



COMPETING THROUGH INNOVATION:

By Glenn Rifkin

As product life-cycles become shorter, the ability to innovate becomes a more important factor. But how do you innovate consistently? And how do you manage creative people whose jobs require them to “think differently”? Broderbund shows the way.

IN THE WORLD of high technology, where legions of 25-year-old programmers have seven-figure net worths and the operational definition of eternity is 18 months (the length of an average product cycle), the management of creative people is a skill akin to herding cats. Nonetheless, most high-technology companies, which eschew traditional management and organization structures, have based their long-term survival on finding ways to operate without stifling creativity and innovation, often the heart and soul of their corporate cultures.

In the consumer software market, for example, an industry barely 20 years old, the log of best practices in managing creativity is hardly a hefty volume. Software is an industry of fits and starts, of intense product cycles, where the phrase “business as usual” is out of place because the fundamental business can change almost every year. Much of what drove the early successes — a deep belief in a radical or innovative idea and a willingness to

do whatever it took to get a product out into the market — eventually gave way to harsher business realities.

With success and growth came real management challenges, chiefly how to recruit, retain and motivate a band of brilliant and iconoclastic product developers with self-worths highly inflated by the new technology-driven economic model.

At a company like Broderbund Software Inc., the highly successful pioneer of the PC-based education/entertainment software market, the formulas for success, like the industry itself, have shifted dramatically, forcing the company in the last year to restructure and reevaluate its long-term strategy. The market — flooded with competition, bloated by too many products and moving swiftly from the shrink-wrapped, off-the-retail-shelf model to the Internet — has undergone a metamorphosis and confronts a new, uncharted landscape. As distribution channels shift, creativity and innovation are, more

than ever, the fuel for future growth. One thing remains clear: past glory is a poor barometer for future success in a highly fickle, highly dynamic business.

Broderbund knows that truism as well as any company, having seen its fortunes soar in the early years of the 1990's and then sag under competitive and creative pressures. Much like the film industry, Broderbund's market is a “hits” business, with a few blockbuster titles producing a high percentage of the earnings. Tomorrow's best sellers can emerge from a raft of new, unknown shops while former winners may drift into irrelevance. Like “Monopoly” or “Clue,” some software titles become evergreens and sell well for years. But most are gone and forgotten in a year or two. Products are as affected by the “buzz” on the World Wide Web as by massive marketing campaigns. In the customer base of young “gamers,” the shelf life of a product is often measured in days or weeks and even the biggest sellers



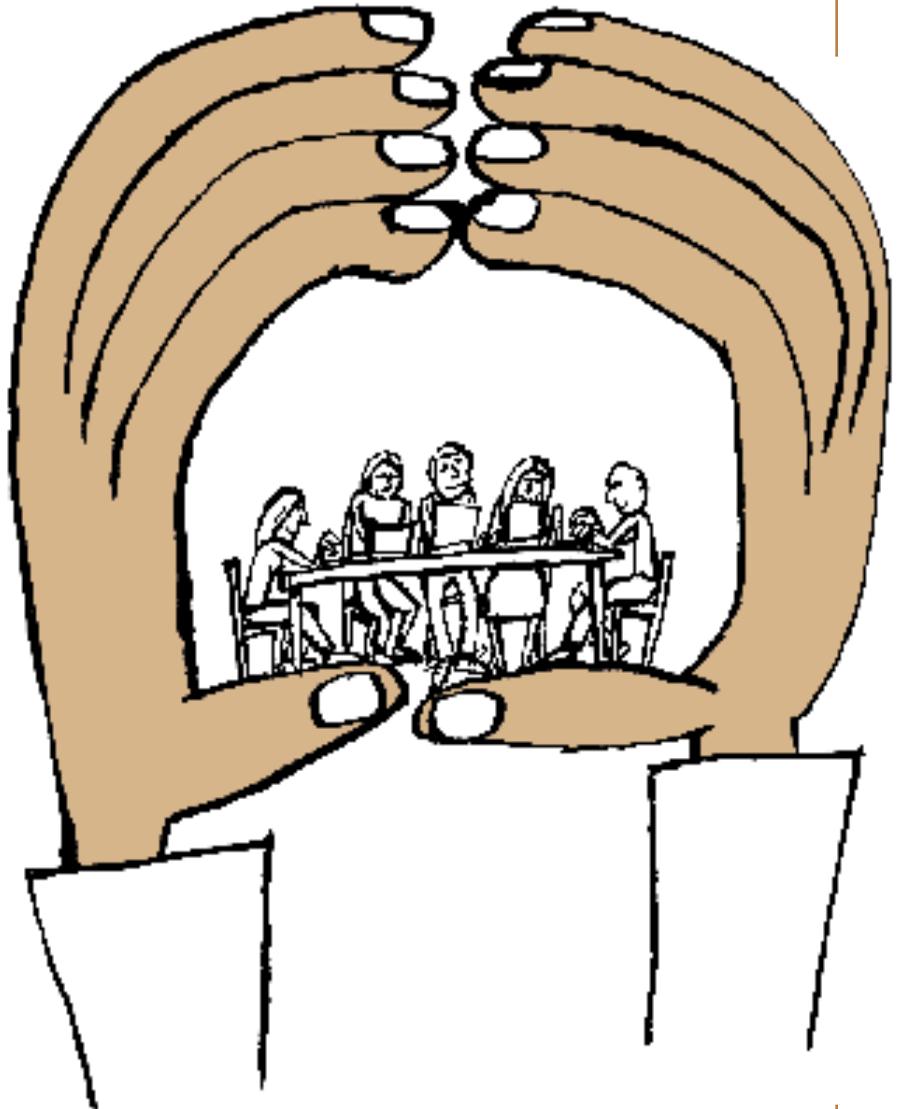
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THE CASE OF BRODERBUND

