



WORLD INTELLECTUAL PROPERTY ORGANIZATION

GENEVA

**Guidelines on Developing Intellectual Property Policy
for Universities and R&D Organizations**

(Unedited, Advance Copy)

Foreword

These Guidelines have been developed to support universities and R&D organizations in developing countries in their efforts to handle and deal with intellectual property issues.

The main objective has been to emphasize the need for universities and R&D organizations to address, design and develop intellectual property policies. This will enable them to identify and to manage properly the IP rights in research findings and other academic works produced by university and R&D staff. As a result, it is expected that there will be greater collaboration between the university and R&D systems, and industry as a whole, thus ensuring that developing countries are laying the foundation for knowledge-based economic development.

On behalf of WIPO, I should like to commend Professor Dr. Tom P.M. Ogada, Associate Professor of Energy and Environmental Engineering, Department of Production Engineering, at Moi University in Eldoret, Kenya, for compiling/writing this publication, and also for his unrelenting efforts to promote the role and function of the IP system in education and development in various countries by linking theory with practice.

Kamil Idris
Director General

Preface

“Intellectual property has been transformed
from a sleepy area of law and business
to one of the driving engines of a
high-technology economy,”
New York Times, April 5, 1999.

Most universities and R&D institutions in developing countries are now entering a stage where they will be expected to interact more with industry as well as governmental and non-governmental organizations, in terms of consultancy, research contracts and commercialization of inventions, innovations and research findings. Collaboration between universities and industry or other bodies is not a new phenomenon. What perhaps will be new is the increased reliance of universities and R&D institutions on industry as a source of income. Industry and other public institutions will increasingly see such collaboration as a source of new technologies as well as expert support for their tasks of product, process and policy development.

In the past, a general observation has been that many universities and R&D institutions have been "amateur" in their relations with sponsors of R&D activities. One of the reasons for this is that most universities and R&D institutions do not have intellectual property policies in place with which to safeguard their interests in managing collaborative research activities. Particularly sensitive are issues related to ownership, disclosure and the distribution of income in the event of an invention being commercialized.

The objective of this booklet is to explain the intellectual property policy (IPP) needs of universities and R&D institutions and to highlight the issues that may be addressed when developing an IPP. The booklet gives guidelines on how to handle various issues related to commercial exploitation of intellectual property generated by universities and R&D institutions. The issues addressed include coverage of intellectual property policy, ownership, disclosure of inventions and licensing as well as distribution of income. Whereas this booklet may not cover all aspects, it can be seen as a base with the help of which, institutions may formulate draft IP policies for presentation for discussion, enrichment and approval by their various governing organs.

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I. NEED FOR AN INTELLECTUAL PROPERTY POLICY FOR UNIVERSITIES AND R&D INSTITUTIONS

A. Current Characteristics of Most Universities and R&D Institutions in Developing Countries

1. Compared with their counterparts in developed countries and in the emerging economies of Asia and Latin America, most universities and R&D institutions in developing countries are currently faced with several problems. These include the following amongst many others:

2. There is inadequate funding of education and R&D activities by various governments. Coupled with this, most universities and R&D institutions currently do not generate much income from internal resources to supplement government funding. This unavailability of adequate funds has caused universities to find it difficult to fulfil their missions adequately and achieve their objectives, as they have lacked the funds with which to:

- provide quality training;
- purchase laboratory and research equipment, and research consumables;
- finance field attachments and practical exposure;
- finance and make available modern information and communication technology.

3. Owing to the low pay, universities and research institutions are finding it increasingly difficult to attract and retain highly qualified and motivated staff and reverse the brain-drain problem.

4. The level of transfer of knowledge from universities and R&D institutions and its utilization for the creation of national wealth is low. Consequently, the contribution of universities and R&D institutions to national development is insignificant.

5. The links between R&D institutions and industry in most developing countries are weak compared with those encountered in developed countries and even in some Asian and Latin American countries. Consequently the flow of income to universities through consultancy, research contracts and the commercialization of inventions, innovations and research findings is very low.

6. The infrastructure and facilities for R&D activities are inadequate and deteriorating further on account of lack of proper maintenance.

B. The Way Forward for R&D Institutions

7. Despite the brain drain of experts from developing countries, universities and R&D institutions are still endowed with the best-trained and best-qualified personnel. The skills of this manpower could be redirected towards consultancy and the production of innovations, invention and research findings with commercial potential.

8. Experience of universities and R&D institutions in developed countries and also some countries in Asia and Latin America has shown that significant income can be generated through consultancy, research and development from sources such as:

- ◆ royalties and fees from licensed IPRs based on staff innovations and inventions;
- ◆ consultancy services;
- ◆ research contracts;
- ◆ sponsored research;
- ◆ university owned companies and joint ventures.

9. Universities and R&D institutions in developing countries are therefore currently being urged to seek active involvement in consultancy and R&D activities as a means of:

- ◆ enhancing dissemination of knowledge and technology transfer;
- ◆ generating income for the further support of teaching and research activities;
- ◆ generating income for staff to enhance staff retention.

C. Stakeholders in the Process of Commercialization of Innovations, Inventions and Research Findings

10. There are several stakeholders in the process of commercialization of innovations, inventions and research findings. These include:

- ◆ universities and R&D institutions;
- ◆ researchers and inventors;
- ◆ inventors' research groups and departments;
- ◆ research assistants;
- ◆ students;
- ◆ postgraduate and postdoctoral fellows;
- ◆ guest researchers;
- ◆ sponsors;
- ◆ technology transfer units;
- ◆ national patent offices;
- ◆ government;
- ◆ the public.

11. Each of these stakeholders contributes in one way or another in the process of generation and commercialization of innovations, inventions and research findings. The stakeholders have their interests and expectations, which in most cases are in conflict with each other.

12. A university or R&D institution is a major stakeholder in patented and/or commercialized innovations, inventions and research findings. It contributes the following:

- ◆ the infrastructure for the researcher or inventor to operate in;
- ◆ the researcher's salary;
- ◆ the funds for research;
- ◆ the goodwill in the name of the institution, which is equally important, not only for obtaining sponsorship and research contracts but also during the process of commercialization of the innovations and inventions.

13. The successful negotiation of contracts requires skills that not all researchers can be expected to possess; technology transfer units are required to provide a central and professional service in most institutions. However, since it is normally the academic and research staff who make the initial contact with a company or other sponsoring agency regarding a potential research collaboration or contract, it is important that research staff are aware of the key points to be addressed in discussing or negotiating a collaborative project.
14. The research activities are undertaken in most cases with the support of research assistants, students, guest researchers or postdoctoral fellows. For their contribution, this category of researchers would expect financial rewards as well as unrestricted publication and utilization of the knowledge acquired.
15. In the case of a major project, a member of a given research group or department may be temporarily released from teaching or other activities to permit concentration on the project. As a result, other members of the group may need to be compensated for their extra effort.
16. The researcher's publication needs must be safeguarded for the sake of his professional and career development, but potential innovations and research findings must be guarded against "premature disclosure," which may jeopardize the patentability and commercial exploitation of an invention.
17. An industry may provide employment for a research assistant who, together with a university researcher, has been involved in the development of an invention or innovation with commercial potential. In that case the industry could acquire the technology free of charge.
18. The sponsor, whether government, industry or institution, provides funds for research and development. Sometimes it will also provide research facilities and may also participate in joint research and development. For that the sponsor may expect ownership of the intellectual property generated and/or unrestricted utilization of the knowledge acquired.
19. The licensee is the industry or institution that purchases the license for a patented invention. It pays for the technology and therefore may expect absolute rights in it.
20. The government provides funds for infrastructure, research and other services including funding of the operations of the university or R&D institutions. It therefore expects that any invention, innovation and research findings, arising from the institution would be used for the development of the country and that no useful inventions would be kept unutilized, through unfair monopoly of ownership.
21. For effective and efficient commercialization of innovations, inventions and research findings, R&D institutions may require technology transfer units. The technology transfer center may be expected to undertake patent searches to assess the novelty of innovations, pay the cost of processing patent applications and take care of the marketing of the invention and its commercialization, as well as the negotiation of the licenses and royalties. For this the unit may expect the costs incurred as well as some management fees to be refunded.

