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THE NEED AND PRACTICAL EXAMPLES OF INTELLECTUAL
PROPERTY POLICIES

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I. INTRODUCTION

“Intellectual Property has been transformed from a sleepy area of Law and Business to one of the driving engines of a high-technology economy”

New York Times, 5th April, 1999

1. The above quotation shows the increasing importance of patenting is achieving in the business world. If in the past, economic development was seen in terms of the battle to control land and natural resources as well as market and raw materials, now the battle is over exclusive rights on new ideas and inventions. This is stimulating patenting activities such that today, some 650,000 patents are filed each year world wide. Universities in developed countries are increasingly becoming more informed on Intellectual Property Rights, whereas universities in developing countries and their staff have been losing this opportunity for a sustainable source of income. Experience from universities in developed countries have shown that significant income can be generated through commercialisation of innovations and research findings from universities and R&D institutions. The commercialisation of innovations and research findings and effective utilisation of the benefits, has also been established as the best way of developing sustainable university industry links.

2. There are several stakeholders in the process of commercialisation of innovations and research findings. Each of these stakeholders has their interests and expectations, which in most cases are in conflict with each other. In order to develop an environment in which all the stakeholders can operate and co-operate meaningfully with each other, there is a need to formulate an Intellectual Property Policy for a University and R&D institutions.

3. In this paper, the interests of some of the stakeholders in the process of commercialisation of innovations, inventions and research findings are discussed. Based on the conflicting interests, some of the common important issues, which an Intellectual Property Policy should cover are identified. As a practical example, the intellectual property activities of the Cornell Research Foundation of Cornell University, USA, is briefly discussed.

II. STAKEHOLDERS IN COMMERCIALISED INNOVATIONS, INVENTIONS AND RESEARCH FINDINGS

4. There are several stakeholders, whose interest should be considered during the commercialisation of innovations, inventions and research findings. For the purpose of discussion, it may suffice to list the following:

- University
- Researcher or inventor
- Industry
- Sponsor
- Technology transfer centre
- National patent office
- Government

A. University

5. The university is a major stakeholder in patented and/or commercialised innovations, inventions and research findings. This is because the university provides the infrastructure for the researcher or inventor to operate. The university also pays the researcher salary. In some cases university may also provide funds for research and above all there is also the good will in the name of the university, which may also be important, both to obtain sponsorship and research contracts and also during the commercialisation of the innovations and inventions. For these contribution the university may expect the following:

- Ownership of the innovation or patent
- Income from the licensing of the patent
- Right to decide on the industry to whom the technology can be sold
- Right to decide on the extent of the rights to be given
- Rights to refuse commercialisation of an innovation if the process is in conflict with the missions and objectives of the university
- As a potential source of income, the university may not want a licensee who fails to commercialised the innovation from the university

B. Researchers and His Assistants

6. In most cases contract research are obtained through the efforts of the researchers. The research activities, in most cases are undertaken with the support of research assistant and students. Sometimes in the case of a big project, a member of a given research group or department may be temporality released from teaching activities in order to concrete on the project. Because of these contributions, there may be the following expectations:

- Ownership of the innovation or patent by the main researcher
- Claim of income by the main researcher, his assistants and research group or department

a. Other Problems

- Sometimes the researcher may be required to enter contractual agreement with the industries, and if the researcher is not competent in this, there could be legal complications and financial loss to the university
- The need for the researcher for publication must be catered for his professional and career development but potential innovations and research findings must be guided against "*premature disclosure*" which may hinder patentability of an invention
- An industry may provide employment to a research assistant or students who together with researcher have been involved in the development of an innovation with a commercial potential. In this case the industry would get the technology free of charge and through a backdoor

C. Sponsor

7. The sponsor which, may be government, industry or institutions provides funds for research and development. Sometimes they may also provide facility for research and may also participate in a joint research and development. For these the sponsor may expect:

- Ownership of the innovation
- Absolute Right over the license
- Confidentiality
- Further assistance in the implementation of a commercialised innovation

D. Technology Transfer Centre

8. As already been mentioned, for effective and efficient commercialisation of innovations and research findings, a university requires a technology transfer centre, which operates more or less autonomous. The technology transfer centre undertakes patent search for novelty of the innovations, pays the cost of processing patent applications, marketing of the innovation and commercialisation as well as negotiation of the licenses and royalty. For this the centre would expect to have control over the following:

- disclosure of innovation and research findings by the staff
- negotiations and signing of research contracts
- the process of commercialisation of the innovation
- the negotiation for royalties from the licence

9. Above all, the Technology Transfer Centre would expect to recover the costs incurred in processing the patent application and commercialising the innovations. The centre may also expect further income from the royalty.

