

The Zeos Story:

Bringing the Quality Movement to Direct Mail Computers

Jack B. Rochester

From "fuzzy logic" to shipping boxes marked Thank You, Zeos' innovative approaches to quality service keep customers coming back for more.

Taking a bite out of the big boys, clone makers like Zeos, Dell, and AST prove why consumers won't always be pushed into adopting what "they" hope will be the newest "industry standard." For purchasers of fleet-size groups of desktop PCs, clones make sense, especially at 50 percent less cost. It's all part of driving the computer industry into a commodity market. To hold market share, it takes low cost and differentiating features like superior, "real people" customer service, plug-and-play characteristics, and rock-solid reliability. Let's take a look at how one clone maker balances low costs with quality and service.

Patricia E. Moody, Editor

The Birth of a Clone

What's in a name? From A to Z, many computer companies have a special name. Atari is a warning to one's opponent in the Japanese game Go. Broderbund, the name of a software company founded by Doug and Gary Carlston, is the German word for brother bond. Lotus represents Mitch Kapor's interest in transcendental medi-

tation. But where did the name Zeos come from?

Greg Herrick, chairman and chief executive officer of Zeos International Ltd. of St. Paul, MN, tells it this way. Back around 1985-86, he was running a company doing contract manufacturing and distribution of electronic components. Then Intel introduced the 80386 microprocessor. Greg thought he would start a business to produce and sell a 386 motherboard that would plug into a 286 machine. He named it Eos, after the Greek goddess of dawn.

However, another company had the

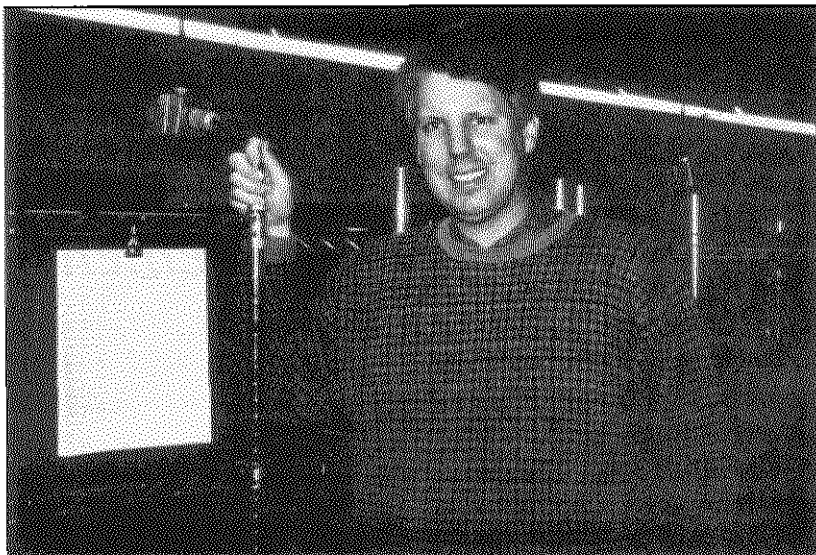
About Zeos

Headquarters: St. Paul, MN

Founded 1981

	<i>Sales</i>	<i>Earnings</i>
1990	\$127.1M	4.2M
1989	37.4	1.7
1988	11.8	.235

Employees: 590

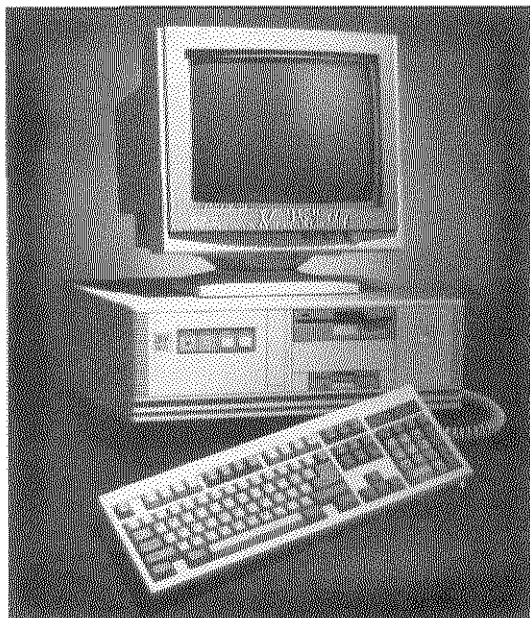


Greg Herrick, chairman and chief executive officer of Zeos International Ltd.