D. Objectives of an Intellectual Property Policy for Universities and R&D Institutions

22. Intellectual property policy should bring harmony to the conflicting interests of all the stakeholders in the generation and commercialization of a patent. Universities and R&D institutions should be dedicated to teaching and research, and to the dissemination of all new knowledge generated. The basic goal of an intellectual property policy should therefore be:

- ◆ to provide for the intellectual property generated at the institution;
- ◆ to promote the progress of science and technology;
- ◆ to ensure that discoveries, inventions and creations generated by staff and students are utilized in ways most likely to benefit the public.

23. In general, an intellectual property policy should aim to achieve the following:

- ◆ creation of an environment that encourages and expedites the dissemination of discoveries, creations and new knowledge generated by researchers for the greatest public benefit;
- ◆ protection of the traditional rights of scholars to control the products of their scholarly work;
- ◆ ensuring that the commercial results, financial or other, are distributed in a fair and equitable manner that recognizes the contributions of the inventors and the institution as well those of as any other stakeholders;
- ◆ ensuring that both intellectual property and other products of research are made available to the public through an efficient and timely process of technology transfer;
- ◆ promotion, preservation, encouragement of and assistance to scientific investigation and research;
- ◆ establishment of standards for determining the rights and obligations of a university or R&D institution, the creators of intellectual property and their sponsors, with respect to inventions, discoveries and works created at the institution;
- ◆ encouragement of, assistance to and the provision of mutually beneficial rewards for a university or R&D institution and its members who transfer intellectual property to the public through commercialization and licensing;
- ◆ ensuring compliance with applicable laws and regulations and enabling a university or R&D institution to secure sponsored research funding at all levels of research;
- ◆ ensuring that institutions are aware of the different IP systems in place in the countries where the acquisition of IP rights is sought;

E. Issues to be addressed by an Intellectual Property Policy

24. In order to harmonize the various conflicting interests of stakeholders and achieve broad-based objectives, an intellectual property policy for universities and R&D institutions should address some of the following issues:

- ◆ coverage of intellectual property policy;
- ◆ ownership of intellectual property;
- ◆ disclosure of intellectual property;
- ◆ marketing, commercialization and licensing of patents;
- ◆ distribution of income;
- ◆ rights and obligations of an inventor and the institution;
- ◆ other pertinent issues.

II. COVERAGE OF INTELLECTUAL PROPERTY POLICY

A. Intellectual Property Rights

25. Universities and R&D institutions need to define intellectual property broadly, and their policies need to be comprehensive in their coverage and holistic in their approach. However, depending on the direction of R&D activities, each institution should decide on the type of intellectual property to be included in its intellectual property policy.

26. The following are the types of intellectual property that may be considered by a university or R&D institution in its development of an intellectual property policy:

- ◆ patents;
- ◆ utility models;
- ◆ industrial designs;
- ◆ copyright in literary works;
- ◆ geographical indications;
- ◆ trade and service marks;
- ◆ new plant varieties;
- ◆ trade secrets.

B. Patents

27. A patent is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem. The protection is granted for a limited period, usually 20 years (as stipulated in the TRIPS agreement). The patent is a title of ownership.

28. Patent protection means that the invention cannot be made, used, distributed or sold on a commercial scale without the patent owner's consent. These patent rights are usually enforced in a court, which in most systems holds the authority to stop patent infringement. Conversely, a court can also declare a patent invalid where it is successfully challenged by a

third party. On registration and the grant of rights, annual fees are charged by the relevant authorities to maintain them.

29. A patent does not give its owner the positive right to use the patented invention. Third parties may have to be requested. A patent owner has the right to decide who may or may not use the patented invention throughout the period during which the invention is protected. The patent owner may give permission to other parties, or license them, to use the invention on mutually agreed terms. The owner may also sell the right to the invention to someone, who then becomes the new owner of the patent.

30. Patents are granted only country by country, some regionally, and may also be used in non-patented territories. Once a patent expires, the protection ends, and the invention becomes part of the public domain, in the sense that the owner no longer holds exclusive rights in it, and it becomes available for commercial exploitation, free of charge, by others.

C. Industrial Designs

31. An industrial design is the ornamental or aesthetic appearance of an article. The design may consist of three-dimensional features of the article, such as its shape or surface, or of two-dimensional features such as patterns, lines or color. Industrial designs are embodied in a wide variety of products of industry and handicraft, from technical and medical instruments to watches, jewelry and other luxury items, from household ware and electrical appliances to vehicles and architectural structures and from textile designs to leisure goods.

32. To be protected under most national laws, an industrial design must appeal to the eye. This means that it is primarily of an aesthetic nature, and does not protect any technical features of the article. Industrial designs are what make an article attractive and appealing and thereby add to its commercial value and increase its marketability. When an industrial design is protected, the owner - the person or entity that has registered the design - is assured of an exclusive right against unauthorized copying or imitation of the design by third parties, and in some countries (like in the European Union), is even protected in an absolute sense, like a patent against unauthorized use by others. Industrial designs can be relatively simple and inexpensive to develop, and they are easily accessible to small and medium-sized enterprises as well as to craftsmen, in both industrialized and developing countries. In most countries an industrial design must be registered in order to qualify for protection under industrial design law. The duration of protection varies from country to country and may be as long as 25 years (like in the European Union).

D. Trademarks

33. A trademark is a distinctive sign that identifies certain goods or services as those produced or provided by a specific person or enterprise. The system helps consumers identify and purchase a product or service because its nature and quality, indicated by its unique trademark, meets their needs. A trademark affords protection to the owner of the mark by ensuring his exclusive right to use it to identify goods or services, or to authorize another to use it against payment. The period of protection varies, but a trademark can be renewed indefinitely beyond the time limit on payment of additional fees. Trademark protection is enforced by the courts, which in most systems have the authority to block trademark

infringement. In a larger sense, trademarks promote initiative and enterprise worldwide by rewarding the owners of trademarks with recognition and financial profit. Trademark protection also hinders the efforts of unfair competitors, such as counterfeiters, to use similar distinctive signs to market inferior or different products or services. Trademarks may be one or more words, letters or numerals or a combination of all three. They may consist of drawings, symbols, three-dimensional shapes such as the outward form and packaging of goods, audible signs such as music or oral distinguishing features or smells.

34. On registration of a trademark, apart from registration fees, there are annual fees payable to the relevant institution for maintenance of the trademark rights.

35. In universities and R&D institutions, a trademark may be important where the institution owns a company and sells goods and services. For example, the University of Florida developed an electrolytic thirst quencher for use by its football teams. The formula was patented and acquired value, as did the trademark (Gatorade). The patent expired after 17 years but the trademark remained in force and continued to produce income for the university.

