

Methodology of teaching: Lectures, discussion of cases, other methods, distance learning?

Regional conference on teaching intellectual property
in higher education establishments

European Patent Office

Belgrade, 1-2 September 2010

Dr. Alexandros Papaderos

University IP Coordinator

My background and my point of view:

- being a natural scientist (not a lawyer!)
- being a former researcher
- now working with a Technical University
- as a Technology Transfer Officer
- and also as an Inventor Consultant
- having one crucial personal experience...

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

150-160 invention reports per year

ca. 50% of which are filed for a patent



Technology Transfer and Universities

Primary role of universities:

- Educate its students
- Generate knowledge through research: scientific, technological, professional, “meaning-giving” knowledge
- Ensure that knowledge developed on a public funded research base is utilised effectively for the benefit of economy and society

**All three missions have
strong connections to IP issues!**

TUM Forte Office for Research and Innovation

Head: Dr. Markus Zanner

Finances: Melanie Hüttinger

Assistant: Nicole Jerouschek

Division 1:

Research Support/ Excellence Initiative

Dr. Markus Zanner

Excellence Initiative Group

Dr. Christiane Haupt

Dr. Christian Ostermeier

Erika Schropp (Emeriti of Excellence)

National Cluster Projects

GRF/FMER

Dr. Cornelia Gotterbarm

International Cluster Projects

EU

Kathrin Staffler

Jenny Pick

TUM-Research Data Base

Research Map

Dr. Alexandra Brunner

Young Researchers Office

Olivia Schmid

Project Management TUM-KAUST

Sabine Albers

Division 2:

