

Intellectual Property Rights in Industry-Sponsored University Research

A Guide to Alternatives
for Research Agreements

GOVERNMENT-UNIVERSITY-INDUSTRY
RESEARCH ROUNDTABLE

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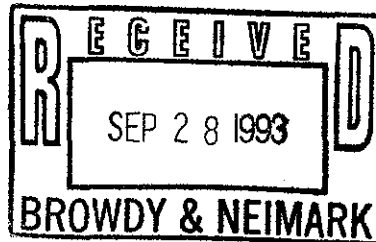
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MEMORANDUM

September 1993

TO: Interested Parties

FROM: Dick Celeste



SUBJECT: New Roundtable Document, **Intellectual Property Rights in Industry-Sponsored University Research: A Guide to Alternatives for Research Agreements**

Enclosed is a copy of the new document, **Intellectual Property Rights in Industry-Sponsored University Research: A Guide to Alternatives for Research Agreements**. This document has been prepared by a Task Force of the Government-University-Industry Research Roundtable in conjunction with the Industrial Research Institute (IRI).

The Roundtable formed a Task Force on Intellectual Property Rights in Industry-Sponsored University Research to identify the contentious issues related to intellectual property rights and develop contract language that makes it easier to negotiate agreements for industry-sponsored university research. The Task Force conducted its work in meetings, conference calls, and a workshop during which the input of the broader community was solicited. Input was also sought from the IRI University Relations Committee and the IRI University Research Relations Directors Network. The result of these deliberations is presented in the document.

The Task Force has provided us with a discussion of the relevant issues in intellectual property rights and has suggested a range of alternatives for dealing with them. These alternatives may represent starting points for negotiating potentially difficult intellectual property rights issues.

I hope you will find this document useful.

Enclosure

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A Guide to Alternatives
for Research Agreements

GOVERNMENT-UNIVERSITY-INDUSTRY
RESEARCH ROUNDTABLE

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INSTITUTE

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August 1993

The Government-University-Industry Research Roundtable

The Government-University-Industry Research Roundtable is sponsored by the National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. The Research Roundtable was created in 1984 to provide a forum where scientists, engineers, administrators, and policymakers from government, university, and industry can come together on an ongoing basis to explore ways to improve the productivity of the nation's research enterprise. The object is to try to understand issues, to inject imaginative thought into the system, and to provide a setting for discussion and the seeking of common ground. The Roundtable does not make recommendations, nor offer specific advice. It does develop options and bring all interested parties together. The uniqueness of the Roundtable is in the breadth of its membership and in the continuity with which it can address issues.

The Industrial Research Institute

The Industrial Research Institute (I.R.I.) was founded in 1938 under the auspices of the National Research Council. Its purposes are to promote, through the cooperative efforts of its members, improved, economical, and effective techniques of organization, administration, and operation of industrial research, including means for more effective interaction with other corporate functions; to generate understanding and cooperation between the academic and industrial research communities; to afford a means for industry to cooperate effectively with government in matters related to research; to stimulate and develop an understanding of research as a force in economic, industrial, and social activities; to encourage high standards in the field of industrial research; and to promote communication and interaction with industrial research organizations in other countries. I.R.I. is an association of some 260 major industrial companies that provides a means for the coordinated study of problems confronting managers of industrial research and development.

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Preface

The Government-University-Industry Research Roundtable has a longstanding interest, beginning well before my time as Chairman, in minimizing difficulties associated with the negotiation of research agreements for industry-sponsored research in universities. In 1988, a Roundtable committee, in conjunction with the Industrial Research Institute, developed a set of model agreements to streamline the negotiation process¹. The intent was that these models would decrease the time and effort needed to develop a research agreement, as well as provide a starting point for companies and universities new to negotiating agreements.

In general, the models were well received by the academic and industrial communities.² However, one concern, intellectual property rights, continues to pose significant hurdles to successful negotiation. We have had repeated requests from academic and business officials for further guidance on negotiating intellectual property rights in research agreements. And members of our Roundtable Council, particularly Richard Zare, professor of chemistry at Stanford, have maintained that cooperative relationships will continue to be strained without some improvements in this area. In response, the Roundtable formed a Task Force on Intellectual Property Rights in Industry-Sponsored University Research. The members of the Task Force are listed in Appendix I.

The charge to the Task Force was to identify the contentious issues related to intellectual property rights and develop contract language that makes it easier to negotiate agreements for industry-sponsored university research. The focus of the effort was to clarify issues that cross institutional boundaries when university-industry research agreements are negotiated. In spite of the temptation to deal with several related issues, the Task Force concentrated its efforts on this narrow focus. Therefore, this document does not address other institutional issues that may or should impact how a company or a university approaches negotiations (e.g., issues related to conflict of interest, and incentives and rewards for investigators). Neither did the Task Force address some of the more global questions that arise when discussing university-industry research relationships:

¹Simplified and Standardized Model Agreements for University-Industry Cooperative Research, Government-University-Industry Research Roundtable and Industrial Research Institute, 1988.

²Survey to Assess the Usefulness of Two Model Agreements for University-Industry Cooperative Research, Government-University-Industry Research Roundtable, 1990

- What principles should guide universities and industries that participate in cooperative research?
- What principles should guide foreign company participation in research endeavors with U.S. universities?
- What principles should guide industry participation in university research endeavors supported by federal funds?

These questions merit full consideration, but were beyond the scope and focus of this project.

I believe that this document will serve its purpose in clarifying the more difficult issues that arise in negotiating intellectual property rights in research agreements. I hope that using this document will enable university and industry research partners to spend less time negotiating contract clauses, and more time addressing what type of cooperative relationships and research projects make sense.

I am also hopeful that the tenor of this document will modify the erroneous perception I have heard from many quarters: that university-industry research relationships will generate substantial revenue for all involved. Experience just does not bear this out. For example, at MIT—viewed by many as the archetype at forging university-industry relationships, gross revenue from all licensing operations is equal to an amount which is less than 2 percent of the university's overall research budget.

University and industry experts on the Task Force emphasize the value of the research rather than the financial gain that might be realized from tangible products of the research. University-industry negotiations and relationships benefit when each party understands the value of the interaction to the other party. Then, the sometimes competing interests of the two parties can be balanced with regard to intellectual property rights, and a "win-win" agreement and relationship can be achieved.

The audiences for this document include officials from universities and industry who seek additional understanding of key intellectual property issues in industry-sponsored university research agreements and ways to deal with those issues. Senior officials from these organizations, who are not routinely involved in negotiating research agreements, may also be able to use this document as a conceptual framework for thinking about how university-industry research arrangements can work effectively. Also, anyone interested or involved in these relationships—

including small businesses and faculty members—might use this document as a primer to learn from those who have had extensive experience in these negotiations.

I am delighted with what the Task Force has accomplished. Led ably by Al Barber, Special Assistant to the Chancellor of UCLA and Associate Member of the Roundtable Council, they carried out a difficult task with remarkable spirit and commitment. Casey Kiernan, Project Director, did an outstanding job of working with Task Force members, individually and collectively, and capturing and knitting together their views to create the scenarios and contract language that are the core of the final document. I hope you find this result of their efforts to be of use.

Richard F. Celeste
Chairman, Research Roundtable
August 1993

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I. Introduction

During the past decade, research relationships between universities and industry have flourished. A number of structures for such relationships exist. A company may sponsor a specific project involving one or more investigators, or an area of research involving a university department, center, or consortium, with one or more universities participating. Alternatively, several companies may support these structures. A collaborative arrangement, in which both the company and the university are involved in the conduct of the research project, may involve individual investigators—either as a long-term arrangement or a short-term focused project—or it may include a university department, center, or consortium.

Within these structures, universities and industry have a variety of expectations and objectives which motivate industry-sponsored research.

From an industry point of view, research relationships with universities provide a window to new information, knowledge, or different approaches to increase fundamental understanding of technologies which may be of current or future interest to the company. These relationships facilitate the transfer of knowledge from universities that may lead to commercially valuable products or processes. Access to faculty expertise and students provides a pool of candidates for consulting and recruitment.