are just vague memories a few years past their halcyon days.

But Broderbund (Danish for “brotherhood” and pronounced BROOder-bund), founded in 1980 by brothers Douglas and Gary Carlston and based in Novato, Calif., has amassed a wealth of knowledge and management skill and fostered a creative culture unparalleled in the software business. If there are lessons to be learned in managing creativity in a software company — or any other business where creativity is key — Broderbund is a seasoned teacher. Indeed, how Broderbund has managed to roll with the punches, and how it has been forced to reshape the special culture that is its lifeblood, is a story that will resonate with managers of many other companies in flux.

In a market where a single hit product is a rare achievement, Broderbund has produced a long string of winners — from its hugely popular “Print Shop” series and innovative children’s offerings like “Where in the World Is Carmen Sandiego?” “Kid Pix” and “The Living Books” series to “Myst,” the most popular software game ever (with nearly four million copies sold since it was



introduced in 1993, generating close to \$200 million in revenues). Last year, after a long delay, the company brought out “Riven: The Sequel to Myst,” selling more than a million copies between late October and January 1998, and pent-up demand quickly vaulted the new game to the top of the best-seller list.

For much of its history, Broderbund operated more like a Hollywood

Broderbund attracted an army of young, talented animators, musicians, writers, designers, engineers and programmers who heard through the grapevine that the company was a haven for creative types.

studio or book publisher than a technology company. Though it is located in the hills of Marin County, north of San Francisco, and a good two-hour drive from the more notable Silicon Valley, Broderbund attracted an army of young, talented animators, musicians, writers, designers, engineers and programmers who heard through the grapevine that the company was a haven for creative types. People had

“room to roam,” said Harry Wilker, an 11-year Broderbund veteran and senior vice president for product development.

With profit margins of 80 percent providing virtually unlimited resources, the creative teams building Broderbund’s products had freedom to push the limits of the available technology. Unlike its Silicon Valley counterparts, Broderbund was not driven by stock options (though they were an important enticement). Creativity, in fact, was the company’s currency and its lure. Recruitment and retention of the best and the brightest was made easy by a combination of reputation, performance and location. Marin, with its proximity to San Francisco, the Napa Valley and the nearby coastline, proved seductive to those who found Hollywood and Silicon Valley distasteful.

The promise of Sunday hikes on Mt. Tamalpais, however, paled in comparison to the creative energy that radiated throughout Broderbund’s offices. Every employee, for example, could expect regular sabbaticals, lasting two to three months, at the company’s Creative Center to recharge their batteries and work on any idea at all, no matter how far-fetched or uncertain its commercial prospects. Ideas emanated from anywhere and everywhere within the company, from programmers as well as writers, and every idea was given an equitable hearing. Product development budgets were elastic; a clever twist in a game that might add \$50,000 to the programming cost was accepted routinely.