same name, a small architectural firm in Excelsior, MN. He called the architect to see if the guy minded sharing the name and yup, sure enough, he did. Greg had already hired a designer to create the Eos logo and letterhead and envelopes and business cards and everything. That had cost \$3000, and he really didn't have the money to spend on a redesign. So Greg thought maybe he could just add a letter to Eos and started down the alphabet, muttering about how this had better work. Nothing sounded right until he reached the Z. So Zeos, with an accent mark over the O, it was.

Paying attention to details

Mail order isn't the easiest way to sell computers, especially in a crowded, competitive market



The Zeos 386SX

and in an industry where brand names settle in, spread out, and often establish an undeserved hegemony. So what could possibly account for Zeos' doubling and then almost quadrupling sales over the past two years?

The honest answer is that Greg and his people are paying attention to many details, not the least of which is manufacturing a computer of extremely high quality.

You can buy an off-the-shelf computer, or they will custom-build a machine to your specifications. Zeos complements a strong advertising program with innovative direct marketing and conscientious, reliable customer service and technical support. The customer has only the phone to rely on when he needs help.

The consumer reigns

Zeos markets 286, 386SX, 386DX, and 486 personal computers and peripheral accessories by direct mail (or at their single factory outlet store about six blocks from Zeos headquarters). The computers are based on the ISA and EISA standards, and run under DOS, OS/2, UNIX, and XENIX. Customers can call a toll-free number 24 hours a day, seven days a week. About 65 percent of Zeos' customers are individuals in Fortune 1000 companies who have received authorization to buy a PC; the balance is split fairly evenly between government and education, individuals, and international sales. The 386SX desktops and towers account for about 50 percent of the business. The 486 machines are commonly used as file servers.

All products are backed by a 30-day "Absolute Satisfaction Money Back Guarantee," and a one-year limited warranty. Orders for standard configurations are usually shipped the same day the order is received. Custom machines take a few weeks for assembly and system burn-in.

Building a Quality PC

"People with screwdrivers can only affect quality so much. It's really the quality of the components," says Greg Herrick. Zeos spends twice as much for a power supply as most competitors, because a poor quality unit can cause many problems, among them power spikes, CMOS and memory failures, and disk drive booting problems. Some

PC power supplies don't have a sufficient power rating (measured in watts) to support the system unit, its boards and drives. So Zeos puts a custom designed and manufactured 200-watt power supply in its 386SX machines, a 250-watt TurboCool in the 386s, and a 450-watt in the 486s.

But it does not stop there; the company will soon offer a significant improvement in its power supply that adds considerable value for the customer. Why? "We're always seeking ways to reduce tech support calls; we'd rather not see customers have a problem," says Greg. "And we're getting fanatical about reliability."

Cooling

Zeos pays special attention to cooling. Heat is the electronic circuit's major enemy; lowering the temperature ten degrees centigrade can double component life. Systems come with two cooling fans, the second moving air across the motherboard

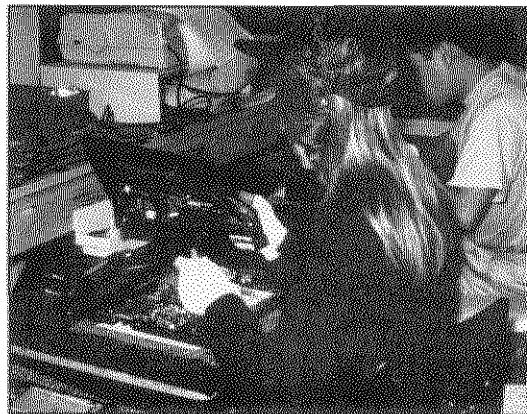
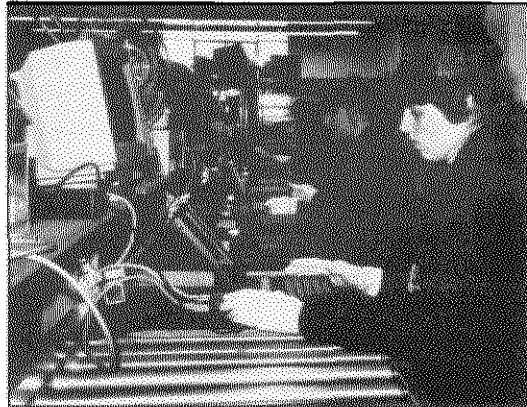
Component quality