E. Utility Models

36. In general terms, a utility model is an invention that does not meet all the requirements of patentability but has an industrial use. The inclusion of utility models into the intellectual property system in some countries has the primary objective of nurturing the rapid evolution of indigenous innovativeness, particularly in small and medium-scale enterprises and among private persons.

F. Copyright

37. Copyright is a legal term describing rights given to creators for their literary and artistic works. The kinds of work covered by copyright include literary works, such as novels, poems, plays, reference works, newspapers, computer programs, databases, films, musical compositions and choreography, artistic works such as paintings, drawings, photographs and sculpture, architectural works, advertisements, maps and technical drawings. The creators of original works protected by copyright, and their heirs, have certain basic rights. They have the exclusive right to use or authorize others to use the work on agreed terms. They can prohibit or authorize:

- ◆ its reproduction in various forms, including printed publication or sound recording;
- ◆ its public performance, as in the case of a play or musical work;
- ◆ its recording, for example on compact disc, cassette, or videotape;
- ◆ its broadcasting, whether by radio, cable or satellite;
- ◆ its translation into other languages, or its adaptation, such as that of a novel into a screenplay.

38. Many creative works protected by copyright require mass distribution and communication, and financial investment for that dissemination to take place (as in the case of publications and computer programs), so universities and R&D institutions that create an intellectual property system more often than not need to sell the rights in their works to

individuals or companies better placed to market the works in return for payment. Copyright protection also includes moral rights, including the right to claim authorship of a work, and the right to oppose changes to it that could harm the creator's reputation. The creator - or the owner of the copyright in a work - can enforce rights administratively and in the courts, by inspection of premises for evidence of production or possession of illegally made “pirated” goods related to protect works. The owner may obtain court orders to stop such activities, as well as seek damages for loss of financial rewards and recognition.

G. Trade Secrets

39. Trade secrets consist of confidential data, information or compilations used in research, business, commerce or industry. Universities and R&D institutions, government agencies, business entities and individuals may own and use trade secrets. The information may include confidential scientific and technical data and business, commercial or financial information not publicly known that is useful to an enterprise and confers competitive advantage on one having a right to use it. The secrecy of the information must be maintained to conserve its trade secret status.

40. Trade secret information may be disclosed or shared under the terms of a confidentiality agreement. Confidential information may be created in sponsored research projects. In that case the sponsor will generally require the university or R&D institution and the creator to preserve the secrecy of the information. Trade secrets in the form of know-how may be vital to the working of patented inventions and other innovations. Trade secret information may have considerable value by itself or in conjunction with other forms of intellectual property.

41. A familiar example of a trade secret is the formula for Coca-Cola. If the formula had been patented, it would no longer be a secret, as patent law requires public disclosure of the invention. Anyone who independently and legitimately discovers the secret of the Coca-Cola formula can use that discovery, and the Coca-Cola Company would have no legal means of stopping them.

42. Some universities, however, may have reservations regarding trade secrets protection, arguing that it is hard to reconcile with openness in knowledge sharing, which is part of the academic mission.

H. New Plant Varieties

43. Currently, most Universities and R&D institutions in developing countries are involved in research in areas such as crop production, livestock and animal health, forestry, fisheries and crop storage. Research efforts in these areas have led to a number of specific achievements e.g. varieties of many crops, which are capable of producing high yield, more adapted to specific farming systems, resistant or tolerant to main diseases and pests, etc. These varieties are made available to farmers through existing seed services. For each variety, descriptive data are also available. They give a brief description of the variety: origin (group, pedigree, common name, etc.), agricultural characteristics (farming system, vegetative cycle, adaptability to biotic and/or abiotic stresses, yield, grain quality,...), etc. These data facilitate the choice of a specific variety for a relevant type of farming system.

44. Under the International Convention for the Protection of New Varieties of Plants (“UPOV Convention”), an intellectual property right, namely “Plant Breeder’s Right”, can be granted to a breeder [19], if the obtained variety is considered to be new, distinct, uniform, stable and has a suitable denomination. The breeder’s right means that the authorization of the breeder is required before accomplishing some acts in respect of the propagating material of the protected variety. The UPOV Convention contains important exceptions to the breeder’s right: The use of protected varieties in subsistence farming does not require the breeder’s authorization. Protected varieties are available without the breeder’s authorization for research and plant breeding and Contracting Parties to the Convention may, within certain limits, permit farmers (other than subsistence farmers) to use for propagating purposes the product of the harvest which they have obtained from the protected variety.

45. By granting a plant breeder’s right, the development of new varieties of plants is encouraged in order to contribute to the enhancement of agricultural, horticultural and forestry productivity and, therefore, improvement of income and overall development.

III. OWNERSHIP RIGHTS

47. The reader of this Chapter should bear in mind that various national laws, which may differ with respect to the ownership of employees’ invention, govern the principles relating to ownership. The guidelines given in this Chapter are therefore intended to stimulate discussion, and should be adapted as necessary to the prevailing national law.

A. Definitions and Relevant Agreements

(a) Participation Agreement

48. As a means of enforcing an intellectual property policy, universities and R&D institutions are advised to develop and adopt a participation agreement, which confirms acceptance of the policy by employees, students and guest researchers and assigns to the university or R&D institution all rights in any intellectual property of which the university or R&D institution may assert ownership. The university or R&D institution must confirm that a valid participation agreement is on file before any of its resources are made available to individuals.

(b) Service Agreement

49. This is a contract between the university or R&D institution and a company in which the former agrees to perform certain tasks, such as evaluation, field testing or clinical trials, using protocols either directly specified by the company or developed by the university or institution, to meet very specific criteria and data requirements set by the company.

(c) Material Transfer Agreement

50. The transfer of proprietary tangible property, often-biological material, is covered by a contract called a material transfer agreement. Such contracts may cover materials coming to a university or R&D institution from industrial and other sources, or the reverse. Negotiated

terms of such agreements may cover the use of the original materials, progeny materials produced by self-replication of the original sample, and modifications of the original materials. Points of contention in negotiations include publication rights, ownership, apportionment of liability arising from hazardous materials and ownership of new inventions arising from the use of the materials.

(d) Confidentiality Agreement

51. May be a separate agreement between disclosing and recipient parties, or may be a term in a Research Contract or License Agreement. When it applies to information disclosed by a company to an employee of a university or R&D institution, the recipient employee may agree to be personally bound not to release the company's confidential information unless expressly permitted by the company. When it applies to information disclosed by an employee of a university or R&D institution to a company, it is usually meant to prevent the company from using the information without permission and to protect the patentability of any invention, or the trade value of other technology, disclosed by the member of the university or R&D institution to the company.

52. Every department or research division should be responsible for ensuring that the participation agreement, service agreement, material transfer agreement and confidentiality agreement (where and whichever applicable) are signed. In all cases, a university or R&D institution should put in place machinery to ensure that the above is done.

(e) Tangible Property

53. This is anything having a physical embodiment (e.g. cell lines, software, devices, etc.) irrespective of whether it is patentable or copyrightable.

(f) Contract

54. A legally binding mutual agreement between two or more parties in which an exchange of value (consideration) occurs, and which ties each party to certain duties covering that exchange. Those signing such an agreement must be authorized to bind the entity that they represent.

B. Claim of Ownership by a University or R&D Institution

55. A university or R&D institution would normally own any intellectual property that is made, designed, discovered or created by a member of staff, students, guest researchers etc., in the course of their employment and responsibilities or which makes significant use of the institution's resources (including institution-administered funds or R&D institution-funded time, facilities, or equipment) in connection with its development.