Operating as both a production house and a publisher, Broderbund

was never hung up on the “Not Invented Here” syndrome. In fact, Broderbund’s early business model, according to Doug Carlston, was to acquire software from independent “authors,” and handle the final programming, if needed, as well as marketing and distribution. As technology and the resulting products grew more complex, the number of people required to complete the technical and support tasks grew significantly and Broderbund built facilities to do what outside contractors couldn’t do on their own.

At the same time, Broderbund executives also recognized that the costs and resources required to create everything in-house were prohibitive and the company could better leverage its reputation in the marketplace by distributing titles like “Myst” or “Prince of Persia” that were produced elsewhere. Hybrid solutions — employees working with outside contractors — became commonplace. In some cases, when Broderbund sought out the best talent and they couldn’t be persuaded to come in-house, relationships were formed and long-term deals were cut.

For much of the 1990’s, Broderbund set the pace in consumer software, a market that grew to \$2.63 billion in 1997. As profit margins and revenues soared, the company became a Wall Street darling, going public in 1991 at \$11 a share and growing steadily to a peak of \$76 a share in September 1995. “Myst,” a compelling and graphically rich fantasy created by Cyan Inc., a tiny game maker in Spokane, Wash., fueled much of the growth, sitting on top of the best-seller list for two years.

But in 1996, growth slowed sharply

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A NEW DIVISION FUELED BY CREATIVITY

Ken Goldstein, the 35-year-old vice president and general manager of the Red Orb Entertainment division at Broderbund Software Inc., began his career as a television writer, once working for the executive producer of the award-winning "Hill Street Blues." A Yale graduate, Mr. Goldstein has an unusual background for high technology but it was actually a lure for Broderbund, which prizes writers, artists and designers as highly as software programmers.

Over the last two years, Mr. Goldstein has been tapped for a key assignment: to snare a bigger piece of the growing entertainment segment of the consumer software market. Broderbund executives had become concerned that more than 40 percent of the market was devoted to entertainment and that the company's only successful offering in the category was "Myst." When Red Orb was spun off as a separate brand last year, Mr. Goldstein, an accomplished product designer and manager, took the reins. Finding and managing creative talent who can help Broderbund take bigger steps in entertainment is now his mandate.

Under Mr. Goldstein, Broderbund has shipped a spate of new

CD-ROM games, including "Warlords III," "Take No Prisoners," "Journeyman Project 3," "War Breeds" and "Extreme Warfare," most of which were produced by third-party developers and then published by Broderbund. The \$70 million business unit scored its biggest win when "Riven: The Sequel to Myst" shipped in October 1997 and immediately drove Broderbund from No. 10 on the entertainment games list to No. 1.

"I'VE SEEN GAMES GO FROM PRIME REAL ESTATE TO THE DISCOUNT BIN IN 60 DAYS."

"This is a hits business," Mr. Goldstein said. "Now you have to create hype, get the excitement going, get the product on the shelf and pray." Mr. Goldstein points out that the market has shifted in the last three or four years. There used to be more room for "art films," he said, experiments or pet projects that might be nurtured into successful products. In the past, a game might have had six months of shelf time in a computer store

or educational software outlet before it was dubbed a flop.

But with the hype generated by the promise of multimedia personal computers, a flood of CD-ROM games has deluged the market, setting off a battle for shelf space and forcing game makers to quickly win the hearts and minds of customers. Like the movie business, the first weekend of product reviews can make or break a new game.

Today, most of Broderbund's products are sold through mass channel retail outlets like CompUSA or Best Buy, where strict performance hurdles such as "inventory turns" or revenue dollars per square foot determine how long a game will be displayed.

"I know if I don't sell through a good 10,000 units in the first month, I'm in trouble," Mr. Goldstein said. "I've seen games go from prime real estate to the discount bin in 60 days. The retail price literally drops from \$49.95 to \$19.95 in that time."

To compete in such a market, the proper management of the creative process has become more crucial than ever before. Mr. Goldstein understands that he must not only have a productive internal staff but also actively mine the

outside opportunities. "I used to listen to a lot of product pitches," he said, "but it wasn't all that fruitful. Today, I do more outreach, more missionary work."

