E

WIPO/IP/DAR/00/18
ORIGINAL: English
DATE: June 2000

GOVERNMENT OF TANZANIA

WORLD INTELLECTUAL
PROPERTY ORGANIZATION

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

organized by
the World Intellectual Property Organization (WIPO)

in cooperation with
the Ministry of Science, Technology and Higher Education
of the United Republic of Tanzania

Dar es Salaam, June 20 to 22, 2000

COUNTRY/ORGANIZATION REPORTS

BOTSWANA TECHNOLOGY CENTRE

PATRICIA NTSHOLE
Botswana Technology Center
Private Bag 0082
Gaborone

I. INTRODUCTION

1. Botswana Technology Center (BOTEC) is a research and development institution mandated to serve as a national focal point for the development and dissemination of science and technology. BOTEC also plays a role in advising government on issues pertaining to Science and Technology policy in the country, and the organization has played a major role in formulating the Policy.

2. The Science and Technology policy objectives are to identify, assess, adapt, evaluate and monitor technology in support of national development and to assist in the solutions of technological problems.

3. The mission of BOTEC is to contribute to the development of Botswana and its" people through research and development, adaptation and application of science and technology.

Structure of BOTEC

4. BOTEC carries out its' research and other activities through three departments, namely, the Technology Development Department; Technology Information; Technology Assessment and Techno Economics.

a) Technology Development Department

5. The department has expertise in the following areas:

- Architecture and building science;
- Civil engineering, water, building materials;
- Electronics engineering; and
- Renewable energy and systems engineering.

6. The main functions of the department are to:

- Undertake research and development of products and processes to address the market needs;
- Assist the people of Botswana in choosing technological solutions to individuals, national and industrial needs;
- Facilitate technology transfer both within Botswana and internationally; and
- Undertake consultancy work in relevant areas.

Technology Information

7. This department deals with technical information collection and its dissemination. It also does research on systems and software technologies through the Computer unit; the Communications unit and finally the Information unit.

8. Its main functions include:

- Develop customized computer software from its' customers;
- Advise on local and wide area networking, internet installation and homepage development;
- Develop and manage databases and information searches for the center's customers;
- Responsible for managing BOTEC Library;
- Current affairs through periodicals and newspapers;
- Promote BOTEC through various media including extension services;
- Responsible for publicity, corporate advertising, publications production and organize seminars;
- Participate in national and regional exhibitions; and
- Coordinate tours for local and external visitors.

Technology Assessment & Economics Unit (TAEU)

9. The unit is responsible for the assessment and effective transfer of technology to the industries for application in the commercial production process. It is also responsible for making economic appraisal of projects, the development budget and the marketing of BOTEC products and services. The unit carries out business management consultancies to technology oriented enterprises.

10. The unit performs its activities through its five units namely, Technology Assessment, Industrial Development, Marketing, Planning & Statistics, Business Consultancy.

11. The activities are as follows:

- Design and coordinate implementation of the programs for technology transfer of BOTEC technology to industry;
- Carry out needs assessment and impact assessment studies;
- Responsible for the economic issues at national, regional and international level;
- Programs and strategies for B0TEC commercialization policy; and
- Market plan for BOTEC.

II. SCIENCE AND TECHNOLOGY (S&T) POLICY

12. The overall goal of this policy is to achieve sustainable social and economic development so as to meet present and future needs of the nation. The policy seeks to coordinate and integrate the application of science and technology for the improvement of the lives of Botswana and conservation of the environment.

13. The rational for establishing this policy was subject to the fact that S&T activities in the country are scattered all over and that there is need for coordination and streamlining and proper targeting. There is also a lack of S&T environment that is conducive to the technology transfer in the country, human resources that would possibly have an impact in the absorption of the imported technology.

14. The principles of the S&T policy include the following:

- Take cognizance of challenges, uncertainties and constraints for future development of S&T;
- Recognize that the approach for S&T must be multi-dimensional and multi -sectoral;
- Emphasize the need for environmentally friendly technologies such as biotechnology and alternative energy sources; and
- Stress the need to harmonize S&T in the future plans for long term development and sustainable economic diversification.

Core S&T policy objectives

a) establish and strengthen national capacity to research, evaluate, select, acquire, adapt, develop, generate, apply and disseminate suitable technologies;
b) develop and raise the national productive capacity and improve competitiveness through efficient application of S&T;
c) promote and develop traditional, endogenous, new and innovative technology; and
d) create knowledge and awareness, improve and develop the scientific and technological culture of Botswana.

15. The policy has outlined core strategies to assist the process of implementation and achieve desired results and to build S&T capabilities in the priority areas of the economic and service sectors with emphasis on rural areas.

III. INTELLECTUAL PROPERTY IN BOTSWANA

Status of Botswana

16. The Ministry of Commerce and Industry is responsible through the Registrar of Companies office, to carry out the processing of applications for patents, trademarks and other intellectual property rights in the country. The Industrial Property office has been said to be not capable to meet the demands of the office due to staffing problems not only in terms of numbers but also expertise. There has been mention that administrative costs of searching for patent information, for example are high.

17. This is an area for improvement if Botswana is thinking of exploring the benefits of intellectual property as a business strategy like other countries are doing. Investors such as transnational corporations may be motivated by such arrangements. A benefit that can accrue to countries with protection could be increasing the pool of knowledge and information in general.

18. The situation of Botswana is that there are few inventions that originate in the country. There is a lack of protection of the rights at law of these inventions and the traditional technologies. Also due to non-protection of the intellectual property this has resulted in copying and use of artwork that has an implication on the original owner of not reaping the fruits of their labor.

19. There has also been a lack of recognition and motivation of inventions but of late BOTEC has developed policy guidelines of Inventors that give the direction of how to receive inventors, protect their ideas, assistance that can be given to them in terms of design sketches/working drawings, patenting process and prototyping process. The inventor is also assisted to draw a legal agreement and a license that is signed by both parties.

Policies related to Intellectual Property

20. The enactment of the Industrial Property rights Act of 1996 by Parliament has since provided a legal framework in terms of Intellectual property issues. After this policy document another Act, the Industrial Development policy was formulated with the objectives of expanding the industrial base of manufacturing industries through technology transfer.

21. The underlying theme of the Act has been to diversify the economy away from mining and agriculture, to foster the development of the small, micro and medium enterprises and the need to support the growth of employment especially in rural areas and small towns.

22. The Small, Micro and Medium Enterprise (SMME) policy was later developed basically to provide a framework in terms of how the sector can be integrated into the mainstream economy and be recognized as an engine of growth and employment creation. This forms part-, of BOTEC target group in that during the process of technology transfer, it is the small and medium companies that ultimately manufacture under license of the organization. This is also in line with the Industrialization policy to expand the manufacturing base of Botswana through development and transfer of effective technologies to the industry.

Participation of BOTEC

23. The participation of BOTEC in creating awareness on intellectual property has been to draw a set of procedures to assist inventors and motivate them to be more creative but also to benefit materially from their inventions. In this regard, BOTEC will be organizing the first National Design for Development Award to recognize original and innovative designs, prototypes and products that offer solutions to problems in the communities.

24. Another event that is organized is the symposium, Botswana Symposium on the Harnessing Science and Technology for Sustainable development. This in collaboration with the University of Botswana and will be held in Gaborone from the 28 June - 01 July 2000. The aim of this event is to solicit practical ideas and experiences from other contexts that could possibly be useful to bring solutions to developmental needs of Botswana.

25. Other collaborators that BOTEC work with include the University of Botswana Faculty of Engineering & Technology (FET UB), Rural Innovation Industries Center (RIIC), National Food Technology Research Center (NAFTEC) and other government departments such as Department of Electrical & Mechanical Services (DEMS).

26. Collaboration has been in the areas of research and development, for example the University of Botswana and BOTEC were both doing some work on building materials using the Kgalagadi sand. RIIC has been involved with BOTEC in some work in researching on water catchment or water harvesting techniques. NAFTEC has been a sister organization to BOTEC. Lastly the department of Electrical and Mechanical Services was engaged with BOTEC to do research on the development of a Photovoltaic Power Station in a small village in the country.

27. The PV Power Station has been a successful project that will be transferred to the relevant authorities to maintain and manage. An assessment of the impact of the project will also make an indication on whether to erect similar power stations in other parts of the country with no access to mains grid electricity.

IV. INTERNATIONAL COOPERATION - BOTSWANA

28. In order to have uniformity in the area of intellectual property, there are treaties and international conventions that Botswana also subscribes to that require member countries to provide minimum norms of intellectual property. An example of such arrangements is the 'Trade related aspects of Intellectual Property Rights (TRIPS).

29. Botswana as a subscriber to the TRIPS Agreement has provided national laws that conform to the internationally agreed norms as mentioned above. Technological areas have been accommodated by the agreement - computer software, and inventions. The agreement is subject to review and future negotiations on unresolved issues. The Seattle meeting for the Third Ministerial Conference that was scheduled to take place from November 30 to December 3, 1999, was to review TRIPS and other agreements.

30. International conventions such as the Paris Convention have been described as important multilateral treaties on intellectual property protection. Botswana is also aware of international filing systems that are in place to obtain protection. The Patent Cooperation Treaty (PCT) is an agreement for international cooperation in filing of patents. If Botswana were a member of this body, it would benefit from eliminating duplication of efforts and administrative costs in processing patent applications.