(a) Conception

56. This means a creation in the inventor's mind of a new and useful way of solving a problem; the act of visualizing an invention, complete in all essential detail; this occurs when a solution is formulated, not when a problem is recognized. Conception is the unequivocal mental discovery of an invention.

(b) University Resources

These may be defined as all tangible resources made available by a university or an R&D institution to inventors, including:

- ◆ office, laboratory and studio space and equipment;
- ◆ computer hardware, software and support;
- ◆ secretarial services;
- ◆ research, teaching and laboratory assistants;
- ◆ supplies and utilities;
- ◆ funding for research and teaching activities, travel and other funding or reimbursements.

57. University resources may not include salary, insurance or retirement plan contribution to or for the benefit of the inventor.

(c) Insignificant Use of University Resources

58. Every university or R&D institution is encouraged to define what does not constitute significant use of its resources. In some universities, use of library facilities, facilities available to the general public and occasional use of office equipment and office staff may ordinarily not be considered “significant use” of the institution’s facilities and equipment.

59. In addition, researchers may not be considered to have made significant use of university or R&D institution resources if:

- ◆ the inventor receives advance written approval of the proposed use from the institution;
- ◆ academic or other R&D uses of facilities and equipment have priority;
- ◆ the inventor compensates the R&D institution for the fair market value of the facilities and equipment (as actually charged by the institution to outside users);
- ◆ the inventor is not using the institution’s committed time because the activities are permitted “Individual Consulting and Outside Activities” (institutions are advised to have a policy on Individual Consulting and Outside Activities);
- ◆ the inventor does not use any institution-provided funds or institution-administered funds in connection with the activity.

(d) Ownership of Institution-Commissioned Work

60. Normally a university or R&D institution will own any intellectual property (including Exempted Scholarly Works) that is made, discovered or created by any person specifically hired or commissioned by the institution for that purpose, unless otherwise provided by written agreement between the person and the institution.

C. Claim of Ownership by a Sponsor

(a) Treatment of Intellectual Property Rights Arising from Sponsored Projects

61. Ownership of any intellectual property (including exempted scholarly works) that is made, discovered, or created in the course of research funded by a sponsor pursuant to a grant or research agreement, or which is subject to a materials transfer agreement, confidential disclosure agreement or other legal obligation affecting ownership, will be governed by the terms of the grant or agreement, as approved by the institution, although normally the institution would claim ownership.

62. Ownership of intellectual property that is made, discovered or created through funding from government would depend on the law governing intellectual property in the countries concerned. In some countries (such as the USA), while the university or R&D institution is assigned the rights in intellectual property generated in the course of government-funded research activities, the government retains the option to claim ownership under certain circumstances. In the event of the government not exercising its option and regardless of ownership, it does in most cases retain a non-exclusive, non-transferable, irrevocable, royalty-free, worldwide license on the invention or to copyrightable material produced under government sponsorship.

63. In some countries, the government owns intellectual property developed using government funds. When such contracts are in force, the R&D institution must require the employees working with such funding to assign ownership of the intellectual property to the institution for conveyance to the government.

64. Where a university or R&D institution is a joint inventor with one or more individuals from other institutions or business entities and where income is shared between the participating entities, the patents are normally jointly owned by the participating institutions, and the rights to use the invention and the distribution of royalties among the institutions is generally negotiated after confidential disclosure of the invention, but before the patent application is filed.

D. Claim of Ownership by an Individual

65. If a university cannot, or decides not to, proceed in a timely manner to patent and/or license an invention, it may reassign ownership to the inventor at the latter's request. This should be to the extent possible under the terms of any agreements that supported or related to the work.

(a) Treatment of Patents Developed through an Individual's Efforts

66. Generally the patents right in an invention made by an individual in his own time and without the use of the institution's resources belong to the inventor. In such cases the institution claims no royalties.

67. If an inventor makes, creates or discovers intellectual property without significant use of the institutions' resources, but the intellectual property closely resembles a specific research project that the inventor has conducted at the institution, it may be argued that the

intellectual property was developed using the institution's resources. Under these circumstances a conflict could arise between the institution and the inventor (or a company for whom the inventor consults) over ownership of the intellectual property. This would be particularly true when the intellectual property gained substantial commercial value. In order to avoid these potentially litigious situations, members of staff should be obliged to disclose to their institutions any intellectual property that closely resembles a specific research project at the institutions. This should be accompanied by an explanation that the intellectual property did not arise through use of the institution's resources. The institution should ask the inventor for documentation supporting the claim that there was no significant use of its resources. If the institution is satisfied, it will then give the inventor a written acknowledgement that it has no claim on ownership of that intellectual property.

(b) Conflicts of interest

68. A conflict occurs whenever two or more goals or ends cannot be pursued simultaneously, and they are in potential competition. Productive interchange between the R&D institution, the faculty, or other employees and the non-academic world may sometimes engender conflicts of interest, in which legitimate but disparate goals of the institution or of an individual employee may present difficult choices. If conflicts of interest cannot be avoided, they must be minimized. Universities and R&D institutions must develop policies and procedures for the disclosure and management of conflicts of interests.

(c) Ownership of Intellectual Property in Student Work

69. Generally students shall own any intellectual property that they make, discover, or create in the course of their research unless:

- (i) the student has received financial support from the university or R&D institution in the form of wages, salary, stipend or grant funds for the research;
- (ii) the student has made significant use of R&D institution resources (the institution-administered funds, institution-funded time, facilities or equipment) in connection with the research;
- (iii) the research has been funded by a sponsor under a grant or sponsored research agreement, or is subject to a materials transfer agreement, confidential disclosure agreement or other legal obligation that restricts ownership of the intellectual property.

(d) Theses and dissertations

70. The texts of all student theses and dissertations, and works derived from such works, are considered Exempted Scholarly Works. Therefore, the students will own copyright in the scholarly work subject to a royalty-free license to the institution to reproduce and publish. Students are normally allowed to publish their theses and dissertations unless they have agreed in writing to restrictions that preclude or delay publication.

71. University research contracts should protect the right of the faculty, students and other employees to publish the results of their work, but may allow brief delays for the filing of patent applications or other moves to protect intellectual property.

E. Surrender of Intellectual Property to an Individual

72. Should a university or R&D institution not express an interest in seeking patent protection, the institution will on request assign to the inventors the rights in the invention, subject only to sponsorship restrictions. In this case, the institutions would notify the inventor in writing of the assignment of rights. In all cases in where the invention is assigned to the inventor, the university or R&D institution will retain the right to a non-exclusive, non-transferable, irrevocable, royalty-free, worldwide license on the invention for research and educational purposes.

73. Where it is advantageous to universities and R&D institutions and the inventors, the institution may retain ownership of the invention, but give a sole license to the inventor(s).

IV. DISCLOSURE OF INVENTIONS

A. Importance of a Technology Transfer Office

74. Universities and R&D institutions should have in place a department, unit or section, with an appropriate name, such as Technology Transfer Office, Center for Technology Management, etc., responsible for the protection and commercial development of inventions and creations. The activities of such a unit should include the following:

- ◆ processing and safeguarding patent and copyright agreements;
- ◆ determination of the patentability or copyrightability (including receiving patent disclosures, undertaking patent search and completing applications for patents and copyright);
- ◆ evaluating the commercial potential of the invention;
- ◆ obtaining appropriate patent protection;
- ◆ locating suitable commercial development partners;
- ◆ negotiating and managing licenses.

