Manual Labor

■ by Laura Hagar _____1

Tim O'Reilly's favorite quote comes from cyberpunk science fiction writer William Gibson: "The future is here. It's just not evenly distributed yet." Distributing the future—in the form of cutting-edge computer manuals that push the envelope of what technology can do is what O'Reilly Media is all about. For more than 25 years, the company has been tracking the discoveries of what O'Reilly calls the "Alpha geeks" of the world and translating their insights into books that bring the information revolution home.

Tucked away in the apple orchards just north of Sebastopol, O'Reilly Media didn't start out as a publishing company. Founded as a technical writing company in 1978, the company was originally named O'Reilly and Associates. (It changed its name to O'Reilly Media this year.) At the time, Tim O'Reilly was just another nerdy 20-something with a flair for writing and a vague interest in business. He wasn't a techno-geek, but when a friend recruited him to write a manual for Digital Equipment Corporation, he agreed. Fresh out of Harvard with a B.A. in classics, O'Reilly figured that learning programming languages couldn't be much harder than mastering Latin and Greek.

In a few short years, O'Reilly's transformation from Greek to geek was complete. He fell in love with the programming language UNIX, an affair that produced the first-ever O'Reilly publication, Unix in a Nutshell. Originally published in 1984, the book went on to sell 800,000 copies and is Publishers Weekly's longest-running computer book bestseller. The In a Nutshell series was just the beginning. In 1991, O'Reilly published Ed Krol's The Whole Internet Guide & Catalog, the book that brought the Internet to the attention of mainstream America. (The New York Public Library listed it as one of the hundred most important books of the 20th century.) The company currently publishes over 300 titles, ranging from mainstream (the best-selling Mac OS X: The Missing Manual) to techno-obscure (Beginning Perl for Bioinformatics) to whimsical (Smileys, a pocket handbook offering over 650 variations on the ubiquitous e-mail smiley face). With over 300 employees, O'Reilly Media has offices in the United States, Japan, France, Germany, the U.K. and China.

From the beginning, O'Reilly Media has mined the fringes of what's been called the "bleeding edge" of technology, creating books for niche markets that other publishers dismissed as either too small, too difficult or too obscure. O'Reilly's special gift has been zeroing in on technological micromarkets that are just about to go mainstream.

The domestication of technology

"We look for things that are emerging, and we help them to emerge," says Tim O'Reilly. "Look at how technology happens—usually there's some primary invention of something new and powerful. People don't know what to do with it for awhile. A lot of times, you first figure out where a technology is going from people who are tinkerers. In the computer world, we call them hackers—not hackers as in the security problem, break-in kind of hackers but people who are good at technology and who play with it. Then, bit by bit, the technology becomes domesticated, and everybody gets to use it.

"A lot of what we do at O'Reilly is that we help in the domestication of technology," he says. "We find things that are growing up in the wilds of advanced technical communities, and we watch those things. Often, all that's

missing to make them more accessible is just information about how to use them. We provide that information through writing and publishing books, through conferences and websites. But it's really all coming from that same vision: helping technology achieve its potential."

O'Reilly Media expects its editors to be well-versed in the technology they publish about—"to get their hands dirty with the technology" is how their website puts it. The company's editors are mostly former programmers, systems administrators, technical writers or practicing scientists. Their writers are hands-on computer specialists with a special flair for making complicated processes clear and understandable. By concentrating on the farthest reaches of the "bleeding edge," O'Reilly Media has created a loyal following among those who use computers most intensely—programmers, systems analysts and web developers. The company has developed a reputation for clarity, accuracy and an antic ability to inject a sense of fun into otherwise dull topics. These same features served the company well when it expanded into the consumer computer market, developing titles on more widely used programs like Excel and Dreamweaver.

Learning from advanced users

O'Reilly Media publishes several different series aimed at different segments of the computer market, but all share a single sensibility: If you want to know how something works, watch how those who know it best work with it and see how they do it.

"We have an attitude that is maybe a little different than the other publishers, and this is really driven by where we see the need for information. As people become more familiar with computers, there are still a lot of people who say, 'I'm a dummy. I need a For Dummies book,' but there are also a lot of people who are accustomed to the basics, and now they're looking for something more. So even as we've moved into more consumer computer topics, we've tried to bring the flavor of 'What can you learn from the advanced users?' In that way, we help people to grow their abilities."

