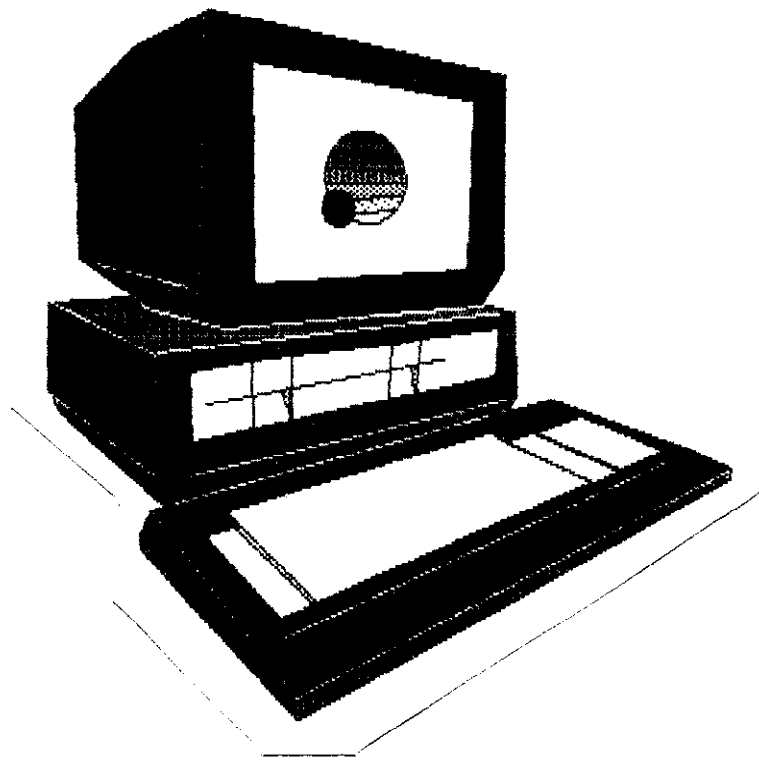


FUTURE APPLICATIONS
OF
COMPUTERS
IN THE HOME

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HISTORY OF COMPUTERS

The abacus was one of the first calculating devices ever developed, it was invented in Babylonia approximately 5000 years ago. So well thought out was this invention that the abacus can still be seen in use throughout much of the world. Although the abacus has been around for thousands of years the next generation in calculating machines did not appear until approximately three hundred and fifty years later.

In 1652 the French scientist Blaise Pascal thought that routine calculations should be done by machine and not by man and so he set out to build a machine that could do just that. After having made numerous attempts he finally produced a machine that he was satisfied with; but because his machine was very expensive it was not well recieved. Businessmen did not like it because it was cheaper to hire clerks, and clerks did not like it because it might have taken some of their jobs away (even then the idea of job security was important). It would take another two hundred years before the first commercialy successful calculator would make its appearance.

The French inventor Charles X. Thomas De Colmar introduced his Arithmometer in 1820, but it was not until around 1860 that his invention began to sell in sizeble quantities. After the introduction of the Arithmometer most of the major advances in

calculator technology were made in the United States rather than in France.

The first calculators like the ones we are familiar with did not appear until the late 1800's. In 1885 Dorr E. Felt developed a calculator that was powered by just pushing buttons, and in 1888 William S. Burroughs produced a machine that not only added its figures from the pushing of buttons but it also printed them along with their total on a strip of paper.

While these calculators could compute numbers they were not really computers because they could not store numbers in memory. The person credited with being the father of the computer is Charles Babbage. In 1812 Babbage had conceived of a calculating machine that could produce accurate logarithms and by 1821 he had a working model. While he was working on this calculator the idea came to him that if a machine could be made that could add why not a machine that could do other functions as well, and so in 1833 the idea of the computer was born.

The first real computer was built in England in 1872 by Lord Kelvin. The machine developed by Lord Kelvin was to be used to plot the rise and fall of the ocean tides. This kind of computer is called an analog computer because it displays its final product as a graph.

Because of the massive amounts of information generated from the censuses being taken in America in the late 1800's a better system of recording and counting was needed. To meet this need a

competition was held to see if this need could be met. Herman Hollerith won the contest with his tabulating machine. Hollerith was selected to undertake the census of 1890 and with the aid of his machine he was able to announce the total population of the United States in six short weeks. To understand just how significant this was we have to realize that it had taken seven years to count the previous census of 1880. Because of his success in counting the census Hollerith went on to found a company that would in 1924 become known as the International Business Machine Corporation, better known by its acronym I.B.M.