75. It is highly advisable for universities and R&D institutions to develop and adopt participation agreements or Patent and Copyright Agreements to govern disclosures. Generally, all researchers should be obliged to disclose all potentially patentable inventions conceived or first put into practice either entirely or partly in the course of their institution responsibilities, or with more than incidental use of the institution's resources.

B. Importance of Invention Disclosure

76. A disclosure is typically used to give a formal description of an invention that is confidentially made by the inventor to his or her employer. An invention disclosure is a document that provides information about the inventor or inventors, what was invented, the circumstances leading to the invention and facts concerning subsequent activities. It provides the basis for determining patentability and the technical information for drafting a patent application. Such a disclosure is the first signal to the university that an invention has been made.

77. An invention disclosure is also used to report technology that cannot be patented but is protected by other means such as copyright.

C. How to Handle a Disclosure

78. Universities and R&D institutions should develop and adopt disclosure forms to assist inventors. If a university or R&D institution does not have a Technology Transfer Unit, there should be a committee responsible for receiving and processing disclosures of potentially patentable inventions.

79. The key information required on the disclosure form should include:

- ◆ invention title;
- ◆ names of the inventors;
- ◆ description of the invention;
- ◆ sponsorship, if any;
- ◆ design date and date put into practice;
- ◆ publication dates, existing or projected, if any.

80. It is important to record an invention as early as possible. The record should include a written description as complete and accurate as possible. The description should be written to allow another person reading it to comprehend and reproduce the invention. The description should be written in ink, preferably in a bound pamphlet with numbered pages. The disclosure should be understood, witnessed and signed by a non-inventor. These actions are designed to substantiate the fact that the invention was made on a certain date.

81. Submitting a disclosure is the first formal step towards obtaining proper intellectual property protection through a university or R&D institution. Inventors are strongly encouraged to submit invention disclosures early in the invention development process to avoid any problems later on. The disclosure should be submitted with a written description of the invention (explanatory drawing, data, abstracts and summaries may be sufficient). The description can be brief and is often a draft of a manuscript prepared for publication. The invention description should state what the invention is, what it does and why it appears significant. Sketches or diagrams are helpful. A description of the most relevant technology known to the inventor may be required. The written description must be in sufficient detail to permit a searcher or patent professional to comprehend the invention and to assess its patentability.

D. Premature Disclosure

82. Premature disclosure is the release of information on an invention to the public before the patent application is filed. Premature disclosure includes abstracts, poster sessions, shelved theses or even certain talks describing an invention to an open audience, even if given by someone who is eventually judged not to be the inventor. Such premature disclosure may disqualify an invention for patentability, and in most countries, it definitely does so.

E. Obligations of a University or R&D Institution During and After Invention Disclosure

83. In all cases where intellectual property is disclosed by a member of staff for possible commercialization, the institution is obliged to ascertain its commercial potential.

84. Intellectual property disclosures are normally considered confidential by the institution, so it will inform all members of the Technology Transfer Unit or Disclosure Committee and all outside experts (which it may contact) that the information contained in the disclosures is confidential, and that there should be no breach of confidentiality. The institution must endeavor to obtain written acknowledgement of such obligations from these individuals.

85. Every university should recognize that, whereas its research and teaching missions normally take precedence, universities should also encourage the development by industry of inventions and technology that resulting from the institution's research, and seek to facilitate the transfer of such technology for the use and benefit of the public.

86. Universities and R&D institutions should:

- ◆ educate their staff in intellectual property and tangible research property;
- ◆ provide support as deemed necessary or desirable;
- ◆ obtain legal protection for their intellectual property;
- ◆ facilitate the transfer of intellectual property for public use;
- ◆ develop machinery within themselves for the licensing and management of technology, including patent clearance.

87. Universities and R&D institutions should also provide legal support, as deemed necessary and desirable, for defending and protecting the interests of the institutions and creators of the intellectual property against third-party claims or unauthorized use.

88. Universities and R&D institutions should promptly report to research sponsors any intellectual property arising from such R&D activities, as required by research and licensing agreements, and applicable laws and regulations.

89. Universities and R&D institutions should, in a timely manner, return the ownership of intellectual property to its creator where they cannot, or decide not to, patent and/or license.

90. Universities and R&D institutions should provide a process for resolution of any intellectual property disputes that arise between and among the institution, sponsors and creators.

91. Universities and R&D institutions should:

- ◆ publish or advertise the technology as they deem appropriate;
- ◆ assist the creator in finding a partner for technology development, or a sponsor;
- ◆ endeavor to negotiate and manage agreements to the best advantage of the creator and the institution;
- ◆ ensure that such agreements are consistent with Intellectual property policy and guidelines.

F. Obligations of an Inventor During and After Invention Disclosure

92. The inventor of new intellectual property must thoroughly and promptly disclose all inventions, discoveries and other works that belong to the institution.
93. The inventor must provide such assistance as may be necessary, throughout the technology transfer process, to protect and effect the transfer of the intellectual property.
94. The inventor must arrange for the keeping of all records and documents that are necessary for the protection of the institution's interest in the intellectual property.
95. The inventor must abide by all commitments made in license, sponsored research and other agreements, and laws relating to privately funded research.
96. The inventor must promptly disclose all potential conflicts of interest to the university.
97. The inventor is expected to apply reasonable judgement as to whether an invention has potential for commercial marketing. If such commercial potential exists, the invention should be considered “potentially patentable”, and disclosed to the institution.
98. The inventor is obliged to disclose inventions as soon as possible and to delay public disclosure until the evaluation process is completed and a patent application has been filed. The institution must endeavor to minimize delays in publication.

G. Managing a Confidential Disclosure Agreement

99. Staff should be aware that public disclosure of an invention prior to completion of the evaluation process and the filing of a patent application may be an obstacle to patentability and will adversely affect the commercial value of the invention, consequently lessening the likelihood of the institution proceeding with the commercialization of that invention.

(a) Confidential Disclosure Agreement

100. During the evaluation period, an invention may be safely disclosed outside the institution under the protection of a Confidential Disclosure Agreement or CDA. This is because disclosures made under an appropriate CDA are not considered public disclosures, unless the recipient of the information does breach the CDA. Institutions are advised to develop and adopt CDA forms to be used by staff when the need arises, particularly when a staff member wishes to disclose an invention to an external researcher associated with a company or other profit organization, or directly to the company or organization itself. The CDA should also contain an obligation of the recipient not to use the invention, etc., for any other purposes than to evaluate it.

(b) Receiving Confidential Information from External Researchers

101. If a researcher receives confidential information from another organization (non-profit or commercial) in relation to research that he or she is conducting at the institution, the other organization may impose serious non-disclosure and non-use obligations on the confidential

information, and may claim an ownership interest in inventions, copyrightable works or materials that arise in the course of research performed with such confidential information. For this reason, only representatives of the institution are authorized to approve and sign CDAs from other organizations on behalf of it.

102. When a staff member receives confidential information in the course of sponsored research, the treatment of that information will be governed by the terms of the applicable sponsored research agreement.

V. MARKET EVALUATION AND LICENSING

A. Introduction

103. It is essential that any patentable invention be analyzed for its industrial relevance and commercial potential. The Technology Transfer Unit of a university or R&D institution should endeavor with the inventor, to answer the following questions:

- ◆ does the technology offer a cheaper and/or a better way of accomplishing something?
- ◆ are there competing technologies available and if so how much better is the invention?
- ◆ does the invention provide a technological answer to an existing problem?
- ◆ does it have the potential for creating a new market?
- ◆ how much investment, in both time and money, will be required to bring the invention to the marketplace?
- ◆ will the inventors continue to work on the invention?
- ◆ what will be the potential pay-off for a company that makes an investment in the development of the invention?

