



IT Department Technology Transfer



The objective of Technology Transfer (TT) at CERN is “to make known and available to third parties under agreed conditions, technical developments achieved in fulfilling the laboratory’s mission in fundamental research”. The IT Department contributes to this objective by the transfer of technology, expertise and know-how to industry, universities, public institutions and the society at large.

IT Department activities focus on fast changing Information and Communications Technologies (ICTs), which often require that the necessary developments are conducted in collaboration with external partners. As a result, the main channels for TT in the Department are collaborations and partnering with external organizations, rather than the classical patenting and licensing approach. The other main channel for

TT is the transfer of software technologies via collaboration agreements or, more frequently, via open source mechanisms.

In IT, collaborations and partnering bring direct additional funding (from funding agencies such as EC-funded projects, as well as funding from industry such as the openlab). The open-source approach for software also brings direct benefits by sharing and lowering the cost of development and testing, as well as bringing indirect longer term benefits, as exemplified by the World-Wide Web.

Technology Transfer through Software Licensing

In 2003, a study was undertaken within the Department to review existing practices in terms of software licensing, to compare licensing via bilateral agreements to that based on open source principles, and to evaluate the various options for open source licensing (e.g. GPL, LGPL, ...).

Bilateral Collaboration Agreements may be appropriate for only software developed within CERN. Open source is appropriate in many cases, including, but not only, software developed in collaboration with external partners. In 2003, two new software packages were made available as open source (Print Server Software and SLIC), one new bilateral Collaboration Agreement was signed (Friedrich Miescher Institute for Biomedical Research) and a number of new organizations downloaded the Printing Client Package (programs in binary-only format).

Technology Transfer through R&D collaborations with industry



The openlab for DataGrid Applications - a framework for evaluating and integrating cutting-edge technologies or services in partnership with industry - is the main vehicle for IT Department R&D partnering with industry. In 2003, two new partners (IBM and Oracle) were successfully incorporated, bringing to the number of sponsors to five (together with Enterasys, HP and Intel).

The IT Department hosted two meetings of the First Tuesday Suisse Romande series at CERN.

Technology Transfer through European Union collaborative projects

The European DataGrid (EDG) and DataTag, both EC-funded projects, were, in 2003, the major examples of TT through publicly funded projects. The European Grid Industry and Research Forum (IRF) -a framework initiated by the European DataGrid project and joined by the CrossGrid project- is the focal point of contact between research on Grid technologies and the industrial and scientific world. At the end of 2003, the IRF counted 287 members. 2003 was also the key year for the preparation and successful submission of the EGEE (Enabling Grid for eScience in Europe) project. EGEE aims to integrate current national, regional and thematic Grid efforts, in order to create a seamless European Grid infrastructure for the support of the European Research Area.



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Technology Transfer through education, outreach and dissemination



CERN organizes the CERN School of Computing (CSC) every year. The 26th CSC took place in Krems an der Donau, Austria. 68 students of 25 different nationalities (a new record for CSCs) and from 39 different institutes attended the school. 73% of them were citizens of a CERN Member State.

For the second year running, an examination was offered at the end of school. 60 students registered for the exam and 53 passed. Each successful candidate received a formal credit certificate from CERN. In 2003, a proposal was made to the European Commission for grants to assist students with living and travel allowance and cover a fraction of the organization costs. The proposal was accepted with a high mark and the contract was signed at the end of 2003.

The IT department (via the EDG and EGEE projects) was also one of the founding members and is still a major contributor to the International School on Grid Computing, organized by the Global Grid Forum. The GGF Grid school 2003 took place in Vico Equense, Italy.



IT was the originator of the RSIS (Role of Science in the Information Society) conference held at CERN in December 2003.

IT contributions included the responsibility for organizing the projects into work packages and that of designing and implementing the SIS-forum, an exhibition organized at Palexpo in the framework of the World Summit on Information Society (WSIS). The organization included 32 people from four divisions (ETT, EP, IT, HR). After a Call for Content, 42 projects from 32 organizations world-wide were selected.



The culminating event was the inauguration in the presence of Mr. Kofi Annan, United Nations Secretary General. The SIS-forum Web site (<http://cern.ch/sis-forum>) received more than half a million visits during the month following the event.

Other activities

The IT Department has carried out an inventory of external projects and the results have been presented via a taxonomy of activities. A website presenting TT in the IT Department can be viewed at (<http://cern.ch/it-tt>).