Universities, for their part, look to these research relationships as a way to enhance the potential development and application of university-based knowledge and discoveries for the public benefit. By working with industry, universities gain access to financial support for research and training; expose academic scientists to industrial approaches to research; and increase understanding of how university research can address industrial concerns. Finally, these research arrangements provide internship and employment opportunities for students.

These industry and university expectations of research relationships fit into the larger, primary objectives of each of these two sectors. Industry focuses on profit and on obligations to stockholders. Universities focus on research, education, and services. Thus, two very different cultures are interacting. Even within these individual cultures, a great deal of diversity exists in terms of objectives, policies, and requirements.

Given the range of possible structures and expectations of university-industry research relationships, it is not surprising that

each relationship may require consideration on a case-by-case basis. Terms to include in a given research agreement will depend on: the structure of the relationship; the stage of investigation relative to commercial application (e.g. basic, applied) and field of research (e.g. biotechnology, electronics, manufacturing); the type of industry (e.g. pharmaceuticals, aerospace); the existing state of knowledge and development (e.g. a newly explored research area, an already highly developed one with patents outstanding); the experience and expectations of the university and industry investigators (e.g. new to industry-sponsored research or "old hands").

Reaching agreement for the conduct of research between two or more partners takes patience, flexibility, and an understanding of each other's objectives. Some relationships have been stalled in the process of negotiation, and some have failed, because of a lack of understanding and accommodation of natural differences in culture and expectations between universities and industry. Frequently, prospective research partners need to get to know each other before a successful agreement can be reached.³

Difficulties in negotiating agreements often are the result of the perception by one party that the other party has unrealistic expectations. The extent to which partners expect to profit financially from the arrangement underlies some of these difficulties. In addition, university and industry expectations regarding diligence in exploiting intellectual property for public benefit may differ. If a commercial product emerges from the sponsored research, all involved stand to gain: the company because it has a tangible result from its investment in a high-risk endeavor; the university because its objectives of making the results of the research available for the public benefit have been realized.

Advanced knowledge, rather than a potential product, is often the most valuable result of industry-sponsored research. The obligation of the sponsor and the university to maximize the public benefit from the research results may, but does not necessarily, require that a product be sold; internal use of the research results by the sponsor may promote public benefit by increasing efficiency and reducing production costs.

³See, for example, *Research Universities as Research Partners: How to Make it Work*, Howard Schneiderman, 1987; and *New Alliances and Partnerships in American Science and Engineering*, Government-University-Industry Research Roundtable, 1986.

The primary value of the relationship is in new knowledge generated by the research that benefits the university, the company, and the public, with the added value of training students to understand industrial R&D problems. If both parties can keep this in mind throughout the negotiation process, potential conflicts may be more easily resolved. All sides win if agreement can be reached.

II. This Document

To minimize difficulties in negotiation, the Government-University-Industry Research Roundtable, in conjunction with the Industrial Research Institute (IRI), established the Task Force on Intellectual Property Rights in Industry-Sponsored University Research Agreements (see Appendix I). The Task Force was directed to provide greater understanding of the framework of university-industry research relationships, given the diversity of attitudes and perceptions; clarify the issues and complexities related to intellectual property rights; identify and describe the key issues that make negotiations difficult; and suggest a "menu" of scenarios and contract language to handle the key issues—all in an attempt to minimize or avoid unnecessary difficulties in the negotiation of industry-sponsored university research agreements.

The Task Force chose to focus its analysis specifically on sponsorship by a single company of a single university investigator project, and collaborative research between an industry scientist and a university investigator. Issues particularly related to the licensing of technology outside of a research agreement (including licenses stemming from government-sponsored research), materials transfer agreements, clinical trials, multiple sponsorship, and consortia were not explicitly addressed.

The Task Force's decision not to address these issues is not intended to minimize their importance. Although many of the issues related to multiple sponsorship and consortia and other types of relationships are the same as those considered here, these types of relationships may pose additional issues which are more complicated by the nature of the relationship. Addressing the unique features of each of these relationships is beyond the scope of this project.

The Task Force conducted its work in meetings, conference calls, and a workshop during which the input, questions, and comments of the broader community were solicited. (See a list of workshop participants in Appendix II.) Input was also sought from the IRI University Relations Committee and the IRI University Research

Relations Directors Network. The result of these deliberations follows.

This document is divided into four sections: (1) ownership of intellectual property; (2) rights to use intellectual property; (3) procedural issues; and (4) special considerations involving copyright. The term "intellectual property," as used in both the ownership and rights to use sections, includes both patents and copyrights.⁴ Special considerations for both types of intellectual property are noted as necessary. Each section presents a discussion of the relevant issues and suggests reasonable ways of dealing with them. Suggestions for specific contract language, where appropriate, have been included in sidebars throughout the text. (A fully integrated contract is not included. The reader is cautioned that the use of the language provided in this document in the sidebars in an actual contract will require redrafting for consistency of terms and approach.)

The scenarios and the contract language described in this document are intended to provide a range of alternatives, a description of issues to consider when choosing those alternatives, and ways of navigating around potentially contentious obstacles. These alternatives may be useful as starting points for negotiating some of the most obvious and potentially difficult intellectual property rights issues.

The scenarios and the contract language neither cover every conceivable issue and problem, nor are they intended to be used as a standard approach. Each issue and approach to handling it must be considered in the context of the unique nature of the relationship and the objectives of both parties in it. The negotiations are part of the "courtship" that is necessary. Up front negotiation enables each party to learn the other's objectives and expectations in order to define a successful relationship.

III. Ownership of Intellectual Property Rights

There are three primary scenarios for the ownership of intellectual property rights: (1) the university owns the intellectual property; (2) the sponsor owns the intellectual property; and (3) the university and sponsor jointly own the intellectual property. As a matter of policy, universities generally require faculty

⁴Intellectual property arising from industry-sponsored university research should not take the form of trade secrets as this form prohibits publication or presentation of research results. Trade secrets require a level of guardianship that universities are not set up to provide, especially a state institution that must comply with a Freedom of Information Act.

members and other employees to assign to the university ownership of inventions arising from research undertaken while employed at the university. Faculty members and other university employees usually sign an employment agreement to this effect. The research agreement may provide assurances to the sponsor that such an agreement has been signed.

University policies vary on whether students, research fellows, or visiting scientists are viewed as "employees" when considering ownership of intellectual property rights. Most universities require students and research fellows to assign such rights to the university if the rights are generated in the performance of the sponsored research. There is more variance, however, among university policies on ownership of intellectual property rights of visiting academic or industry scientists participating in sponsored research.

These policies should be discussed during the negotiation of research agreements in which such personnel will be participating so that both parties know what to expect.⁵

Scenario 1: The university owns the intellectual property

Most universities own inventions conceived or reduced to practice solely by their employees during the conduct of research. In general, sponsors have accepted this position subject to other considerations such as the right to use intellectual property as discussed in Section IV on page 7.

In general, universities also own software generated during the performance of a sponsored research project, if a university scientist or other employee has created the material.

Scenario 2: The sponsor owns the intellectual property

Companies from some industrial sectors take the position that the sponsor has a right to own the intellectual property since it has paid for the research. Under this scenario, the

Contract language for "Faculty members, staff, students, and research fellows"—*Each of University's faculty members, staff, students, and research fellows involved in performing investigations or providing services under this Agreement shall be obligated to University in writing, prior to such involvement, to assign his or her rights to any University Intellectual Property resulting from research under this Agreement.*

Contract language for "The university owns the intellectual property"—*"University Intellectual Property" means individually and collectively all inventions, improvements, or discoveries and all works of authorship, excluding articles, dissertations, theses, and books, which are generated solely by one or more employees of University in performance of the research agreement during the Contract Period. All rights and title to University Intellectual Property developed under the research agreement belong to University and are subject to the terms and conditions of this Agreement.*

⁵See, for example, **Ownership of University Inventions**, B. Jean Weidemier, 1992, *Journal of the Association of University Technology Managers*, Volume IV, pages 1-20.

sponsor owns the intellectual property through contract or assignment by the university or the investigators. This scenario may apply, for example, when the sponsor has made a substantial investment in the development of the technology that is the subject of the university's research, when the sponsor is likely to be the only practical user of the resulting inventions, or if the sponsor has provided proprietary information, technology, or material which is the basis of the research.