When he or his staff finds a great game, Mr. Goldstein calls the author and starts the courting process — what are the plans for a sequel, is the author happy with the current publisher, is there any interest in working with Red Orb?

If there is a positive response, Mr. Goldstein solicits a brief product plan from the author. As the publisher, Broderbund can throw seed money at a project to get it started. Early on, before any large sums are promised or spent, Mr. Goldstein must decide whether the project is worth "taking all the way."

After getting a complete outline of the game and how it will be played, Mr. Goldstein asks for a design document, a 50-to-200-page blueprint or road map for the software development. Prototypes of characters and situations are "built" and Mr. Goldstein gets a sense of whether the developer can actually produce what is promised in a reasonable time frame. A product cycle is 18 months on average, and one of the key issues that Mr. Goldstein must resolve is where the technology is likely to be at that point.

Michael Foulger, Broderbund's chief technical officer, consults with Mr. Goldstein and his staff. He not only forecasts what the tech-

nology landscape will look like — software designers operate under Moore's Law of Computing, which holds that computing power doubles every 18 months — but also points out what tricks are now available, or soon will be, that can jazz up a game or give it an effect that is unique. "Riven," for example, makes spectacular use of digital audio and video to give it a surrealistic, movie-like feel but

"MYST" WAS DEVELOPED FOR \$600,000. "RIVEN" COST UPWARD OF \$10 MILLION.

requires a PC with a Pentium chip that has a minimum of 100 megahertz of processing power.

The gamers who buy these products are avid techies who upgrade their systems often and want only the state of the art with the most power. If a product is hugely successful, Broderbund can later issue a "light" version for less powerful PC's.

The first 60 to 90 days of the development process are crucial. If the designers are way off track, taking six months to complete the initial work, Mr. Goldstein gets nervous and may pull the plug. At this stage, if he commits, there is little chance of turning back; the

commitment goes from 10 percent of the proposed budget to 70 percent, and contractors will be hired and engineers assigned. As the market has changed, budgets for building games have soared.

"Myst," for example, was developed for \$600,000. "Riven" cost upward of \$10 million, including the expense of putting up a building to house its small army of creators. Games developed for under \$1 million are rare nowadays.

As publisher, Broderbund often pays for all upfront costs as advances against royalties, thus assuming almost all of the financial risk, and pays the developer in fixed increments as pieces of the game are delivered. Product developers, like authors and songwriters, make their money on royalties. A hit software package can be highly lucrative. It can, indeed, be a rags-to-riches business. Cyan Inc.'s Rand and Robyn Miller, barely able to pay their rent before creating "Myst," took in more than \$25 million on the megahit game.

"It's a cyclical business," Mr. Goldstein said, "just like Hollywood. One minute you're hot, the next minute, you're not." Even the coolest and most financially successful games of a few years ago, like "The Seventh Guest," are little more than fond memories and technical anachronisms, virtually unknown to a new generation of 14-year-old gamers.

All of which means that there

are no guarantees, even when the best and most creative game makers are on the job. "Rand and Robyn Miller are brilliant and I definitely want to publish their next product," Mr. Goldstein said. But he also understands that the odds for a big payoff are long. Of 800 software games released in a given year, only 25 will make money while another 80 will break even. "If you're not willing to accept failure, you shouldn't even put your toe in the water," he said.

Douglas Carlston, Broderbund's chairman and co-founder, agreed. Because of the increasingly high cost of producing games, software publishers "want a high level of certainty," he said. "The more money they put in, the more certainty they want. But it's hard to get certainty. Everyone wants to get products that will become classics, evergreens. You can say you'll only do evergreen products, but those are rare. You have to do a lot of products to find one."

To find its evergreens, Red Orb fields a core staff of 50 full-time employees. With six to eight development teams operating internally and externally at any given time, the number of contract workers it uses can ramp up to 200.

These product developers — young game fanatics who gladly put in 16-hour days and six-day weeks during the final stages of

product testing and debugging — need a certain environment in which to thrive.

"The No. 1 consideration is work environment," Mr. Goldstein said. "Does it have the heart of a creative shop, in the sense that you allow people the freedom and resources to try new things? That is the No. 1 issue in talent retention." The process is team-oriented, iterative and highly creative. Those seeking individual glory will not thrive at Broderbund.

