Intellectual Property and Technology Transfer – WIPO Capacity Building Programs and Tools

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Topics

• I. IP and Technology Transfer
• II. Challenges Facing R&D in Developing and Countries with Economies in Transition
• III. WIPO Available Programs and Tools to Enhance Member State’s Innovation and Technology Transfer Capacity
• IV. New Planed Projects
• V. Your Suggestions and Comments
I. IP and Technology Transfer

• What are intellectual property (IP) rights?
  – Intellectual property rights are the rights given to persons over the creations of their minds.

Convention Establishing World intellectual Property Organization – Article 2 - Definitions
• (viii) “intellectual property” shall include the rights relating to:
  • – literary, artistic and scientific works,
  • – performances of performing artists, phonograms, and broadcasts,
  • – inventions in all fields of human endeavor,
  • – scientific discoveries,
  • – industrial designs,
  • – trademarks, service marks, and commercial names and designations,
  • – protection against unfair competition,
  • and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.
I. IP and Technology Transfer

- IP gives the IP owner (which is not forcibly creator) an **exclusive right over the use of his/her creation** for a certain period of time.
- Protected IP becomes a legal right, which is a necessary precondition for IP commercialization and technology transfer.

- IP protection is not purpose by itself but strategic decision – in line with our institutional policy and objectives that we want to achieve.
- Quality of IP not number of IPRs can be used as indicator of success and development.
- However, issue of IP ownership is one of the most disputed issues in the relation R&D and industry.
I. IP and Technology Transfer

- Intellectual property (IP) rights have become a widely used tool in many, in particular developed countries to promote technology transfer and university-industry partnerships.
- Why IP and technology transfer?
- IP is embodied in scientific work, research results and developed technologies.
- In addition IP provides the necessary incentives to
  - enhance national creativity and innovation,
  - investment in R&D,
  - solution of needs
  - creation of new technologically based enterprises and thus
    - new jobs,
    - reduction or limitation of brain drain,
    - development of new products
    - increase the quality of life in the society
    - contribute to the competitiveness and economic growth of the country.
I. IP and Technology Transfer

- Technology Transfer – Inside or Cross Border Transfer of Knowledge and IP?
- Different Definitions, Approaches and Models
- Doha Declaration – Article 37.- Trade and Transfer of Technology
- Trade-Related Aspects of Intellectual Property Rights (TRIPS) - Article 66.2 “Least-Developed Country Members”
- Encouraging technology transfer from universities to the private sector has been identified in many countries as a desirable goal in particular in the context of the knowledge based economy, where competitiveness and economic growth are based on local creativity and innovation.
- The objective is not only to enhance the competitive advantage of the private sector through access to innovative research results but also to ensure that university and R&D institution results are made available to society through their commercialization and utilized to fulfill public and private needs.
I. IP and Technology Transfer

- The objective of the technology transfer is IMPACT not INCOME!
- IMPACT
  - Creation and dissemination of knowledge relevant for education but also for industry;
  - Development of particular skills needed in society;
  - Increasing reputation of University as player in society;
  - Enhancing university – industry partnership;
  - Finding solutions for needs – including in health sector (saving lives);
  - Improving the quality of life;
  - Contributing to the development and job creation in the micro regions around R&D centers;
  - Enhancing value of national produces and services;
  - Contribute to the global competitiveness, etc.
I. IP and Technology Transfer

IMACT not INCOME!

The Association of University Technology Managers (AUTM) - professional association of about 3500 technology transfer professionals in more than 30 countries) reported in its Activity Survey for the fiscal year 2006, that based on the university – industry relations only in that year:

• 697 new products were introduced to the market
• more than 4,350 products placed on the market through licensing partnerships since FY1998: the equivalent of nine new products every week – more than one per day every day of every year
• 553 new startup companies were launched only in 2006. (approximately 2,2 new companies for every working day based on academic technology)
• For one of the previous Activity Surveys (in the year 1996) AUTM presented projection that university – industry partnership, manly through licensing agreements, created and supported about 240 000 jobs through the process of investment, product development and sales of products based on academic technology in one year only.
I. IP and Technology Transfer

• However, a **key challenge for governments** and institutions is to adequately support the technology transfer process through various mechanisms, **including the use of IP rights**, while not losing sight of, and reinforcing, the educational and research mission of universities.

• Necessary Basic Preconditions for Efficient Technology Transfer System
  • Adequate Legal Framework (on national and institutional level)
  • Organizational Infrastructure (technology management organizations and units)
  • Funding (government and venture capital)
  • Skilled Professionals (scientists, technology managers, IP professionals,....)
  • Education – to provide sustainable flow of skilled people.
  • Supportive IP System

• Innovation and Technology Transfer Actors
  • Government
  • Academia
  • Private Sector
II. Challenges Facing R&D in Developing and Countries with Economies in Transition

- Under – Investment in R&D
- Lack on Returns on Investment Made
- Low Awareness on IP
- Lack of Adequate Infrastructure
- Low IP and Technology Management Capacity
- Isolation – Difficulties in Inter-Disciplinary R&D
- Sponsored Research – Lack of IP Institutional Policy
- Brain Drain

Countries with Economies in Transition

- Lack of Market Economy Culture
- Industries, in particular SMEs, rarely have their own R&D and use knowledge and IP developed in national universities and R&D institutions
- Existing strategies – very little about IP.
II. Challenges - Key External Sources of Knowledge for SMEs in Turkey – Source – MIRIAD Project Funded by EC Sixth Framework Program

**Figure 4.8: Key External Sources of Knowledge for SMEs**

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<td>Institutes of higher education and other educational institutions</td>
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<td>Developers (institutes and design offices)</td>
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<td>Branch establishments</td>
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<td>Private enterprises</td>
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<td>Joint ventures</td>
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<td>Foreign firms, companies</td>
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III. WIPO Available Capacity
Building Programs and Tools

Objective
To effectively support Member States, in particular developing countries and countries in transition, to enhance and strengthen their capacity for local creation, development, ownership, management, strategic use and commercialization of IP as an economic asset for the benefit of their nationals and economic growth.