In cases when the sponsor acquires ownership of a copyright or invention, the university retains a royalty-free right to use the intellectual property for any internal research and teaching purposes, and may retain the right to sublicense to investigators for research and teaching purposes.

Company ownership of intellectual property resulting from federally sponsored research requires the permission of the federal funding agency.⁶

Scenario 3: The university and sponsor jointly own the intellectual property

For intellectual property jointly made by employees of a university and an industrial sponsor, under U.S. law, the parties have joint ownership in and the independent right to exploit the intellectual property, unless otherwise agreed.⁸ If one party wants exclusive rights to jointly-owned intellectual property, that party needs to obtain the other party's rights, by licensing or assignment, as discussed in Section IV., Scenario 3 on page 13.

Contract language for "The sponsor owns the intellectual property"—*University shall assign to Sponsor, upon request, all right, title, and interest in University Intellectual Property. No sooner than three months following termination of this Agreement, or any extension thereof, the University shall have the right to request that Sponsor make a final decision regarding such assignment. Sponsor shall then make the decision no later than sixty (60) days after the University's request. Any assignment made by the University to the Sponsor shall include the following conditions:*

Contract language for "The university and sponsor jointly own the intellectual property"—*"Joint Intellectual Property" means individually and collectively all inventions, improvements, or discoveries and all works of authorship, excluding articles, dissertations, theses, and books, which are generated by one or more employees of University and one or more employees of Sponsor in performance of the research under the Agreement. All rights and title to Joint Intellectual Property belong jointly to University and Sponsor and are subject to the terms and conditions of this Agreement.*

⁶35 USC 202 (c)(7)(A); 37 CFR 401.14 (k) Special Provisions for Contracts with Nonprofit Organizations. If the contractor is a nonprofit organization, it agrees that: (1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the contractor..

⁷The assignment might include no conditions. Alternatively, some possible terms include: royalty, diligence, reservation of rights, reversion.

⁸For copyrights, and for patents in many foreign countries, the ability to license without accountability to or permission of the other party may be limited.

IV. Rights to Use Intellectual Property Under Different Ownership Scenarios

For the purposes of discussing the rights to use intellectual property, the three scenarios used in the previous section are also used here: (1) the university owns the intellectual property; (2) the sponsor owns the intellectual property; and (3) the university and sponsor jointly own the intellectual property.

Scenario 1: The university owns the intellectual property

Under this scenario, three approaches are described to acquire license rights to use intellectual property. The document then goes on to describe the scope of the license provisions considered within each of these approaches.

A. Approaches

When the university owns the intellectual property, sponsors may wish to acquire license rights to the intellectual property, including the right to use and the right to make derivative works. These rights may be in the form of an option in which the sponsor can elect a future license, or in the form of a grant of a specific license as part of the research agreement, although these are not mutually exclusive. Three approaches for transferring these rights are discussed below: the option for a license; the grant of a license; and the right of first refusal.

Approach 1: Option for a license

The research agreement provides for an option period during which the sponsor has the sole right to elect a license, to be negotiated in good faith. While an invention disclosure or filing of a patent application is of significance, many inventions for which applications are filed are never commercialized. Thus, a sponsor will typically have insufficient information at the time of filing to reach an informed decision on whether to commit to a commercial development under a license agreement. One reason for the university to conclude a license agreement, however, is to commit the sponsor to a

Contract language for "Option for a license"—University hereby grants to Sponsor the exclusive option to elect any of the following licenses:⁹

- i) *a non-exclusive, royalty-free license to the University Intellectual Property for any internal research and development purposes*
- ii) *a non-exclusive, royalty-free license to the University Intellectual Property without the right to grant sublicenses*
- iii) *a non-exclusive, royalty-bearing license to the University Intellectual Property including the right to grant sublicenses*
- iv) *an exclusive, royalty-bearing license to the University Intellectual Property in the field of use of _____ including the right to grant sublicenses*
- v) *an exclusive, royalty-bearing license to the University Intellectual Property including the right to grant sublicenses*
- vi) *an exclusive, royalty-free license to the University Intellectual Property including the right to grant sublicenses*

This option shall extend for _____ [time] from the disclosure of intellectual property to the sponsor, OR filing of a patent application, OR notice of patent allowance, OR issuance of a patent, OR conclusion of the contract period. Terms and conditions of these licenses are to be negotiated in good faith and agreed upon between University and Sponsor.

⁹The sponsor and the university need to discuss which choices are to be included in the research agreement. For example, an exclusive license may negate the need for the grant of a non-exclusive license.

commercialization of the invention. Both parties' interests may be substantially met if they can agree on mutually satisfactory commitment, other than commercialization, during the option period. This commitment may consist of continued funding of the research program, payment of patent costs, internal company development, or other considerations, including further funding tied to a patent application or other milestones.

The beginning and length of the option period varies widely according to the nature of the anticipated intellectual property and the industry involved. In general, universities want a short option period to enable the university to seek a third party licensee in the event that the sponsor is not interested in a license. The sponsor, on the other hand, would prefer a longer option period in which to assess the commercial potential of the intellectual property.

For intellectual property which is a potential product, such as that which may arise from research funded by a pharmaceutical company, the option period generally extends for some period beyond the initial invention disclosure or filing, and may extend beyond the termination of the sponsored research agreement.

In some industries, it takes longer to determine the commercial value of the intellectual property. For example, in many areas of technology, a single patent rarely defines an entire product, in which case, the value of a single patent may not be clear until other patents emerge from a company's patent portfolio. In such cases, an extended option period, perhaps even beyond issuance of a patent, may be appropriate. Intellectual property of these types sometimes arise from research in such industries as petroleum, chemical, and heavy manufacturing, and is typically utilized with other proprietary technologies in actual commercial use.

Approach 2: Grant of a license

In some cases the research agreement grants a specific license to the sponsor to use the intellectual property and describes the extent of the permitted use, as distinguished from an option which grants only the right to obtain a license at a later time, but no present rights. Often the

Contract language for "Grant of a license"—University hereby grants to Sponsor any of the following licenses:⁹

- i) a non-exclusive, royalty-free license to the University Intellectual Property for any internal research and development purposes*
- ii) a non-exclusive, royalty-free license to the University Intellectual Property without the right to grant sublicenses*
- iii) a non-exclusive, royalty-bearing license to the University Intellectual Property including the right to grant sublicenses*
- iv) an exclusive, royalty-bearing license to the University Intellectual Property in the field of use of _____ including the right to grant sublicenses*
- v) an exclusive, royalty-bearing license to the University Intellectual Property including the right to grant sublicenses*
- vi) an exclusive, royalty-free license to the University Intellectual Property including the right to grant sublicenses*

Terms and conditions of these licenses are to be negotiated in good faith and agreed upon between University and Sponsor.

sponsor obtains a non-exclusive, royalty-free license for internal research and development in the research agreement, though more extensive license rights may also be granted in that agreement.⁹ Some sponsors may be reluctant to fund research without knowing what effect license provisions will have on the availability and cost of the eventual product. So some license provisions may be defined in the research agreement. However, by including an option for a license in the research agreement, negotiation of most license provisions may be deferred until some time after disclosure of the specific intellectual property.

Approach 3: The right of first refusal

In practice, when the sponsor elects to take a license, the parties are almost always able to reach acceptable terms for a license agreement for the intellectual property resulting from the sponsored research. If agreement cannot be reached, mediation or arbitration can sometimes be helpful. Occasionally, in spite of these efforts, agreement still cannot be achieved within the agreed upon time. When this occurs, the university has the right to negotiate with third parties. If the university is able to reach agreement with a third party on more favorable terms than were presented to the sponsor, under the right of first refusal, the sponsor has the right to accept such a license offered to a third party.

The right of first refusal may be acceptable to a university if it is contingent upon the sponsor negotiating a license agreement in good faith during the option negotiation period. Having the right of first refusal may provide the added level of comfort that a sponsor needs to justify the research investment. However, some universities are reluctant to accept the right of first refusal under any circumstances, because the practical effect may be to impede the university's ability to interest a third party in a license. For its part, the sponsor may feel that, in the absence of detailed license terms in the research and option agreement, a right of first refusal is needed to reduce the risk that the university will prematurely initiate negotiations with a third party.