Technology Transfer

Dr. Alexandros Papaderos

Industry Liaison Office

Stefan Fiegler

Centre for Knowledge Interchange

NN

Patent and Licensing Office

Dr. Alexandros Papaderos

Anita Widmann

Dr. Katharina Aulinger-Fuchs

Sandra Schottenhamml

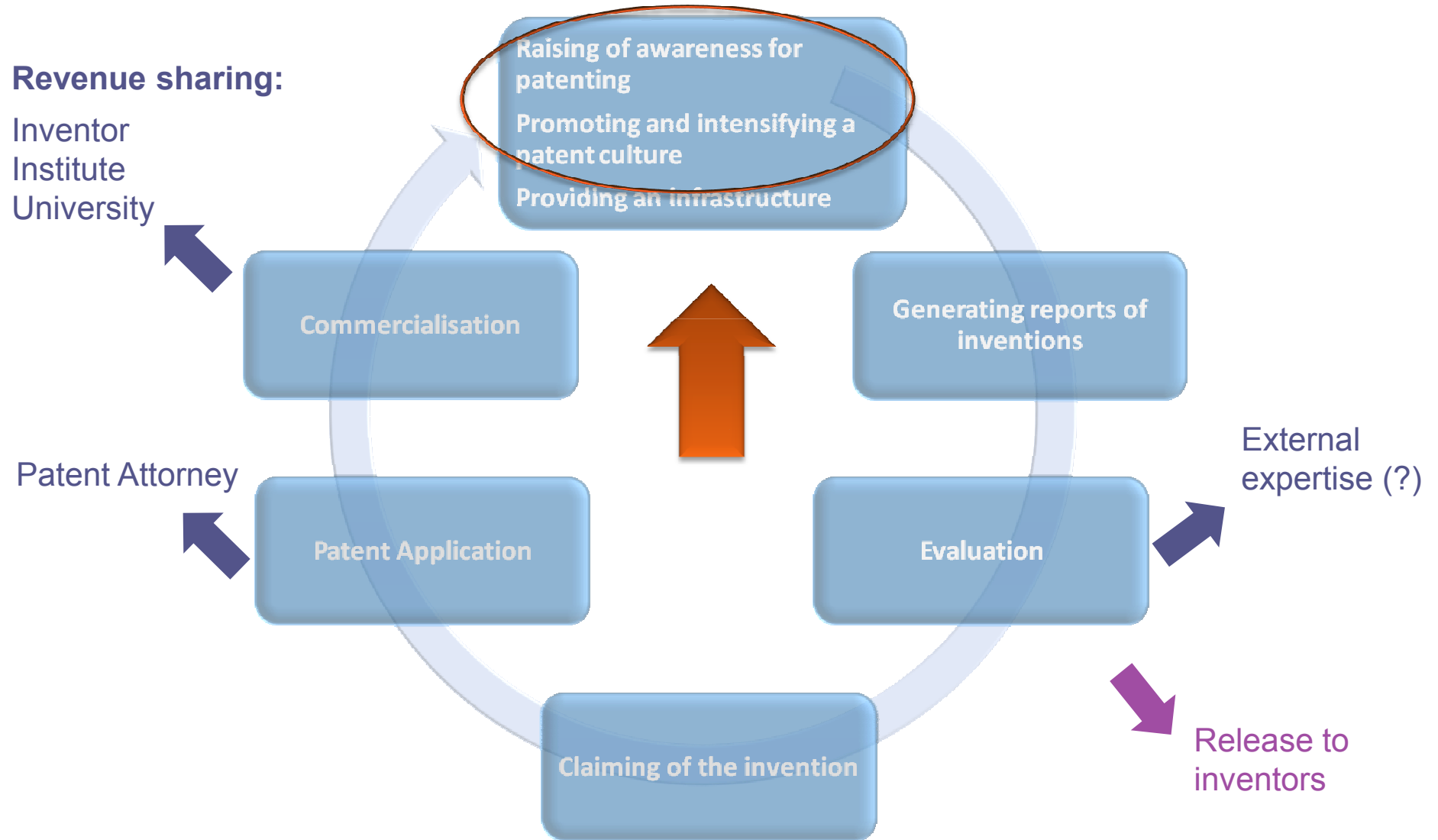
Equity Management

Dr. Alexandros Papaderos

in close collaboration with:

- ▣ **Legal Office**
- ▣ **unternehmerTUM (Entrepreneurship Centre)**
- ▣ **gate (Business Incubator)**

Life cycle of an invention



The challenges

- my personal experience: first contact to the IPR system during my doctoral thesis
- students/researchers (**our inventors!**) are key players in the generation, protection and commercial exploitation of IPR

BUT:

- traditionally concentrate on their academic responsibilities of teaching and research and on publishing
- fail to recognize the economic potentials of their research results
- lack of knowledge of the legal and especially the IPR system
- lack of entrepreneurial skills

What do we need?

- a culture/environment within the university that supports and encourages both invention disclosure and the inventor's participation in the technology transfer process
- a university patent strategy which includes information and training support

There are many ingredients for creating a culture which allows technology transfer to thrive, e.g.

- ☞ publicize success stories about how TT can have a positive impact on the persons and the institute
- ☞ facilitate the access to technical information contained in patent documents to support research and development projects
- ☞ provide possibilities for students/researchers to learn both worlds (offering of internships in patent offices/patent departments)
- ☞ **incorporate technology transfer issues into the curricula**

The TUM approach

- **state of play:** one lecture (“Invention, Patent, Licence”, no ECTS points), one lecture (“Fundamentals of Patent law”, no ECTS points) , six (6) lectures about various subjects, where IPR is dealt very peripherally (no ECTS points)
 - bottom line:** offering is rather lean, maybe “boring”, not target-oriented and/or without any visible use for the students
- **new actions**
 - global:**
 - appointment of a Vice President Research and Technology Transfer
 - adoption of a University IP Policy
 - concept for maintaining a patent culture and raising awareness for the IPR system
 - specific:**
 - offering of a new IP lecture concept

The TUM approach

- discussions with practitioners: lawyers, patent attorneys and technology transfer professionals network
- **New IP lecture concept:** “IPR Protection – how to protect and commercialize your research results”
 - Concept comprises of 10 lectures, each lecture lasts 2 hours
 - The first seven (7) lectures can be visited by students from all IPR-relevant Faculties
 - the students receive information about
 - the fundamentals of IPR, the protection of ideas and inventions through patents, industrial designs, trademarks , utility models, copyright, new plant varieties, etc.
 - the Employees Invention Law (especially University employees)
 - the enforcement of IPR
 - the commercialization of IPR with a focus on University generated IPR
 - the lectures are held by patent attorneys, specialized lawyers and technology transfer professionals

The TUM approach (cont.)

- for the next two lectures the students are divided in four groups according to their subject of study: I. Electrical Engineering and Informatics, II. Mechanical Engineering and Physics, III. Life Sciences, Biotechnology and Pharmacy and IV. Chemistry and Material Sciences
 - the knowledge acquired in the first seven lectures is deepened according to the above mentioned disciplines
 - lectures are held again by specialized patent attorneys who file, supervise, etc. patent applications in these disciplines
- the last lecture is actually a patent search seminar (one day) with the collaboration of the European Patent Academy and the EPO in Vienna.
- the lectures are completed by a written examination, students receive 2-3 ECTS
- lecturers on a voluntary bases
- strong support from the Board of Management and the Students' Representatives

Summary

My very personal ideal IPR lecture contains

➤ of course **IPR issues**

but also

➤ **Technology Transfer examples** (best cases!)

➤ other **legal issues** (i.e. contract governing issues)

➤ **business elements** (i.e. spin-off and start-up companies)

Thank you for your attention!

**TUM Office for Research and Innovation
Patent and Licensing Office**

Dr. Alexandros Papaderos

Phone: +49.89.289.22611

Fax: +49.89.289.28381

E-Mail papaderos@zv.tum.de