V. THE WAY FORWARD

31. It is essential for BOTEC to actively participate in the debate on intellectual property including this regional seminar. BOTEC is therefore seeking ways of how best to tackle issues relating to but not limited to the list below.

- To register its logo as a trademark;
- Botswana to ratify agreements such as Patent Cooperation Treaty, Madrid Protocols, International Registration of Marks and International Deposits of Industrial Designs;
- Access to information on protected work in Botswana or other countries of interest that is related to BOTEC activities; and
- How to deal with new improvements on technology that has been transferred to companies.

REFERENCES

K. Basaako, BOTEC Report on Training on Intellectual Property;
K. Mosarwa, BOTEC Report on Introductory Seminar by WIPO;
L. R Hefter, R D Litowitz Partners in the Washington DC, firm of
Government Printers Industrial Development Policy of 1998
Government Printers Industrial Property Act 1996
Government Printers Science & Technology Policy approved 1998
Strategic plan Botswana Technology Centre

Working papers for the Seattle meeting, Gaborone 1999.

ERITREA

I. INTRODUCTION

1. Eritrea, a newly born African Nation located in the Horn of Africa, is bordered on the north-east and east by the Red Sea, on the south-east by Djibouti, on the south by Ethiopia and on the west and north-west by the Sudan. Eritrea became an independent State in May 1991 and the Eritrean population confirmed its support for independence in an internationally supervised referendum held in April 1993.

2. The 30 years of war for liberation and years of recurrent drought left the economy virtually crippled and devastated. The cost of freedom in terms of loss of human life, displacement of population, economic and social disruption and environmental degradation was enormous. The government of the state of Eritrea inherited a country with virtually no physical and institutional infrastructure.

3. The Government of the state of Eritrea is now faced with immense challenge of reconstruction. It has to rehabilitate and transform the war devastated socio-economic system while at the same time laying sound foundations for its further development.

4. In the last nine years, with the wise and dedicated efforts of the Government and people of Eritrea a significant stride has been made in rebuilding destroyed infrastructures and constructing new ones. Hospitals, schools, health centers, roads, water wells and reservoirs and other vital infrastructures in every corner of the Country have been constructed. In the agricultural sector a commendable job has been done. With a concerted effort there is no doubt Eritrea would be food self-sufficient in the near future. In the fields of fishery, mining and energy plus in the development of skilled and qualified manpower success has been achieved. Though the boarder dispute with Ethiopia, which unnecessarily escalated to a full blown war, has dragged the economic and social development of the country to a certain extent, this in no way will affect adversely the overall performance of the economy.

II. ERITREA'S ECONOMIC POLICY

5. To spur the wheel of the economy, the Government needed to create a policy to guide the long-term economic development of the country. As such, the Government is currently engaged in creating modern, technologically competitive economy where the private enterprise is the driving economic force. To achieve this, the Government has adopted a broad based growth strategy that has aspects of rehabilitation, reconstruction and development covering all sectors of the economy. The strategy's major components are to:

- Improve agricultural production and productivity through the development of irrigated agriculture and assist peasants, pastoralists and agropastoralists to enhance their productivity by providing new farming and grazing methods;
- Develop capital-and know] edge-intensive, export oriented industries and services; upgrade and technologically improve the informal sector;
- Develop the tourism sector; create an international financial center;

- Develop and systematize a public health care system;
- Provide a broad based education system and improve access to it; provide an effective social welfare and safety net; and
- Safe guard and upgrade the environment from undue pollution.

6. The centerpiece of this strategy is the establishment of an efficient, outward looking, private sector-led market economy with the Government playing a pro-active role to stimulate private economic activities. While the public sector would normally be restricted to those areas, which the private may tend to avoid, public investment programs in strategic subsectors can be initiated to stimulate economic growth and supplement the efforts of the private sector. In such cases, all strategic public investments will be operated on commercial bases, and eventual divestiture would not be excluded.

7. In keeping with these development objectives and strategies, the Government designed a macropolicy framework to stimulate private investment and engender economic revival and growth. The thrusts of the policy are the swift transition to a market economy, a liberal trade policy, and a central role for the private sector and export-led growth.

8. As part of the macropolicy the investment proclamation is designed to mobilize investment capital from internal and external sources for export industries, by having external trade taxes and exchange rate regimes that favor exports. It also aims to create and expand employment opportunities, encourage the introduction of new technology to enhance productivity, and foster the growth of small and medium scale enterprises. The proclamation provides incentives such as a nominal 2% tax on capital goods, industrial spare parts and raw materials, and exemption from export duties and sales taxes for exports.

9. Income taxes have been re-evaluated to range from 25-35% on corporate profit, 2- on commercial agricultural profit, 1-48% on rent income. Besides any corporate profit that is set aside for reinvestment shall be taxed at the rate of 20%. There shall be no taxes on declared dividends. The proclamation also allows and loss incurred during the first two years of operation by an investor to be carried forward for three consecutive years. Foreign exchange may be remitted out of Eritrea for, among other, net profits and dividends accrued from investment capital, debt-service payments for foreign loans incurred pursuant to the proclamation, and payments received from the sale or transfer of shares. Investors may retain up to 100% of their export earnings in foreign currency in Eritrea in accordance with Bank regulation.

10. Closely tied to the success of any investment is the allocation of land. The land proclamation eradicated the antiquated practices of land allocation and creates a new system where ownership of all land is vested in the Government. This proclamation will spur growth by making land for business and residential purposes easily accessible to all who would put it to use.

11. The Government of the state of Eritrea has also made it clear in its trade policy that it would:

- Foster liberal internal and external trade regimes with limited intervention that would not contradict the tenets of free trade. This will mean, among other things, liberalizing and simplifying the licensing regime and reducing and elimination tariff and non-tariff barriers;

- Foster export and export based industries and services by providing preferential financing, assistance in international market penetration and strong promotional support to aid exports, and support mechanisms for quality and standards control;
- Encourage participation in regional bilateral and multilateral trade economic cooperation;
- Assist and encourage the private sector to play a leading role in both domestic and external markets;
- The role of the public sector will be limited to regulatory functions and the import and export of critical commodities and supplies required in several sectors;
- Help build the institutional capacity that would make Eritrea a trading country;
- Encourage and support participation of Eritreans living abroad in trading activities; and
- Promote and participate in regional, bilateral and multilateral trade and economic co-operation.

III. ACTIVITIES REGARDING INTELLECTUAL PROPERTY RIGHTS IN ERITREA

- Eritrea became a member of WIPO in February 1997.
- National Office that overlooks Intellectual Property Rights in the country is not yet established. This is because there is sever lack of qualified manpower, resource materials and finance.
- With the financial assistance secured from WIPO need assessment is carried out by the former ARIPO General Director - Mr. Ziconda. We are expecting his findings in the near future.
- Studies are underway regarding laws of intellectual property rights.

12. Hoping that WIPO will extend its assistance in Eritrea's endeavor in the implementation of the principles of Intellectual Property Rights, we would like to assure that Eritrea is committed to fully realize these rights.

THE **ETHIOPIAN** EXPERIENCES IN INTELLECTUAL PROPERTY SYSTEM'S

I. INTRODUCTION

1. In Ethiopia there was a commercial code enacted in 1960, where in its is stated that patents shall be subjected to the protection of special laws, but there was no national law to allow its implementation. In 1974 it was recorded that there were 30 patents registered in Addis Ababa by the Ministry of Commerce and Industry; out of these, three patens were owned by Ethiopian Nationals and 26 of them by foreign nationals. Furthermore, 23 patent holdings were owned by a small number of big transitional companies. The patent law of Ethiopia was enacted recently (1995) and it totally excludes life forms from patent coverage. Following the 1995 proclamation concerning inventions, minor inventions and industrial designs implementing regulations has been issued.

II. THE ETHIOPIAN PATENT LAW AND ITS ADMINISTRATION

2. The power to administer and implement the 1995 patent proclamation is vested upon the Ethiopian Science and Technology Commission. In order to discharge these duties, the commission has established the Patent, Technology Transfer and Development Department.

3. The Commission is empowered with the responsibilities and mandate to encourage, enhance and support science and technology activities that contribute to the realization of the country's socio-economic development.

4. Among others, the duties of the Commission includes the establishment of a patent system that encourages and supports technology transfer, the development of inventions and innovations and enhancing the development of the practical application of inventions.

5. The Patent, Technology Transfer and Development Department of the Commission is charged to execute the implementation of the proclamation of the invention, minor inventions and industrial designs. The major duties of the Department includes:

- Maintain a register of granted titles;
- Publish information concerning application and grants;
- Make available copies of patent documents upon payment of prescribed fees; and
- Provide patent information to users. In this respect, a patent news letter is launched to disseminate information about the situation of industrial property in the country and promote better public understanding and appreciation of the role and benefits of intellectual property in the development system.

6. This patent news letter contains information about:

- Industrial property rights granted in Ethiopian and abstracts and drawings of applications for patents and other form of industrial property rights;
- Also aimed to explain various issues related to the subject and industrial property so that it will be easily understood by both the general public and those who wish to know something more about the subject.

