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**REGIONAL SEMINAR ON THE BENEFITS OF THE
INTELLECTUAL PROPERTY SYSTEM FOR UNIVERSITIES,
UNIVERSITY RESEARCHERS AND RESEARCH
AND DEVELOPMENT ORGANIZATIONS**

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UNIVERSITIES, RESEARCH AND DEVELOPMENT ORGANIZATIONS AND
INTELLECTUAL PROPERTY - GENERAL OVERVIEW OF THE LINKS
BETWEEN EDUCATION, RESEARCH, PUBLIC INTEREST AND
INTELLECTUAL PROPERTY RIGHTS

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I. INTRODUCTION

1. It is often very useful if at the outset of any discussion session to agree on definitions of keywords. In this paper, intellectual property is taken to refer to original and novel creations of the human mind. These creations may include but are not limited to inventions, literary works, industrial designs, electronic circuits, musical compositions and arrangements, paintings, sculptures, software products, trade services and performances. Intellectual property rights give the creator exclusive rights to use such creations for a specified period of time. Copyrights, trademarks and patents are legal titles for protecting intellectual property rights.⁽¹⁾

2. Patents are the strongest forms of intellectual property rights. They protect inventions, that are new, not obvious and have industrial applications incorporated in a work, whereas copyrights protect works of the mind of artistic or literary character.

3. The creation, maintenance, protection and transfer of intellectual property rights are becoming increasingly important in a knowledge-based global economy. Universities are an important component of such an economy and, therefore, intellectual property rights are an important area of concern for a modern-day university.

4. The mission of a university revolves around teaching, research and the provision of service. In the sequel, we shall look at how intellectual property rights arise and feature in the mission of a university.

II. TEACHING AND INTELLECTUAL PROPERTY RIGHTS

5. The increasing availability and use of Information and Communication Technologies (ICTs) has made it possible for universities to offer on-line courses by developing and using multi-media products. The transmission of these multi-media products over global networks such as the Internet has made it easy for copyrights to be infringed. In an age where every student and every teacher is a potential publisher of multi-media materials, increasing efforts must be devoted to:

- i. Governing the creation and use of multimedia products to prevent copyright infringement;
- ii. Providing information and training to all stakeholders about the ethical use of intellectual properties;
- iii. Putting in place international treaties and agreements to protect intellectual property so as to enhance global sharing of multimedia resources.

6. Processes and ideas on effective provision of on-line distance education programs can also be patented. In this regard, care needs to be taken to ensure that the patenting process is not abused by, for example, patenting broad ideas that would keep competitors out of potential areas of business.

7. The development of national and global information infrastructure has brought into play new challenges to the intellectual property rights system that will have also an impact on educational institutions. Today works protected by copyright can easily be distributed to the public by transmission over the Internet. Such transmissions fall within the exclusive

distribution right of the copyright owner and should be taken into consideration in relation to distance education. Discussions also need to be carried out to agree on a definition of fair use of copyright and works in a digital environment where, at the server level, for example, encryption, digital signatures and steganography (digital watermarking) can be used to limit access to works.⁽²⁾

III. INTELLECTUAL PROPERTY RIGHTS AND RESEARCH

8. The changing role of the university in the twenty-first century has been described very well by Michael Gibbons, the Secretary General of the Association of Commonwealth Universities.⁽³⁾

“During the past twenty years, a new paradigm of the function of higher education in society has gradually emerged. Gone, it seems, is the high-mindedness of a Von Humboldt or a Newman with its pursuit of knowledge for its own sake. In their places has been put a view of higher education in which universities are meant to sense society, primarily by supporting the economy and promoting the quality of life of its citizens. While it is true that universities still retain their role as the “conscience of society,” the critical function of universities has been displaced in favour of a more pragmatic role in terms of the provision of qualified manpower and the production of knowledge. These changes are not national. Rather, they are intended to have direct practical impact on the behavior and functioning of higher education institutions. The new paradigm is bringing in its train a new culture of accountability as is evidenced by the spread of managerialism and an ethos of value for money throughout higher education institutions internationally.”

9. The new paradigm places prime value on the intellectual property created and owned by universities. Licensing of patents – usually to start-up companies as is the model in Silicon Valley – earns for the universities patent royalties and serves as an important vehicle of technology transfer by the universities.

10. The quest for relevance and accountability engendered in the new paradigm of a university has spurred a move towards practical, problem solving research and development activities in universities. This has caused the number of patents issued to faculty to increase and since the patents address solutions to practical problems, it seems that to license the patents for such inventions would be relatively easy.

A. Ownership of patents and copyrights

11. Universities have usually owned patentable material created by an employee within the scope of his employment. However, academic tradition and the essential principles of academic freedom, have led faculty to claim that they own the copyrighted material they create. Historically, many university administrations asserted institutional ownership, but then allowed, or did not challenge the faculty position on copyrights, at least in part because the value of copyrightable materials was insignificant when compared with the value of patentable materials. But as the potential value of copyrightable materials escalates, this position is likely to change.⁽⁴⁾

12. Ownership of patentable inventions in collaborative research between universities and between universities and industry needs to be carefully protected through legally enforceable contracts or agreements. Exchange of biological materials needs to be protected through material transfer agreements.

13. In order to ensure protection of their intellectual properties, universities need to set up offices to coordinate the obtaining of patent protection, licensing intellectual property rights and finding industrial support for the application of these patents. Such an office can greatly increase the results from marketing the innovative technologies produced by a university.

B. Infringement of patents

14. Patent infringement is a hot business. This leads either to litigation or to cross-licensing agreements with or without financial considerations.⁽¹⁾

15. Infringement is made difficult if one patents strategically. Rather than patenting a product, for example, one would be advised to patent the production processes as Dell Computers did in respect to its made-to-order personal computer.⁽¹⁾ One can also use patents to colonize new areas of technology through portfolios of patents.

16. Infringement can also be curbed by the development of global standards and agreements that will protect intellectual property while accelerating the development of methods that allow access to, and the sharing of, intellectual property.

IV. INTELLECTUAL PROPERTY AND THE PROVISION OF SERVICE

17. One hot area for the provision of service to the public is the development of business methods for the Internet to facilitate e-commerce and e-business. A method for reverse auctioning, where a customer places on a Web site the price at which he/she is willing to purchase a service and service providers compete to meet the price, has grown into an 11 billion US dollars business, per annum.

V. CONCLUSION

18. This paper has presented a perspective on universities and R&D organizations and intellectual property. The intersection of intellectual property and the mission of a university – teaching, research and service – has been explored and recommendations on the protection of intellectual property rights have been given.

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