Production and development of computers in Czechoslovakia in 1945 – 1989

1. Computers developed in Czechoslovakia since 1945

The beginning of the development and production of computers in Czechoslovakia dates back to 1945, but it had to overcome many difficulties caused by social and economic changes after World War II. Antonín Svoboda, a computer expert who has returned from the USA, has largely participated in the development of computers in Czechoslovakia. In 1950 work began on the project of the first Czechoslovak relay computer and after seven years it was put into trial operation. This long period of development was caused by the state of the Czechoslovak economy, namely the lack of components and their high failure rate and lack of experienced workers.

The first Czechoslovak computer was named SAPO. His successor was the computer E1, which was completed in 1961. E1t was followed by an experimental computer MP10, which had control logic still based on relays, but in the serial arithmetic unit were the first semiconductors. All these computers suffered from failures and backwardness as the first computer SAPO, and their main problem was the lack of quality components.

At that time, it was already clear that the relay computers had no great future, but the experience gained by developers was evaluated in the coming years. In 1956, the development of a large, universal computer named EPOS design to process mass data. If previous computer development activities were not initiated by the state and they were rather research projects, EPOS was developed as a state project.

Computing technology was an important technology in the world in the 1950s. Even in the countries of the Soviet bloc, state was interested for computers in economic and military terms. The result was an embargo from Western countries to export technologies to the Communist countries of Europe. This brought with it the requirements for the development of its own technologies in Czechoslovakia, which was very difficult at the time of the inefficient planned economy. The development was also adversely affected by the emigration of Antonín Svoboda with a number of collaborators to the USA in 1964.

2. Cooperation in computers development of Soviet bloc countries after 1968

Computer technology lagging behind in the socialist states and the very small possibility of importing computer technology from developed countries due to the US embargo led to the development of a joint project of the JSEP (Unified Computer System) in the eastern countries. From 1975 to 1974, the development and production of five types of computers named JSEP was launched. In 1974, the SMEP Small Electronic Computer System was added to the joint program. Within a few years, we have managed to create a modular system of technical and programmatic resources, which, with the mutual cooperation of the participating countries, would guarantee cheaper mass production. All of the JSEP computers developed in Czechoslovakia differed significantly from the other computers in this line of software. While all other COMECON countries literally copied IBM operating system prototyping systems, often bordering or outperforming, Czechoslovak computers had their own operating systems. These were high-quality operating systems, fully compatible with IBM based on the IBM Principles of Operation. The result of all these

activities was not excellent. The computers produced were very malfunctioning and the copied components were not of good quality

3. Personal computers

In the second half of the 1980s, microcomputers and personal computers began to be used in Czechoslovakia. Their imports were limited and again domestic substitutes were produced. Production of the first home microcomputers in Czechoslovakia began in 1983. They were computers PMD-85 produced in Tesla Piešťany and IQ 151 from ZPA Nový Bor. The IQ 151 was the most widespread microcomputer for schools. Another interesting experiment was the microcomputer TNS, which was produced in the Agricultural Cooperative JZD Slušovice and was used in the commercial area. Also worth mentioning is Didaktik Gamma, which was compatible with the ZX Spectrum.

The state has tried to catch up with many years of delays in this area by importing several tens of thousands of the cheapest types of home computers, especially ZX Spectrum and Atari. Other few computers types were available in the foreign trade company TUZEX. Surveys in 1985 showed that 100,000 computers were in our homes at the time.

4. Final evaluation

What impact did the development and production of computer technology have on the development of Czechoslovakia?

We can look at these activities as a totally useless activity because the West has never managed to catch up and the results were not good. Computers were unreliable and often even unusable.

On the other hand, the research and development of computer technology contributed to the fact that the level of knowledge in this field was at a very high level in Czechoslovakia and after the changes in 1989 helped experts to adapt to the influx of new products more quickly. The development of computer technology in the field of architecture and software was not in Czechoslovakia a literal copy of Western designs, as was the case in other eastern countries. Especially in the field of operating systems and application programs, a number of original solutions were created in Czechoslovakia. The development of computers has contributed to the introduction of new technologies, which have been widely used outside the field of computer technology. When the computer market was opened after 1989, the experience gained was fully used to work with the newly purchased computer technology.

References

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