Contract language for "The right of first refusal"—*If Sponsor exercises its option, the parties will thereafter negotiate in good faith to conclude a license agreement within ____ [time]. Such negotiations shall take into account factors affecting Sponsor's ability to commercialize the product profitably, including, but not limited to, terms of any third party license which may be necessary for the manufacture, use, and sale of any product relating to the field, size of market, development time and cost, product performance relative to competing products, and whether the invention is covered by a sole or joint patent.*

In the event the parties fail to reach a mutually acceptable agreement within the negotiation period, University shall be entitled to negotiate in good faith with one or more third parties a license for any University Intellectual Property and University's interest in any Joint Intellectual Property. However, upon the conclusion of such negotiations and before any license is granted to any such third party on terms more favorable than were offered to Sponsor, University shall offer Sponsor a license on the same terms. If Sponsor is willing to enter into a license with University on such terms, Sponsor shall be granted the license instead of such third party.

B. Scope

Regardless of which of the above approaches to acquiring a license is utilized, consideration of the scope of the license is the same. Below is a discussion of possible provisions to be considered, including provisions for exclusive and non-exclusive licenses, royalty rates, field of use, and inclusion of a full license agreement.

1) Exclusive and non-exclusive license provisions

Exclusive licenses are especially important in some industries, such as pharmaceuticals, biotechnology, and chemicals, whereas they may not be as important to others, such as electronics and automobile manufacturing.

If a technology is of general use or limited value, or if it is a small part of a large system, the sponsor may choose a non-exclusive license. Sponsors often expect non-exclusive rights to inventions resulting from sponsored research to be royalty-free, but companies are generally willing to pay royalties for exclusive rights.

In some industries, pharmaceuticals, for example, if a sponsor is granted a non-exclusive license, the university may have difficulty interesting other licensees. Some potential licensees may not be willing to spend large sums of money developing a product using the intellectual property that the original sponsor chose not to develop, but could subsequently use royalty free or market in an improved form.

If the sponsor elects a non-exclusive, royalty-free license to use the intellectual property solely for research purposes, the university is still able to grant an exclusive license to a third party for commercialization of the intellectual property. If the sponsor takes an exclusive license, the university must retain the right to use the intellectual property in its own research and instructional programs.

2) Royalty provisions

Generally, royalty provisions are not included in research agreements.¹⁰ When they are, the sponsor often will agree to a range of royalty rates, deferring determination of the actual rate. The pre-specification of royalty rate—or a range of rates—does not preclude discussion of other financial considerations during negotiations of the license.

Royalty rates are influenced by a number of factors including the potential market size and profitability of the licensed product, the potential cost of commercialization, the obligation to pay royalties to more than one licensor-holder for the product, the value added to the product by the university invention, and the degree of exclusivity granted by the license. The field of research, type of invention, size of the research project, prior or background rights, stage and type of research being carried out, and the nature of the potential intellectual property, also may affect the rates. Royalty payments may be capped on a cumulative, percentage, or annual basis.

The royalty base will require definition and may be based on: net sales, net earnings, bulk manufacturing costs, number of units, products, processes, value added, and profits. No contract language is provided here for royalty provisions because these and other variables must be considered.

In the case of copyrights, universities may expect companies to pay royalties for using software, for some other types of copyrightable material, and for derivative works if the software is not considered part of the "deliverables" in a sponsored project. (See the definition of derivative works in footnote 15 on page 17.) If royalties are to be paid for derivative works, the basis and extent of this obligation may be further defined in subsequent license agreements or in the initial research agreement depending on the specificity of other intellectual property terms in the agreements and the preference of the parties.

¹⁰Under Title XIII Tax-Exempt Bonds and the House and Senate amendments to it, tax-free status of public bonds may be adversely affected under certain conditions, particularly for pre-negotiated royalty rates with exclusive licenses. Because of its complexity, competent tax advice may be necessary. See the Conference Report to the Tax Reform Act of 1986, II-683ff, especially II-685-6 and II-689.

3) Field of use provisions

Licenses to intellectual property may limit the sponsor's license rights to specific fields of use. The license may allow exclusive or non-exclusive use within specific fields.

In many instances, the sponsor may wish to obtain a license for all fields of use. The university, however, may be concerned about the ability of the sponsor to fully commercialize the licensed product in every possible field of use. In fact, such full development is an ideal rarely realized in practice. Market size, development costs, and other factors often make the development of an invention for particular applications or markets unprofitable.

Contract language is generally included that commits the sponsor to use "commercially reasonable efforts" to develop the invention within the field of use. The sponsor may develop certain applications or markets through sublicensing or joint ventures.

For certain types of products, such as pharmaceuticals, a broad field of use may be critical to commercial success. For instance, successful commercialization may ultimately depend on the later discovery of a new medical use for a compound that was not considered commercially valuable during the original negotiations. Alternatively, a drug may have multiple uses that collectively make the product sufficiently profitable to justify undertaking the research. The sponsor may not be willing to gamble resources on a subset of possible applications. At the very least, the sponsor will likely feel that competitors should not benefit, at the sponsor's expense, from the research it has sponsored.

A compromise acceptable to both the university and the sponsor may be to include all fields to which the sponsor will devote "commercially reasonable efforts."

4) Inclusion of full license agreement as an appendix

In many cases both the university and the sponsor are reluctant to negotiate a full license as part of the research agreement because it is time-consuming. However, some sponsors insist on it. When the parties have sufficient information about the probability of intellectual property resulting from the research, as well as its likely commercial value, a full license agreement may be

Contract language for "Field of use provisions"—[See contract language for option for a license and grant of a license on pages 7 and 8, respectively, where fields of use may be specified.]

Contract language for "commercially reasonable efforts"—"*Commercially Reasonable Efforts*" means efforts and resources commonly used in the _____ (e.g. pharmaceutical) industry for a product at a similar stage in its product life of similar market potential taking into account the establishment of use of the product in the marketplace, the competitiveness of alternative products in the marketplace, the proprietary position of the product, the likelihood of regulatory approval given the regulatory structure involved, the profitability of the product and alternative products, and other relevant factors.

appropriate. When included, it is usually as an appendix to the research agreement. This allows the appendix to be easily modified without affecting other provisions of the agreement. Discussion of terms to be included in the full license is beyond the scope of this document.

It should be noted that some states require disclosure upon request of information in research agreements under provisions of their Freedom of Information Act. If a license agreement is appended to the research agreement, it may become publicly available and, therefore, subject to such disclosure.

Scenario 2: The sponsor owns the intellectual property

When the sponsor owns the intellectual property through contract or assignment by the university or the investigators, the university should reserve the right to continue to use the intellectual property for internal, research and teaching purposes, and may retain the right to sublicense to investigators for research and teaching purposes.

Scenario 3: The university and sponsor jointly own the intellectual property

Under this scenario, both parties can use and license the jointly owned intellectual property without obtaining permission from the other party, unless they have signed an agreement to the contrary.¹¹ If the sponsor wants exclusive rights to commercialize jointly-owned intellectual property, the decision to include option and license terms in the research agreement should be made based on the same considerations discussed above in Section IV., Scenario 1.

V. Procedural Issues

A. Delay of Publication

University researchers must be able to publish and make presentations on the results of sponsored research. Sponsors usually obtain the right to review manuscripts prior to submission for publication or oral presentation. This is done

Contract language for "Rights to use when the sponsor owns the intellectual property"—University reserves for itself a royalty-free, irrevocable license to make and use such University Intellectual Property within the University for internal non-commercial purposes only.

Contract language for "Delay of publication"—Sponsor shall be furnished copies of any proposed publication or presentation at least 45 days before submission of such proposed publication or presentation. During that time, Sponsor shall have the right to: (i) review the material for confidential information provided by the sponsor and (ii) assess the patentability of any invention described in the material. If the Sponsor decides that a patent application should be filed, the publication or presentation shall be delayed an additional seventy-five (75) days or until a patent application is filed, whichever is sooner. At Sponsor's request, confidential information provided by Sponsor shall be deleted.