104. A license is a contract which awards to a party other than the owner of the intellectual property the right to make, use, sell or import products or services based on the owner's intellectual property. Licenses may be awarded on an exclusive or non-exclusive basis and may provide for payment of license fees, milestones, royalties, or other income to the owner of the intellectual property.

105. It is recognized that the protection of proprietary rights in the form of a patent or copyright is often necessary to encourage a company to risk the investment of its human and financial resources to develop the invention. In some cases an exclusive license may be necessary to give a company the incentive to undertake commercial development and production. Non-exclusive licenses allow several companies to exploit an invention.

106. Increasingly, products are made locally and not shipped round the world; but the ability to make them may still depend on technology and techniques patented or laboriously acquired elsewhere. Business people are prepared to pay for knowledge that they require, and they find this the most cost-effective way of developing a new business.

107. When a company buys a license, the main thing it sees itself buying is the ability to manufacture a product safeguarded by a patent, which otherwise would be illegal to use.

B. Factors to be considered when discussing a Licensing Agreement

108. The following is a checklist of items that need to be considered by universities and R&D institutions when discussing a licensing agreement:

- ◆ Particulars of the parties: names of parties; clarifying the licensee: if it is a division of a large company, if registered, addresses of the main parties;
- ◆ Definition of territory; scope and patents to be licensed;
- ◆ Obligations of the parties;
- ◆ Nature of agreement:
 - (i) agreement to grant a license;
 - (ii) know-how agreement;
 - (iii) assignment of rights;
 - (iv) limitations on use by the licensee.
- ◆ Nature of property:
 - (i) invention;
 - (ii) design;
 - (iii) know-how;
 - (iv) copyright.
- ◆ Property to be licensed or assigned, or subject of the agreement;
- ◆ Ownership of property:
 - (i) who is the owner of the property that is the subject of the agreement?
 - (ii) who is the owner of the beneficial interest in the property that is the subject of agreement?
 - (iii) what is the nature of the licensor's right in the property that is the subject of the agreement, including the right to grant licenses or other rights?
- ◆ If the licensor is the owner of the beneficial interest and is not the legal owner of the property that is the subject of the agreement, the instrument giving the licensor the right to grant a license or other right thereunder should be identified;
- ◆ It should be made clear what, if anything, will happen to future patents, designs, inventions, technical information or know-how, or improvements to any of them where:
 - (i) the licensor obtains rights in them;
 - (ii) the licensee obtains rights in them.
- ◆ Nature and extent of rights: is the party being granted:
 - ◆
 - (i) sole rights;
 - (ii) non-exclusive rights?
 - (iii) a combination of any of them for different purposes or different territories.

- ◆ Nature of the rights granted:
 - (i) manufacture;
 - (ii) use;
 - (iii) sale;
 - (iv) lease;
 - (v) territories in which rights are granted;
 - (vi) identification of the nature of rights granted for different territories.

- ◆ Is technical assistance to be given?

- ◆ In the absence of any patent or registered design, authority for the licensee to exercise rights granted in respect of property that is the subject of the agreement (this arises with know-how, technical aid, copyright, inventions or designs when industrial property protection has not been granted for some reason, for example where a patent application is still pending).

- ◆ Has either party the right to assign the agreement or benefits?

- ◆ What is the position of subsidiaries of the licensee under the agreement?

- ◆ What is the right of the licensee to grant sublicenses in respect of licensed property?

- ◆ What is to be the form of the sublicense?

- ◆ What is the licensee's responsibility in relation to acts of the sub-licensee?

- ◆ What is the licensee's responsibility for the maintenance of confidentiality with respect to know-how?

- ◆ Is the licensee to have the right to sub-contract the manufacture of articles derived from licensed property?

- ◆ Payments and royalties:
 - (i) is a down payment required, and, if so, does it have to be set off against royalties or other receipts deriving from the agreement?
 - (ii) what is the royalty rate to be paid in respect of the derived articles?
 - (iii) is a certain minimum royalty payable? If not, does there have to be a right of denunciation of the agreement if a minimum payment is not made?

- ◆ Are payments other than royalties to be made by the licensee to the licensor?

- ◆ Specify the currency in which all payments are to be made, and the reference dates for exchange rates.

- ◆ Does the licensee have to keep records of:
 - (i) the amount of derived articles dealt in?
 - (ii) sales or other commercial dealings?
 - (iii) receipts for commercial transactions involving the derived articles?
- ◆ What rights of inspection of records does the licensor have?
- ◆ What provision has to be made for the marking of articles covered by design patent protection?
- ◆ What provision has to be made for indemnification by the licensee where marking provisions are not complied?
- ◆ What provision has to be made for the protection of copyright?
- ◆ What has to be the starting date of the agreement?
- ◆ What is the duration of the agreement?
- ◆ What rights of denunciation does the licensor or the licensee have?
- ◆ Provision for denunciation on breach of the agreement or on insolvency and change of management or control of the licensor or licensee.
- ◆ Does the licensee retain any rights in the event of termination?
- ◆ Provision for the licensee to respect the validity of industrial property rights covered by the agreement.
- ◆ Exclusion of licensor's certification that the licensed property is valid.
- ◆ What happens if the property that is the subject of the agreement fails?
- ◆ Provision for certificates of renewal of industrial property.
- ◆ Provision for the licensee to endeavor to create a market for and sell derived articles.
- ◆ Provision for the licensee to take such action as may be necessary to avoid the grant of a compulsory license in respect of the industrial property.
- ◆ What happens in the event of infringement of the industrial property covered by the agreement?
- ◆ Provision for the service of notices.

- ◆ List of licensed property.
- ◆ Confidentiality.

VI. REVENUE DISTRIBUTION

A. Gross and Net Income

109. Gross income is funds obtained from the commercialization of technology under a license agreement. Gross income may include license fees, milestone payments, minimum annual royalties, earned or running royalties, equity, equipment or reimbursement of patent expenses and fees.

110. Net income is gross income less non-reimbursed R&D institution expenses for patent prosecution and licensing expenses associated with a particular license agreement (e.g. travel made expressly to negotiate a particular license agreement).

B. General Principles of Income Sharing

111. Where an invention made by an employee of an institution (using university resources) is patented and commercialized, the general principle is as shown below:

- ◆ 100% of the revenue goes to the institution until all out-of-pocket expenses associated with protection and exploitation of the patent or copyright have been reimbursed. Such expenses include fees associated with patent filing and copyright registration and any other continuing costs associated with licensing and other commercialization of the intellectual property;
- ◆ thereafter, the net income is shared between the inventor and the institution;
- ◆ the general trend is that the inventor's percentage share decreases whereas that of the institution increases as total net revenue increases. For example, one USA university gives the inventor 50% for the first \$100,000 of net revenue, 40% for the next \$300,000, 30% for the next \$600,000 and 25% for net income in excess of 100,000;
- ◆ each R&D institution will establish and review the thresholds, and revise them as necessary in the light of inflation and other economic factors in the country concerned.