A significant percentage of O'Reilly's publications are still written for the most advanced users. Their catalog is filled with titles like Java Servlet & JSP Cookbook and Perl Objects, References & Modules—and those are the more recognizable titles. There's also Jakarta Struts or Transact-SQL Programming. Though bibles to the initiated, these books can be daunting to beginners. In fact, when O'Reilly moved into the more consumer end of the market, it had to change the design of the company's book jackets. Too many beginning computer users associated the company's instantly recognizable jacket—white cover with an elegant black and white etching of an animal—as a mark of impenetrable geekdom. They now publish several different series—the Missing Manual and Hacks series are the most accessible. (See sidebar.)

In the 1990s, Tim O'Reilly founded a second publishing company called Travelers with his brother James. O'Reilly Media tried to broaden its reach as well, starting a new series called Patient-Centered Guides. Like the company's computer books, both series were based on the notion of learning from those who've gone before. Travelers Tales are collections of essays—some historical, some modern—from literate and insightful travelers to various countries. It's a terrific series—the sort of books you should read before you go anywhere and take with you to deepen your experience of travel.

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O'Reilly has been less satisfied with the economic performance of Patient-Centered Guides. The Guides take the same approach as Travelers, except this time the contributors are people who've personally explored the uncharted territory of serious illness. "The problem that we didn't realize from a business point of view with Patient-Centered Guides is that it's a set of disconnected vertical markets," O'Reilly says. "When someone buys one of our computer books, there's a good chance they'll buy another one and another. But if you need to buy our book on hydrocephaly, and then you have to buy our book on ovarian cancer and then Tourettes, you're in pretty sad shape. The classic definition of a market is that it's a set of customers who reference each other when making buying decisions. Even though consumer health looks like a single market, it's actually sort of a cluster of micro-markets, and you don't get reference value."

O'Reilly is continuing its efforts to grow outside of the strict computer book market, but for now at least, the company is sticking closer to its area of expertise, releasing books on high-tech accessories like mobile phones, TiVo and IPod. They've recently released a book called The IPod Fan Book which, like many O'Reilly books, shows you how to make your IPod do more things than you ever thought possible.

"We're definitely looking at consumer technology as our next big market," says O'Reilly. "We're very much getting into digital photography. We have a number of books on PhotoShop, plus Digital Photography Expert Techniques and Pocket Guide to Digital Photography. Digital photography technology is a part of a market that's really expanding."

Going on Safari and other online adventures

As befits a leading-edge computer book company, O'Reilly Media has a huge online presence at www.oreilly.com. Back in 1993, with the publication of The Whole Internet Guide & Catalog, O'Reilly established the first web portal, Global Network Navigator or GNN. (GNN was also the first website ever supported by advertising.) They created several other groundbreaking websites during the 1990s, including WebReview.com which they sold in 1999. The company also runs the O'Reilly Network, created by longtime O'Reilly associate and company vice president Dale Dougherty. A portal for programmers and developers interested in new and emerging technologies, the network offers in-depth technical information, newsgroup forums, developer blogs, an open technology wire service and a learning lab offering online classes.

From a business perspective, the company's most interesting online venture is Safari—an online library consisting of over 2,000 computer and business books that's accessible by subscription. In addition to O'Reilly's books, Safari contains books from Pearson, the large British conglomerate that controls about 40% of the computer book market. In addition to books on programming and business applications like Excel or PowerPoint, the library also has a significant business book component, including books on management and human resources.

Safari was created, in part, in response to the much-talked-about phenomenon of e-books. "One of the things that we identified really early in our thinking about e-books is that part of the power of online is the ability to search," says Sara Winge, the company's director of communications. "With Safari, users can search across this entire library of 2,000 books when they're looking for information. All you do is punch in what you're

interested in, and, voilà, you get a huge list with books, with page-number references and explanatory notes."
"A lot of people talk about e-books," O'Reilly says, "and there's this big debate about whether electronic books will ever take off. We made a determination pretty early on that electronic books were being thought of too narrowly, as if the idea of an e-book was simply to take the form of a book and transpose it to some electronic device. That's kind of like the early days of film when people who wanted to make movies thought, 'OK, let's just point the camera at a stage.' But that's not really a movie. Later on, they figured out, 'Hey, we can move the camera!' and a whole set of new conventions evolved. With e-books, we're still in that very early stage of understanding what an e-book really means."

Conferences on the future

O'Reilly Media is also the producer of some of the technology industry's most interesting conferences. The company produces the Mac OS X conference, the Open Source conference, the Emerging Technologies conference and the Web 2.0 conference. "A lot of conferences are focused on vendors who are trying to sell people something," O'Reilly says. "We tend to focus our conferences on 'What is the meaning of technology and what are the implications of new technology?' In the case of the Emerging Technologies conference, we look at emerging technologies that we think are important and that are really going to affect the future of computing. We've had a fairly good track record of anointing new technologies that are about to explode onto the scene. Jeff Bezos of Amazon always comes to that conference because it's where he learns what's coming down the pike that's going to affect his business."

