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## **MASTER zaawansowany system operacyjny stworzony w warunkach przemysłowych**

### **MASTER Advanced Operating System created in industrial conditions**

#### SUMMARY

In the middle of 1984, in the MERASTER Scientific-Production Centre of Control Systems (CNPSS) in Katowice, which at that time was one of the biggest producers of computer systems in Poland, it was decided to construct an equipment and software that enabled realization of multi-access systems on the basis of a very simple microcomputer, an equivalent to LSI-11/03 of Digital Equipment. To accomplish this ambitious task and because of external economic conditions, it was necessary to construct a new equipment and a new operating system in just 15 months.

This paper describes guidelines for designing, construction and production of this new equipment and software, as well as organisation and the course of work on the realization of the system. That task, from today's perspective probably perceived as unrealistic and technically impossible to accomplish (microcomputer's processor had an operating memory of 56 kilobytes, while memory requirements of today's operating systems as Windows or Linux are several thousand higher) was, however, fulfilled within the 15-month period only by a team of several people. Nowadays, realization of a similar system would certainly require the work of at least hundreds of people and would take several dozen months.

Final effects of work on the described system were of financial and non-financial nature. CNPSS MERASTER sold approximately 300 systems during 3 years, which was quite profitable for the company. Of non-financial character were the experience and skills of the employees, gained throughout their time of work on the system, both in terms of programming experience and skills resulting from realization of a complex system in the whole cycle: from the concept to implementation and operation, and in terms of conclusions and practical experience obtained during the organisation of work.

That experience was appreciated at the All-Poland Programming Fair SOFTARG'86, where it received the 1st Prize, and also by the Minister, Head of the Scientific-Technical Development and Implementation Office in the form of the 1st Special Award for the authors of the software. Another confirmation of the authors' skills was submission of patent claims by a team of construction engineers of the Semiconductor External Memory that was created specifically for the purpose of the described system.

**Analecta – Studia i Materiały z Dziejów Nauki**

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