III. ADDIS ABABA UNIVERSITY AND PATENTS

7. The creation of a University Intellectual Property Office was envisaged during the current review process of the University with reference to fund raising. The University also has tried a brain gain scheme through the support of the American Association for Advancement of Science with particular reference to Ethiopian Scientific Society in U.S.A. Under some instances the University had experienced illegal partners (i.e., Endod for Zebra Mussels control in North America and Canada). Here the lion share of the research was done by the Addis Ababa University, of which the University paid salaries for two Scientist and their assistants, provided lab space and plots. The University of Toledo and the Addis Ababa University signed an agreement in 1992 whose intent was clearly to share the benefit that accrues from the research. However, the University of Toledo tried to put aside the Addis Ababa University, thus inviting a court case, like that of India Turameric Traditional Medicine and Basmatic Rice.

8. The Addis Ababa University had developed a memorandum of understanding and agreements with regard to intellectual property rights for all the internationally and locally funded projects housed in the University. The major issues addressed around the internationally supported research projects include:

- Partnership model;
- Patents; and
- Benefit sharing.

9. The memorandum of understanding spelt out the background and the rational, the objectives and the terms of agreement given in articles as well as elaborating the mechanism for implementation and dispute resolution. These tell exactly how research results are going to be used and owned. The University has strongly linked itself with several professional societies, and trends towards pre-empting patentable products through immature publication is to be seriously checked.

GHANA'S EXPERIENCE IN THE MANAGEMENT OF INTELLECTUAL PROPERTY RIGHT (IPR) SYSTEM

Dr. Kofi A. Owusu-Ansah, Director, CSIR (Ghana)
and
Emmanuel Yaw Benneh, Senior Lecturer, Faculty of Law, University of Ghana

I. REPORT FROM CSIR

1. Ghana has a patent office which is located at the Registrar General's office, but it is depleted of information retrieval systems like CD/DVD ROMS.

2. A couple of years ago when the Institute of Industrial Research (IIR) of the Council for Scientific and Industrial Research (CSIR) had to file an application for patent rights it had to rely on the ARIPO office for information that could not be assessed on the Internet.

3. Realizing this shortcoming, the CSIR (Ghana) mandated IIR to set up a proper patent office. This is the result of realization that an intellectual property system is a worthy tool for research, development and industrialization. This has been well emphasized at this Workshop.

4. IIR will rely on the Law Faculty of the University of Ghana for human resource on legal issues, while the institute provides engineers and scientists to make up the full team for the Patent Office.

5. I am glad to learn that WIPO and ARIPO can offer some assistance in procuring information retrieval systems. We shall call on these organizations to help IIR in its effort to build capacity for the IPR system.

6. I am sure that in the near future, Ghana's research and development institutions and the Universities will pull their resources together to set up a IPR system. We hope to tell you about the success story, when we have the opportunity to meet again.

II. UNIVERSITY OF GHANA

7. The teaching of intellectual property was established in the Faculty of Law, University of Ghana, in 1991, through the active support and assistance of WIPO. Its establishment coincided with the growing awareness of the importance of the intellectual property system to economic, social and cultural development. It also coincided with the process of review of national laws on copyright, patents, trademarks, industrial design, etc., as well as the establishment and modernization of government structures that administer such laws.

8. Within the University, several departments and faculties are engaged in research in their own fields with potential for achieving results. Yet no structures for organized research in the field of intellectual property exists as one can find in certain American Universities (George Washington Law School) or European institutions (e.g. Max Planck Institute).

9. It is noteworthy, however, that attention in the university has now turned to addressing the question of intellectual property protection in relation among the University and technical institutes and industry, in other words, the need for an intellectual property (patent) policy.

10. A number of issues have come to the fore, namely:

(a) The ownership of inventions and other innovations resulting from research activities. Does it belong to researchers or the University?

(b) The terms and conditions of the contract for research and development concluded between the University and industrial firms;

(c) The terms and conditions of license agreements and other technology transfer arrangements for the exploitation of inventions and innovations;

(d) Steps and procedures leading to the patenting of inventions; and

(e) Marketing and commercialization of research results achieved at the University.

11. These issues are receiving in-depth attention at the University of Ghana and it is hoped that very soon an IP policy which will contribute significantly to the management of the intellectual property system will be in place.

EDUCATING THE NATION ON INTELLECTUAL PROPERTY RIGHTS: THE ROLE PLAYED BY THE UNIVERSITY OF **MALAWI** IN RAISING COPYRIGHT CONSIOUNESS, 1985 – 2000, INCORPORATING PROPOSALS FOR FURTHER DEVELOPMENT

By Mr. Dickson B. Vuwa Phiri, BA, M. Lib, (African Bibliographer) Senior Assistant Librarian, University of Malawi, Chancellor College

INTRODUCTION

1. In the International Encyclopedia of Information and Library Science, Paul Maret defines intellectual property as "Products of the human intellect considered as personal property, especially works protected under the law of copyright and inventions protected by patents. Other subjects include utility models, industrial designs, confidential information and trade marks" (Maret, 1996). This definition, which is by no means the only ones suffices for this paper. Apart from natural things such as plants, animals, mountains and rivers almost all the items that we use in daily life in the modern world are products of the human intellect. Someone somewhere has to come up with a story, a design or an invention for people to have cars, airplane, skyscrapers, books and television sets to mention only a few. An author, designer or inventor has to spend time, money and other resources and probably life itself to up with the prototype of the products which make the world move but which, sometimes, are taken for granted.

2. In order that the world continues to have new artistic works designs and inventions which meet excellent standards and also that those who toil to bring them into existence should enjoy appropriate financial and moral rewards, it is imperative that protective measures be put in place against piracy, abuse or adulteration. To achieve this, laws have to be enacted and mechanisms to enforce them to put in place. Almost every country protects intellectual property by its laws (Maret, 1996). It is these laws which define intellectual property rights. The law of copyright is a subset in realm of intellectual property laws, the others being patents, trademarks and confidential information.

3. In order that people learn to respect intellectual property rights it is essential that they be educated on what the various laws that spell out such rights are meant to effect. This is particularly so where protection of the ownership of ideas or products of ideas is a relatively new phenomenon. The role of educating the public can be done by various institutions and agencies. Universities are among such institutions. They play their educational role through lessons taught to students or their staff working together with other members of the community and providing leadership in forging new approaches and directions. From the mid eighties to the beginning of the new millennium, the University of Malawi has played such a role in matters of copyright.

THE SCOPE OF THE PAPER

4. This paper looks at the role of the University of Malawi in improving the copyright law and in the sensitization of the Malawian population to the need to adhere to its provisions. The period being focused is 1985-2000, a period which has not only seen the repealing of a

number of old laws including the copyright law. It has also the country changing from the single party to the multiparty dispensation, the controlled to the liberalized economy. This period has also witnessed rapid technological change characterized by an accelerated utilization of computer technology video and television.

METHODOLOGY

5. The author does not presume authority in legal matters and so the approach to this paper is that of a custodian of information resources (books, journals and audio-visual materials) and also that of a senior member of the University of Malawi community. However, having had the opportunity to participate in the first National Copyright Workshop held in the Great Hall at Chancellor College (1st – 4th April, 1985) Zomba, Malawi, this author has enjoyed a special privilege to follow Malawi's evolution of copyright consciousness from the mid eighties to the year 2000. However, reports of the steering committee set up at the above workshop and other published works have been valuable sources of information.

WHAT MOST MALAWIANS KNEW ABOUT COPYRIGHT BEFORE THE MID EIGHTIES

6. With the exception of those who had studied law or whose work centered on the use of the law, to most Malawians the word copyright did not mean the right of the author, artist or composer to prevent another person copying original work. It, instead, meant to copy. If a local band played a song that another band elsewhere had already played, the local band was playing a copyright. It was not uncommon to hear remarks such as "we didn't enjoy the performance of band X because they were only playing copyrights and none of their own songs." The misunderstanding or misinterpretation of the term copyright was largely due to ignorance (legal ignorance rather than illiteracy). Cases of people being sued for violation of copyright were rare (if any). Furthermore there was no authority to educate the public and to monitor cases of copyright violation. With respect to culture what Stanley Irura says about Africa in general is also true for Malawi by and large.

> *In African traditional societies and most preliterate societies, the culture was passed from one generation to another by word of mouth. Education was imparted to the young through various oral mediums such as folktales, myths and legends. The old people were the custodians of old wisdom… No one in traditional societies in Africa could claim to be the owner of copyright. The Intellectual Property of the entire community belonged to everyone… The advert of the copyright law in Africa was brought about by the contact between the African and the so called caviling influences of the white man (Irura, 1998)*

7. However, the Laws of Malawi did include the copyright law (Chapter 49:03) which the Republic of Malawi inherited from the colonial government.

THE STATUS OF THE COPYRIGHT LAW IN THE MID EIGHTIES

8. From 1st to 4th April, 1985, a National Copyright Workshop was held in the Great Hall, at Chancellor College in Zomba. This workshop was held with help from WIPO and UNESCO. The main outcome of this workshop was the setting up of a steering committee to champion efforts for the amendment of the copyright right Act (1965). According to Christopher Kamlongera, this act was found:

> *Unsatisfactory by the Government of Malawi. It is felt that it (the Act) does not cover enough in it's provision of what should be protected. For instance folklore is not mentioned at all. It does not spell out clearly and satisfactorily what the office for copyright enforcement will be and what powers it will have. The act does not show enough awareness of the existence of other international agreements, it treats copyright problems as being a specifically Malawian problem (Kamlongera, 1988).*

9. The steering committee included in its membership some top level academics of the University of Malawi. Dr. James L. Ng'ombe who was Chairman of the Steering Committee was of the rank of Senior Lecture of above at Bunda College of Agriculture, a constituent college of the University of Malawi. Professor Christopher Kamlongera whose paper is quoted above was another high ranking member of the University of Malawi.