Only the superstars, like the Miller brothers at Cyan, have marquee value. The average professional salary at a place like Broderbund is \$50,000 to \$75,000 while veteran product designers can earn double that, hardly the kind of financial rewards that stock options can bring in Silicon Valley. "Most people who work for the game companies are not going to get wealthy," Mr. Goldstein said.

Still, though Broderbund's growth has slowed and its stock price has faltered, its long-term prospects remain strong. And that is proving increasingly attractive to its employees as they get older, start having families and become more concerned about financial stability.

"Just as growth investors often swap out for value investors in our stock," Mr. Goldstein said, "we've had growth employees swap out for value employees."

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in the consumer software market while a flood of products jockeyed for shelf space. Forced to cut prices to stay competitive and hurt by the delay of the "Myst" sequel, Broderbund watched as its margins shriveled. It felt the full force of the slowdown in 1997. Though revenues increased marginally last year — to \$190 million, from \$186 million in 1996 — net income dropped to just under \$10 million, from \$36 million. Wall Street punished the stock, which dropped as low as \$17.75 a share in 1997, and Broderbund was forced to restructure.

The shakeup was orchestrated by Joseph P. Durrett, a veteran of the consumer packaged goods industry, who was named chief executive by the board in late 1996. In 1997, Mr. Durrett proceeded to reorganize the company into business units by product segment, rather than by business function, in an attempt to focus more on the customer. The company's entertainment division, which produced a string of exciting computer games and distributed "Myst" and "Riven," was renamed Red Orb Entertainment in order to create a strong brand in its particular niche and to differentiate Broderbund's games from its education and productivity products.

The most profound change for veteran Broderbunders was the belt-tightening and cost controls, in effect a dose of old-fashioned, traditional management by the bottom line. The days of flexible budgets and free spending were quickly replaced by a cost consciousness that put every creative decision under scrutiny. The Creative Center is now shuttered and sabbaticals are no

longer discussed. In this environment, employees feel pressure to meet deadlines and to contain costs in ways that had always been foreign in Novato.

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As the high-technology sector matures, more of its companies will face a similar transition and similar problems. For veteran Broderbund managers like Mr. Wilker, the shift to the new hard-edged environment has made it absolutely necessary to find ways to retain the vital link to the creativity that made the company what it was in the first place.

THE MOTIVATION LINK

Teresa Amabile, a professor of business administration at the Harvard Business School, has spent the last 20 years studying the management of creativity in organizations. The most essential element — and the one most often ignored — is motivation, she said.

“People will be most creative

when they are motivated — primarily by interest, enjoyment, personal challenge, involvement in the work itself, and not by external inducements,” Professor Amabile said.

Particularly in high-tech companies, this “intrinsic motivation principle” is crucial to successfully managing creativity, she stated. Thus, while stock options and outlandish compensation packages grab the headlines around Silicon Valley, the true motivator for creative people is to offer them the toughest challenge.

In her research, Professor Amabile compiled a list of six stimulants and supports to creativity. They are:

1) Freedom or autonomy — feeling a sense of control over your own ideas.

2) Challenge — working on important, complex problems that others can’t solve. This has a huge effect, particularly in high-tech companies where people feel they are doing what everyone says is impossible.

3) Sufficient resources — having enough backing to do a job well.

4) Work group supports — receiving support from a creative team trying to solve a problem. This encompasses a mutual sense of trust, a free flow of ideas and information and a shared sense of commitment to the project. While there may be moments of heated debate, there is always an openness to other opinions.

5) Supervisory encouragement — having an immediate supervisor who sets clear, strategic goals for the team but at the same time allows operational autonomy. Such a supervisor communicates effectively and also pro-

pects the group from corporate interference.

6) Organizational encouragement — having upper-level management who foster creativity with an effective system of rewards and recognition, along with a free flow of ideas and information.

Professor Amabile uses the “creativity” maze as an analogy. If an employee thinks of a task as a maze to get through, there is often one clear path to the solution. But with most tasks, especially in high-tech settings, there are many ways to solve a problem, and these are often much more interesting, exciting and elegant than the one obvious way.