When Howard Aiken became president of IBM he pressed the company into building a full-scale computer. The project took five years to complete, and in 1944 the IBM corporation announced that it had completed its goal of building the worlds first full-scale digital computer. This computer was known as the Harvard Mark I in honor of it's having been built at Harvard University. In 1946 a computer was built to make ballistic calculations, this computer was called the Electronic Numerical Intergrator And Computer, or ENIAC for short. This computer was very fast and could add a five-digit number 5000 times a second.

Over the next decade there were many improvements made in computer technology but the average person was not seeing much of this new technology because the vast majority of the computers being made were for either scientific or defence purposes. Finally in 1951 John W. Mauchly and J. Presper Eckert built the first commercial computer called the UNIVAC I for Sperry Rand. This computer had a hundred times the capacity of the ENIAC, was

ten times as fast, and almost a tenth of the size.

The next major step in the development of the computer was the replacing of electronic tubes with transistors. The first transistorized computer was built at the Massachusetts Institute of Technology in 1956. With this change in computer design the next generation of computers was reduced in size and expense, and they were much more powerful and easier to operate.

In 1964 the intergrated circuit, or "chip", made its apperance in computers. Ten years after the introduction of the "chip" technology had progressed a thousand times to the point where these circuits were now being called "microchips" which in turn brought about the microcomputer. At this point the fourth generation of computers was reached, the first having been the tube computer, the second the transistor computer, and the third the intergrated circuit computer.

As was discussed at the beginning of this paper most of the advances over the past one hundred years have come from here in America, but as developments towards building a fifth generation computer continue America may lose some of its edge in building computers. The reason for this is that Japan as a nation has set the goal for itself to develop the next generation of computers by 1990.

Future Applications
of
Computers
in the Home

There were days that I sure resented the home management computer that my father had had installed a number of months ago; and today was one of those days. I'm certain that you too have had days like this, you know the kind, even though your alarm goes off in the morning all you want to do is sleep; so what do you do, you reach over to your clock and either touch the snooze option or turn the clock off so that your slumbers can continue uninterrupted. But with the intrusion of the Fox 500 Home Management Computer things changed drastically.

It used to be that when you wanted to use the computer you went back to the study, turned the computer on, and did what you needed to do with the computer. But ever since that Fox 500 came into the house we have found ourselves using the computer more and more to help us with our daily routine.

Lets take yesterday as an example. It had started out, for me, like one of those days I have already talked about. But instead of being able to just turn off the alarm like I used to do I now have no choice but to get up. That's because the Fox 500 doesn't just turn on my alarm, it opens my skylight, turns on the lights, opens the closet doors, and tells me the forcast for the day so that I can choose the appoprite clothes to wear.

But don't get me wrong, I like the convenience that the Fox 500 provides. In the past I would try and judge when to leave the house down to the last second and most of the time I would be off by a few minutes and thus would not be able to eat breakfast before I went to school. But now that we have a home management computer that can be programmed to do just about anything imaginable my mornings are much more organized than they used to be. Now when I get up in the morning all I have to do is push a button and the computer starts my shower for me and when I turn the water off the computer starts my english muffins toasting.

My mother has really enjoyed the new Fox 500 because it allows her to have a lot more free time when she gets home from work. Whereas in the past she would go shopping once a week for groceries she now only has to keep a running inventory of what we have on hand by subtracting from the computer's grocery list the things that we use; then when we start getting low on items she has the computer call up the grocery store and order what we need delivered to our home.

The Fox company will be coming out with a new interface soon that my dad is really looking forward to. It will allow the Fox 500 to be hooked up to our automobiles onboard computers so that it will be very easy to determine what the condition each of the auto is in at any given moment. He also likes the idea that the computer will start the cars on cold mornings so that they are warm when we get in them to go to school or work.

My sister has really enjoyed having the Fox 500 around because it helps her keep track of which guy she is going out with and when; believe me that involves some juggling, even for the computer. She also likes being able to have the computer screen her telephone calls. That way if she does not want to talk to someone the computer can be programmed to say she isn't home.

The Fox 500 provides many other amenities to make life easier for us. Such as; it controls the house-cleaning robots so that we do not have to program them every time we want them to do a different job. Instead we just tell the Fox 500 what we want them to do and it assigns them the jobs that fit their abilities; whether it is feeding the dog, acting as a doorman, or as a routine house-cleaning type robot.

The thing that I really like most about the Fox 500 is that it makes doing homework fun and easy. With all of the different business programs that are in the computers memory it is just a matter of putting my work into the computer and "presto" out comes all the answers to my assignment. I just have to make sure that my parents don't catch me doing that or I could get into trouble. But of course one of the best features is the letter or paper writing program. All that is required is to tell the computer what you want to write on and out it comes. For example: a paper on the "Future Applications of Computers in the Home". And to individualize the papers it takes into account your speech patterns and mannerisms. It does of course have an override on this function, and that is what I used to write this last paragraph.

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