

# The computer revolution—when will it be here?

## Role of computer changing with development of personal, home models

Ever since personal computers caught the public eye in 1975, there has been increasing speculation about the day when offices, homes and perhaps lives would revolve around the machine.

Currently, the industry has sold more than 250,000 units and personal computers are striding rapidly into America life, with many companies experiencing growth rates of 100% and more annually.

Yet most people in the country have never touched a personal computer. Just how far away is the computer revolution?

A home computer, is a device that serves the average person without prior training or detailed instructions. Like a TV, it is incorporated in the popular culture. Its role is understood, and a support network exists (broadcasters, repair shops, retailers) for the product to be readily put to work. People don't buy television sets so much as they buy entertainment and information. TV is the vehicle for these services.

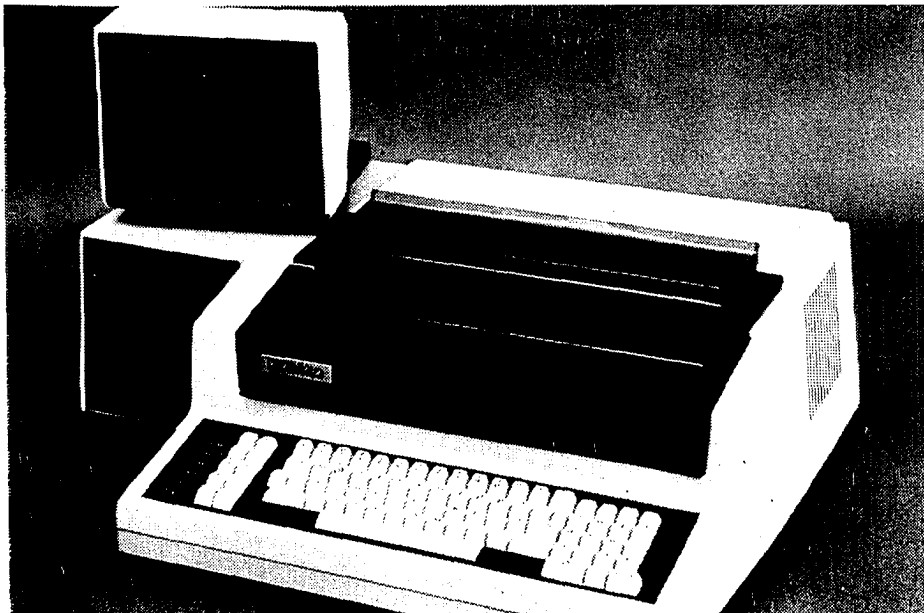
On the other hand, a personal computer, like a calculator or a tool kit, is simply a device whose size and price allow it to be owned and used by a knowledgeable individual. It

may sit at work, at home, in the shop or the laboratory. It is not yet a consumer appliance, incorporated into our culture. Yet many people use such machines every day to handle tasks ranging from learning math to keeping track of business inventory to text editing to scientific calculations.

Early computers occupied spaces the size of a house, were very costly and used tremendous amounts of electrical energy. Today's leading personal computer, the Apple, is the size of a portable typewriter, has several times the memory of those first computers and retails for \$1,195.

For more than 20 years, computers were used primarily

**Please Turn to Page 5, Col. 1**



**INTEGRATED SYSTEM-** -Durango F-85, a one-piece desktop computer, weighs only 65 pounds.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

# COMPUTER REVOLUTION

Continued from Second Page

to process numbers, and that image of computers has stuck. Many people dismiss the idea of using a computer because "the math is too difficult." Yet computers have nothing to do with math, per se.

The role of computers is changing. Computers have become inexpensive enough so that they are potentially a consumer item, like cameras or stereo systems.

However, getting the computer from the manufacturer to the consumer will not be easy. To begin with, there isn't a large enough sales support force to translate for the person who has a problem to solve, which means a lot of training will have to be done.

New applications, which do more than process numbers, will help to usher in the era of the home computer sometime in the 1980s. Meanwhile, a growing, semi-technical customer base will exert a powerful influence on the shape of computer products.

The mass market already is demanding a "friendlier" computer. It's one thing to sit an engineer in front of a stack of printouts. If he is interested enough, he'll figure out the program. But how will a computer hold the interest of a 10-year-old born in the age of television? Actually, the industry already has created computers that can approach such an audience.

Apple II was the first personal computer to combine many "friendly" features in a single package. Apple's color graphics, speech and sound synthesis, and hand-controlled joystick inputs are examples of the "humanizing" elements.



Chris is seven. Cerebral palsy has left him unable to control his body. Though as intelligent as his peers, he can neither walk nor talk and depends upon his family not only for companionship, but for life itself.

Unable to communicate except by grunts and the movement of his left hand, he slowly was going crazy. For him, an Apple computer brought the gift of dialog.

Chris' father is an engineer with an idea about what small computers can do. He developed a plan for a system that could present words or letters on the screen and allow sentences to be constructed by means of a movable cursor. The cursor could be controlled by moving a joystick. The resulting sentences could do anything from communicating with other people to controlling the machine that presented them. With a little help from Apple, Chris' father began building his system.

Today, Chris can "speak." He can create sentences on a screen to talk with his friends. Using a printer or a telecommunications link, he can communicate long-distance with people he will never see. It's bringing him out of his shell.

In addition, Chris now can reach out to affect things that he can't touch from his wheelchair. Using a standard Apple interface to remotely control AC devices, he now can turn on lamps, stereos, television and other electrical

**Please Turn to Page 10, Col. 1**

# COMPUTER ALTERS LIVES

**Continued from 5th Page**

equipment in the house. The once-agonizing attempts to reach a tiny knob are replaced by a simple movement of the joystick with his clenched fist.

The computer, programmed to that movement, sends a signal through the existing house wiring to remote controllers located at every electrical device. Chris can turn on a radio or heater just as easily as he can "talk."



At the University of Kentucky, a small group of visionaries are working to bring science fiction to life in Kentucky farmhouses.

The vehicle is the Greenthumb Box, an electronic package that connects a farmer's television with the county computer system through his telephone. With it, he can get up-to-the-minute weather, crop and market information to help him make important business decisions.

At a recent Greenthumb conference, an Apple computer running demonstration software took the concept beyond simply providing data. It also used its computational power to help the farmer make some decisions with his extra information.

Using its graphic capability, the Apple first displayed a dramatic, six-day animation of cloud masses over Kentucky (from NASA weather satellite photos). By sequencing the images, the computer helped viewers see local weather as part of a larger system.

The Apple then printed out local

weather forecasts for several areas around the state.



The rise of human civilization is linked directly with the ability to communicate across the years and across the miles. As computers make available more information and better means of digesting it, communication becomes increasingly important.