



high tech
Ronald R.
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Watcke to tell what high tech means to you

What does all the buzzing about high technology mean to you? Will it change your life? How?

Beginning today, Ronald R. Watcke will explain the world of high tech in a series of articles in plain English. He will tell what it means to people who work, to students, to people planning to return to school, small business operators, people planning career changes.

"The column will go beyond reporting the news. It will be analytical and hopefully thought-provoking," he said as he outlined his topics — Michigan's own Silicon Ridge stretching from Troy through Farmington Hills and Ann Arbor, the effect on the auto industry, the paperless office, genetic engineering, home computers and satellites.

The Troy resident has been dean of liberal arts at Wayne County Community College

since November, and prior to that was vocational dean there for five years.

A native of Stafford, Conn., Watcke earned his bachelor's degree from Eastern Kentucky University, master's in history from Wayne State University and doctorate in education from the University of Michigan.

He taught in East Detroit and Detroit public schools before joining the faculty of WCCO when it was founded in 1969.

Future topics include Michigan's own Silicon Ridge, the effect on the auto industry, the paperless office, genetic engineering, home computers and satellites.

What's this 'high tech' buzzword?

"We have reached no general agreement on a definition of a high technology industry." So concluded a study last year by the Joint Economic Committee of Congress.

The term "high tech" became part of our language during the late 1960s. It was most commonly used in reference to computers and related technology. During the 1980s, the term has become an overworked buzzword of politicians, educators, scientists, investors and the mass media.

As with other buzzwords, the definition got lost in the hype.

TECHNOLOGY is the application of science. But I believe high technology is more than this. Recently, the U.S. Department of Commerce's Office of Science and Technology defined a high technology industry as one which continuously utilizes technology of recent origin for improvement and development of new products.

Another federal bureaucracy, the National Bureau of Standards, offered this definition: A high technology industry is one which has experienced significant technological change, generally originated within the industry itself, during the last several decades.

Both definitions leave a lot to be desired.

THE JOINT Economic Committee of Congress did agree that high technology industries fall into five broad categories.

They are electric equipment, machinery, transportation equipment, instruments and related products, and chemicals and allied products.

High technology refers to processes as well as products. Even the most mundane "low tech" products such as steel and textiles can be made with high tech processes such as computers and automated factory systems.

The definition I will be using in these columns incorporates a combination of the following 10 characteristics of high technology industries.

HIGH TECHNOLOGY:

- 1) Has significant growth potential.
- 2) Is based on scientific and engineering ideas and principles.
- 3) Utilizes sophisticated technology.
- 4) Issues a significant number of patents.
- 5) Has a high capital-to-labor ratio.
- 6) Is at the leading edge of technological development.
- 7) Has high levels of research and development spending.
- 8) Incorporates sophisticated and expensive equipment.
- 9) Uses a high ratio of scientists, engineers and technicians in the work force.
- 10) Is characterized by rapid changes and development.

IN RECENT years, high technology has been touted as a way to economic recovery, industrial growth and worldwide market expansion.

Without a doubt, new and expanding high technology industries will create jobs. However, since high technology industries are diverse, it is extremely difficult to pinpoint which industries and how many new jobs.

High technology industries have a significant impact on occupations. The effect upon employment will be first realized by an increase in entry-level skill requirements.

Secondly, many workers will experience an upgrading of occupational skills and a healthy dose of retraining to keep abreast of the rapid technological changes.

Thirdly, there will be a reduction in the number of unskilled employment opportunities.

Lastly, there will be an increased demand for higher education and sophisticated occupational training so workers will be adequately prepared to face the brave new world of high technology.

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Road board aiding state jobs effort

Oakland County road commissioners will help provide work for people in state jobs programs.

The road commission will pay Oakland County \$17,850 for roadside litter pickup work for 17 weeks.

Commission Chairman John R. Guau Jr. said he was told 11 people in Gov. James Blanchard's jobs program will staff the jobs five days a week until the program expires in September. Then the jobs will be staffed by labor from the Department of Social Services general assistance work program.

He said the road commission has participated in the county work program in the past, but this year it has increased from two to five days a week.