¹¹As mentioned previously, for copyrights, and for patents in many foreign countries, the ability to license without accountability to or permission of the other party may be limited.

to insure that no confidential information of the sponsor is released and to assess the patentability of any invention described in the material. Commonly, sponsors have 45 days to review the material, and another 30 to 75 days to prepare and file a patent application. Thus the period allowed for review and patent application filing is generally less than 120 days.¹² Periods of time are negotiable, however, and in certain rapidly moving fields shorter periods may be appropriate.

B. Procedures for patents

1) The university owns the invention

It is customary for the university to file the patent application, and most companies are willing to reimburse the university for reasonable patenting costs if they wish to obtain a license to the patent.¹³ The sponsor usually has the right to review and comment on the application and subsequent prosecution of the case including patent expenses. When a sponsor pays for filing a patent

¹²There are two possible ways for giving the sponsor time to review research findings to be reported in the publication or presentation of dissertations, theses, and their oral defense without interfering with the student's matriculation:

- (1) Dissertations, theses, and their defense may be considered separate from other publications and presentations. The presumption would be that the university and the sponsor are working together to assure an adequate dialogue—particularly when a graduate student is participating in the research—so that, at the time of defense and publication, the sponsor has already had adequate consultation on the material. This is especially true if the student has been giving public seminars on the material as part of a job-hunting process.
- (2) The research agreement may spell out that, at the completion of the thesis, the major professor will request that the thesis be sequestered at the library until the sponsor has completed its review. This approach allows time for sponsor to review the thesis, but it does not take into account the fact that the thesis defense often is considered a public presentation, and therefore, it too would be subject to review.

¹³In many instances, the sponsor and the university may want to establish a procedure for reimbursement costs. Some procedures include: consultation and review of costs; sponsor monitoring of the preparation, filing, and prosecution of the patent application; sponsor pre-approval of outside patent counsel or of all costs; or sponsor carrying out the patent application filing and prosecution task in the university's best interest.

Usually, sponsors are closely involved in the process so that consultation and review or monitoring are typically acceptable to both parties. Some companies, however, as a matter of policy, require pre-approval of costs to be reimbursed. In the absence of such a policy, the paperwork and time associated with pre-approval can require more effort than either the university or the sponsor may want to undertake. Lastly, on occasion, the sponsor is better able to prepare and file a patent application, and it will take the lead for the university. This procedure can create difficulties, however, because of the potential for liabilities and conflict of interest.

¹⁴Once a patent application has been filed in the United States, the patent applicant has 12 months in which to file corresponding foreign Convention patents, if the U.S. filing predates any public disclosure. (Some countries, Taiwan, for example, do not allow Convention filing).

Contract language for "Patent procedures when the university owns the invention"—University shall promptly notify Sponsor of any University Intellectual Property disclosed to it by the researcher(s). Such disclosure shall be provided and maintained in confidence. Sponsor shall have up to forty-five (45) days from the receipt of the disclosure by Sponsor in which to request the filing of patent application(s).

University shall promptly file and prosecute patent applications, using counsel of University's choice after due consultation with Sponsor. University shall keep Sponsor advised as to developments with respect to application(s) and shall promptly supply copies of all papers received and filed in connection with the prosecution in sufficient time for Sponsor to comment. Sponsor's comments shall be taken into consideration.

Sponsor shall reimburse all reasonable out-of-pocket costs incurred in connection with such preparation, filing, and prosecution of patent applications. Such applications shall include all items considered by Sponsor to be of commercial interest and importance.

Within nine (9) months of the filing date of a U.S. patent application, the Sponsor shall provide to the University a written list of foreign countries in which applications should be filed.¹⁴

[Contract language continued on next page.]

application, such costs may be considered a credit toward future royalty payments. Absent an agreement by the sponsor to pay patent costs, the university should be under no obligation to file a patent application or to continue prosecution.

The research agreement may include language to allow the sponsor to discontinue paying patent costs. The consequences of such action should be addressed in negotiations.

In the case of a non-exclusive, royalty-bearing license, the patent costs may be paid by the initial licensee, who may be reimbursed on a *pro rata* basis from revenues obtained from other licensees. In the case of a non-exclusive license when the sponsor does not reimburse patent costs, the university retains the right to decide whether to apply for or maintain patents without further obligation to the sponsor.

2) The university and sponsor jointly own the invention

In the case of joint ownership of an invention, the university and the sponsor together should decide which party is responsible for filing and prosecuting the patent application. The other party retains the right to review the patent prosecution documents, and patent costs are usually shared. When the sponsor has an option to obtain an exclusive right to commercialize the joint invention, the sponsor generally pays all patent costs, with what would have been the university's share of such costs being deducted from royalties.

Contract language for "Patent procedures when the university owns the invention," continued—
If Sponsor elects to discontinue the financial support of any patent prosecution, in any country, University shall be free to continue prosecution at University's expense.

In such event, University shall have no further obligation to Sponsor in regard to such patent applications or patents in such country. In the event University does not file in a reasonable time an application on the invention, as directed and paid by Sponsor, or intends to discontinue prosecution of any patent application or maintenance of any patent, University shall so notify Sponsor and Sponsor may elect to continue prosecution and maintenance at Sponsor's sole expense.

Contract language for "Patent procedures when the university and the sponsor jointly own the invention"—*The University and Sponsor shall decide which party shall be responsible for the prosecution of patent applications on joint inventions. If Sponsor has an option to obtain an exclusive license to the joint invention, Sponsor shall be responsible for all patent costs; otherwise patent costs shall be shared. Whichever party is responsible for patent filing and prosecution will provide the other party with an opportunity to comment on papers filed in connection with the patent application. Such comments shall be taken into consideration.*

C. Confidential information

Most universities will agree not to disclose to third parties confidential information that is provided by the sponsor for use in the sponsored research. Similarly, most companies will agree to protect university confidential information. Some universities require that the university investigator(s) personally sign a confidentiality agreement to safeguard confidential information received from the sponsor, rather than the university signing. Other universities will assume this liability for persons acting within the scope of their employment.

The sponsor and the university may further agree that only confidential information directly relevant to the research project will be exchanged, unless the receiving party agrees in writing to accept additional confidential information. In practice, this concern is generally more important to the sponsor, who wants to confine disclosure to information relating to the research project to avoid potential conflicts over ownership of inventions that arise from the sponsor's own research.

Sometimes, confidential information will be disclosed by both parties during the course of the research. Rather than deal with this issue in the research agreement, the parties may enter into a separate confidentiality agreement at the time confidential information is disclosed. Otherwise, disclosures not covered by a confidentiality agreement may be considered public disclosure.

The parties should be aware of the terms of their state's Freedom of Information Act, which may limit the conditions under which confidentiality can be maintained.

Contract language for
"Confidential information"—
During the term and any subsequent extension of this Agreement, and for a period of ____ years thereafter, the parties shall not use or disclose to any third party without prior written consent of the other party, any Confidential Information of the other party. For the purposes of this Agreement, "Confidential Information" means all information which is disclosed or provided to one party to this agreement (Receiving Party) by the other party (Disclosing Party), whether in written form, or in oral or electronic form which is reduced to written form, and is designated in writing as confidential. The Receiving Party shall have no obligations with respect to any portion of such Confidential Information which:

- (a) is or later becomes generally available to the public by use, publication, or the like, through no fault of the Receiving Party; or*
- (b) is obtained without an obligation of confidentiality from a third party who had the legal right to disclose the same to the Receiving Party; or*
- (c) the Receiving Party already possesses, as evidenced by its written records, pre-dating receipt thereof from the Disclosing Party; or*
- (d) the Receiving Party independently develops without reference to Confidential Information of the Disclosing Party; or*
- (e) is required to be disclosed by law.*

[Contract language continued on next page.]

Contract language for
"Confidential information,"
continued—*During the term of the Agreement, the parties will not disclose to each other any information which is confidential or proprietary to the Disclosing Party or any third party, (1) except as is necessary for the Disclosing Party to fulfill its obligations under this Agreement, or (2) unless the Receiving Party has agreed in writing to accept such disclosure. All other communications between the parties shall be on a non-confidential basis.*

VI. Special Considerations Involving Copyright

In some research agreements, copyrightable intellectual property, which may take various forms, is treated differently than patentable intellectual property.¹⁵

¹⁵Definitions relevant to issues of copyright in research agreements:

"**Author**" means the person, using his or her own independent efforts, who creates an original work by translating an idea into a fixed, tangible expression that is entitled to copyright protection.