E. Licensee

10. That is the industries or institutions which purchase the licence for a patented innovation. He pays for the technology and therefore may expect

- Absolute Right
- The right to commercialised the technology or not

F. Government

11. The government provides funds for infrastructure, research and other services including funding of the operations of national patent offices. It therefore expects that:

- Innovations and research findings would be used for the development of the country
- No useful innovation will be kept unutilised

12. It is clear that some of the expectations of the stakeholders are in conflict with each other and therefore there is a need for an intellectual property policy to harmonise these interests.

IV. ISSUES WHICH AN INTELLECTUAL PROPERTY RIGHTS SHOULD ADDRESS

13. To harmonise the various conflicting interest discussed above, an intellectual property policy for a university is required to address the following issues, amongst others

- Disclosure of innovation and research finding
- Ownership
- Contract projects
- Sponsored projects
- Inventions from joint research and development
- Rights of inventions by research assistant, students and fellows
- Distribution of income
- Private inventions by university staff
- Marketing and choice of a licensee
- Patent processing costs
- Commercialisation of innovations
- Types of licenses
- Responsibilities of the inventors

V. EXAMPLE OF INTELLECTUAL PROPERTY SERVICE AND POLICY

14. As an example of intellectual property service and policy, the case of Cornell Research Foundation of Cornell University is hereby briefly discussed.

A. Missions and Functions

15. The Cornell Research Foundation (CRF), is the Business arm of Cornell University, USA. It provides services on Intellectual Property Rights and commercialisation of innovations and research findings to all Cornell employees and is responsible for obtaining appropriate patents or copyright protection on all Cornell owned intellectual property. The Foundation's mission is:

- to actively foster creativity and inventiveness in Cornell University;
- support the educational and research mission of Cornell University;
- enhance and protect the intellectual property interests of Cornell University and its employees and
- manage these interests for the benefit of Cornell research and educational enterprise and its inventors.

16. To achieve this mission, CRF undertakes the following functions:

- Determination of the patentability of the innovations and inventions;
- Evaluation of the commercial potentials of the innovation and inventions;
- Obtaining appropriate intellectual property protection;
- Locating suitable commercial development partners and R and D collaborators;
- Marketing Cornell's intellectual property; and

- Negotiating and management of licenses for Cornell intellectual property

B. Intellectual Property Policy for Cornell University

17. To effectively realise the patent functions of Cornell Research Foundation, Cornell University has an Intellectual Property Policy. It is based on the University's primary obligation, that is the pursue of knowledge for the benefit of the society. Amongst others, the policy regulates issues concerning disclosure, ownership, royalty distribution, marketing, sponsorship, licensing and commercialisation. These are briefly summarised here below:

a. Disclosure

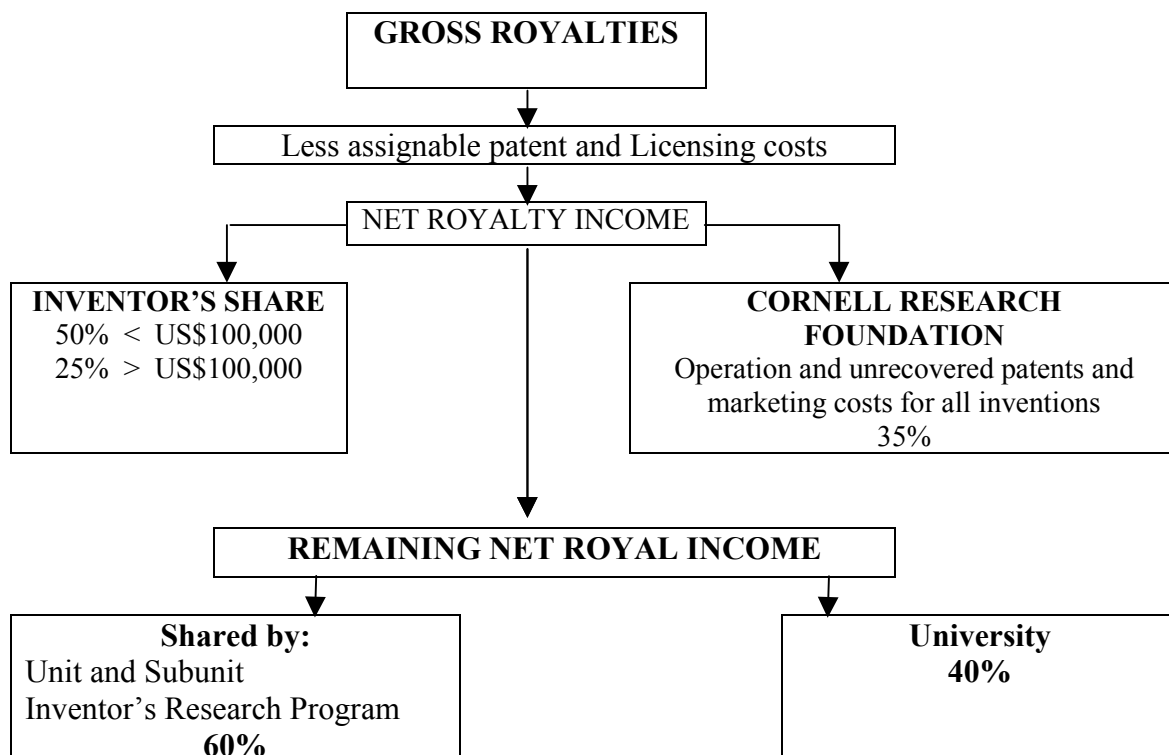
18. All staff of Cornell university are obliged to disclose their inventions and research findings to Cornell Research Foundation, and to assist in all phases of patent processing