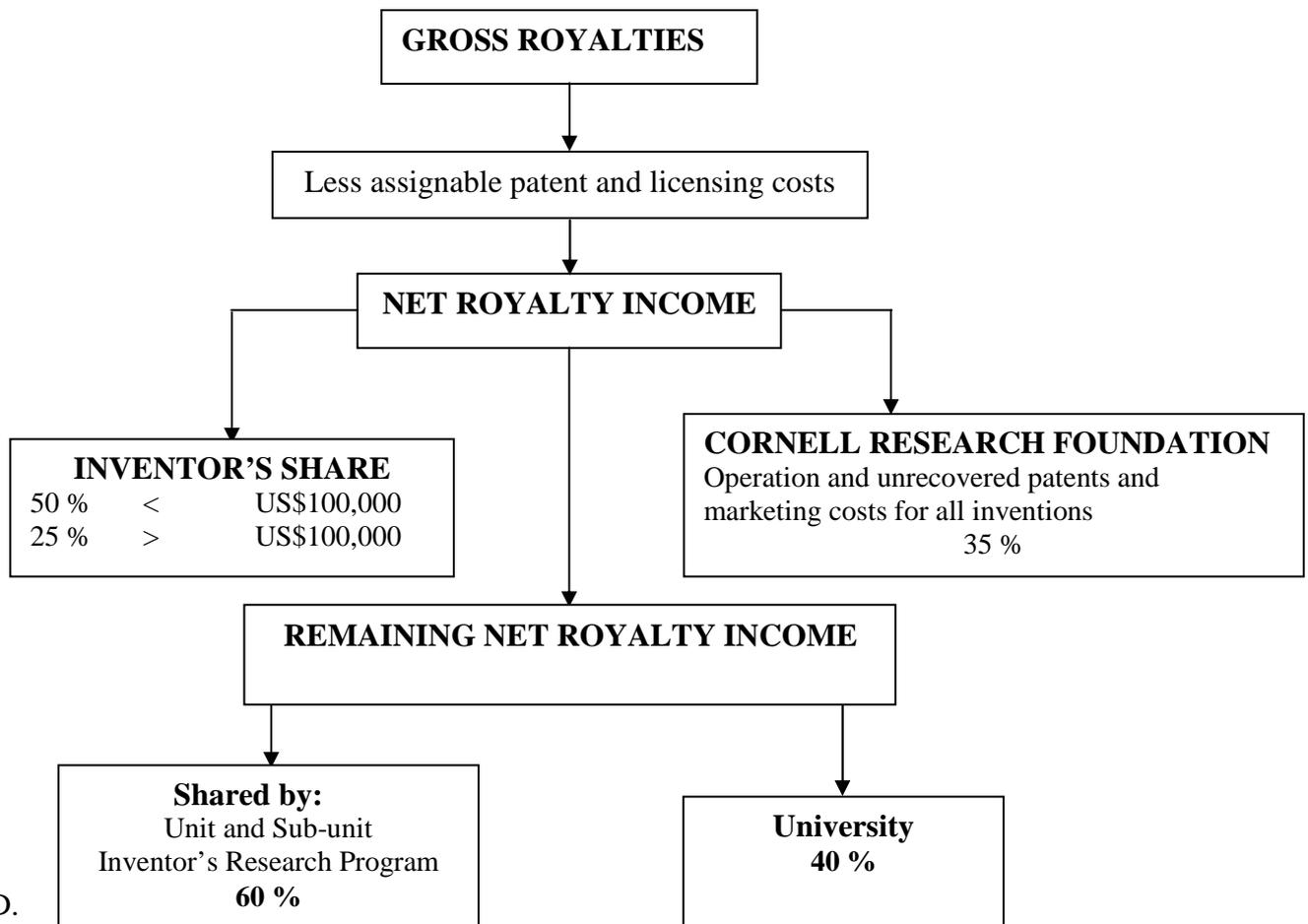
112. Each institution should define the stakeholders with whom the institution's income may be shared. These may include the following:

- ◆ an inventor's research group, faculty, campus etc.;
- ◆ a patent fund;
- ◆ an operation of technology transfer;
- ◆ research fund;
- ◆ a scholarship fund and graduate education;
- ◆ a university.

113. In the absence of a written agreement to the contrary, groups of two or more creators will receive equal portions of the creator's share of net revenue. When the creators are located on different campuses, each campus will receive the same percentage of the total campus share of net revenue as the creators located on that campus receive of the total creator share of net revenue.

C. Example from Cornell Research Foundation, USA

114. An example of a sharing principle based on that of Cornell Research Foundation of Cornell University, in the USA, is shown in the figure following:



D.

115. Equity or equity shares are shares of common or preferred stock, warrants, options, convertible instruments, units of a limited partnership, or any other instrument conveying ownership interest in a commercial venture.

116. A commercial venture is a start-up company, partnership, joint venture, corporation or any other enterprise entity that has obtained a license for R&D institution technology in exchange for equity in the enterprise entity.

- (a) How equity interests are handled

117. Institutions may negotiate for equity interests in lieu of or in addition to monetary consideration under an agreement between the institution and an external entity relating to applicable intellectual property.

118. Each inventor decides on the distribution of his or her share of equity interests or the proceeds from their sale, resulting from the transfer or commercialization of applicable intellectual property, unless legal requirements or contractual agreements dictate otherwise.

119. A university or R&D institution may own equity interests. If and when monetary proceeds are generated by the sale of equity interests, those proceeds are distributed according to agreed policies for revenue distribution.

120. A university or R&D institution may require a portion of the equity interests to be set aside that is equal in value to the direct expenses incurred by the institution in obtaining protection for the intellectual property in question (unless those expenses have been covered as part of sharing the income).

121. The inventor does not have the right to specify the distribution of equity interests where distribution is impossible or impractical.

E. Other Related Issues

(a) Material made available for use by the R&D institution

122. Material made available for use by a university or R&D institution is any invention, creation, innovation, discovery or improvement produced by a creator and enjoying intellectual property protection which the inventor voluntarily makes available for the institution's use without expectation of further compensation. In such a case the university or R&D institution retains a non-exclusive, royalty-free license to use such material, provided that significant contributions by the inventor are acknowledged. That license does not include the right to exploit the work outside the institution for profit.

(b) Treatment of licenses for non-commercial research and teaching within a university or R&D institution

123. Many staff and students experience high costs and practical inconvenience in obtaining permission to use material covered by intellectual property protection for research and teaching. Inventors are therefore encouraged to approach publishers and other persons to whom inventors assign rights in their intellectual property and request a non-exclusive, royalty-free license for their own non-commercial research and teaching, including where possible the right of anyone within the R&D institution to use that intellectual property for non-commercial research and teaching. It is important to remember that, in some national laws, acts in connection with non-commercial research and teaching are excluded from the scope of the exclusive rights conferred by intellectual property titles.

(c) Treatment of Assignment or Licensing of Relevant Intellectual Property by the Inventor

124. Universities or R&D institutions may, at their sole discretion, permit the creator or creators to assign or license intellectual property. The institution may not unreasonably withhold its consent to assignment or licensing, and may not withhold it at all unless intending to seek protection itself. Such assignments or licenses are subject to the following provisions, unless the institution waves them in writing:

- ◆ normally an institution would wish to retain for itself a royalty-free license to use the intellectual property for non-commercial research and teaching on its premises;
- ◆ institutions receive a share of all proceeds generated by commercialization of the intellectual property after the inventor has recovered documented out-of-pocket costs for obtaining legal protection. The institution's share is negotiated on a case-by-case basis.

