He prefers developing everything in-house, and thinks that in many cases, his reinvented wheels are an improvement. A staff of five programmers handles the web site. (A separate staff still develops commercial connectivity software.)

Good shopping engine connectivity is key in a business where many customers are looking for very specific parts, and Wily hasn't seen what he wants in packaged software, which he says typically offers one standard feed to all the shopping engines, leaving them to parse the information the way they need it. "When we first built, we thought we could get away with one feed to all the engines. They're smart, but their parsers don't always get it right, and you don't appear as high in the results. With a single feed, 20% of our products weren't showing up in searches." Sewell Direct's software does custom feeds to every engine that Wily deems important to its business.

Instant response

Wily also likes being able to respond instantly to a new need or customer request, rather than having to wait for quarterly updates from a vendor, and being able to customize the analytics that track clicks and show when a shopper converts to a customer. He will buy functions now and then, though, such as a site search module from Google and a live chat product.

ThinkGeek, Fairfax, Va., is essentially a toy, game and novelty shop for the geek in everyone, with Albert Einstein action figures, USB memory units imprinted with "HAL 9000" on the case, and T-shirts that say "There's no place like 127.0.0.1."

Launched in 1999, the site was self-developed from the beginning. "Our programmer was pretty green, but he had taught himself Perl, and we hobbled along," Frazier says. That same programmer is still with the company.

Along the way, ThinkGeek was acquired by Andover.net (now VA Software), and just as Frazier and her colleagues were beginning a total revamp in 2002, word came down that they should outsource. "We spent countless hours meeting with the vendor, but then they went out of business," Frazier says. "Luckily for us, we could just pick up where we had left off with our own system. We didn't want to work with them anyway. We wanted to do things that seemed simple to us, like changing content in a template, and they would say it required a rewrite. There was an overriding theme of frustration."

Don't follow the crowd

ThinkGeek added a second programmer a couple of years ago, and the two work well together, Frazier says. It's a lean, mean operation, with 13 employees in all and \$15 million in revenue least year. Growth has been averaging 35% a year.

Frazier acknowledges that packaged software might yield a slicker shopping experience, but she's not convinced that it matters. "People will do things just because everyone else does. Everyone was doing one-step checkout, for instance, so we put it in. The old one had been four or five pages. We expected our conversion rate to go through the roof, but nothing much changed. People liked it, but they didn't desperately need it."

Frazier's only IT budget is for salaries, so for the moment, buying extra functions isn't practical. She'd like to find a good product review system that she can afford, but the going rate for a commercial product is several thousand dollars a month. "If something is going to cost us \$50,000 a year, it has to be pretty darn amazing, and the return has to be quick and high," she says.

ThinkGeek has no plans to change its self-developing ways. "It's just been what works for us," Frazier says. "We're all geeks here. It would be a blow to our pride to have to outsource the geekiest part of it."

Elizabeth Gardner is a Riverside, Ill.-based freelance business and Internet writer.

So you wanna be a D-I-Yer?

Some tips from build-it-yourself veterans:

- If you buy components from an outside vendor, make sure the deal includes the source code. It's worth paying extra for it.
- When you add features, go through an orderly process of design, development, testing, implementation, and evaluation. Don't just start to tinker and say, "Hey, let's see if this works!"
- Make your programmers annotate and document their work thoroughly, in case they get hit by a bus or suddenly relocate to someplace with no cell phone service. Being at the mercy of an absent programmer is as bad as being at the mercy of an out-of-business vendor.



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