"**Derivative Work**" means any work substantially based on one or more preexisting works, such as revisions, annotations, elaborations, translations, or modifications, which as a whole represent an original work of authorship. A work is derivative if it would be considered infringing on the original copyright if the material or pre-existing work from which it was derived has been taken without the consent of the original copyright holder.

"**Employer**" means the hiring party who had the right to control the manner and means of the author/employee's work. Copyright protection will be afforded the employer by statute for works made by its author/employee in the regular course of business.

"**Fair Use**" means the use of a copyrighted work for purposes such as criticism, comment, news reporting, teaching, scholarship or research that do not infringe the copyright after consideration of the following factors: (1) the purpose and character of the use, including whether the use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the relative amount and substantiality of the use compared to the whole copyrighted work; and (4) the effect of the use on the marketability or value of the copyrighted work.

"**Improvements**" on a preexisting work, by their very nature, tend to be derivative works. If the work is a software program, improvements may take the following general forms: (1) error corrections—such as "maintenance" or "bug" corrections; (2) additional features—"enhancements;" or (3) a substantial rewrite of the program having new features, yet retaining "portability" from the original program.

"**Originality**" means that the work is independently created and not copied from other works. Originality of a derivative work means any variation of an original work which is sufficient to render the derivative work distinguishable from its prior work in any meaningful manner.

"**Owner**" means the person entitled to a claim of copyright. This person must be either the author or have succeeded to the right of the author (e.g., employer).

"**Work Made for Hire**" means a work prepared by an employee within the scope of his or her employment or a certain work specially ordered or commissioned, and so designated in writing.

In general, copyrights protect the original expression of ideas in a tangible form, while patents protect original ideas (inventions) that are reduced to practice. Hence, the expression of an original idea may be protected by a copyright, while an invention arising from the idea may also be protected by a patent. For example, consider a new drug XYZ that is a patentable invention.

Disclosing the composition of drug XYZ in a patent protects the drug composition. One can write an article or book about the drug, its composition, its uses, or its efficacy without infringing the patent. The author would own a copyright to his or her "literary work" on drug XYZ, and others would be prohibited from copying this article or book. However, one author's ownership of a copyright does not mean that another author cannot write a different article or book on the same subject.

A. Forms of copyright

In industry-sponsored university research, copyright issues arise over information and data; articles, dissertations, theses, and books; research reports; software; and other copyrightable works generated during the sponsored project. Each of these categories of material may require special contract language in the research agreement.

1) Information and data

Original expression of information and data developed in the performance of sponsored research, such as a report or manuscript, may be copyrightable, but alternative forms of expression or use of the information and data by other parties may not be protected by the copyright. Sponsors and universities both may have concerns about how information and data are used and how to protect potentially commercially valuable ideas they contain. In some universities, determining who owns the copyright will depend on whether the information and data are "deliverables" of the sponsored project. Many universities and sponsors have found that it is easier to deal with rights to information and data if the discussion centers on use rather than ownership.

Contract language for "Information and data"—*The Sponsor may use all information and data developed by the University under the research agreement, except as otherwise specified, that is obtained by Sponsor, in any manner without further license from or payment to the University.*

2) Articles, dissertations, theses, and books

In general, copyrights to articles, dissertations, theses, and books are not intellectual property to which the sponsor has rights under the research agreement. Many university intellectual property policies do not claim these "scholarly

works" as works for hire, nor do they require employees or students to assign these works to the university. However, these materials may be subject to review by the sponsor under the publication clause of the agreement, and the sponsor may use any information and data described in the materials.

3) Research reports

Research reports are usually required under the research agreement. Universities, on behalf of the authors of the reports, may assign copyright to the report delivered to the sponsor. The university, however, will explicitly reserve the right to continue to use data and information contained in the report. If the report is published by the sponsor, the university may require acknowledgment of the university's contribution.

Pharmaceutical companies that rely on clinical trials carried out by universities customarily claim ownership of the case-report forms. This claim is made in an effort to ease compliance with requirements of the Food and Drug Administration. However, the university may retain ownership of the copyright to the final report provided to the sponsor, and grant to the sponsor the right to use the data and information contained in the report. Clinical trials represent a special case for copyrights in research agreements, but this point is also relevant to other situations.

4) Software

Distinctions may be made between object code and source code, although both forms are copyrightable. While universities prefer to retain ownership of both types of code, some institutions may be willing to assign to the sponsor the object code specifically developed for the sponsor. It is generally assumed that the sponsor's application of the object code is not readily useful to other potential licensees. Universities, however, will generally not assign title or give an exclusive license to the source code, if this would impede their ability to use such code for other research or to make derivative works, or to use it to create and license out object code for applications other than the sponsor's.

Contract language for "Research reports"—University hereby assigns its copyright to the Research Report to Sponsor. Notwithstanding the foregoing, University reserves the right to reproduce and use any portion of the Report for non-commercial purposes.

5) Other copyrightable works

Materials that fall into this category include films, videotapes, music compositions, posters, and artwork. Such works generally are owned by the author, with the rights and acknowledgments negotiated in the research agreement.

Such works may sometimes be assigned to the sponsor, if they are considered deliverables under the research agreement. Deliverables can be treated as research reports or as intellectual property.

B. Software issues

Two issues that are of special consideration for software are derivative works and improvements.

1) Derivative works

The right to make derivative works resides solely with the copyright owner. However, the copyright owner may authorize others to make derivative works. In the case of licenses to copyrightable material, therefore, a licensee would need specific authorization from the copyright owner to develop derivative works. Generally, the university will retain the non-exclusive right to make derivative works for its own purposes, even if it grants the sponsor an exclusive license to the software and to derivative works.

If the sponsor has a license to make commercially available derivative works, it may expect to pay a royalty based on those works. In order to fairly assign royalties, it may be necessary to distinguish among enhancements, improvements, modifications, and derivative works, although these terms are not mutually exclusive.

Both parties should determine whether software used in the research incorporates software owned by others, because this software owned by others may become incorporated into new software arising from the research.

2) Improvements

Rights to improvements in software made by the university may be included in the rights granted under a

Contract language for
"Derivative works"—*In the event that Sponsor acquires a license to copyrightable University Intellectual Property, such license specifically includes the right of the Sponsor to make Derivative Works, subject to the definition of University Intellectual Property agreed to by the parties.*

research agreement, when the improvements are made within a defined period after the research agreement ends. In such cases, the university and sponsor should discuss the possibility of options and licenses to improvements. Generally, if the improvement by the university is small, a royalty-free license to the improvement is granted. If it is a substantial enhancement, such as a new algorithm for software in a major piece of equipment, a separate license may be required.

There are several different types of improvements possible.¹⁶ The university and the sponsor need to agree on the definition of "improvements" for the purposes of the research agreement.

Contract language for
"Improvements"—*Improvements*¹⁶
to copyrightable University
Intellectual Property made by
University within ____ months
following termination of this
Agreement shall be provided to
Sponsor on a non-exclusive,
royalty-free basis, subject to the
definition of University Intellectual
Property agreed to by the parties.
(For the purposes of this
Agreement, "Improvements" means
_____.)

VII. Conclusion/Summary

Four major intellectual property rights issues have been addressed in this document: (1) ownership of intellectual property; (2) rights to use intellectual property; (3) procedural issues; and (4) special considerations involving copyright. Given the different nature and culture of universities and industry, the scenarios and corresponding contract language represent compromises that university and industry representatives on the Task Force believe will provide negotiators with reasonable options for dealing with these issues and with a framework for the general consideration of intellectual property rights within research agreements.

The objective of the Task Force was to facilitate the negotiation of intellectual property rights in research agreements between universities and industry. To the extent this document is helpful in those endeavors, the Task Force will have accomplished its main objective.

¹⁶See footnote 15 on page 17.