“If you are extrinsically motivated, if you are the rat with the cheese outside, the best thing to do is get out of the maze,” Professor Amabile said. “But if you are intrinsically motivated, the process is exciting and challenging to you. You enjoy the maze, and deviating, finding other solutions.”

Most people who go into high-technology careers do enjoy the maze, she said, and they need a work environment that fosters that enjoyment. “They can’t be loaded down with creativity killers,” such as too much employee evaluation and surveillance or severely constrained resources, she said.

For that reason, a company like Broderbund, which suddenly found itself going from abundant to constrained resources, has faced a stern test of its ability to manage creativity, not only in recruiting and retaining talented employees but in maintaining the appropriate culture.

Mr. Wilker, the senior vice president for product development, has always enjoyed the maze. As the company's creativity chief, he has been responsible for the definition, design and publication of its software. In that capacity, he helped define the culture for Broderbund's creative teams — the writers, designers, animators, musicians and engineers who produced its string of hits. An exuberant 52-year-old entrepreneur and ex-New Yorker, Mr. Wilker loved that culture, notably the freedom to push the envelope of both the technology and the game concepts that flowed in and around the Broderbund "studio."

Today, Mr. Wilker acknowledges that the world has changed and he is frustrated. "Now every creative device has an economic question," he said. "Can you sell this? Can it be merchandised?" At the same time, many new titles are sequels or extensions of existing products, thus cutting off some of the challenge and incentive that software developers get from pursuing hot new games.

Mr. Wilker and other Broderbund managers are most frustrated by the squeezed prices and crowded display shelves that now define the company's business environment. But it was Broderbund's very success — its stratospheric margins and skyrocketing stock price — that helped transform that environment by attracting so many new competitors. Many of the new arrivals focused far less on quality than Broderbund has and flooded the market with inferior products. A parent who goes to the mall, spends \$49.95 for a computer game

and watches in horror when her bored 5-year-old shuts off the computer after 20 minutes is unlikely to buy more software, regardless of the vendor.

Nonetheless, Mr. Wilker knows that a huge audience remains for Broderbund's products — the company shipped 46 new titles in 1997, up from 42 and 36 in the two previous years — and he has succeeded in holding onto a solid staff. In the realignment, he no longer runs the entire creative group. But his nearly two decades in the software business makes him a full professor of high-tech creativity management.

Mr. Wilker believes that the commandments for successfully managing creative people are simple, intuitive and more art than science — and that they apply now more than ever, given all the new constraints. The key ingredients:

- > Fostering good communication.
- > Trusting your people.
- > Realizing that the entire organization is creative and that good ideas can and will come from anywhere.
- > Making sure there is a well-conceived design document or blueprint for every project.
- > Checking milestones along the way; evaluating prototypes, keeping projects flowing.
- > Having the ability to champion projects but also to kill projects, if the economics or market demands it.
- > Avoiding divisive practices, like paying internal product royalties to employees.
- > Knowing when and how to shake up stalled projects.
- > Recruiting the best and bright-

est; promoting the ones with vision and organizational skills; distrusting formal credentials and long résumés.

Mr. Wilker echoes Professor Amabile on the question of what drives creative people. "Most of the people in this industry, outside of the few stars, are not primarily driven by economics," he said. "Making good money is important to them and they are well paid, but that is not what drives them." At Broderbund, where the stock is far off its all-time high, stock options are even less of a motivating factor than before.

Indeed, according to Ken Goldstein, vice president and general manager of the Red Orb Entertainment division, most of his creative people have done the same work at some point in their lives for free.

"My people are hard-core gamers," Mr. Goldstein said. "They are our own customers. They play a lot of games. And if you don't love the art and science of making games, you'll burn out after the 600th night in front of the computer and the 4,000th piece of pizza. The only thing that carries you is a passion for making really cool software."

And in the interest of avoiding turf battles and political infighting, employees don't get product royalties. Paying internal royalties "is incredibly divisive," Mr. Wilker said. "You don't really know who contributed more than someone else, and with teams of 10 to 12 people contributing to the development of a product, it's hard to determine how royalties would be divided."

So Broderbund pays competitive salaries and bonuses and appeals to the creative souls of its 1,000 employ-

ees to keep them around. That appeal generally works. Even with the constraints imposed by the tougher operating environment, the company is

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still considered by many to be the best at creating games, although Broderbund executives concede that recruitment at the top ranks is harder than it used to be.

