

THE SUNDAY TIMES

A Knight Ridder Newspaper

Editorial

U.S. must invest more in innovation

FOR MOST OF THE 20th century the United States led the world in innovative technology. We are still global leaders in scientific discovery and innovation, but there are serious threats to America's leading position.

More now than ever before, our economic future and even our national security depend on maintaining our lead in science and engineering. But we are falling behind much of the rest of the world, particularly Asian nations with rapidly growing economies and investment in science and engineering education and industrial development of high-tech products.

Foreign students now make up more than half of the science and engineering enrollment in U.S. graduate schools. An increasing number of graduates return to their native countries where there is an increasing government support for innovative technology. In several Asian countries, Ph.D. students are being educated in their homeland, even as they constitute an increasing percentage of U.S. graduate school students.

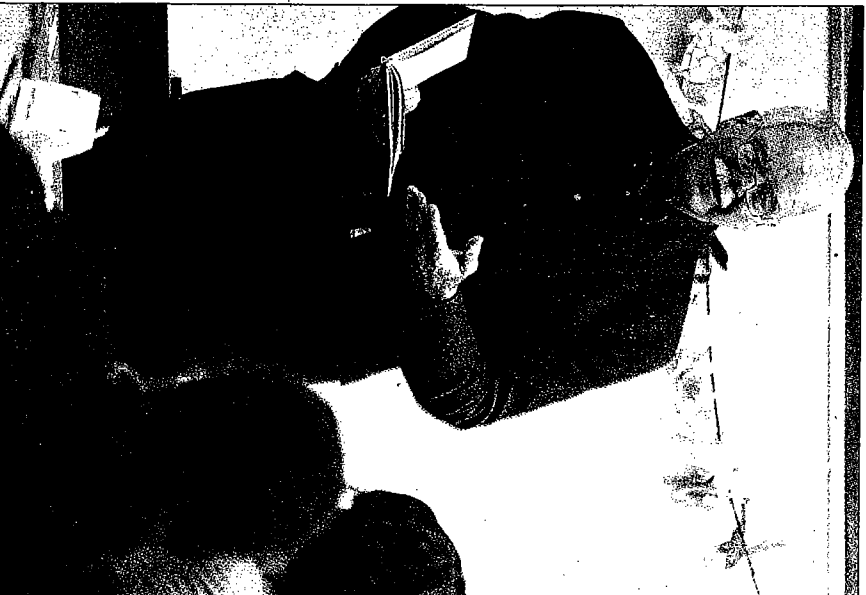
China and South Korea understand that they must invest more in science and engineering institutions if they are to be competitive in the future.

Unfortunately, there does not seem to be the same commitment in this country. That does not bode well for our future.

We need to increase investment in research and development to keep pace with other nations. In 1970, the U.S. federal government invested about 0.1 percent of our gross national product in physical sciences research. Today that percentage has been cut in half.

U.S. information technology manufacturing has been in decline for a generation and the descent is worsening. Asian nations may already have surpassed us in nanotechnology.

America has lost its dominance of the aerospace industry and has virtually given up on fusion energy research, which has been rapidly increasing in Western Europe and Japan.



DAN ROSEN/STOCKPHOTOS FILE

U.S. REP GEORGE MILLER, D Martinis, says the nation must regain ground it's losing in innovation or face serious economic and national security problems.

Despite all the negative trends, the United States is still a leader in science and technology, but it may not be for long unless we greatly increase our investment in science and engineering education and in spending on long-term research and development.

While the private sector has increased investment in technology, most of the money is directed toward short-term development of products and not innovative scientific research in which there is

no short-term economic gain.

That is why the federal government needs to make a major commitment to science and engineering institutions and to basic scientific research.

Fortunately, there are leaders in Congress, if not in the White House, who understand the importance of investing in our future. Rep. George Miller, D-Martinis, is one of them.

He is promoting the Democratic Party's five-year \$128 billion initiative, which calls for educating 100,000 new scientists, engineers and mathematicians through scholarships, doubling the funding for the National Science Foundation and providing government cash to increase access to broadband Internet access.

It also recommends public investment in synthetic and bio-based fuels such as ethanol and doubling federal funding for technical aid to small businesses.

If anything, the initiative is too limited. It should include a major investment in fusion technology and bio-engineering research.

The innovation initiative should not be seen in a partisan light. Public investment in education and scientific research has long been an obligation of the federal government in cooperation with the private sector.

High-tech businesses strongly support the initiative, which was inspired by the Republican Club in Washington, D.C., where Miller attended a speech earlier this year by John Boaddock, retired government relations executive for Texas Instruments.

Boaddock warned the group about America's waning lead in science and technology and the disastrous impact it could have on our economy, security and quality of life.

It would be encouraging if a bipartisan coalition in Congress and the Bush administration were to take up Miller's challenge and approve the innovation initiative before we fall behind Western Europe and Asia in creating and developing the goods and services that will dominate the global economy of the future.