Strategy – To respond to the main challenges they are facing with – development of strategies, infrastructure and skilled professionals.
III. WIPO Available Capacity Building Programs and Tools

Macro Level: “Infrastructure” for Innovation Promotion and Technology Transfer Efficient Systems

Local R&D and innovation

National IP Audit and Strategy

Institutional IP Policies for Universities and Research Centers

R&D Network and IP Hub (TTO)

Micro-Level: WIPO Programs for Capacity Building in IP Management

IP Protection

Patent Drafting

IP Management, licensing

Successful Technology Licensing

Technology transfer and commercialization

IP Valuation

IP Marketing
National IP/Innovation Strategy

WIPO assists Member States in the definition of the National IP Strategies in line with their national economic development priorities, innovation and education policies...

1. Assessment of the existing preconditions and needs in the process of IP/Innovation Strategy definition - IP Auditing process at the national level (“Where we are?”)
2. Identification of needs and objectives of the Strategy (“Where we want to be?”)
3. Definition of the Strategy Plan of Action (“How we are going to achieve our objectives?”)
4. Implementation of the Strategy

Available tools:
1. WIPO IP Audit Tool
2. Database on National IP Strategies and Innovation Policies
Training on IP Policies and Procedures for R&D Institutions and Universities

Training program structured around 10 key critical issues for IP asset management, protection and commercialization.

The manual provides universities and R&D institutions with a practical guide for:

- Different issues to be considered when developing institutional IP Policy
- Issues for the establishment of technology transfer offices
- IP and technology management procedures for R&D operations at research institutions
- Considerations/options for technology transfer and commercialization of technology and R&D results generated in the university
- Models of R&D Collaboration Contracts
Management of Academic Intellectual Property and Early Stage Innovation in Countries in Transition

- Study was requested by countries in transition during the Strategy Planning Meeting, held in Moscow, on July 18 and 19, 2007.
- Dr. Stan Molnár, Managing Director, Biopolisz LTD, Szeged, Hungary, was appointed as a WIPO consultant to prepare the Study.
- Study was prepared on the base of the questionnaire that was distributed to all interested countries. 21 countries in transition responded thereto, providing WIPO with an important base of information on technology transfer situation in the Region.
- **Objectives**
  - (a) to identify elements of the legal and institutional infrastructure of the existing innovation systems in selected countries in transition
  - (b) to benchmark the best practices as compared with those of the developed countries;
  - (c) to recommend a feasible model for the IP management, in particular of the early stage technologies in the academic environment in countries in transition, including management methods and protocols for the processes.
- **Content of the Study**
  - Early Stage Innovation, Research and Technology Management, Transfer of Technology
  - Some legal aspects of IPR Management and Technology Transfer
  - Technology Transfer Organizations
  - Research and Academic Intellectual Property Management
  - Transfer of Technology Process

- Study will be published and available from April 2009.
- **Contact person**: Mr. Micahal Svantner, Director, Division for certain Countries in Europe and Asia
Patent Drafting Training Module

Objectives:
• To fill the critical shortage of persons skilled in drafting patents in developing and counties in transition

Target audience:
• Scientists, researchers, technology managers, inventors and attorneys with technical background, who will be drafting patents in the future

Expected key deliverables:
• Clear understanding of scope of patents
• Knowing structure of patent documents and patent application procedures
• Determining what, when, how and where to patent
• Claim designing and drafting skills
Training Kit on Technology Transfer - Successful Technology Licensing (STL)

Objectives:
- To understand different technology transfer options and make licensing an accessible tool for technology transfer and business in developing and countries in transition
- To empower potential users to recognize licensing business opportunities and risks
- To provide a solid base for practical application of the IP and licensing knowledge acquired.

Target audience:
Broad scope of users: technology managers, scientists and researchers, lawyers, policy makers, funding institutions, SMEs and business
R&D Networks and IP Hubs (TTOs):
WIPO developed Pilot Project on Micro-Strategy for R&D Institutions – Implemented in Colombia and Western African Countries
WHERE WE DELIVERED OUR PROGRAMS AND TOOLS

- Jamaica, Barbados, Cuba, México, Costa Rica
- Cameroon, Ethiopia, Mozambique, Zambia, Rwanda, Nigeria, Kenya, Senegal, Egypt, Tunisia, Morocco, Madagascar, Mauricius, ARIPo, OAPI and CEMAC
- Colombia, Brazil, Argentina, Uruguay
- Jordan, Dubai, Syria, Bahrain, Saudi Arabia
- Serbia, Turkey, Hungary (for South East and Central European countries)
- India, Philippines, Singapore, Vietnam, Thailand, Indonesia, Malaysia, South Korea

The diagram shows a world map with red lines pointing to various countries and regions where programs and tools were delivered.
IV. New Planed Projects

- WIPO Innovation and Technology Transfer Portal (on the WIPO Web – Site)
- IP Valuation Training Module
- Pilot Project on the Establishment of the Technology Transfer Office for R&D Institution with WIPO Support
V. Your Suggestions and Comments!

- Did you identify particular needs in this area that you would like to be addressed in WIPO programs?
- What are your views on the best way that WIPO can assist you?
- Do you have comments on the pertinence of the existing tools and suggestions for their improvements?
- What would you consider as the best mean of regular communication with WIPO on these topics?
Thank you for your attention and comments!