10. Four years after the National Copyright Workshop and the setting up of the steering committee, an amended act came into force. The amended Copyright Act which is Chapter 49:03 of the Laws of Malawi was passed in 1989 and reads as follows:

> *An Act to make provision for copyright in literary, dramatic, musical and artistic works, sound recordings and broadcasts; the rights of performers; the establishment of the Copyright Society of Malawi; and for matters incidental thereto or connected therewith.*

11. This amended act has taken care of weakness observed during the 1985 National Copyright Workshop. Folklore and other categories of creative works left out in the earlier version have been included. A body known as the Copyright Society to oversee matters of copyright is now in existence

12. The first major involvement of the University of Malawi in copyright was through the membership of its staff in the steering committee which brought the copyright to its present state. Some of the tasks which were accomplished by the steering committee even before the act was amended included the holding of workshops for local drama and musicians artists to sensitize them on copyright and neighboring rights (in August 1987 and October 1988, respectively).

UNIVERSITY OF MALAWI LIBRARIES ORIENTATION PROGRAMS

13. The five constituent colleges of the university of Malawi namely, Chancellor College, Bunda College of Agricuture, Kamuzu College of Nursing, College of Medicine and the Polytechnic, undertake orientation programs in library use for first year and postgraduate students. In these programs, students are taught various aspects of information searching. Copyright issues are also covered. This is done particularly because students and library users

do have to make photocopies from books and journals as well perform plays form anthologies stocked by the library. Since the students who graduate from the college take up important positions in both the public and private sectors, it is implied that by engaging in the exercise, the University of Malawi helps to is raise the copyright consciousness of the Malawi Society.

THE FACULTY OF LAW AT CHANCELLOR COLLEGE

14. Over eighty percent of Malawi's lawyers have been educated by the Faculty of Law at Chancellor College. The coming of the multiparty dispensation has brought with it an increasing awareness of human rights. The Faculty is now engaged in reviewing its curriculum to incorporate courses in human rights and intellectual property rights. The teaching of these courses will further enhance the role of the University of Malawi in raising copyright consciousness among Malawians, i.e. educate the Malawi Nation on copyright issues.

PROPOSALS FURTHER DEVELOPMENTS BEYOND THE YEAR 2000

Mechanism to monitor copyright violation

15. Like any other university, the University of Malawi is involved in teaching, learning research and publishing. One of the University of Malawi's Senate Committee is the Research and Publishing Committee (RPC). Every year many research and publication projects are funded by this committee. These research activities generate reports, journal articles and books. Both published and unpublished (grey) products of the research activities find their way into libraries (such as the University of Malawi Libraries), documentation centers and archival repositories (e.g. National Archives of Malawi). The Library section which this author heads (Africana Section of Chancellor College Library) acquires copies of almost every research project conducted at Chancellor College. Other libraries in the sister colleges also do the same. While library users are warned against violation of copyright, there is no mechanism to ensure that cases of violation (if noted) are brought to book. The University of Malawi has neither the legal mandate nor a mechanism nor indeed the financial muscle to police copyright violation. It is essential that this omission be speedily looked into particularly since the country is open to researchers of other nationalities who come to use Malawi's libraries and archive repositories where products of research and publications projects are deposited.

Extending the educational (orientation) role beyond the Law Faculty and the library

16. While the Faculty of Law and the Library Departments in or all constituent colleges of the University of Malawi do their best to educate students (future leaders of the Malawi Nation) on matters of copyright, it is essential that other faculties and departments should share this responsibilities. This will ensure, among other things, those who do not pursue law and those who miss lessons on copyright topic during library orientation will be catered for in other lessons. However, for this proposal to be realized, seminars need to be organized where faculty and other members of staff of all constituent colleges of the University of Malawi can

be enlightened as to what their role should be in raising copyright awareness among students. This author thinks the Copyright Society of Malawi (COSOMA) in conjunction with the Faculty of Law, University of Malawi Libraries and the Research and Publication Committee of the University of Malawi can champion this responsibility.

CONCLUSION

17. This paper has demonstrated the significance of respecting intellectual property rights if there is to be continuation in the generation of new ideas leading to excellent inventions, designs, artistic performance and other creative works. The center of focus has been the role that the University of Malawi has played in raising copyright consciousness (educating the Malawi Nation) since the mid eighties. The paper winds up with suggestions on what is to be done if this role is to be enhanced since what has been done so far or is being planned to be done (through the involvement of University Staff in the amendment of copyright law, the redesigning of the law curriculum and orientation of college student by library staff) is not adequate.

BIBLIOGRAPHY

IRURA, Stanley (1998). *The Library at the crossroads: copyright laws and the dissemination of information*. In proceedings of the 13th Standing Conference of Eastern Central and Southern African Librarians (27th – 31st July 1998), Nairobi: Kenya Library Association.

KAMLONGERA, Chris. F. (1988). *The Situation and recent development relating to copyright legislation in Malawi*. Paper presented at the WIPO/Hungary Training Course on copyright and neighboring rights held in Budapest, August 29 – September 13, 1988.

MALAWI Government (1989). Laws of Malawi: Chapter 49:03: *Copyright Act*.

MARET, Paul (1996). *Intellectual Property* in the International Encyclopedia of Information and Library Science, London: Routledge.

UNIVERSITY OF **MAURITIUS**
INTELLECTUAL PROPERTY SCHEME

Professor A Peerally, Pro-Vice-Chancellor (R&C)

and

S. Parahoo, Manager Consultancy Center

I. BACKGROUND

1. The University Consultancy Scheme briefly mentions the issue of Intellectual Property Rights (IPR) at section 4.8. The objective of this paper is to evolve policies and procedures for the protection of IPR in the course of research, contract research or consultancy work undertaken by University staff.

2. With the coming in force of the Trade Related Aspects of Intellectual Property Rights (TRIPS), which is an integral component of WTO as from 01 January 2000 in Mauritius, the issue will assume greater relevance and importance. The relevant local legislation, namely The Patents Act 1875, as amended by the Information Technology (Miscellaneous provision) Act No. 18 of 1988, are currently being amended to comply with the TRIPS Agreement.

3. It is recognized that the field of IPR involves complex administrative and legal issues. It is thus not possible to anticipate all the nuances that the future may hold in this area. The contents of this document will hence evolve, as hands-on experience is gathered in the field of IPR protection. Nonetheless, it is deemed useful at this stage of the development of the University to take the proactive step of developing policies pertaining to IPR protection.

II. PREAMBLE

4. The University dedicates its activities and services to the promotion and support of public welfare. Most of the results of Research and Development produced by the University staff are placed in the public domain through publication and other forms of disclosure. Occasionally, however, original inventions may be produced by the University staff or utilizing University resources, and *these I may better be dedicated to the public service through obtaining patents and controlling licensing and distribution arrangements to assure that the public interest will be served.

5. It is the intent of the University in managing intellectual property rights for the public benefit, to encourage and assist University staff in the use of the Intellectual Property protection systems with respect to their discoveries and inventions in a manner that is equitable to all parties involved. The University recognizes the need for and desirability of encouraging the broad utilization of the results of University research, not only by scholars but also in practical application for the general public benefit, and acknowledges the importance of the Intellectual Property Rights protection system in bringing innovative research findings to practical application. This is in line with the following strategic objectives in the Strategic Plan 1999-2000 of the University.

B3 Undertake developmental research and consultancy
G1 Increase income from the private sector

III. INTRODUCTION

Intellectual Property Rights

6. Intellectual Property Rights give legal recognition to the ownership of new ideas or brand names and give the proprietor the right to stop any other party exploiting the owner's property.

7. Intellectual Property Rights include patents, copyright, registered designs and design rights, and registered trade marks and service marks.

8. With the exception of some copyright, the primary reason for securing Intellectual Property Rights is to gain commercial advantage.

Patents

9. The granting of a patent gives its owner a monopoly over the manufacture, use and sale of the invention, which remains in force for about twenty years. Patentees also have the right to sue any party that infringes the patent, and to seek redress through the courts. However, it is the responsibility of the patentee to police and enforce the patent. There is however no 'worldwide' patent and protection must be sought in individual countries.

10. Patents will be sought by the University only when patent protection is justified or essential to ensure an eventual proper development or use, and appropriate management, including financial management, of the invention.

Why patent an invention?

- Patents are an effective means of deriving economic value from research advancements and for enhancing support of research activity.
- Patents are often the best means of developing and disseminating a technology for the widest good.
- Experience over the last several years in developed countries indicates that patents are typically essential as a basis for starting companies based on university inventions and discoveries.
- Patents are perhaps the best means of managing the conflicts which are inherent in academic/industrial collaboration.

Patent Checklist

11. On embarking on a patenting procedure, the following questions have to be answered about the process/product to be patented.

- Is it new?

12. Do similar patents in this area of work already exist?

- Is it inventive?

13. Would it be obvious to another expert in the field of work?

- Would it be of interest to industry?

14. Does it have a practical application? Is it likely that profits will be made from its manufacture and sale?

- Has there been any public disclosure of the invention?

15. Material at conferences, publications, discussions with colleagues, friends and family?

- How was the original research funded?

