

California high technology collapsing

This sector is on the ropes, ignored by the Bush administration and hoping that Soviet markets really exist. Part II by Brian Lantz.

The California economy, touted as the fifth-largest in the world, has been home to the "post-industrial society" and its even uglier sister, the "Aquarian Conspiracy." Contrary to New Age rhetoric, however, California's wealth wasn't conjured up, but was the result of tremendous capital investment in infrastructure which enabled the buildup of its real economic base. The decline of a successful post-industrial economy dies slowly, however.

Today, talk in Silicon Valley centers around a desperate search for new markets. Until recently, the expectation was that high-tech research and development (R&D) investment would create its own markets, with new products creating demand, which in turn would provide profits that allowed high-flying electronics firms to re-invest and stay at the competitive, technological cutting edge. In those days, Jerry Saunders, chief executive officer of Advanced Micro Devices (AMD), proudly railed against "government interference." Free trade rhetoric carried the day, and greedy trading companies had a field day buying up advanced technology for application to the Soviet Strategic Rocket Forces.

But the high-tech sellers' market of the 1970s and early 1980s is no longer. Based as it was on consumer credit, government bureaucracy, and corporate indebtedness, the "information age" blew a fuse. The 1986 tax code revisions, coming on top of tough international competition, squeezed profit margins, and contracting markets, were described in the semiconductor industry as "Chernobyl." Today, thoughts are on a quick fix.

The search for Soviet markets

When Mikhail Gorbachov met with business and political leaders on June 4 in San Francisco, another low-profile "Silicon Summit" was occurring in Santa Clara, California, 30 miles to the south. A 10-member Soviet delegation from state-owned computer, space, and communications agencies—provided with specially arranged security clearances—began a 10-day conference with U.S. high-tech corporate representatives.

Discussion at the Silicon Summit was of complex deals which amount to little more than an agreement to take in each other's laundry. The Soviets propose to trade their technological "know-how" and "product breakthroughs" for U.S. man-

ufacturing abilities, advanced semiconductor technologies, and supercomputers. The talk is of "joint ventures," combining the Soviet's huge R&D facilities with U.S. corporate ability to develop basic technologies for the marketplace. Market-hungry Silicon Valley executives are willing to close almost any deal, but the unanswered, \$64,000 question is, "Where's the dough?"

Silicon Valley shorts out

Over the past decade, fully 19% of California's manufacturing work force has been employed by the electronics industry, which has paid out \$6 billion annually in wages. Over the last 12 months, that work force has been decimated by layoffs. IBM laid off 10,000 nationwide, with heavy layoffs in Silicon Valley. It had laid off 22,000 in 1988, and is planning as many as 10,000 additional firings in 1990. AT&T is doing the same. Other layoffs hit Wang, Unisys Corp., and Digital Equipment Corp. in the second quarter of 1989.

In the first half of 1990, the dynamic has continued. In January, financially troubled Apple Computer wrote its 12,000 employees that cutbacks and layoffs were in the offing. In May, Apple announced that its employees would take an effective 10-15% wage cut. Amdahl Inc. reported a 42% decline in earnings in the last quarter of 1989 and laid off 5% of its workforce. Raychem Corp. announced 1,000 layoffs April 5, and Varian Associates, Inc. announced the layoff of 600 workers—20% of its work force.

Perhaps most indicative of the depth of the crisis is the decline of the "Big Three" U.S. semiconductor giants. National Semiconductor lost \$200 million in 1989 and laid off 2,000 employees. AMD laid off 2,400 workers in 1989 and has turned to Sony Corp. for manufacturing advice. Intel has done somewhat better by comparison, due to a "lucky" microprocessor arrangement with IBM.

Back in 1985, Intel, National Semiconductor, and AMD had been forced out of the huge, advanced dynamic random access memory chips (DRAM) market—the key ingredient in computers and other electronic devices—with Intel losing \$203 million in 1986. The U.S. market share dropped from 70% in 1982 to 35% in 1989. Japan is projected to control the entire \$250 billion market by 1992. Hit with financial losses, mass layoffs, and declining market share, the "Big Three" have been pleading for government help, but the Bush

administration is not listening.