And when it comes to electronic components, Zeos has always strived for quality. In fact, Greg got his start in the electronics business back around 1981 first as a distributor, then as a contract manufacturer or "board stuffer." In its early days, Zeos bought I/O cards from 13 different manufacturers. How can we be assured of quality? Greg asked—and of course there was no satisfactory answer. So Zeos designed its own board to meet its standards, and began manufacturing it.

Zeos uses only top-quality components from outside sources, for example Hercules and Diamond video cards, Sony and NEC monitors, and Teac, Seagate, Conner, and Imprimis drives. "Buy the best, manufacture the rest here," is Greg's philosophy.

They now manufacture their own 386SX motherboards, designed in-house. Each board is tested a total of four times for increased reliability.

Other, smaller details add exceptional quality to the PC. One is the system unit design; an extra bracket is welded to three sides of the cover so that it slips firmly and surely into tongues on the chassis, without all the fussing and fidgeting usually attendant upon such occasions. Each PC comes with a utility disk, a plastic dust cover for the



Workers on the Notebook assembly line.

keyboard, and a ferrite bead to reduce video monitor interference.

Then there are the clever plastic covers that fit on the ports and are labeled serial and parallel and video. "First-time users sometimes get confused, so these help them figure out which is which," says Greg. The four AA cell CMOS battery pack was recently replaced with a lithium battery, because it lasts longer. Because some customers still prefer the less expensive AA cells, a battery carrier is also shipped with every system.

Documentation

Quality also extends to documentation, that most-overlooked aspect of computer systems. Each user manual is customized to fit the specific system, so the information is for your computer—no hunting through irrelevant material. It comes with drawings explaining what components are located where, shows you how to install cards and drives or upgrade your memory, and even provides a place to

"People with screwdrivers can only affect quality so much..."

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write down your setup configuration information.

Building a Quality Organization

Quality computers are built, not born. I toured the Zeos board manufacturing facility, the computer assembly facilities, the labs, the warehouse, customer service, tech support—in short, the entire organization. I met all the people I'd spoken to on the phone and many more, and I found them to be happy workers who enjoyed what they were doing.

Why are your people so highly-motivated? I asked Greg. "I believe you should treat your employees the same way you treat your customers, with respect," he said. "Do what you can, and do it well. See, I'm not really in this for the money. I was flat broke for the first five or six years. You've gotta enjoy what you're doing, and if you're not you may have a personal problem but for sure the company is going to have problems. So we work hard, and we get the job done."

I saw this attitude reflected everywhere; there was a briskness to the way people did their jobs; for example, the inspection guy checking system burn-ins clearly took his job seriously. Completed systems are burned in for at least 24 hours; a diagnostic program tests every aspect of the system. The inspector travels down the line, connecting a monitor to the machines to scan the diagnostic program's reports.

As the tour continued, we stopped by the packing and shipping room where Zeos computers were packed into boxes with "THANK YOU" printed on the inside flaps. Completed systems wait on racks with their special parts and accessories sealed in plastic bags, the customer's order attached. Each time an employee packs a system, he is doing so for a customer with a name. Greg pointed out the high-grade foam used to insulate the computer; they had looked into spray foam, but decided against it because of its hazard to employees breathing it, and it's also environmentally unsound. R-E-S-P-E-C-T.

Striving for Continuous Quality Improvement

Customer service support

One of the problems with being a fast-growing company is that it's hard to maintain quality. Zeos had an unprecedented surge in orders in December, 1990, which meant it took a few weeks instead

of a few days to ship systems. Yet if you called your on-line sales or customer service representative, you'd get a pretty accurate ship date.

