

Legal and Regulatory Framework for Technology Management at the National and Institutional Levels

WIPO Regional Seminar on Technology Transfer

by Universities and PRIs

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Dr. Alexandros Papaderos
University IP Coordinator

Today's menu

- ▣ My background – The Technische Universität München
- ▣ Knowledge and Technology Transfer in universities
- ▣ National legal frameworks
- ▣ Institutional frameworks – IP policy

Dr. Alexandros Papaderos

- ▣ biology studies at the Ruhr-Universität Bochum, Germany
- ▣ diploma thesis at the KFA-Research Center Jülich GmbH, Germany
- ▣ doctoral thesis at the GSF-National Research Center for Environment and Health GmbH, Neuherberg, Germany
- ▣ Scientific Consultant for a Bavarian financial institution (Stadtsparkasse München)
- ▣ Inventor Consultant for the Technische Universität München (TUM).
- ▣ Main working field as an Inventor Consultant:
 - establishment of the patent and licensing system at the TUM,
 - consultancy for the TUM-inventors,
 - assistance in the identification of patentable research results,
 - patenting and commercial exploitation of TUM-inventions.
- ▣ since November 2008: Deputy Head of the TUM Office for Research and Innovation and Head of the Patent and Licensing Office of TUM
- ▣ Patent Manager for the Faculty of Medicine and the Center of Life and Food Sciences Weihenstephan



TUM. Technische Universität München



The Technische Universität München

| | |
|----------------|-------------------------------------|
| 13 | faculties |
| 123 | courses of studies |
| 23.338 | students (2008/09) |
| 32% | female students |
| 18% | students from abroad |
| 6.392 | freshmen (2008/09) |
| 3.503 | graduates |
| 417 | professors |
| 4.777 | scientific staff |
| 2.962 | non-scientific staff |
| 794 | million € total budget |
| 180 | million € research funding |
| 140-150 | invention reports per year |
| 25-30 | patent applications per year |



Competition. Internationality. Responsibility

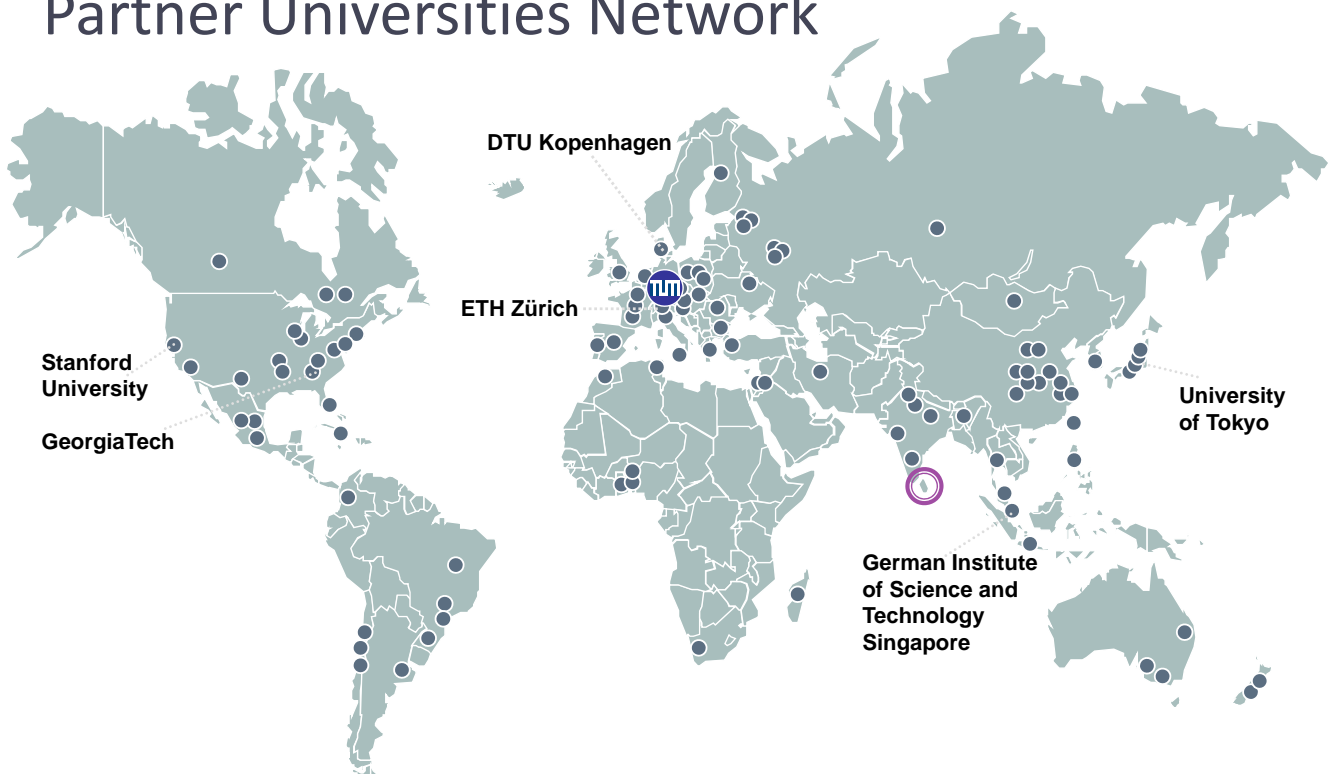
- 22.500 Students
(32 % female., 24 % internat.)
- 425 Tenured Professors
- 4.100 Researchers
- 7.000 Employees