The typical Broderbund employee looks a lot like those who work in Silicon Valley or Redmond, Wash., where the Microsoft Corporation reigns. Most Broderbunders are in their late 20's or early 30's, have college degrees, are single and are intensely driven, with a deep visceral love and understanding of their product, in this case, games.

Jeans, T-shirts and tennis shoes define the dress code.

Often socially shy and awkward, they tend to watch cartoons, shop at F.A.O. Schwarz and spend their vacations at Disneyland or playing computer games, their own and those of competitors. When "Quake II," a competitor's hot new game, hit the stores, for example, three Broderbund developers rushed out, bought a copy and immediately set up an all-night "Quake-a-thon" at the office to test the product.

When veteran employees, those in their 30's and 40's, take their young children to the office, a practice that is actively encouraged, the younger staffers bring out the abundant toys they have on their desks, sit on the floor and play with the kids, testing their new ideas and enjoying themselves. "Some part of them is a child that never grew up," said Michelle Bushneff, an art director and 13-year Broderbund veteran.

But while software programmers have earned a well-deserved reputation as lone wolves, preferring long, solitary hours in front of the computer monitor, Broderbund's employees are just the opposite. Here, collaboration is the foundation of a team-based approach that prizes the individuality of its members. Mr. Goldstein, a six-year veteran, said it is a "very vocal and opinionated culture," with spirited and heated discussions a regular part of the workday.

"Everyone here is creative in some form," Mr. Goldstein said. "Without that creative spirit, you'll have a hard time working here."

Added Laurie Strand, vice presi-

dent of the education studio unit, "The best creative team is one with a shared vision and an ability to respect each other's disciplines. Content is what really motivates people. They feel they are really contributing creatively. Taking cartoon characters they grew up watching, for example, and bringing them to life in a computer game."

And with consumer tastes shifting quickly, constantly and without obvious logic, flexibility is crucial for managing the creative teams. Ms. Strand described the recent birth of a "Carmen Sandiego" spinoff, "Carmen Sandiego Word Detective." That product began as an educational game called "Word Workshop," a language-learning companion to the company's popular "Math Workshop."

After six months of intense design and development, "Word Workshop" was nearly complete when management decided that the competition for shelf space had become too cutthroat. To have a better chance in the stores, the game would have to be recast as a line extension to Carmen Sandiego.

"I had to call everyone into a room and tell them that we had to redo everything and put it into the context of Carmen," Ms. Strand said. Rather than grumbling, the team pressed forward without missing a beat.

Like a SWAT team leader, the product manager, who acts much like a movie or television producer, marshaled the creative forces. In the first meeting were eight staffers and outside contractors: artists, writers, software designers and programmers. The first order of business was brainstorming a story line that would fit in

with Carmen. As with all such projects, the one essential element is to decide what the core game is about — how will it work, what will make it exciting and addictive? Without that element, called the game play in the business, there is nothing to work on.

Ideas were tossed about. Someone suggested that Carmen, the noted international thief, would steal the unstealable: language. She would scramble the words and players would have to decode her diabolical actions. She would also need to be tracked down and caught. A freelance screenwriter, brought in for the meeting, suggested that a new character be introduced, a secret agent with a checkered past who works for the good guys. The idea was adopted.

Once the story line was set, the product manager drew up a mission statement and assignments were made. A script had to be written, and the sights and sounds of a new electronic world had to be created. Someone suggested sponsoring a contest on America Online to name the new character, an approach that eventually produced the moniker Chase Devineaux.

The artists began drawing the characters and 20 contract animators were hired from around the United States to help with the laborious task. If Carmen was to dash off to 20 different places, each location had to be drawn in a certain cohesive way. Software code had to be adapted to the new structure of the game; it could not

be played the same way as other Carmen games. The product, aimed at children 8 through 14, also had to offer different degrees of difficulty as succeeding levels of play were reached. And throughout the process, the educational content had to be run past a panel of teachers serving as advisers.



Armed with a design document, team members went off with their assignments. Prototypes were built at each step of the way, and two-hour meetings were held twice a week to chart progress. The game went into full production mode within six months, about a third the usual time, and hit the shelves late last year.