16. Does the contract assign IPR?

- Would a patent be more valuable than maintaining secrecy?

- Would the invention be unpatentable?

17. The following are not patentable:

Discovery of previously unknown natural Phenomena. New theories to account for observed phenomena; new mathematical procedures; new methods for presenting information; computer programs and software.

Copyright

18. Copyright give rights to the creators of original literary works (including computer programs), dramatic, artistic and musical works, published editions of works, sound recordings, films (including videos), broadcast and cable programs and computer programs. Copyright enables the creator to control exploitation and cover copying, adapting, publishing, performing and broadcasting.

19. Ideas are not protected by copyright. However, the resulting work may be.

IV. INTELLECTUAL PROPERTY RIGHTS POLICY

20. Inherent in the mission of the University is the obligation to pursue knowledge for the benefit of society. The process of protection of IPR facilitates the dissemination of technology for the widest good by creating a mechanism whereby the inventions can be put to practical use.

Disclosure

21. The University staff shall promptly report and fully disclose their inventions or other analogous property rights to the Pro-Vice-Chancellor (R&C).

Ownership

22. The University staff shall also assign their rights in the inventions to the University. The University staff will include academic staff, administrative staff, research assistants, graduate research and teaching assistants, students who provide services under University supervision, and others who utilize University resources in the furtherance of their research. In case the University decides not to go ahead with the patent process, the rights will be returned to the inventor(s).

23. Inventions and other forms of intellectual property generated by an employee will be deemed to be assigned to the employer if made in the course of the inventor's employment.

V. EXPLOITATION OF INVENTIONS AND PATENTS

24. IPR, like any other business commodity, can be bought, sold, hired or licensed. It follows that when considering protection, an evaluation of potential markets must be sought as well as the cost of such protection.

25. The policy of the University is to encourage its staff members to work on new developments and inventions. In the case where a student or Research Assistant is a member of a Research team whose efforts have resulted in an invention, he/she will be treated, for the purpose of patenting or commercial exploitation of the research results, as a member of the staff team which comprised the rest of the research group.

26. Generally, the patent will be vested in the University. If an invention is patentable, care must be taken to ensure that the possibility of patenting is not lost by premature publication, or other forms of public disclosure.

27. If, in the course of his or her duties, a member of staff makes an invention which he/she believes to be commercially exploitable, this will be reported to the Pro-Vice-Chancellor (R&C) through the Head of Department (HOD) and Dean of Faculty (DOF). The Pro-Vice-Chancellor (R&C) and the Manager Consultancy Center, will in consultation with the HOD, DOF and other relevant parties, ensure that steps are taken to protect and exploit the invention, if appropriate. No contract or arrangements shall be entered into with an outside body by the member of staff without the prior agreement of the Pro-Vice-Chancellor (R&C).

28. The inventor and the University management will collaborate to protect the secrecy of the invention at all times before the filing of any initial application for a patent.

29. If, after having taken expert advice, the Pro-Vice-Chancellor (R&C) decides that the University does not wish to take part in the development or exploitation of an invention, the University will formally release its rights in the invention to the inventor. In this case, the inventor will be free to proceed at his/her own expense, to seek and obtain a patent and handle it as he/she chooses.

30. Otherwise, the University will undertake responsibility for development and exploitation. This may involve negotiation with a third party for development and exploitation. Alternatively, the University will apply for patent protection and assign any patent granted to the name of the University.

VI. UNIVERSITY INTELLECTUAL PROPERTY ADVISORY COMMITTEE (UIPAC)

31. The Deans Committee (R&C) will act as the University Intellectual Property Advisory Committee. It usually meets on a monthly basis, with the Manager Consultancy Center in attendance. The Committee may co-opt any expert in a given field or solicit advice from the latter to assist it in reaching a decision on an issue related to IPR management. The responsibilities of the UIPAC are:

- Review the intellectual property to determine the University's interest and rights.
- Determine patentability (with the assistance of inventor or expert if necessary).
- Determine commercial viability (with the assistance of inventor).
- Make recommendations as whether to pursue the patent process or to release the patent interest to the inventor (with conditions).

VII. SHARING OF REVENUE FROM THE COMMERCIAL EXPLOITATION OF INTELLECTUAL PROPERTY

32. In line with its policy to promote applied research work leading to new developments and inventions among its staff, the University is prepared to award a share of the net proceeds accruing from the commercial exploitation of intellectual property rights to the inventor.

33. It is to be noted here that the Net Total Income is defined as the Total Income from commercial exploitation of the invention less the costs of patenting, protecting and preserving patent and related property rights, maintaining patents, the licensing of patent and related property rights, overhead costs, and such other costs, taxes, or reimbursements as may be necessary or required by law. The assessment of overhead costs rests with the Manager Consultancy Center and Budget Director, after consultation with those directly concerned, and in line with the current University policies and practice in this regard.

34. The sharing of Net Total Income is detailed in Table below:

	Net Total Income (Rs)	Inventor(s)	Faculty	University
I	First 100 000	75%	10%	15%
2	Next 400 000	50%	15%	35%
3	>500 000	25%	20%	55%

35. Where there is more than one inventor, the University will apportion the share of the inventors according to their recommendations in writing for the sharing of money duly signed by each inventor and submitted to the Pro-Vice-Chancellor (R&C) or Manager Consultancy Center. In case no such proposed sharing ratio is proposed by the inventors, the University will normally distribute the share of the inventors equally between them.

VIII. FURTHER INFORMATION

36. For further information, advice and assistance with issues relating to IPR and exploitation, please contact the Pro-Vice-Chancellor (R&C) or the Manager Consultancy Center.

BRIEF REPORT ABOUT INTELLECTUAL PROPERTY RIGHTS SYSTEM IN **NIGERIA** AND THE FUNCTIONS OF NATIONAL OFFICE FOR TECHNOLOGY ACQUISITION AND PROMOTION (NOTAP)

By

MR. IKENNA ORIZU, PRINCIPAL ANALYST

I. INTRODUCTION

Brief History of NOTAP

1. Nigerian's attempt at developing the national economy in the 1970's, when crude oil was discovered, focused mainly on the establishment of infrastructure and industries utilizing assortment of obsolete technologies. These technologies, many of which were unsuitable and outdated, were sold at prices determined, in the majority of cases, by the whims and caprices of the advanced countries under unfair contractual terms and conditions. Nigerians lacked the negotiating capability for technology acquisition and therefore signed and executed technology agreements which did not favor national economic interest. Such agreements contained monopoly pricing, and restrictive business practices, ranging from export restrictions, discriminatory royalty rates, coercive packages, tie-in clauses dealing with capital equipment, raw materials and components tied to the strings of the technology suppliers. Contracts were excessively long and sometimes of indefinite duration. In addition, details of technology to be acquired were in most cases not properly stipulated in the agreements, products quantity, quality and standards were not clearly stated, while guarantees, warranties, and infringement penalties were not clearly defined in most contracts. Generally foreign companies had a free hand in the management of the projects with no accountability or consideration for the local needs of the people or to environmental impacts of their operation/activities. In most contracts, Research and Development were non-existent while little or no attention was paid to capacity building/training of indigenous staff except statements of general nature which were never implemented. With time it emerged that the indiscriminate import of technology into Nigeria had resulted into high level of capital flight, had led to haphazard patterns of development, had accentuated dependence and had inhibited indigenous skill acquisition. This was the imperfect situation which characterized the import of foreign technology into Nigeria prior to the promulgation of Decree No. 70 of 1979.

2. There is no question that in an area so much affected by oligopolistic and monopolistic practices, a public screening mechanism was required to redress such inequitable business practices, if the technological and economic development of Nigeria were not to be compromised.

Establishment of the National Office for Technology Acquisition and Promotion

3. To address the issues raised above, the National Office for Technology Acquisition and Promotion (NOTAP), was established by Decree No. 70 of 1979, as amended by Decree No. 82 of 1992, as a corporate body with a legal identity to implement the acquisition, promotion and development of technology and at the same time correct certain imperfections in the acquisition of foreign technology into the country.

4. In line with the globalization and liberalization of the world economy, NOTAP has shifted its emphasis from regulatory and control to promotional and developmental roles. The new areas of focus are aimed at attracting foreign technologies and investment as well as emphasizing local manpower development with a view to strengthening local technological capabilities.

5. Given the new global industrial structure, the revolutionary developments in technology, and since technology represents the engine of growth and development, the office has realized the urgent need to take research results from our research institutions to industries and hence to the market place if Nigeria is to join the league of technologically developed countries within the shortest possible time.

IV. NIGERIAN INTELLECTUAL PROPERTY RIGHTS LAW

6. Nigerian intellectual property law is codified in about 10 domestic laws, including separate laws for trade marks, copyrights, patent and design. Other relevant status include the counterfeit and fake drugs act, the trade malpractice Decree, the National Agency for Food and Drugs Administration Control (NAFDAC) and the Standard Organization of Nigeria (SON).

7. Nigeria is a signatory to several multilateral agreements on intellectual property, including the Berne Convention for the protection of Literary and Artistic Works of 1886, Universal Copyright convention UCC of 1952, and the Paris Convention for the protection of industrial property 1883, as revised in Lisbon in 1953, in addition Nigeria became a member of WIPO in 1993.