- Change Management
- Internationality
- Fundraising
- Third Party Funding
- Entrepreneurial Assets
- Strategical Alliances



- Student Admission Assessment
- Entrepreneurial Culture
- Centres of Excellence Strategy
- Social and Cultural Awareness

Partner Universities Network



TUM. Business and Industry Network.



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Technology Transfer and Universities

Primary role of universities

Universities have a “contract” with society:

- Educate its students
- Focus on research to push forward the frontiers of knowledge for the benefit of the public
- Creation of knowledge which is occasionally leading to commercialization
- BUT: as creators of new knowledge they should be benefiting from its commercialization
- Universities have to ensure that technology developed on a public funded research base is transferred and utilised effectively for the benefit of society and economy

Technology Transfer at TUM has many forms...

| | Networking | Docs, Post-docs and sabbaticals | Sponsored Research or Joint Research | Commercialization of research results | Alliances |
|----------|---|---|--|---|--|
| Examples | <ul style="list-style-type: none"> → conference attendance → conference presentations | <ul style="list-style-type: none"> → doctoral and postdoctoral theses → consultancy | <ul style="list-style-type: none"> → contract research → co-operations | <ul style="list-style-type: none"> → Patent Licensing → start-up or spin-of companies | <ul style="list-style-type: none"> → Strategic alliances |
| Benefits | <ul style="list-style-type: none"> → latest trends → contacts | <ul style="list-style-type: none"> → exchange of experiences | <ul style="list-style-type: none"> → access to external expertise, equipment | <ul style="list-style-type: none"> → financial benefits | <ul style="list-style-type: none"> → creation of centres of scientific excellence → establishment of long-termed relationships |

TUM Forte Office for Research and Innovation

Division 1:
Research Support/ Excellence Initiative
Dr. Markus Zanner

Division 2:
Technology Transfer
Dr. Alexandros Papaderos

Excellence Initiative Group
Dr. Christiane Haupt
Dr. Christian Ostermeier
Erika Schropp (Emeriti of Excellence)

**TUM-Research Data Base
Research Map**
Dr. Alexandra Brunner

Industry Liaison Office
Stefan Fiegle
Centre for Knowledge Interchange
NN

**National Cluster Projects
GRF/FMER**
Dr. Cornelia Gotterbarm

Young Researchers Office
Olivia Schmid

Patent and Licencing Office
Dr. Alexandros Papaderos
Anita Widmann
Dr. Katharina Aulinger-Fuchs
Sandra Schottenhamml

**International Cluster Projects
EU**
Kathrin Staffler
Sabine Gossner

Project Management TUM-KAUST
Sabine Albers

Equity Management
Dr. Alexandros Papaderos

in close collaboration with:

- ▣ **Legal Office**
- ▣ **unternehmerTUM (Entrepreneurs Centre)**
- ▣ **gate (Incubator)**

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Bavarian Higher Education Law

§ 2 University Mission (excerpt)

- ▣ "... serve the maintenance and development of science and the arts through **research, teaching, study and training** in a liberal, democratic and social state of law."
- ▣ "... **prepare for a career** which requires the use of scientific knowledge and scientific methods..."
- ▣ "... **serve teaching and research** and connect them to a predominantly science-related training."
- ▣ "... **promote** the international, in particular the European, **cooperation** in higher education, and **exchanges** between German and foreign universities. ... take into account the special needs of foreign students."
- ▣ "... act together with economic and professional practice and **promote knowledge and technology transfer**."
- ▣ "... promote the acquisition of additional qualifications for the **transition into working life** in cooperation with the economy."
- ▣ "... promote the **connection to their former students**."
- ▣ "... inform the **public** of their tasks."

