Institute of Computer Science

Annual Activity Report 1997

1. INSTITUTE OF COMPUTER SCIENCE

head: Assoc. Prof. RNDr. Václav Račanský, CSc.

In 1997, the main activity of the Institute of Computer Technology followed up on initiatives from previous years, in particular the running and extending of the metropolitan computer network and the connecting of Masaryk University and the whole of the Brno metropolitan network to the TEN-34 CZ project. The Institute's staff are members of the working team of this nationwide project, the aim of which to build and operate a high-speed spine using ATM technology and which at present can provide a connection speed of 34MB/s. The Institute of Computer Technology is the main point of connection of the Brno academic network to this high-speed spine. Together with VUT Brno it administrates almost 30km of optical fibres which create the basis of the metropolitan spine. The metropolitan spine includes the spine of Masaryk University, to which about 2,000 computers are currently connected.

The Institute carried out infrastructure projects for the Foundation for the Development of Institutes of Higher Education and the Infra programme, generating funds of CZK 12.9 million. These funds plus a contribution from the University enabled the substantial extending of optical routes of the metropolitan network and the equipping of this with new active ATM elements. Together with active involvement in the TEN-34 CZ project, this led to the improvement of the quality of connections to the computer network for MU's faculties and departments and brought about opportunities to use new applications which require the transfer of great volumes of data.

The Institute of Computer Technology runs a Supercomputer Centre which is equipped with a POWER Challenge twelve-processor computer server from the Silicon Graphics company. The capacity of the Centre is sufficient for all those interested in complex calculations in the world of academia in the Czech Republic. At Masaryk University, the Centre is mostly used by staff from the Faculties of Science and Informatics. The Supercomputer Centre is also the main workplace of the nationwide METACentrum project, the main objective of which is the unification of high-performance servers at institutes of higher education and the creation of a high-performance virtual supercomputer with c. 60 processors. This project is supported by the TEN-34 project, and in 1997 received a CZK 7.2 million subsidy.

The group for the WorldWideWeb and multimedia performed the transfer of information on Masaryk University and all its faculties to the pages of the Internet, also providing access to all information stored in individual databases (lists of employees and students, information on courses, creative activities, etc.). The group is also involved in the CP 94-0943 HYPERMEDATA international project of the European Union, a project which is focused on the integration of autonomous information systems in one main system, thus making data accessible to users (in the form of hypermedia documents) and allowing data exchanges between source systems. Project issuers – coordinators the Rutherford Appleton Laboratory (RAL) for Great Britain and the Institute of Computer Technology of Masaryk University for the Czech Republic and Slovakia, together with AMIS s. r. o. and PCS Medical s. r. o. from the Czech Republic and ELAS s. r. o. from Slovakia – received support from the European Union (a CP94-0943 grant as part of the COPERNICUS programme for 1995–1998) and from the Ministry of Education, Youth and Physical Education (in the form of subsidies as part of the OK 204 contract).

I nstitute staff give lectures at the MU Faculties of Informatics and Economics and Administration. They also participate in the compiling and publishing of the Newsletter of the Institute of Computer Technology. In 1997, 4 issues were published with 25 contributions from Institute staff.

2. LIBRARY AND INFORMATION CENTRE

head: RNDr. Miroslav Bartošek, CSc.

In 1997, the Library and Information Centre of MU (a university-wide sub-department of the Institute of Computer Technology for the coordination and development of libraries and their services) continued in the performing of its objectives as outlined at the Centre's opening in 1996 - i.e. the general coordination of the future development of librarian studies at Masaryk University, professional support for the automation of libraries, the introduction of new information technologies, and the creation and operation of centralized information systems.

Thanks to the Centre's help, great progress was made in work towards automation at all faculties: the total number of electronic library recordings in the automatic systems of the MU faculties (see telnet://tinlib@knihovna.muni.cz) exceeded 200,000. Four faculties (Economics and Administration, Informatics, Arts, Science) extended their automated services in the field of document loans.

Thirty-five computers purchased with funds provided by a MOLIN (Moravian Regional Library Network) grant from the Mellon Foundation gave MU libraries a great boost. Within the framework of the MOLIN project, successful cooperation between the Library and Information Centre and the Information Centre of Palacký University Olomouc brought about significant results such as a universal WWW interface for the TINLIB library system, a virtual catalogue (see http://tin.upol.cz/~hales) and a records downloading system linking TINLIB library catalogues on the Internet.

The Centre administrated the running of the central CD-ROM server based on Ultra*Net technology and centrally obtained CD-ROM bases (which at present include BookFind, the Czech National Bibliography, Ulrych's International Periodical Directory, the Oxford English Dictionary, Journal Performance Indicators, MDT on CD-ROM and the Information Service of Faculty of Economics and Administration databases – for details see http://www.ics.muni.cz/services/cdrom).

In 1997, the Centre was very active in many fields. As an example of this activity, we wish to mention the commencement of work on an MU WWW virtual library, the integration of all MU library and information services (including the Ultra*Net CD-ROM server) in a united WorldWideWeb, and the establishing of a Library Consortium at institutes of higher education in the Czech Republic for the purchasing and running of joint sources of information within the framework of the CESNET academic network.