8. Generally, Nigeria’s intellectual property laws have been in existence for many years and is derived from English law. Therefore, the major components of these laws, such as terms of protection and definitions of various rights are generally similar to those required by TRIPS Agreement.

9. Though Nigeria has a codified IPR protection the teaching of intellectual property system in universities has not been developed. We have few universities offering courses on intellectual property system and they are mostly located in the faculty of law, they are elective courses in most of those institutions but what we will like and what we are proposing is that intellectual property system subjects should not only be established in all universities and polytechnics but should be made a compulsory course for all students.

III. NOTAP's MANDATE

10. Specifically, NOTAP is mandated to carry out the following functions:

- Encouragement of a more efficient process for the identification and selection of foreign technology;

- Development of the negotiating skill of Nigerians with a view to ensuring the acquisition of the best contractual terms and conditions by Nigerian parties entering into any contract or agreement for transfer of foreign technology;

- Provision of a more efficient process for the adaptation of imported technology;

- Registration of all contracts or agreements having effect in Nigeria, on the date of the coming into force of Decree No. 70 of 1979, and of all contracts and agreements thereafter entered into, for transfer of foreign technology to Nigerian parties. Every such contract or agreement is registrable if its purpose or intent is in the opinion of NOTAP wholly or partially for or in connection with any of the following:
  i. the use of trade-marks;
  ii the right to use patented inventions
  iii the supply of technical expertise in the form of the preparation of plans, diagrams, operating manuals or any other forms of technical assistance of any description whatsoever;
  iv the supply of basic or detailed engineering;
  v the supply of machinery and plant;
  vi the provision of operating staff or managerial assistance and the training of personnel.

- The monitoring on a continuous basis of the execution of any contract or agreement registered in pursuant to Decree No. 70 of 1979.

- In addition to the existing functions as highlighted above, NOTAP was given an additional mandate in 1998 to embark on the Commercialization of locally motivated technologies through the commercialization of research and development findings, inventions and innovations in all the Research Institutes, Universities, Polytechnics and private Laboratories and workshops. This mandate covers the following activities:
  - Commercialization of all R & D results and inventions;
  - Promotion of locally generated technologies;
  - Dissemination of technology information;
  - Development of guidelines for the documentation of all valuable inventions and R&D results from the public and private research institutions;
  - Collation of all valuable invention and R&D results from these institution and their publication in bulletins, on quarterly basis;
  - Commercialization of all such inventions and R&D results;
  - Patenting of all viable R&D results from government funded projects;
  - Production of industrial project profiles for Micro, Small and Medium Enterprises (MSMEs);

- Establishment of a technology data bank to provide researchers and indigenous entrepreneurs with information on global and local technology developments;
- Organization of seminars/workshops on technology acquisition and utilization of industrial property: a forum that brings together researchers, entrepreneurs, investors, venture capitalists, and public and organized private sector;
- Conducting regular sector-based surveys of technologies available in the country, and related issues.

IV. NOTAP's ACTIVITIES

(a) Evaluation of Technology Transfer Agreements - The National Office has so far evaluated 3,000 Foreign Technology Transfer Agreements from various sectors of the economy out of which close to 2000 was registered

(b) FINANCIAL SAVINGS - The Office saved over N5 billion for Nigerian economy through its intervention and analysis of Royalty payment on Technology Transfer Agreements between Nigerian Enterprises and their Technology Transferors. This could have amounted to substantial capital flight but for the intervention made by NOTAP.

(c) PROMOTION AND DISSEMINATION OF TECHNOLOGY INFORMATION - NOTAP has mounted effective promotional activities with a view to informing researchers, industrialists, and entrepreneurs on new trends in scientific/technological developments and applications, particularly in areas of intellectual property and technology advisory services.

11. The Office, through its Patent Information and Documentation Center (PIDC) disseminates technology information to interested users such as researchers patent attorneys, private investors, entrepreneurs, etc. The center was developed with the assistance of World Intellectual Property Organization (WIPO). The Patent Information and Documentation Center (PIDC) is a network of information system that link the National Office for Technology Acquisition and Promotion with other Patent Information Center in the world. It is an avenue through which information on industrial property are sought globally. The PIDC enables NOTAP to have access to technology information contained in patent documents. This technology information is made available to interested users such as researchers, patent attorneys, private investors, entrepreneurs, etc.

12. The patent Information and Documentation Center (PIDC) enables NOTAP's clients to, amongst other things, have access to:

(i) the state of the art/search/reports carried out in patent documents and online databases;
(ii) information on equivalent patent documents and on patent literature cited in earlier examination procedures or identified in documentary/searches;
(iii) information on the legal status of published patent applications and granted patents;
(iv) copies of individual patent documents; and

(v) search and examination reports of applications for patents.

13. Interested entrepreneurs, industrialists, researchers, patent agents/attorney and private investors can avail themselves of the opportunity of the free access to the PIDC in NOTAP. For such users, the advantages include the following, among others.

- Saving of resources in terms of time, labor and costs;
- Prevention of avoidable exercise on esoteric researches;
- Eliminating project repetitions and "re-inventing of the wheel";
- Having direct access to current information on technology trends;
- Providing linkage opportunities between the Nigerian researchers and their counterparts at the international level;
- Providing a summary of the invention, a description of the invention and how it differs from the prior art, and of course claims that define the scope of invention; and
- The PIDC provides technology information on new developments in Science and Technology (S&T) and this assists Nigerians to improve their knowledge and skills on the emerging technologies for industrial applications. It also assists inventors in the patenting of their inventions abroad through the assistance of World Intellectual property organization (WIPO).

14. NOTAP in collaboration with FMST is currently carrying out National Awareness Building Program on Technology Information in Patent Documentation in some selected Universities and Polytechnics in the six geo-political zones of Nigeria.

(d) PATENT AGENCY - NOTAP acts as patent agency to local investors, innovators, and research institutions in the country. This service is carried out locally, and internationally with the assistance of WIPO for the patenting of inventions abroad. The Office has assisted research institutions e.g. FIIRO, Cereal Research Institute, as well as private inventors e.g. Col/Dr Ovadje (winner of the WIPO-OAU Best African Inventor Award), Mallam Salehden Umar of University of Sokoto, etc. in the patenting of their invention both nationally, (and internationally in the case of Dr Ovadje.)

(e) Commercialization of Research and Development Results - In pursuance of its commercialization mandate, NOTAP has developed guidelines to implement the new mandate. The Office has conducted a nationwide survey of projects in research institutions and has developed a compendium of available research results and inventions for commercialization. The Office is now working on the commercialization of a number of inventions and research results identified during the nation wide survey.

(f) Technology Advisory Service (TAS) - NOTAP continuously provides technology advisory services to entrepreneurs in all aspect of negotiation and acquisition of Technology. TAS is designed to provide rapid, objective and impartial advice to enterprises in the negotiation of different types of Technology contracts particularly for major industrial projects within TAS program. The office provides assistance on all

relevant issues related to technology acquisition through contractual arrangements, including assistance in the evaluation of proposals and selection of suppliers, preparation for negotiation, drafting of agreement and advice during negotiation especially at inter-ministerial level when public projects are involved.

(g) Publications - NOTAP has published some technical books as one of its strategies to assist in the dissemination of scientific and technology information to Nigerians. Some of these publications include:

- NOTAP Newsletter
- Basic Questions and Answers on Patents and Inventions
- Basic Questions and Answers on Trade Marks
- Basic Questions and Answers on Industrial Designs
- PIDC Flyer
- Typical Patents: Complete and Abstracts
- Compendium of R&D Results, Inventions and Researchers
- Technical Bulletin
- NOTAP Patent Search and Advisory Services
- NOTAP Guidelines on Commercialization for Investment Promoters
- NOTAP Guidelines on Commercialization for Research Institutions
- Guidelines on Industrial Property Rights Protection in Nigeria
- Directory of Licensors and Licensees
- Basic Questions and Answers on Copyrights and Acquisition of Foreign Technology in Works Covered by Copyright Laws.

- Some other activities carried out by the Office include localization of projects profiles.
- Collaboration efforts/Linkages with public/private sectors
- Monitoring of Technology Transfer Agreements/contracts.
- Organizing Workshop and Seminars

V. CONCLUSION

15. NOTAP since inception has indeed assisted the country to attain a measure of industrial and technological self-sufficiency through the steadfast pursuit of the goal of rapid absorption and acquisition of technology at reasonable cost. As earlier mentioned, prior to the establishment of NOTAP, technology was being sold and purchased at exorbitant prices. In the attempt to develop a strong technological base for the enhancement of the political and social economic well-being of our people, the life blood of the Nigerian economy had been sapped away through strangulating payments associated with the acquisition of foreign technology. Invariably, our industries became pawns in the hands of foreign partners as huge sums of money were siphoned out as payments for plants, machinery, technical/management and industrial property rights thereby making the country industrially and technologically over dependent on foreign interest. With the attainment of goal of regulating the transfer of technology and ensuring the best contractual terms for technology acquisition, especially as regards price, the Office has to a large extent saved the nation huge sums of money. Through deliberate policies NOTAP is now promoting the development of local technologies and the export market, especially into the West African sub-region.

16. With globalization and liberalization of economies and consequent shift of emphasis by NOTAP towards the development of indigenous technological capacity, substantial success have been recorded on commercialization of R&D results and inventions. A compendium of all available R&D findings in the Nigerian institutions is being published.