Bavarian Higher Education Law (cont.)

§ 6 Research mission (excerpt)

- ▣ "...Subject of research in the universities may be, taking into account the mission of the university, all scientific fields and **the application of scientific knowledge in the economy** and of vocational and other practices, **including the consequences that may result from the application of scientific knowledge**."

§ 7 Coordination of research

- ▣ "Research projects and research will be coordinated by the universities in factually appropriate way. For the mutual coordination of research projects and research priorities and for planning and conducting joint research projects universities will contribute together with other research institutions and institutions of the inter-regional research planning and research"

Bavarian Higher Education Law (cont.)

§ 8 Research with third parties (excerpt)

□ “The university members, whose service duties are the independent performance of duties in the research, are entitled to as part of their official duties to carry out research projects including those that are not or not completely founded from the available state resources but are funded by third parties. **The implementation of such projects is part of university research.**”

□ “...If the university or the university hospital gains financial return from research carried out on campus or in the university hospital, particularly from accruing charges for the use of staff, material and equipment, then these **additional resources shall be used to meet the respective tasks of the university.**”

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Model IP Policy ?

- ▣ Universities need to develop institutional IP policies and procedural guidelines!
- ▣ BUT: different traditions, cultures and legal systems → it is very hard to find
a model IP policy
- ▣ Despite all this differences, many of the problems are similar
- ▣ What are the problems that a IP policy should prevent?
 - Problems with the management of IP
 - Problems with the ownership of IP
 - Problems with the commercialization of IP
- ▣ an University IP Policy should **basically** include the following



Main features of a model IP policy

- ▣ **Preface**
 - ▣ Importance of IP and in particular of the IP policy for the institution and the history of its development
 - ▣ Responsibility for the IP policy and its implementation
- ▣ **Objectives of the IP policy:** reasons why the university needs to have an IP policy and the expectations from its implementation
 - ▣ Promotion of innovation through knowledge and technology transfer for the benefit of society and economy
 - ▣ Establishment of an effective IP management
 - ▣ Ensuring the compliance with national and international legal framework
 - ▣ Ensuring the backflow of revenues from the commercialization of IP

Main features of a model IP policy (cont.)

▣ **Persons or organizations** affected by the IP policy

- Staff (scientific and non-scientific)
- Students
- Visiting scientists
- Chairs, institutes, faculties
- Affiliated companies
- Industry

▣ **Types of IP** covered by the IP policy

- Patents, Industrial designs, Utility Models
- Trademarks
- Copyright, Computer programs
- Trade secrets
- New plant varieties
- Unpatented materials

Main features of a model IP policy (cont.)

▣ **Ownership of the IP:** Who produced the IP? Under which circumstances?

- University funded (“ground financing”)
- publicly funded research (regional, national, EU)
- Industry funded contract research
- Co-founded industry-PRI collaboration
- Undergraduate/Diploma/Doctoral Thesis
- Visiting scientists

▣ **IP Management:** What are the procedures for

- Identification
- Reporting
- Evaluation
- Protection and
- Maintenance

Main features of a model IP policy (cont.)

- ▣ **IP Commercialization:** What are the procedures and who are the key players in the commercial exploitation of IP?
 - Valuation
 - Commercialization strategy (licensing, transfer, start-up company?)
 - Implementation of the strategy

- ▣ **Revenue management**
 - Sharing
 - Inventor Remuneration

What else is important?

The university IP policy has to

- ▣ **conform** with the several rules of universities and public research institutions like:
 - Statutes and regulations
 - Students Handbook
 - Research policy
 - National and international laws

- ▣ be constantly **developed and adapted** to new circumstances

- ▣ be **supported** by the university administration

- ▣ be periodically **communicated** to all stakeholders (students, staff, industry, organizations etc.)

Conclusions

- ▣ **governments** have to acknowledge KTT as a major mission for universities and public research institutions
- ▣ universities and public research institutions have to incorporate KTT in to their mission statement
- ▣ IP policies have to be
- ▣ all actions concerning KTT have to be **supported** and **communicated**

Thank you for listening !

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