Last November, D. Allan Bromley, director of the White House Office of Science and Technology Policy, announced that the administration would not increase funding to high-technology R&D programs. The only news that wasn't bad, was that the administration said it would not cut Sematech funding. Sematech, the Austin, Texas-based consortium, was formed in 1987 to combine private industry and government to compete in manufacturing semiconductors, particularly DRAMs. However, Sematech funds will not be increased, and the Bush administration has ditched most other industry recommendations for Sematech as well. In April, Craig Fields, head of the Defense Advanced Research Projects Agency (DARPA), was fired. Fields had championed grants to help U.S. companies enter such strategic fields as high-definition television. According to industry analysts, the firing of Fields spells doom for DARPA's program for high-definition systems which are important for both military and commercial applications.

Other efforts to put together "Japanese-style" consortiums have died out. A proposal to create a Consumer Electronics Capital Corp. sank without a trace. CECC was conceived of as a for-profit company, offering billions of dollars in equity investments and low-interest loans using private, state, and local government money. U.S. Memories, launched in June 1989 by seven companies including IBM and Hewlett Packard, fell apart six months later amid bitter accusations that computer makers, such as Hewlett Packard and Apple, were not willing to invest in the industry's future.

A further blow to entrepreneurial activity in Silicon Valley has been the disappearance of U.S. venture capital, the life-blood of fledgling "start-up" electronics companies. Major Japanese corporations have stepped in as an investment source, in return for manufacturing and selling rights outside the United States. However, with the Japanese stock market crash, these investments will not last long.

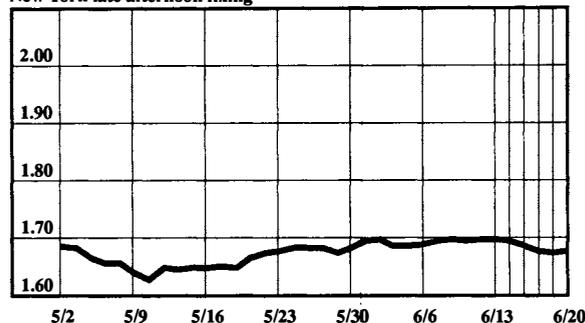
Bush offers nonexistent markets

It was President George Bush who set the stage for the Soviet-Silicon Valley summit, proposing earlier this year that barriers be lifted to computer shipments to Eastern Europe and the Soviet Union. The proposal will be formally presented to Western allies at the meeting of the Coordinating Committee on Multilateral Export Control (CoCom) in Paris in late June. President Bush's proposal came only months after his administration sank computer industry proposals for joint private and government R&D initiatives. Ironically, in killing the private-government development efforts, the Bush administration advanced the very free-enterprise rhetoric so popular in Silicon Valley only a few years ago. As a more "realistic" alternative to R&D, Bush has generously offered nonexistent markets in Moscow, Krakow, and Kiev. A good listen to Lyndon LaRouche, the world's outstanding physical economist, is long, long overdue.

Currency Rates

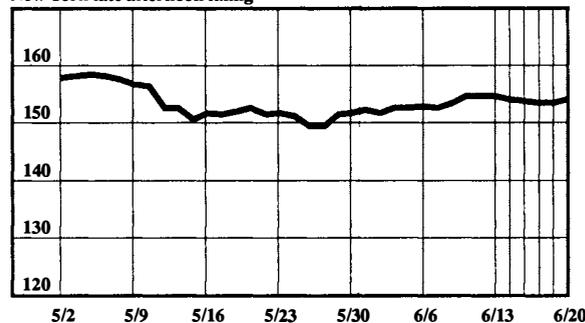
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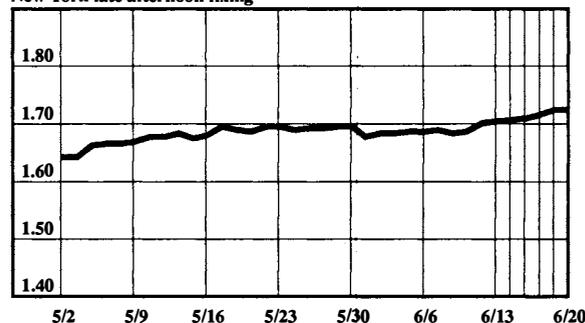
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New York late afternoon fixing



The British pound in dollars

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The dollar in Swiss francs

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