

Institute of Computer Science

Annual Activity Report 1998

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In 1998, the main work of the Institute followed the trends set in previous years. The Institute focused on the running and further extending of the Brno Academic Computer Network (BAPS), and its members continue to work on the TEN-34 CZ project. At the present time, ATM technology ensures the running of the spine on 155 Ms/s. The Institute of Computer Science is the main connection point of BAPS to this high-speed spine. In co-operation with VUT Brno, it administrates 40 km of optical cables which form the basis of the metropolitan spine. Last year, the Institute carried out infrastructure programmes of the Fund for the Development of Schools of Higher Education and INFRA programmes in the field of computer networks amounting to a total value of CZK 8.4 million. Thanks to these projects (supported by a contribution from the University) it was possible to extend optical routes of the metropolitan network and equip it with other active elements on the ATM basis. In 1998, basic preconditions for the development of medical applications in the metropolitan optical network were created. This project focuses on the communication of multimedia data between individual workstations located in connected hospitals and lecture rooms.

The Institute supervises the work of the Supercomputer Centre which has received a three-year project of the INFRA (2) programme for its further equipping. In the framework of this project, a Silicon Graphics Origin 2000 computer with 32 processors and 16 GB main memory was bought at a total value of CZK 23 million. The first half of the computer was delivered in 1998 and became part of the Metacentre, a virtual supercomputer centre of schools of higher education which was established in the framework of the project of the same name as part of the TEN-34 CZ programme. Once the second half of the computer is installed, the most efficient parallel supercomputer in the Czech Republic will be available in the Supercomputer Centre. From 1999, the Metacentre project will continue as part of the CESNET research object, where it is one of the most significant concrete applications of a high-speed network. Computers in the Supercomputer Centre are at the disposal of teaching staff from MU (from the Faculties of Science and Informatics in particular) and other schools of higher education and institutes of the Academy of Science of the Czech Republic. At the end of 1998, the Supercomputer Centre was provided with an Onyx graphical supercomputer equipped with eight computers, 2 GB RAM and 2 graphical subsystems of the highest Infinity Reality class.

The WWW group and multimedia took part in the development of applications of a supracomputer network both for the needs of Masaryk University and larger projects. The group implemented the Internet pages of Masaryk University on the university WWW server, which provides summarised information about all university activities. (The pages use information filed in the MU personnel and study databases for which the group creates a further database superstructure as necessary.) In the framework of the co-operation with non-university institutions, the group completed and defended the CP 94-0943 HYPERMEDATA European Union international project. The project focuses on the exchange and presentation of data from autonomous information systems (with primary application in health services) which the group co-ordinated for the Czech and Slovak Republics between 1995 and 1998. For the period of 1999 to 2001, the group gained a European Union grant for an international project in the field of strategic planning.

The Library Information Centre of Masaryk University (a university-wide unit of the Institute of Computer Science) continued to address the tasks given at its founding in 1996: general co-ordination of further development of MU librarianship, professional support of automation of libraries, introduction of new information technologies – forming and operating of centralised information systems. The total number of volumes which are accessible in the electronic catalogue amount to 300,000, which is

about one quarter of the volumes of Masaryk University. Five faculties (the Faculties of Economics and Administration, Informatics, Arts, Science and Law) have extended its automated services and in addition are able to lend various documents. Complete information sources and services implemented in the framework of KIC MU were made accessible to users as part of the newly created virtual WWW library of MU (<http://ww.muni.cz/library>). Other activities include the gaining of the Current Contents Connect unlimited university-wide licence and the installation of the academic Intranet server which operates these information sources, plus the successful concluding of two INFRA projects amounting to CZK 5.4 million.