CHIPP  Annual Meeting Lausanne, Sept. 2008

Technology Transfer in the field of Particle Physics

An international network under construction

Outline

- Background
- What is TT
- Situation in CH
- Q & A
Background

- Delegations within CERN Council have expressed a strong interest to increase efficiency of technology transfer (TT) in the field of Particle Physics (PP)
- A dedicated taskforce was created in 2007 to study the situation and make proposals to the Council
- The taskforce has proposed the creation of a professional TT Network based on existing TT offices/organizations within the research institutions of the member states and with the CERN TT office
- The Council approved such proposal in March 2008 (however w/o financial support!)
- The project Particle Physics TT Network is currently in a conception phase (working groups)

TT in the field of Particle Physics
Objectives as given by CERN Council

- Improve efficiency and effectiveness of particle physics TT activities in member states
- Enlarge technology offer
- Improve match between technology offer and industry needs
- Enhance visibility of PP activities
**TT Network in the field of Particle Physics**

**Initial members**

- CERN : TT office
- DE : DESY, GSI
- FR : CEA, CNRS/IN2P3
- SE : Chalmers
- IT : INFN, Univ. Insubria
- DK : Copenhagen Univ.
- GR : NTUA
- BUL : Univ. Sofia
- CH : EPFL

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**What is TT ?**

Bring interesting and innovative scientific results to a use for the ultimate benefit of society

- new products and services
- new diagnostics and therapies
- better use of resources
- better environment
- new jobs
- new companies
- ...

Large investments of public money in R&D lead to legitimate expected returns for society
Transfer of knowledge and of technology to industry & economy: a challenging path...

The industrial partner shall have the leadership for the development as soon as possible!
Challenge: have an industrial partner early in the process!

The TT office
professional services for researchers
Missions & activities of a TT office

- Negotiate and approve Research Agreements and Partnerships with third parties, NDAs, MTAs, ...
- Evaluate, protect and manage the Intellectual Property (IP) created within its institution
- Search for partners, negotiate, and manage Licenses and Technology Transfer Agreements
- Support the creation of Start-Up companies from its institution and manage interactions with such companies (licenses, equity, R&D, access to labs and facilities, conflicts of interests, etc)

Further missions & activities of a TT office

- Maintain active relations with incubators / VC’s / Seed funds / Science parks / ...
- Contribute to education such as courses and seminars in the fields of IP and innovation management for students and scientists
- Contribute to TT policies, regulations, best practices, ... on the local, national and international levels
TT office: available skills and capabilities

- Practical knowledge of the « MARKETS »:
  - University - Industry collaborations
  - Technology Transfer (licensing)
- Science & technology
- Negotiations & business
- Legal aspects
- Intellectual property & patents matters

Technology Transfer & negotiation of research agreements

... always

in very close collaboration with the scientists, inventors and the responsible professors!

>> proximity & form a team:
TT officers + scientists
Financial incentive for inventors, software authors and labs
example of distribution of income from licensing / TT

financial returns from commercial exploitation
(royalties, fees, equity cashed-in, …)

1

reimburse ext. costs (patenting, etc.)

1/3
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Inventors

Laboratory

TT : situation in CH

➢ All major universities and research institutes have now a professional TT office

➢ Overall good TT output from Swiss public R&D institutions

➢ A Swiss Technology Transfer Association (SWITT) with members (TT officers) from almost all Swiss public institutions:
   > exclusive web list of available technologies
   > education courses, seminars
   > accesses to databases for TT offices
   > development of good practices
   > TT surveys
   > communication, contacts with authorities, …
Switzerland is doing well in public-private TT …

… but it needs to be actively maintained and further developed

Data from IMD world competitiveness yearbook 2007
Switt TT survey 2006 (19 CH institutions)

- 2,654 new research projects with economic partners
- 404 invention disclosures registered
- 212 priority patent applications filed
- 196 license and option agreements executed
- 1,245 patent cases active end of 2006
- 824 active license agreements end of 2006
- 235 active licenses generated ca 9 mio CHF income
- 51 new start-up companies founded
- 330 start-up companies founded since 2000

A recent example of a start-up in PP

www.arktis-detectors.com
More information and links

www.switt.ch

Technology Transfer Offices

**swiTTlist - Technology Opportunities from Swiss academic research institutes**

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swiTT is continually updating its new technologies from universities and other institutes of higher education. The technologies presented can form the basis of new product development in cooperation with business partners. A brief technical description and contact information is provided for each invention and technology.

If you want to be informed on new technologies of a certain field or with certain keywords, you may subscribe to our Technology Alert.

Search for technologies that are interesting for you in swiTT’s data base:

- **Keyword(s):** [input field]
- **Institution:** [input field]
- **TTO:** [input field]
- **Categories:**
  - Advanced Materials
  - Chemical Processes & Compounds
  - Electrical & Electronics Engineering
  - Mechanical Engineering & Aerospace
  - Micro- & Nanotechnology
  - Biotechnology & Pharmaceuticals
  - Diagnostics
  - Information & Communications Technology
  - Medical Devices
  - Sensors & Analytics

Sorting by: TTO | TTO | Institution

Ecole Polytechnique Fédérale de Lausanne, Switzerland (EPFL)

**Academic research ↔ Economy & industry**

« win - win »

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TT: we work for our future ... and we count on you!