17. Evaluation/assessment of research results contained in the compendium and subsequent activities such as intellectual property rights acquisition, feasibility reports, pilot plants, venture capital search and marketing for full commercialization of key projects shall form the thrust of year 2000 program.

THE AFRICAN REGIONAL CENTRE FOR TECHNOLOGY, AN INTERGOVERNMENTAL R&D ORGANISATION FOR TO THE DEVELOPMENT OF THE AFRICAN FOOD PROCESSING AND RENEWABLE ENERGY SECTORS

By

Mr. Abdoulaye Seye, Research and Technological Consulting Services Division,
African Regional Center for Technology

1. The African Regional Center for Technology (ARCT) expresses its deep gratitude to the World Intellectual Property Organization (WIPO) and to the Government of the United Republic of Tanzania for their invitation to participate at this important seminar on the benefits of intellectual property protection for universities and R&D organizations.

2. As an intergovernmental R&D organization engaged in the development of the African food and energy sectors, ARCT has highly appreciated this invitation to share these three days of rich exchanges over the current world intellectual property system. This gathering is indeed a great endeavor to promote scientific and technological innovation and creativity.

3. In this brief report, we would like to first present the Center and, then, outline its interest in the intellectual property system, considering its current main R&D programs.

I. BRIEF PRESENTATION OF ARCT'S MISSION AND FIELDS OF ACTION

4. The African Regional Center for Technology was created in 1977 in Kaduna, Nigerian, under the patronage of the Organization of African Unity (OAU) and the United Nations Economic Commission for Africa (ECA). Settling its headquarters in Dakar, Senegal, ARCT was made operational in 1980, with the mission of contributing to the technological development of the African food and energy sectors. This mission is mainly achieved through the promotion of food processing SMEs and renewable energy uses.

5. Its member States are Algeria, Benin, Burkina Faso, Burundi, Cameroon, Cap Vert, Congo (Democratic Republic of), Egypt, Ethiopia, Ghana, Guinea, Bissau Guinea, Equatorial Guinea, Kenya, Liberia, Malawi, Morocco, Mauritius Island, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Uganda and Zambia.

6. The Focal Points, which coordinate ARCT's activities in these countries, are the Ministries (or Departments) in charge of S&T national policies.

7. The activities of the Center, implemented through a biannual program, are mainly related to the fields of:

(a) training and human resources development;
(b) technological information system improvement; and
(c) technology innovation and transfer.

8. Throughout these activities, ARCT is highly concerned with:

- African economic integration at regional as well as sub-regional levels, through the enhancement of national capacities;
- Sustainable development (promotion of "green" technologies); and
- Women empowerment, considering their important involvement in the African agri-food and energy sectors.

II. INTELLECTUAL PROPERTY AND ARCT'S R&D POLICY

9. Intellectual property protection is of a great concern for ARCT in its effort to achieve the objectives of the mission mentioned above. Such protection, by fostering innovation, is undoubtedly one of the main concerns of ARCT technological development programs.

10. Through its training programs, the Center promotes awareness in the world intellectual property system by inviting specialized organizations to participate at the workshops on food processing technologies. Thus, the African Intellectual Property Organization (OAPI) was involved in the last workshop held in Yaoundé, Cameroon on May 16 - 26, 2000, at the benefit of African women-entrepreneurs in the food processing sector. On this occasion, a lecture was delivered on "the importance of industrial property for food processing enterprises" and a visit organized at OAPI's Headquarters. For the next workshop to be held in Porto Novo, Benin, WIPO has already given a favorable answer to the invitation for participation. So, this will be an opportunity for the women-entrepreneurs who will attend it to know more about the world intellectual property system.

11. Not only does ARCT works for a wider awareness in the system, but the Center also promotes the effective use of it by giving special attention to intellectual property functions in its Incubation Centers. Entrepreneurs are helped approach the national patenting services in order to value their creativity.

12. The present regional seminar has been a good opportunity to enhance the capacities of ARCT to address intellectual property issues. Thus, as a conclusion, ARCT would highly recommend that such a rich forum be organized at the benefit of French-speaking universities and R&D organizations in Africa.

THE INTELLECTUAL PROPERTY SYSTEM IN **UGANDA** AND OPPORTUNITIES FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT

By Ismail N. Barugahara*

I. INTRODUCTION

1. Intellectual property is the intangible product of the mind, the human intellect, ideas and the way they are represented. The common types of intellectual properties are inventions, publications and other works of scholarship, video tapes, computer programs or works of art. The main instruments for the protection of these intellectual properties are patents, copyrights, industrial designs, utility models, trade marks, geographical indications, plant variety protection, trade secrets etc. These statutory legal instruments are one of the ways of protection of intellectual property, there are non statutory and traditional forms of protection though they are inadequate.

II. THE SYSTEM FOR PROTECTION OF IPR IN UGANDA

2. This section presents the available forms of protection for especially the academic and research community in Uganda. These are mainly patents, utility models and copyrights.

III. PATENTS

3. The intellectual property system in Uganda has undergone several reforms aimed at easing the process of applying for and obtaining legal protection for intellectual property. For instance before 1993, Uganda's intellectual property system was based on the United Kingdom (UK) law. The 1964 Patents Act required Ugandans seeking patent protection to first obtain one in the UK before registration in Uganda. This prompted the review of the patents law.

4. The 1991 Patents Statute created an independent patent law system for Uganda, and put in place a Patent Registry under the Department of the Registrar General in the Ministry of Justice and Constitutional Affairs. The functions for the administration of intellectual property is currently vested in the Registrar General's Department. The office was created to perform five (5) major functions:

- Keep a register of all granted patents;
- Register contracts and patents applications;
- Provide patent information services to the public;

---

* Ismail Nabil Barugahara is a Science Secretary for Planning, Development and Evaluation; Secretary to the ICT Policy Task Force, Industrial and Engineering Sciences and Physical Sciences Specialized Technical Committees of the Uganda National Council for Science and Technology (UNCST)

- Act as Uganda's industrial property office on behalf of ARIPO;
- Act as a designate office for international applications granted under the Patent Cooperation Treaty (PCT) administered by the World Intellectual Property Organization (WIPO).

5. In Uganda, a patent is defined as "a solution to a specific technological problem and may be or relate to product or process". It is granted to a "true and first innovator" or his/her designate. An invention must satisfy the following requirements to qualify for patent protection:

i) It must be new or novel;
ii) Have use or utility/industrial application;
iii) Non obvious to one skilled in the field of the invention.

6. Patent protection normally lasts for fifteen (15) years from date of application with a possibility of extension. While utility models/certificates which require less stringent conditions (only novelty) last for only seven (7) years.

7. A holder of a patent has the right to disclose the invention; to work the patented invention within the country in the prescribed time; exclusive right to make, use, exercise and vend the invention. In case of infringement of any of the above rights, the patent holder or licensee may institute infringement proceedings in the High Court.

IV. COPYRIGHTS

8. This provides protection for creativity as expressed in the choice and arrangement of words, musical notes, colors, shapes etc. Copyrights protect the owner of the property rights in literary and artistic works against those who copy or otherwise take and use the form expressed by the author. Copyrights mainly provide protection for literary works, musical works, artistic works, cinematograph films, gramophone records, broads etc. This mainly covers work of the following description:

a) Literary works irrespective of literary quality. Such as novels, stories and poetic works; plays, stage direction, film scenarios; text books, treatise, histories, biographies, essays and articles; dictionaries, directories, anthologies and encyclopedias; letters, reports and memoranda; lectures, addresses and sermons; computer programs.

b) Artistic works irrespective of their artistic quality. Such as paintings, drawings, etchings, lithographies, woodcuts, engravings and prints; maps, plans, diagrams; works of sculpture; works of architecture in form of buildings or models; works of artistic craftsmanship.

c) Musical work irrespective of musical quality and words composed for musical accomplishment.

9. Computer programs are not explicitly mentioned in Uganda's Copyright Act of 1964. However efforts are being coordinated by the Uganda National Council for Science and

Technology (UNCST) to formulate a national policy and regulatory framework for the development of Information and Communication Technology (ICT) in the country. IPR issues in ICT development will be addressed and appropriate legislation drawn within the framework of the existing law.

10. Copyright protection do not require an application, it is only advisable to have the dates of creation for purposes of entitlement. It is required that the work be original and the ideas though not necessarily new, the form in which they are expressed, must be the creation of the author. Of necessity, the work must be written, recorded or otherwise reduced to material form and marked for identification.

11. Copyrights give the author exclusive rights to control the distribution of copies, the public performance for payment, the broadcasting in Uganda or any other country the whole or section of the work, for at least 45 years from the date of creation of the work.

V. PROTECTION OF NEW PLANT VARIETIES IN UGANDA

12. At present the Ugandan law has not been revised to address this issue. Under the current law new plant varieties are not eligible for protection. Debates have been going on for the protection of biotechnological innovations and it is hoped that the revised Patent Statute will provide for such protection.

13. Being a member of the World Trade! Organization (WTO), Uganda will certainly adhere to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) which compels members to provide appropriate protection of plant varieties within ten years signing the agreement.

VI. MEMBERSHIP TO INTERNATIONAL IP CONVENTIONS

14. Uganda adheres to the Harare Protocol. Under this arrangement, Ugandan residents can file a single application and designate any member country of ARIPO, the same applies to residents in countries that are party to the protocol.

