

## Why U.S. Inventions Profit Foreigners

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were willing to take on. Several other American companies also declined to participate."

The acoustical microscope, which relies on sound waves rather than light to operate, originally was licensed to American Optical Co., but remained undeveloped in the United States and ultimately went to German and Japanese interests.

Reimers said Stanford earns about \$4 million a year by licensing patents under its control — with about one-third of its income coming from foreign companies willing to undertake projects that Americans rejected.

Stanford is not alone in licensing its patents to foreign firms. Last year, Washington University in St. Louis issued a license to a Japanese firm to manufacture a local area network — a system to link computers over phone lines.

"We tried every U.S. manufacturer first," said Duke Leahy, the school's director of industrial contract and licensing.

"We have a situation where U.S. universities are the best in the world in both basic and applied research, and where European and Japanese companies are hungry for new technology and are willing to take a flyer," Leahy said.

Fortunately there are signs

that things are getting better now, and many U.S. companies are becoming aware that technology will pass them by unless they invest in new ideas."

Washington University issued a limited license permitting the equipment to be manufactured only for sale outside the United States. The school hopes it will find an American company willing to produce it here after the Japanese show it can be done.

The University of Wisconsin Alumni Foundation, which is ranked third in patent licensing revenue after Stanford and the University of California, has had similar experiences.

"We don't publicize our figures, but probably half our revenue comes from abroad," said Marvin Woerbel, the foundation's director of licensing. Many of the foundation's products are pharmaceuticals, not yet licensed for sale in the United States.

If and when the U.S. licenses are granted, he said, the foreign

companies will be free to sell their products in this country.

At the Massachusetts Institute of Technology, which received about \$2 million in patent licensing income last year — enough to put it in fourth place — approximately 15 percent to 20 percent came from abroad.

Arthur Smith Jr., director of the program, said MIT has instituted what he calls "an aggressive marketing program" in Europe.

But there are exceptions to the trend.

The University of California collected \$2.6 million in patent payments during the 1983-84 fiscal year, almost all from domestic sources, said Roger G. Ditzel, director of the patent program for all UC campuses.

Spencer Blaylock of Iowa State University, serving a term as president of the Society of University Patent Administrators, said he thinks the Stanford synthesizer and microscope experiences are atypical.

He said he believes that about 25 percent of patent income re-

ceived by American universities comes from abroad. But he added he "would be surprised if more than 1 percent" of the patent revenue is derived from products invented on American campuses, produced abroad and then sold in the United States.

Reimers said at Stanford that he sees signs that there may be greater willingness by American

companies to license inventions that now go to foreigners by default. But he said some U.S. firms remain harder to deal with than foreign companies.

"We do sign most of our licenses with American companies," Reimers said. "But the guy who has to mobilize things may not have gotten all his ducks in a row, and the project may die."

## Why Inventions Flee Overseas

By Michael Harris

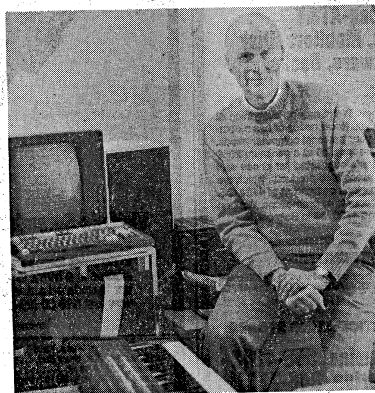
A new musical computer invented at Stanford University is a wonderful money-maker for Japan.

The Yamaha DX7 synthesizer has proven so successful in its first 18 months on the market that demand for the instrument has outstripped production.

Drupe's, a Palo Alto music store near the Stanford campus, has already sold "well over 100" for \$1,995 apiece. More than 25,000 have been sold around the country and 25,000 more worldwide.

The result is that an invention that could have produced export income for the United States has instead increased the nation's record trade deficit.

A second Stanford invention, an acoustical microscope, will come to the United States this year under German and Japanese sponsorship. The device already has won co-inventor Professor Calvin F. Quate a \$55,000



By Vincent Maggiora

Niels Reimers, Stanford's technology licensing director

award from the Rank Prize Fund of England.

No numbers are kept nationally or at most invention-producing universities, but some ideas born on campuses in the United States are produced abroad because domestic manufacturers fail to accept the challenge to develop them.

"We always attempt to reach American companies first," said Niels J. Reimers, Stanford's director of technology licensing.

But Reimers and some other university patent officials said they found that American willingness to take risks diminished sharply in the 1970s. So some schools turned to foreign companies after exhausting domestic possibilities.

"An American company sent five engineers and executives to look at the synthesizer," said Reimers. "They liked it but finally decided it was more of a technical challenge than they

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