b. Ownership

19. The Cornell Patent Policy provides that all patentable inventions conceived or first reduced to practise by Cornell faculty and staff in the conduct of university research , belong to Cornell and must be reported to Cornell's Office of Patents. All faculty staff of the University, including research assistants, fellows and students, who provide services under sponsor agreements and other who utilise university resources in furtherance of their research, are obliged to assign the right of their inventions to Cornell University (CRF).

c. Distribution of Income

20. The Cornell Intellectual Policy defines the distribution of the royalties. The following schematic is a guide to royalty distribution.



21. The income generated from Licensing and Royalty is shared by the inventor, the Cornell Research Foundation, Cornell University and the inventors research group and program. Normally, CRF pays for all the costs of patenting and commercialising the innovative idea. These costs are recovered from the licence or royalty, before the distribution of royalty.

d. Federal funding

22. The US government acquires certain rights in any invention made using its funds. Although such rights rarely inhibit the commercial potential of the inventions and finally funded invention must be reported to the funding agency and must be acknowledged in the patent application.

e. Corporate Funding

23. Any research contract between Cornell University and a corporate sponsor has an intellectual property clause, which stipulates the rights if any, the sponsor will have in any resulting inventions. Although Cornell always retains ownership of any patentable invention developed at Cornell, the rights licensed to a sponsor or can range from none to exclusive.

f. Research Contracts

24. The university also has a policy to any intellectual property that may result from research contracts. Professors are always made aware of the intellectual property clauses governing research contracts, in order to avoid unnecessary legal tassel from damages.

g. Research Contract Negotiation

25. Cornell's Office of Sponsored Programs is solely responsible for negotiations and entering into sponsored research contracts with companies and government agencies. However, CRF is responsible for approval of the intellectual property portion of such contracts.

h. Premature disclosure

26. All researchers are obliged to inform Cornell Research Foundation of any publications or planned publication that may disclose an invention. This will determine the time frame for filling a patent application if a decision is made to do so since "premature disclosure" may bar patentability.

i. Licensing

27. Cornell Research Foundation has put in place systems for effective market evaluation of any inventions and research findings. Cornell Foundation maintains contacts with literally hundreds of companies that have potential commercial interests in Cornell technologies. CRF strives to license to companies that, amongst other criteria, appears to have the best chance for establishing and maintaining a good relationship with the inventor and his research group. Often, this may mean additional research support and consultancy services. A primary goal for CRF licensing activity is to ensure that Cornell University technology will be brought to the market and benefit the public.

C. Experience of Cornell Research Foundation

28. Through Cornell Research Foundation, Cornell University has established that:

- Patents are effective means of deriving economic values from research development and for enhancing support of research activities. Hundreds of Cornell University staff, researchers and their research programs currently benefit financially from their patented and licensed technologies
- Patents are often the best way of developing and disseminating a technology. Unless a patent exist, it is unlikely that industry will make investment in the process of developing and commercialising a product and many inventions will simply “sit on the shell” benefiting no one.
- Patents are typically essential as a basis for starting companies based on university inventions and discoveries.
- The process of obtaining a patent and marketing it to the industry provides a highly effective means of developing a meaningful interaction between university and industry and strengthening University-Industry Links

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