Do it yourself inquiries. The company is developing a computerized bulletin board (CBBS) customer service system that customers call up from a remote computer. It will serve several functions. First, it will provide customers with updated order information, so they can learn the status of their system and the date it will ship. The system will also provide computerized technical support utilizing two sophisticated software techniques, fuzzy logic and hypertext.

Fuzzy logic. Fuzzy logic makes it possible to type in less-than-precise commands, requests, or instructions that the computer can still interpret and then make the appropriate response. Direct-to-customer technical support will address common, simple problems. For example, the customer may type in "my hard drive won't work" and the system might respond, "RUN SETUP PROGRAM." This way, customers get answers more quickly than holding on the phone for a customer support technician.

Hypertext. Hypertext is context-sensitive documentation that locates and isolates specific textual references instead of displaying an entire document or manual sequentially, from page 1 forward. It is an excellent tool for a help system; for example, the user can type in a query, such as "hard disk," and the hypertext system will display all specific references to the hard disk — but not all the extraneous text.

Zeos is building an extensive database of problems and solutions to support the fuzzy logic and hypertext customer support system. Yet not all problems are simple, and some always require the aid of a well-trained customer support technician. So Zeos is designing the system so that its people can use it to identify problems when supporting customers over the phone. They are also preparing a system that has solutions to the most commonly-asked problems, so the customer will get quicker answers.

Quality is a people thing, too. The marketing director recounts the story of a customer who wrote him complaining that his shipping box didn't have "Thank you" printed on it. He couldn't imagine

how that could have happened; regardless, the customer received a letter of apology and some blank disks were enclosed as a sign of good will.

According to President Herrick, "With revenues growing as fast as they are, customer service must improve with it. We not only have to keep up, we have to make it better." The goal is to ship the off-the-shelf systems by 5 p.m. on the day they were ordered 96 percent of the time, and to ship all custom systems within three-five days of the order. That's the attitude behind why you can not only buy a Zeos computer 365 days a year, but you can get technical support any time of the day or night. "There is no reason to assume that someone's computer only breaks down between the hours of 9 and 5," says Greg.

Tech support people train at the company before they begin answering calls. First they work in the factory, so they know the computers. Then they sit with a "mentor" for about two months, until they are ready to fly solo. Only about 15 percent of the calls are for hardware support. Most people need help with software, and the philosophy is to help in any way they can—even if it's how to install WordPerfect.

The continuous improvement goal for the future is to answer every call on the first ring; today, it takes between 5-10 minutes. And even though it's a toll-free 800 number, after you've been on hold five minutes or more the computerized phone system notifies you how many calls are ahead of yours. If the wait takes longer someone comes on the line, takes your phone number, and tech support calls you back. When this happened to me, I asked how long it would be before I got the call-back. The receptionist said there were four people in front of me and calls averaged 15 minutes; therefore, perhaps an hour. It was 20 minutes

Computer Glasnost

The company recently reached agreement to begin marketing products in Russia through

Marubeni, the third largest trading company in Japan. They will be serviced by the International Computer Club, an organization not unlike the Boston Computer Society.

However, the plans for international expansion stop there. "Our goal is to do our work perfectly here at home first," says Greg. "We're going to keep our eye on the ball domestically; we don't want to dilute our efforts."

Who they perceive as their major competition; is it Dell? Northgate? Comp-U-Add? Gateway?

"IBM and Compaq," Greg replied. "Their names are associated with quality, but their products are very expensive. Zeos is quality and value. You see, value is the perfect combination of price, performance, quality and support. We still have lots of opportunities to improve, mostly in things people don't see. I respect all those firms, but we're just going to keep doing it better and better until we're the best direct marketer in the United States."

Jack B. Rochester is a veteran industry journalist and author. He is editor of I/S Analyser, the first monthly journal of information systems management. His work has appeared in Computerworld, Boston Computer Society Update magazine, Harvard Business Review, and U. S. News and World Report. He has written six books, including The Naked Computer.

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Each time an employee packs a system, they are doing so for a customer with a name.