VII. OTHER RELEVANT ISSUES

A. Consultancy

- (a) Consultancy on behalf of the university or R&D institution

125. Consultancy undertaken by staff, as agents acting for or on behalf of universities should be subject of agreements or contracts with clients, with fee income shared as appropriate among one or more members of staff, their department(s) and the institution.

- (b) Private consultancy

126. Universities and R&D institutions require a policy on private consultancy work. This is because private consultancy may have implications in terms of use of resources, time spent, professional and product liability and potential loss of revenue for the institution. Universities are advised to take professional advice:

- (i) to ensure correct notification to clients that consultancy undertaken privately by the institution's staff does not involve the university or institution; and
 - (ii) to ensure appropriate contract wording and insurance cover for R&D institution consultancy contracts.
- (c) Sponsored research

127. There is the potential for an underlying conflict and disenchantment between universities and R&D institutions on the one hand and companies and government partners on the other. Whereas the collaborating organizations will look for confidentiality and ownership of a piece of work in so far as they have paid for it, academic researchers will more probably consider it a research grant without constraints attached. The conflict may be compounded further by the academics' inclination to quote costs to sponsors that are more in keeping with a research grant application than commercially confidential work. Money for sponsored research should not be regarded as free and without conditions; the benefits for both the sponsor and the R&D institution should be recognized in the contract.

128. There is a need for universities to coordinate the management of their sponsored research activities across the various academic departments involved, to be consistent over time and to act in concert.

129. It is therefore recommended that each institution has a central office with responsibility for managing research and technology transfer interaction with external organizations, including any exploitation companies set up by the institution, and for ensuring that procedures are internally consented to and in keeping with agreements elsewhere in the R&D institution sector.

B. Contract Obligations

130. It is recommended that:

- (i) universities include in contract documents a clear title for the program of work, and in an appendix a fuller description detailing work packages, milestones and reporting intervals where appropriate;
- (ii) where milestones or review points are included in the contract, they must represent events or activities that relate to the research, and not to specific outcomes that cannot be guaranteed and would lead, in the case of failure, to the institution being obliged to continue experiments indefinitely without further financial support;
- (iii) reports be submitted as “report in format reasonably acceptable to sponsor,” not “report to the satisfaction of sponsor,” so that the sponsor is guaranteed a report of an acceptable size and nature, the contents of which reflect the work that the university or R&D institution has agreed to undertake rather than a mechanism for withholding payment if the results do not match the sponsor’s aspirations;
- (iv) universities assert that amendment of the original contract will not occur without the sponsor’s and the institution’s prior written agreement, in order to protect the institution from financial loss and to ensure that the work remains relevant to the sponsor’s objectives, academically appropriate and of interest to all parties.

C. Costing

131. It is recommended that:

- (i) universities price externally-funded work in a way that recognizes the value of the work in the market;
- (ii) universities seek a price for commissioned research that ensures full recovery of costs and also takes into account opportunity costs where rights are assigned or constraints imposed. In cases where a university or R&D institution decides to share part of the project cost, taking account of the relative benefits to the

institution and to the sponsor, the details of such a sharing arrangement should be explicitly stated and should be understood and agreed to by all concerned.

D. Confidentiality, Publication and Theses

132. It is recommended that:

- (i) universities agree to sponsors seeing the publication prior to its issue, and having the right to delay it for a specified period not exceeding 6-12 months;
- (ii) the sponsor be able allowed, in exceptional circumstances to negotiate a longer delay period with a university, but only on submission of a compelling case and with the agreement of the research staff involved;
- (iii) a university should not, under any circumstances, allow the sponsor the right to delay publication for an unrestricted period of time;
- (iv) universities consider whether their rules on theses should provide for the student assigning all copyright to the institution, and whether they provide adequately for the institution to meet its obligation to exploit the results of research undertaken by postgraduate students and research fellows;
- (v) in exceptional cases, and only where it is agreed that there will be no delay in the submission or assessment of a thesis, a university may agree, with the full consent of the student and subject to annual review, to public access to a thesis being restricted for a specified, limited period (e.g. not more than 6-12 months), to enable the student and/or the university to benefit commercially from the results of a sponsored research project.

E. Ownership of Equipment

133. Equipment purchased under a company-funded research contract or donated by the collaborating company has tended to remain the property of the university on completion of the contract. It is therefore recommended that there should be a clause in all contracts defining the ownership of equipment during the project completion.

F. Professional and Product Liability

134. It is recommended that:

- (i) the matter of which party should bear the liability for work performed in relation to particular projects be addressed in all contracts. In particular, the terms should be such that the university is absolved from liability, within the limits of the law and universities should not be expected to give indemnities;
- (ii) within those permitted limits, the contract should state that the university is not to be held responsible for any consequences of any inaccuracies or omissions (unless resulting from negligence), and that no liability attaches to it for the

effects of any product or process that may be produced or adopted by the sponsor, notwithstanding that the formulation of the product or process may be based on the findings of the projects;

- (iii) contracts entered into with parties in other countries should whenever possible be subject to national laws of countries where the institutions are located, and should also be made subject to the jurisdiction of those countries' courts, unless an acceptable arbitration clause is included;
- (iv) universities investigate the degree to which they may be exposed to liability as a result of private consultancy work undertaken by members of their staff, and they are advised to take steps to eliminate the risks by adopting positive methods of control.

The information contained in this document is based on the existing intellectual property policies of several universities and on other documents mentioned below (the high quality of these sources of information is acknowledged). For examples of IP policies, the reader may wish to consult the web pages (1-9) which follow:

1. Columbia University
http://www.stv.columbia.edu/guide/policies/app_I.html
2. Indiana University Intellectual Property Policy
<http://www.indiana.edu/~ovpr/respol/intprop.html>
3. Massachusetts Institute of Technology
<http://web.mit.edu/policies/13.1.html>
4. Oxford University
<http://www.admin.ox.ac.uk/rso/policy/intpol.shtml>
5. Stanford University
<http://snf.stanford.edu/Labmembers/IntelProp.html>
6. Washington University
<http://www.wustl.edu/policies>.
7. University of Massachusetts Intellectual Property Policy
<http://www.umass.edu/research/intelfac.html>
8. University of Sydney
<http://www.usyd.edu.au/blo/staff/manual/iplu.shtml>
9. University of Texas
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13. Sponsored University Research, Recommendations and Guidance on Contract Issues. CVCP, U.K. 1992.
14. What is an Industrial Design? Booklet by the World Intellectual Property Organization.
15. What is a Trademark? Booklet by the World Intellectual Property Organization.
16. What is a Patent? Booklet by the World Intellectual Property Organization.
17. What is a Copyright? Booklet by the World Intellectual Property Organization.
18. "breeder" means the person who bred, or discovered and developed, a variety, The person who is the employer of the aforementioned person or who has commissioned the latter's work, where the laws of the relevant Contracting Party so provide, or the successor in title of the first or second aforementioned person, as the case may be.

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The World Intellectual Property Organization (WIPO) was established by its Member States - of which there are currently 179 – as a vehicle for promoting the protection, dissemination and use of intellectual property throughout the world for economic, cultural and social development.

The Organization provides services both to its Member States and to the individuals and enterprises that are constituents of those States.

The services provided by WIPO to its Member States include the provision of a forum for the development and implementation of intellectual property policies internationally through treaties and other policy instruments.

The services provided to the private sector by WIPO include the administration of systems that make it possible to obtain protection for patents, trademarks, industrial designs and geographical indications in multiple countries through a single international procedure.

Further information about WIPO and its work can be found at the Organization's website – <http://www.wipo.int> – or by writing to the address below.

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