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**Working Group on Innovation and Technology Policy**

**WORKSHOP ON THE MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS FROM PUBLIC RESEARCH**

**Issues Paper**

*Delegates will find attached an issues paper prepared by the Secretariat for the Workshop on the Management of Intellectual Property Rights from Public Research, to be held on 11 December 2000.*

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## WORKSHOP ON THE MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS FROM PUBLIC RESEARCH

### ISSUES PAPER

The following is a short discussion paper that raises some of the main issues that experts and participants at the TIP Workshop should aim to address in order to help policy makers and public research institutions improve the management and commercial exploitation of intellectual property rights (IPRs) from public research.

#### **I. Managing Intellectual Property in the Public Research Sector**

##### **A. *The Changes in National IPR Regimes***

1. In many OECD countries, universities and research institutions in the public sector are establishing new regulations and incentive structures to promote the development and exploitation of knowledge with commercial promise. At the same time, many governments are also establishing explicit policies or guidelines concerning intellectual property rights (IPRs) for the public research institutions.

2. This new orientation has been, in part, a reaction to important changes in the intellectual property regimes of OECD countries which have made it more attractive to seek protection for inventions (*e.g.*, the ratification of TRIPs and other multinational harmonisation efforts, the strengthening and broadening of patent protection, and the lowering of protection costs.)

- *What are the different approaches or strategies across the OECD for managing IPRs from public research?*
- *Are reforms or other changes needed at the national/regional level of government, or within research institutions themselves in order to more efficiently transfer research results for both commercial benefits and the public good?*
- *What types of measures need to be national, and what issues should be left up to individual institutions?*

##### **B. *Finding the Right Balance: research mandates versus commercial goals***

3. Policymakers are interested in maximising social returns from government sponsored research but sometimes find their research and commercialisation objectives in conflict. The tendency is clearly toward encouraging the use of IPRs as a way of creating larger incentives for the development, the broad advertisement, and the commercial use of innovations. Some observers contend that this trend has gone too far, to the detriment of the quality of research and the ability to diffuse its results broadly. There is concern

that too restrictive a patent regime could hinder innovation which often draws on imitation, reinterpretation and experimentation.

- *Has the emphasis on commercialisation of publicly funded research results in fact gone too far?*
- *Is there undue pressure to generate revenues from publicly funded research?*

4. The shift to a greater emphasis on obtaining IPRs has not been straightforward as public research institutions have multiple, and at times competing, objectives : knowledge production; education missions, addressing social, environmental, and health related issues; and commercial development. Also, the public research base is made up of a variety of actors who contribute to the creation, protection, and exploitation of intellectual property. Not all actors are unquestionably in favour of further strengthening commercialisation policies.

- *Does the new emphasis on the commercialisation of intellectual property significantly change the mission of universities and public research institutions?*
- *How are these missions or priorities being redefined?*
- *To what extent have the reactions of higher education and research institutions differed?*
- *Is the new emphasis on commercial exploitation distorting or restricting the public good element of public research?*
- *In creating more efficient public sector “knowledge markets” are we encouraging or limiting the diffusion of public sector research results?*
- *How can national governments help maintain a good balance between commercialisation objectives and other research funding objectives?*

## **II. Good Practices and Emerging Issues**

5. Many OECD countries have implemented national and institutions specific policies that constitute good practices. The Workshop should aim to identify good practices to improve the management of IPRs in three broad areas: economic spillovers; conflict management; and institution building.

### **A. Economic spillovers**

6. By encouraging public research institutions to obtain and exploit IP rights, some observers fear that the contribution of public research to public goods – related to health, the environment, even national safety – is being jeopardised. *Do governments need to take measures to ensure that innovations with a public good character are both developed and broadly diffused? If so, what types of measures are relevant?*

7. *National clauses:* Some countries have tried to encourage the exploitation of publicly funded R&D domestically by including a national use clause. *How can these clauses be implemented and enforce? Can their effectiveness be evaluated?*

8. *Exclusive v. non-exclusive licensing*: On the one hand, there is debate about whether exclusive licenses should be granted to discoveries that have benefited from public funds because such licenses can limit the diffusion of technologies. On the other hand, evidence shows that new start-ups and spin-off firms often require exclusive licensing. *What are the costs and benefits of exclusive vs. non-exclusive licenses and on what basis do research institutions decide what type of agreement to negotiate?*

9. *Mandatory licensing*: Governments or public research institutions may require mandatory non-exclusive licensing of inventions from public research in order to ensure diffusion of research or to foster technological development through a competitive process. *When has it been necessary to force non-exclusive licensing for national security, public health, or environmental reasons? Who does the mandating?*

## **B. Conflict Management**

10. *Secrecy*: There is some evidence that protecting research results and materials through secrecy – which means there is no public disclosure as in the case of patents - is on the rise, possibly slowing the dissemination of knowledge. Are there ways to mitigate against this trend or its most nefarious manifestations such as by discouraging certain types of clauses in industry-public sector contracts?

11. *Tensions among disciplines*: Commercial interests are broadening the gap in the resources available to different disciplines. How do tensions between departments manifest themselves and how are they being resolved?

12. *Changing the research agenda*: There is a concern that commercial imperatives may change the direction as well as pace of research. Is there evidence that demonstrate that the research agenda is in fact shifting, and in which direction?

13. *Public outcries*: Several broad ranging agreements between a research institution and a company have raised public concerns. While the public accepts individual agreements with the private sector, or even public sector programmes that encourage collaboration with the private sector, the public is less accepting when all researchers in a group are implicated with the same company. The possibility that a single company can heavily influence the research activities of a public laboratory is not well received. How can research institutions prevent or manage such crises?

14. *Ownership of downstream IP*: Certain agreements between the public and private sector touch not only on ongoing research but also future research results as well as research results of colleagues, which some observers view as impeding collaboration and possibly constituting an abuse of monopoly rights. *What are the implications for research of such types of agreements and how should they be monitored?*

## **C. Institution Building**

15. Protecting and commercialising public research requires effective institutional structures. What should be the role of national governments in helping research institutions build the types of support structures necessary for the protection and exploitation of their knowledge base? What kind of support measures should national governments provide to help public research institutions commercialise knowledge?

- Standardised IP ownership rules.

- Model contracts and conflict of interest guidelines.
- Estimates of the costs associated with exploiting and defending IPRs.
- Funding or loans for the start up of TTOs/TLOs.
- Studies of costs and benefits of various models of technology transfer and development activities, including in-house, semi-public, private/contracted out, co-operative or networked, and on-line models.
- Skills training, re-tooling, and recruitment of the managers of public sector IP portfolios.

16. How can national initiatives maintain flexibility so that individual institutions can customise them to their particular needs?

### **III. Economic outcomes**

17. There are several indicators that can be used to show the relationship between IPR strategies and broader economic impacts such as the broader diffusion of research, greater economic relevance of research, the generation of revenue. Generally these indicators are derived from patent data, licensing data, and information on university/public research spin-off companies. These include:

- Patent application and obtention rates.
  - Patent quality indicators.
  - Patent citations.
  - Licenses negotiated.
  - Licensing and royalty revenues actualised.
  - Spin-off creations.
- What are the shortcomings of these indicators and what are alternative indicators could be used?
  - What evidence is there that a greater exploitation of IPRs has contributed to greater revenue for public research institutions?
  - What is the evidence linking increased public sector patenting (or co-patenting) activities to economic growth for regional or national economies? Are individual firms in individual sectors relying more on IP outsourced from public research than in the past, and does this contribute their competitiveness?