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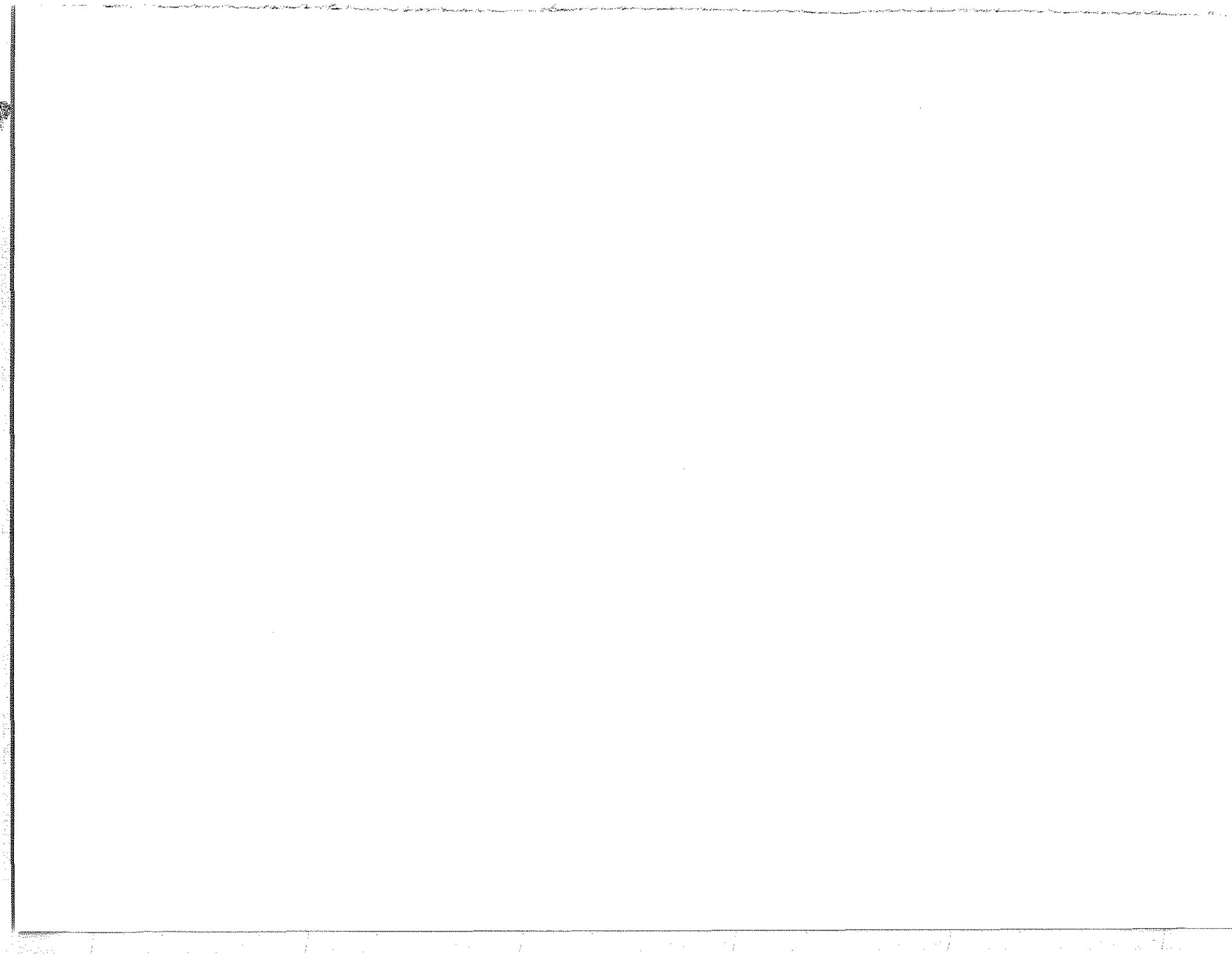
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University of Wisconsin - Madison

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Battelle Pacific Northwest Laboratories

Edward Wong*
Managing Counsel
Hewlett-Packard Company





"6. SPONSOR recognizes that an important objective of UNIVERSITY is to make available to the public the fruits of research. SPONSOR agrees to use reasonable efforts in commercializing an invention or in identifying and securing one or more licensees capable of commercializing an invention described in a patent application assigned to SPONSOR by UNIVERSITY. In the event said invention is not commercialized either by SPONSOR or through its licensees within a period of five (5) years from the filing date of said patent application, SPONSOR will assign all rights to said patent or patent application to UNIVERSITY upon request subject to an irrevocable, nonexclusive, royalty-free license to SPONSOR to make and use within SPONSOR for purposes of research and development, but not for production or sale, the subject matter of said patent or patent application."

3. The Sponsor agrees to pay the university a royalty for monetary benefits arising from the practice of the invention, with the rate to be negotiated in good faith when the invention is known.

4. The Sponsor will review contemplated oral or written publications prior to their release so as not to jeopardize either U.S. or foreign patent applications, but promises a tight timetable for this review to prevent any possible suppression of the information or unreasonable delay in publication.

Where the contract contains provisions such as the foregoing, it may in many respects have the same net effect as if the University retained title and provided an exclusive, long-term license to the Sponsor. The issue, then, is which party should control the patent in the public interest and which party must take the initiative to resolve disagreements through arbitration or other legal steps.

10.2 Other considerations

Universities which are willing as a matter of policy to assign title to industrial sponsors under appropriate terms, however, consider a number of additional factors before doing so in particular situations, such as:

- a. Whether there is any possibility of past or future support that might result in subjecting inventions to Public Law 96-517.
- b. Whether the proposed research has been supported by other commercial sponsors or is related to other projects in such a way that rights in resulting inventions might be claimed by more than one party, particularly if the research involves the reduction to practice of inventions previously conceived under other sponsorship.
- c. Whether the proposed research is likely to result in inventions which have significant applications outside the sponsor's field of interest and whether these applications will be pursued.
- d. Whether the University already has a patent position in the technology involved.

10.3 Patent clauses -- Title in sponsor

In practice, where sponsors acquire title, the terms can vary widely. A simple clause granting the sponsor title without any consideration or control by the university might be used as follows:

"Title to any invention or discovery made or conceived in the performance of this research shall vest in the Sponsor, provided, however, that Sponsor shall grant to the University an irrevocable, royalty-free, non-exclusive license for the use of such invention or discovery for the term of any patent thereon."

Consequently, a number of universities contractually agree to an additional delay or deferral for this purpose, through a clause such as the following:

"The University is free to publish the results of this research after giving a copy to the sponsor at least 30 days prior to the intended publication, except that the University agrees that it will defer the intended publication for an additional 60 days, upon the request of the Sponsor during the initial 30 day review period, in order to provide adequate time for the filing of a patent application."

c. Delay in submission

The foregoing clauses provide a delay period based on the intended date of publication, but some sponsors are uncomfortable with this since the publication date may not be in the university's control and for other reasons. In such cases, some universities are willing to state the delay in terms of "30 days prior to submission to the publisher" rather than prior to the intended date of publication.

9.0 DISCLOSURE AND PUBLICATION

Where patents are an important consideration in contracts sponsored by industry, emphasis is also placed on the filing of patent applications before patent rights are defeated by publication, as discussed in Part I of this course.

9.1 Monitoring and disclosure of inventions

Some contracts seek to protect patent rights by establishing mechanisms for (1) monitoring or reviewing the research on an on-going basis to identify inventions at an early stage and (2) prompt disclosure to the sponsor.

A sample three-part clause reflecting this approach is as follows:

"1. The Sponsor shall monitor progress of the Project through its representative on the Advisory Committee, the Program Director, and the Project Investigator, as appropriate. The primary purpose of such monitoring is to detect potentially patentable inventions as early as possible, which shall be a responsibility of the Sponsor."

"2. When in the judgment of the University a Project first reaches the stage where it has produced technical developments of apparent commercial utility and the University believes that such technical developments may be patentable and have not been identified by the Sponsor through the monitoring of progress on the research, the University shall report such potentially patentable inventions to the Sponsor. Thereupon the Sponsor shall make the evaluation, exercise its election and report to the University as specified above.

"3. University shall make periodic reports to Sponsor of the results of the research and shall notify Sponsor of its intentions with respect to all patentable inventions conceived or first reduced to practice in performing the research hereunder, including its intention to file or not to file for patents and the countries to be filed in, to terminate prosecution of pending patent applications, or to discontinue the maintenance of any issued patents."