Like the company's computer books, O'Reilly's conferences tend to focus on what the Alpha geeks of the world are doing and thinking right now and projecting how that will play out in the real world. ("Alpha geek" is O'Reilly's name for people working on the frontiers of technology.) "You can see these people who are way ahead of the curve, and you can tell that everybody else is going to be there in a few years," he says. The hot technologies from the most recent Emerging Technologies Conference included frontline robotics, new GPS applications, morphing mobile phones and hardware hacking.

Never heard of hardware hacking? Most people haven't, but O'Reilly thinks he senses a whole new movement in the offing. "People are beginning to tinker with actual hardware again, and we're almost getting to the stage where we can reinvent a magazine like Popular Mechanics for the computer age. These are people who say, 'I've got a TiVo, but I want to make it bigger, so I'll put in a new hard drive or just play around with it in some way.' For example, back when WiFi first came out six years ago, we had a guy in our office who wasn't happy with the range, so he started building these home-brewed antennas—the first one was made out of a Pringles can—so he could pick up the signal and beam it further."

Open source warrior

In an interview with PC Pro magazine, O'Reilly told the interviewer that one of his favorite novels was F.M. Busby's Rissa Kerguelen, a science fiction novel about the way that small businesses can play a disruptive, counter-cultural role in a world increasingly dominated by large corporations. "This book was an inspiration

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to me when I was starting my company," he says.

O'Reilly is deeply committed to what he calls "technology activism." He's a leading activist in the open source movement and in the fight against frivolous software patents. "At O'Reilly, we think of ourselves as the Paul Revere of technology movements," he says. "We always keep an eye out for new and interesting technologies that are coming down the pike, but we also keep our eye open for bad things we see coming, and that's why I got involved fighting frivolous software patents because that's something that's going to threaten innovation downstream."

His involvement in the open source movement is another case in point. O'Reilly's Open Source Conference is for programmers working with Linux, Perl, Apache and other open source languages and applications. "These programs are known as open source because the program source code, the language in which the program is written, is not secret," says O'Reilly. "There's a whole community of programmers organized around that idea. We, in fact, organized the meeting where they agreed to use the name 'open source' to describe it." (Another word for open source is "freeware," a word O'Reilly dislikes.) Advocates of open source operating systems, languages and software argue that open source programs are cheaper, more flexible and more reliable than proprietary (and sometimes monopolistic) brands like Microsoft. The appeal of the open source movement is political as well. Open source software, created, developed and maintained by a free-floating group of programmers around the world, just seems more, well, democratic.

O'Reilly says the battle over open source is moving from the desktop to the Web. For the last several years, O'Reilly has devoted much of his activism to the question of who will control the World Wide Web. In October, the company is sponsoring its first-ever Web 2.0 conference, about the next generation of Web applications—and who, if anyone, will control them. "The big battle in the next decade of the computer industry is who's going to be to the Internet what Microsoft was to the personal computer. The model of open source is really a model of how you do a different kind of Internet system that's not proprietary.

"There are two models for an Internet operating system," says O'Reilly. "One model is 'one ring to rule them all,' and the other is 'small pieces loosely joined.'" The phrase "one ring to rule them all" is from Lord of the Rings, where the ring of power is associated with ultimate evil and the sorcerer-imperialist Sauron, ruler of the dark kingdom of Mordor. For open source activists, the war over open source computing is Mordor vs. the Shire all over again. In this case, Mordor is currently being played by that other M-word, Microsoft.

"When you think of how the Internet works today, there are all these cooperating programs, and you have basically open-standard protocols that connect them. Everybody agrees on the protocols, so people control the endpoint programs but nobody controls the middle. That's the way it is now. The question is, can we keep it that way? The people who like it that way, me included, are working to try to make sure that the mass of people realize what's at stake and don't fall into the one-ring trap."

The Tolkeinesque metaphor comes naturally to O'Reilly, a fan of science fiction and fantasy novels and an avid reader who has a 6,000 volume library in his Sebastopol home. Earlier in this article, I mentioned O'Reilly's transformation from Greek to geek but, in truth, that transformation is far from complete. O'Reilly still nurses an avid interest in philosophy and history and is still looking for answers to the big questions, like

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"What is the meaning of life?" and "What is the meaning of work?" —the same sort of questions that once drove him to explore the writing of the West's first philosophers. For himself, he's decided that the meaning of his company is about adding to the sum of human knowledge and widening the circle of technological knowledge to include as many people as possible.

And book by book, he's doing it.