Mr. Wilker noted that throughout this type of process, “there is immense room for creativity.” Nonetheless, he added, it is only by everyone following a single vision that the goal is reached. “The person with the design vision must be in control,” he said.

PROTECTING THE VISION

One of the keys to Broderbund’s success, according to Mr. Wilker, is that it has always been agnostic about creative visions: they can come from anywhere, from project managers, artists, programmers or outside contractors. But once the vision is identified and put

in position, Broderbund managers protect it like guardians of the flame. Part of that process is shielding creative people from the bureaucracy, Mr. Wilker said, by steering clear of committees “and insulating them from the suits.” Without this shield, he explained, new products will feel as if they have “come right out of a focus group.”

Nonetheless, Mr. Wilker, who views formal organizational rules and regulations with disdain, recognizes that the “suits” need to be represented; business acumen is an increasingly necessary ingredient for success in today’s harsher marketplace.

“You need to get that stuff into the process,” he said, but not without translating it, filtering out the nonsense and guiding it. He said the mantra of his creative teams has long been, “Tell me what you need done — don’t tell me how to do it.”

Besides wasted effort, the other great menace in the design process is the onset of ennui. Then heels drag and costs begin to mount.

Broderbund clearly understands those parameters, even with the new constraints that it must operate under. Working as closely as it does with Cyan, the creative house behind “Myst” and “Riven,” tests the company’s understanding of managing creativity. “Riven,” the brainchild of designers Rand Miller and his brother, Robyn, was four years in the making, required a team of 25 writers, artists, designers and engineers and cost upward of \$10 million. (Part of that cost went for the construction of a building to house the development team.) In the world of entertainment software, it was akin to Hollywood’s “Titanic” in terms of its expense and how much was riding on its success.

Though “Riven” was a year late and Broderbund’s stock paid the price for

the tardiness, the company gave Cyan its creative space. “They were very hands-off in the development and creativity of the game,” said Tony Fryman, Cyan’s project manager for “Riven.”

Mr. Wilker, in fact, explodes the myths of high-tech creativity, all those images of individual geniuses huddled over keyboards turning out dazzling, bug-free software. “The process requires constant attention and it is driven by the design documents, which always bring us back to what we want to do,” he explained. “It is an iterative, by-touch process, and extremely people-intensive.”

Indeed, complex software, like “Riven” or “Journeyman Project 3,” another new Broderbund title, is often the result of more than one inspired vision. It is cumulative, built over time and fleshed out like a novel, with regular and rapid feedback as the design process unfolds. Constant testing of prototypes is also required. As a project scales up, the costs committed to it increase exponentially, “so you need to know you are right,” Mr. Wilker said. “Wasted effort is the great killer of software.”

Doug Carlston added that the fostering of mutual respect is crucial to product development. “We want people not to feel that in order to get their own moment in the sun, they have to deny it to others,” he said.

Besides wasted effort, the other great menace in the design process is the onset of ennui. Then heels drag and costs begin to mount. In these instances, Mr. Wilker says, a manager must shake things up and “destabilize” the situation. That can be done in

different ways: by moving key people off the project and replacing them with others, by implementing zero-based accounting (“If you can’t cost justify this, we’ll kill it”) or by making a consultant-like assessment to figure out what is wrong. “A project gone awry never rights itself,” Mr. Wilker insisted. “The worst thing you can do is nothing.”

As Broderbund moves forward, Mr. Wilker faces his toughest challenge. Shrink-wrapped software, the company’s meat and potatoes, is no longer the sweet spot in the market. Broderbund has created an on-line business unit to accelerate sales of its products over the Internet. But as any high-tech company caught in a market transition knows, this is the time when it is hardest to recruit and retain the top people.

Mr. Wilker looks to savvy producers like Mr. Goldstein and Ms. Strand to drive the creative engine forward. Recognizing talent, “avoiding the self-aggrandizing types” and putting the right people in charge are among the most critical skills for managing creativity, he said.

His advice is to question résumés and formal credentials. “This is a business where people have résumés as long as your arm,” he said. “I’m sure there are 50 people out there who claim to have written ‘Carmen Sandiego.’”

“I look for people who are really intelligent, cooperative and organized,” he added. “These projects have big budgets and get very complex. If you are not in control, they can eat you alive.”

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