

Computer History

Poland's First Computers – How It Started

by Stanisław Jaskólski



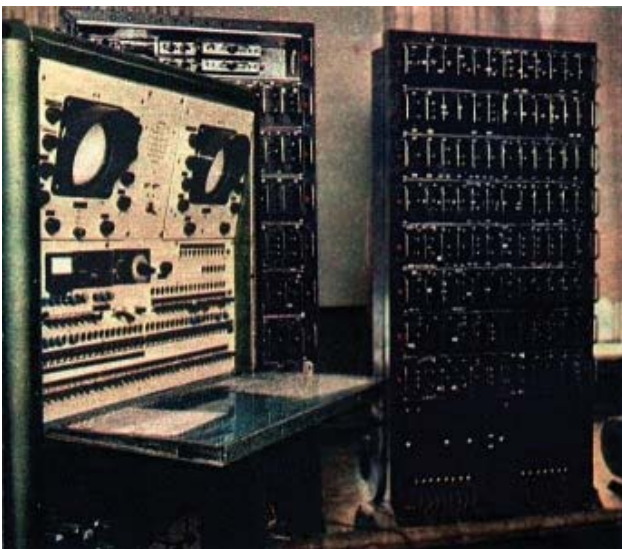
Mr. Stanisław Jaskólski, M.Sc. (E.Eng.), graduated at Warsaw University of Technology and since 1981 is a founding member of the Polish Information Processing Society. During 1966 - 1985 he worked for the Polish Central Statistical Office Data Processing Organization and from 1981 to

1985 served as its General Manager. Later, he was consultant to Qualcomm Inc. (USA), and at present Stanisław consults SELEX Communications S.p.A., a Finmeccanica company.

XYZ – The Polish Premiere

In 1950, the Polish Academy of Sciences established a special unit to study emerging issues of early computers. Originally named “GAM” (*Grupa Aparatów Matematycznych - Mathematical Apparatuses Group*) it evolved to IMM (*Instytut Maszyn Matematycznych – Mathematical Machines Institute*).

The decision to create the first computer in Poland was made at the end of 1955. This task was accomplished in three years – the machine named XYZ, fully designed and built in Poland, began operating in 1958.



XYZ computer front panel, behind – two racks with electronic circuitry

The XYZ computer was a serial, binary computer, built with approximately 400 tubes and 2000 diodes. Programming was in internal binary language and in a symbolic addressing system SAS; after 1960 also by SAKO – algorithmic language compiler (SAS and SAKO were

original Polish software products, developed by IMM, highly appreciated by computing specialists at that time). Input/output equipment was based on standard Hollerith punched card reproducer. The speed of this computer reached up to 1000 arithmetic operations per second.

The XYZ, although an experimental model, was a fully usable digital computing machine. The experience gained by several customers was crucial for further development of the computers in the ZAM, since GAM was temporarily renamed to Zakład Aparatów Matematycznych (*Mathematical Apparatuses Division*). Here, the team of mathematicians and engineers designed and built the next series of digital computers named ZAM-2, ZAM -21 and ZAM-41. The total number of produced ZAM computers was about 30 units. ZAM 21/41 computers were equipped with line printers, magnetic tape and paper tape input/output units.

The experience Polish scientists, programmers, engineers gained in these early years led to the further development of the computer industry in Poland. The ELWRO factory, located in city of Wrocław, played a leading role since



ZAM 21

1970, where approx. 600 units of the Odra family of computers were manufactured. The most important products of this family are Odra 1204 (own design), and Odra 1305/1325 (fully compatible with British ICL-1900 computer series). The last Odra 1305 computers were used successfully up to 2005.



Odra 1305