

## The Oregonian

### Fighting to survive in China's world

Four Oregon display companies look to stay in the picture by seeing their tech foe as ally

Sunday, July 10, 2005

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The Oregonian

SHENZHEN, China -- From Oregon, China looms as a monolithic threat, a black hole that sucks in U.S. jobs, raw materials and money while it spits out ever-cheaper goods for Wal-Mart shoppers.

Four Portland-area companies, spinning closer to this powerful vortex, face the fight of their lives to prove the image wrong. Confronted by withering Chinese competition, the companies, among the brightest stars in Oregon's high-tech galaxy, have decided not to flee China but to embrace it.

InFocus Corp., Pixelworks Inc., Planar Systems Inc. and Clarity Visual Systems Inc. all make advanced display products, ranging from big-screen televisions to the semiconductors that control them. But each company is dealing with China in an entirely different way.

At stake is a \$1.5 billion Oregon display-systems industry that employs at least 1,200 people in the state. It's a corporate cluster that the state government has helped cultivate and promote. But it's also a local industry under tremendous pressure. Giant global brands with big research budgets use cheap Chinese labor to drive down prices, turning today's technological wonders into tomorrow's everyday commodities.

The Oregon display-systems industry, which grew from technology spun out of Tektronix, is becoming a test case as China's prowess grows. If these companies can't cut it, prospects dim for other Oregon high-tech firms. But if they manage to thrive at home by manufacturing and marketing in China, other businesses and workers can take heart.

"We have to figure out how to do business in China, or we'll turtle in the middle of the highway -- as a company, and as a country," says Allen Alley, chief executive officer of Tualatin-based Pixelworks, who travels to China about once a quarter.

To be sure, the success of Pixelworks and the other three companies depends on more than China. These firms are global players with sales and operations in Europe and other regions. They are affected by factors ranging from product development and quality to investor confidence.

But China directly challenges the proposition that homegrown technology companies can thrive in the Silicon Forest and support the lifestyles of Oregon managers, marketers and engineers. Increasingly, Chinese companies not only assemble products, but also develop them.

"It's hard to make the argument that forever the United States, or some Western economy, is going to be so much better at that than China," says Paul Semenza, display research vice president at iSuppli Corp., a California market-intelligence firm.

What U.S. companies can do, in the Darwinian global economy, is to identify their competitive strengths

and hone them, leaving sidelines to other players.

Planar, which develops flat-panel video displays for computers, medical devices and industrial equipment, concentrates on product design and marketing, outsourcing manufacturing to Chinese factories. Pixelworks, which supplies microchips that process images in projectors and televisions, is hiring more design engineers in China, building on a startup company it acquired.

InFocus, which makes advanced projectors and televisions, must cut costs to compete with China. So it's teaming with a Chinese TV giant to launch a manufacturing joint venture. The Wilsonville company once employed 89 assembly workers in Oregon, but Kyle Ranson, InFocus president and chief executive officer, rejects criticism for moving jobs offshore. "If we had attempted to keep manufacturing here in Oregon, we'd already be out of business," says Ranson, who visits the Wilsonville company's Shenzhen joint venture at least once a month.

But Oregon managers acknowledge that they risk their technology by going abroad -- especially in China, where product piracy is rampant. Knock-off artists, for example, copied a product made under contract in China for Wilsonville-based Clarity Visual Systems. "If it's a very neat, cool product, they'll just go buy one and try to copy it," says Mark Dustan, Clarity international sales director. "The way you get around that is innovation."

Pixelworks guards against technology theft by equipping its Chinese designers with work stations that lack disk drives, ports and e-mail access. Planar keeps its crown-jewel technology in-house at a company-owned factory in Finland.

At home, Planar and InFocus reel from foreign competition. InFocus has suffered losses as high-volume competitors ranging from Dell to Asian companies cut digital-projector prices. Planar is laying off workers and eliminating its chief financial officer as low-cost foreign manufacturers undercut sales.

Digital-display executives agree that Oregon's future is not in the manufacture of hardware, but in value-added products that provide innovative solutions for customers.

Balaji Krishnamurthy, Planar president and chief executive officer, offers a hypothetical example. Assume, he says, that his Beaverton-based company can invent and sell a sophisticated \$10,000 product containing a display panel made in China for \$1,000. "The entire value between the \$1,000 panel and the \$10,000 solution is ours," says Krishnamurthy.

But competition threatens Krishnamurthy's \$9,000 opportunity, says David Mentley, editor of Display Technology Investor newsletter. As the price of digital display products falls, the value-added portion of the product shrinks, too.

Marketing also is an area in which Oregon companies can excel, says Krishnamurthy. "Which is easier," he asks, "to build a factory or to reach 1,000 customers?" These days, he says, access to customers trumps access to cheap manufacturing.

Chinese companies have been slow to build brands and sales channels, Mentley says. But that won't be true forever. Japanese and South Korean electronics giants ranging from Sharp to Samsung have overcome those obstacles.

"What a lot of people are concerned about is whether design is the next thing to go offshore, because that's the field where you can afford to have people sitting in Oregon with their nice lifestyle," says Semenza, of iSuppli. "But if teams in China can do the design, geez, what's the rationale then?"

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