15. Uganda is a member of WIPO and obtains support from WIPO's Development Cooperation Program. The support includes human resource development for the protection of intellectual property within the judiciary. It involves training of staff of the Registry, Judges and Lawyers.

16. Uganda acceded the Patent Cooperation Treaty (PCT) which allows it (Uganda) to be designated by any applicant who is a national or resident of any contractual state of the PCT.

17. Uganda is also a member of the World Trade Organization (WTO) and therefore adheres to the conventions instituted by WTO, i.e. TRIPS under the General Agreement on Tariffs and Trade (GATT) and the Berne Convention.

VII. HUMAN RESOURCES AND TRAINING IN IPR

18. For some time, the administration in Universities and higher centers of learning treated IPR with mixed feelings. They did not consider it an academic discipline. For that matter it was not given adequate attention. It was taught to practitioners at short courses, seminars, conferences or long term courses abroad. Makerere University, the leading center of learning in Uganda introduced intellectual property rights as a course unit at only postgraduate level. It was taught to a small number of higher degree students in law. Consequently, there are few people with full understanding of the implications of IPR, and/or with experience in handling IPR issues. Resources i.e. financial and human need to be committed to develop sufficient manpower with capacity to internalize and handle IPR issues well aware of the threats and opportunities thereof and to meaningfully participate and contribute to the global debates and conventions on intellectual property.

VIII. AWARENESS OF IPR ISSUES AMONG THE UGANDAN ACADEMIC AND RESEARCH COMMUNITY

19. The majority of the population have no knowledge of intellectual property and the patent system in Uganda. Given the inadequate attention paid to IPR issues at Universities, which are normally the centers of inventive activity, there is no doubt that the Ugandan research community is inadequately aware of their intellectual property rights and obligations.

20. Records from the patents and copyrights registry indicate a low level of patent application in the country. This does not imply lack of novelty but a lack of awareness of the benefits of IPR among the research community. The levels of transfer of technology, patenting and technological transfer are still low. At the same time, the country is unable to provide adequate protection against the unfair exploitation of its inventions and creations due to low levels of knowledge of the intellectual property system.

IX. UNCST EFFORTS TO PROMOTE IPR IN UGANDA

21. The Uganda National Council for Science and Technology (UNCST) was created by Statute No.1 of 1990 as a semi-autonomous body under the Ministry of Finance, Planning and Economic Development with the mandate to oversee the integration of Science and Technology in socioeconomic development of the country by among other things:

(a) Overseeing and coordinating the formulation of an explicit national policy on all areas of science and technology (S&T).
(b) Promoting the development of indigenous science and technology.
(c) Rationalizing the use of foreign science and technology.
(d) Acting as a clearing house for information on research and experimental development (R&D) taking place in scientific institutions, centers and other enterprises.

22. In pursuance of its mandate, the Council maintains close and strong links with all R&D, S&T institutions in the country.

23. The following efforts were put in place by the Uganda National Council for Science and Technology in close collaboration with the Department of the Registrar General and other players in IPR to address the issue of awareness of IPR among the population as well as, address the gaps in the existing legislation on intellectual property:

(a) Formulation of guidelines for intellectual property in Uganda. This is in form of an IPR information manual.

(b) Establishment of an Intellectual Property Network (INPRONET) Committee. The committee was among other things formed to strengthen the intellectual property system in the country by, sensitizing the public. Several local and international seminars, workshops and meetings have been organized and convened by the Committee.

(c) Establishment of a statutory specialized committee under the Council, for the protection of technological innovations, local inventions and scientific discoveries.

(d) The Council registers and clears all research undertaken in the country. This is a step towards obtaining intellectual property protection for the findings of the research. The scrutiny the research undergoes before a research permit is issued eases the process of securing IPR protection from the Registrar General's Office.

(e) The Council is the focal point for the application of the regulation on access to genetic resources and benefit sharing drafted by the UNCST and the National Environment Management Authority (NEMA) and other stakeholders in biotechnology.

(f) The Council is the coordinating institution for the development of a national strategy and policy to promote the development of Indigenous Knowledge (IK). This will address the IK-related intellectual property rights.

(g) Currently, the Council is, through its Task Force on ICT policy, coordinating the development of a national policy and strategy for Information and Communication Technologies (ICTs). -rbe policy will address IPR issues in the use and application of ICTs and recommend for the amendment the IPR laws to address this issue.

(h) The Council is, through its Industrial and Engineering Sciences Committee, working towards the establishment of a mechanism to foster cooperation among University-Industry and Research. This aims to identify research and development projects at Universities and R&D institutions that can be jointly or independently funded by industry, assess the patentable and marketable research outputs, set benefit sharing agreements and the terms of collaboration.

X. CONCLUSION

24. There are many forms of protection of intellectual property provided by the current laws in Uganda as outlined in the foregoing discussion. Those that are not adequately provided for are being discussed for incorporation in the revised laws, many others are covered by the international conventions of which Uganda is a member. The challenging issues remain development of sufficient manpower to manage an efficient IPR regime for the country and sensitization of the public especially the academic research community on practical applications and the benefits arising from IPR. Several bodies including the judiciary and the UNCST have played their role but need support from the public, the national government and the International community to create a vibrant IPR regime in Uganda.

THE BENEFITS OF THE INTELLECTUAL PROPERTY SYSTEM FOR UNIVERSITIES, UNIVERSITY RESEARCHERS AND RESEARCH AND DEVELOPMENT (R&D) ORGANIZATIONS – **ZIMBABWE**

By Mr. Wilfred M. Mukondiwa, Registrar, University of Zimbabwe, Harare

UNIVERSITY OF ZIMBABWE'S EXPERIENCE

1. When the University of Zimbabwe opened in 1955 it operated under a Royal Charter which did not allow the Institution to make money. The University was wholly supported by Government and well-wishers. This was the case until 1980 when Zimbabwe gained Independence. By the way the University of Zimbabwe was the only university in the country until 1990 when the National University of Science and Technology was established in Bulawayo. Research at the University of Zimbabwe was mostly fundamental and not geared for generation of funds. There was no urgency regarding the issue of property rights.

2. The advent of Independence saw increase in Institutions for Tertiary Education (Polytechnic Colleges, Teacher Training Colleges, State Universities and the Scientific and Industrial Research and Development Center, etc.). As a result the University found itself getting less and less funding from the Government. At the same time the nation was looking at the University of Zimbabwe to lead the way in tertiary education. It was expected to take more students with less resources. Thus the Institution had to review its position. In 1995 the University of Zimbabwe started formulating the 5 Year Strategic Plan and income generation was one of the objectives of the Plan.

3. Up until then, nobody had seriously thought of Intellectual Property Rights as an issue. Although the course was taught as a full course since 1986 in the Faculty of Law, the University had never actually done much in formulating a comprehensive intellectual property right policy for itself.

4. Let me give you a few examples to illustrate this situation:

(a) The Terms and Conditions of Service of Academic Staff specify that "a member who applies for a patent connected with or arising out of his University Work is required to inform the Registrar of the University." The rationale is that members come up with inventions in the process of discharging their duties. The Contract however does not specify whether the University should benefit or whether it should claim interests. For example, an academic member of staff in the Faculty of Engineering invented a 14FTC TIMBER SPACE-FRAME CONNECTOR. This was done using personal research facilities and during his spare time. However, he used the testing facilities of the University to evaluate the engineering performance of the device. The member went on to register his patent and then informed the Registrar's office.

(b) The University has a Development Technology Center which developed a Stove called "Tsotso Stove" which uses very little firewood. The Invention became an instant hit with rural folk because of its economic use of firewood. Because the

University of Zimbabwe had not obtained a patent, the invention was copied by a well-known company which makes fireplaces. There was no help for the Researcher from the University due to lack of a clear-cut policy. The Center could not patent the invention because of the high costs associated with patenting. The Donor funding agents who are funding researchers at the Center are now encouraging collaboration between the researchers, manufacturers and end-users. However, it might not be possible to protect some of the basic ideas which emanate from projects unless there was a clear Intellectual Property Rights Policy.

(c) Recently there was a case of a former student who sued a member of the academic staff for plagiarizing a thesis the lecturer had supervised and published in a paper. Because of a lack of a clear policy the University could only refer the matter to its attorneys for advice.

(d) On the positive side, the University of Zimbabwe has a Publications Unit which is doing fairly well in publishing books and other publications for members of staff. These publications are protected by copyright. If an employee undertake a project which is funded by the Research Board and he/she publishes a book, the copyright belongs to the employer (the University of Zimbabwe). The University pays royalties of up to five percent of the sales to the researcher. There are other authors who take the initiative of looking for their own funding. In such cases, the copyright belongs to the author. However, for administrative purposes, if a person wants to reproduce a significant amount of the written work, he has to seek permission from the publisher, which is the University of Zimbabwe.

(e) The University has now established a Development office. The office's major function is to link up industry, government research establishments and the University. This is done in order to ensure that results of research are exploited wherever possible, to bring reward to the inventors as well as the University, so that research does not die in laboratories. The office is compiling a directory of expertise which will be made available to public, private and international organizations. The key to success by the Development Office will be a comprehensive Intellectual Property Rights Policy by the University of Zimbabwe.

5. In conclusion, the University of Zimbabwe currently has no clear policy which addresses the issue of ownership of Intellectual Property. We need therefore to put in place a comprehensive Intellectual Property Rights policy.

[End of document]