Whether or not a research project is such as to warrant this type of monitoring depends on the facts, and it may not be appropriate in some cases. In any event, where some such a mechanism is in place, the emphasis on the review of publications and journal articles as the means of disclosing patentable inventions is less and the likelihood of publication delays of the type contemplated in the following section is reduced.

to Sponsor, may take action to file or prosecute any Patent application or have issued or maintain any Patent on which Sponsor elects not to take such action. Any such election by Sponsor shall be promptly communicated to the University and in adequate time to allow the University to take such action if it so desires. Sponsor's right to a license thereunder shall not thereby be diminished.

"3. With respect to Patent applications filed and prosecuted and Patents issued or maintained by Sponsor under Paragraphs 1 and 2, the University at its own expense may designate and retain patent counsel of its own who shall be permitted to review such Patent applications and proposed responses to Patent Office actions thereon and issuance and maintenance of Patents and to consult with Sponsor's patent attorneys before Sponsor takes action thereon. However, the control of such filings, prosecutions, issuances and maintenances shall rest with Sponsor unless it elects to relinquish such control to the University under Paragraph 2 by timely written notice. The University may at any time elect by notice in writing to Sponsor to assume at University's cost those activities undertaken by Sponsor under Paragraphs 1, 2 and 3 on behalf of the University in regard to any Patent application or Patent, and Sponsor's right to a license thereunder shall not thereby be diminished."

"1. Sponsor agrees to provide university with non-binding recommendations regarding the filing, prosecution, issuance, reissuance and maintenance of all University patent rights. University shall have the sole right, in its discretion, to follow or not to follow Sponsor's recommendations. To enable Sponsor to provide its recommendations, University agrees to advise Sponsor at least 30 calendar days prior to the due date for taking any action affecting the filing, substantive amendments, issuance, reissuance and maintenance of all University patent rights.

"2. Sponsor agrees to reimburse University for one-half of its reasonable out-of-pocket patent costs (including outside patent counsel fees, search costs, filing and issue fees, and maintenance taxes) associated with the filing, prosecution, issuance, reissuance and maintenance of those Contract Patent Rights which Sponsor recommends should be filed, prosecuted, issued, reissued and maintained.

"3. If Sponsor specifically declines in writing to recommend that University file an application to obtain any Contract Patent Rights, University shall be free to proceed at its own expense and any contract patent rights obtained shall not be subject to the licenses granted to the Sponsor elsewhere in this agreement.

"4. In the event that University elects not to follow any Sponsor recommendation in favor of the filing, prosecution, issuance, reissuance and maintenance of any patent application or patent within University Patent Rights, University shall so inform Sponsor in writing at least 60 days (to the extent feasible) in advance of any statutory bar, including foreign statutory bars, or response date or the proposed date of abandonment, and Sponsor may, at its option, pursue said patent rights in the name of University. Thenceforth, Sponsor shall bear all expenses associated with obtaining such patent rights."

Where the sponsor files as contemplated above on inventions which the university elects not to pursue, there are various ways to recognize its contribution. The sponsor might be given a credit against royalties due the university from the licensing of the patent up to the total of sponsor's prosecution and maintenance costs, or royalties might be shared on a basis more favorable to the sponsor, or waived entirely. In such cases, it is also somewhat more likely that the sponsor would be given the exclusive license for the life of the patent rather than for a limited term.

In some cases where the university elects not to file, the sponsor is allowed to file in the sponsor's name, and the university would normally retain a royalty-free, non-exclusive irrevocable license to practice such invention for research purposes only. Royalties might or might not be shared. Some universities prefer this approach rather than allowing the sponsor to file in the name of the university. In the latter case, control is essentially in the sponsor, but the university might well be joined as a party to any infringement or other litigation since it retains legal

b. University ownership

The following clause reflects the philosophy that unless the university takes title to all inventions made in the performance of the research, regardless of by whom made, it could create undesirable conflicts and fragmenting of ownership. The equities and contribution of the sponsor, however, can be reflected in the setting of royalties and other licensing provisions:

"Title to any inventions made by sponsor and/or University personnel solely or jointly in the performance of the research or through the use of any facilities or resources of the University shall vest in the University, but due consideration will be given to the Sponsor's contribution in negotiating the terms of the licenses granted elsewhere under this agreement."

6. JOINT TITLE

Although most universities resist the fragmenting of ownership, some recognize a few situations in which a research sponsor might be granted joint title to inventions resulting from the research.

6.1 As an alternative to sole title

Some universities negotiate joint title as an alternative to granting the research sponsor sole title, using a clause such as the following:

"Title to any invention or discovery conceived or first reduced to practice in the performance of this research shall be jointly owned, with each party having the right to license others without accounting."

Although this may be preferable to surrendering sole title, it should be recalled, as stated in Unit 1 of this series, that each holder of joint title in an invention can do anything a sole owner could, i.e., sell or assign its joint interest to others, license others on whatever terms and conditions the joint owner deems appropriate, and do so without any responsibility to account for its actions or for its royalty income to the other joint owner.

Joint owners, however, may also agree to a coordinated approach to filing, licensing, and the treatment of royalties, and some universities, where joint title is agreed to, prefer this from the standpoint of good business and licensing practice. This type of arrangement is reflected in the sample clause which follows:

"a. Title to any invention or discovery conceived or first reduced to practice during the performance of the work under this agreement shall be jointly owned by Sponsor and the University, and each shall receive an equal undivided partial interest in such invention or discovery, and resulting foreign or U.S. patent applications thereon, and any foreign or U.S. patents issued thereon.

"b. Sponsor and the University as joint owners shall be free to grant non-exclusive licenses hereunder to anyone. Any such patent/patent applications jointly owned by the University and Sponsor shall be applied for at the joint expense of both parties, provided that each party concurs in the acquisition of such patent. If either party elects not to contribute to such expense, the other party shall receive the whole interest in such patent application/patent.

"c. Patent applications and/or patents obtained hereunder on jointly owned inventions may be licensed by the University or the Sponsor on any appropriate terms, including royalty free or on a

"And provided further that the University shall grant to the Sponsor (an option to acquire) an exclusive license to make, , have made, use and sell such invention or discovery, with the right to sublicense, at reasonable royalty rates, the term of exclusivity and the royalty rates to be negotiated at the time the invention or discovery is made (provided further, however, that this option must be exercised by Sponsor by notice in writing to the University within ___ months from the date the invention or discovery is first disclosed to the Sponsor). The parties agree that all of the terms and conditions of any such license shall be reasonable in light of then existing industry practice."

There is apparently some difference of opinion as to whether an exclusive license (or an option for one) should be granted under the research contract or negotiated only after an invention has, in fact, been identified. The more common practice is probably the granting of the exclusive license (or option) at the time the contract is negotiated, assuming that the research project, the research team, and other pertinent information is known, including any potential for conflicts in patent rights. Under umbrella agreements, where the individual projects are not known at the time the overall agreement is negotiated, the decision is more likely to be deferred. A number of other comments should be made:

a. Discretionary filing

Although not as emphatically stated as the clause in Section 5.2 above, the university is under no obligation to file on all patentable inventions, but only to grant a license for the term of "any patent thereon." Sponsors who are interested in exclusive licensing, however, are more likely to want a firmer commitment with respect to patent filing, and this is explored in Part 7.

b. Length of exclusivity and royalty rates

The sample clause above states that the term of exclusivity and the royalty rates will be negotiated at the time the invention or discovery is identified. The rationale for this approach is that only after the making of the invention can its value and potential market be ascertained.

If there are compelling reasons, however, for specifying these in advance, some universities may agree to setting the length of exclusivity and the minimum and maximum royalty rates in the contract at the outset. This can be done for example, by modifying the foregoing clause as follows:

"And provided further that the University shall grant to the Sponsor a limited term, exclusive license to make, use and sell such invention or discovery, with the right to sublicense, the term of exclusivity to be ___ years from the date of execution of the license agreement or ___ years from the date of the first commercial sale of said invention or

5. LICENSING OPTIONS

The clauses and commentary which follow cover the license rights and other options most frequently granted to industrial research sponsors by universities which retain title to resulting inventions

5.1 Disposition at university discretion

Some industrial sponsors either do not wish to acquire any patent rights, or are willing to let the university determine disposition. In such cases, a clause such as the following can be used:

"Title to inventions conceived and/or reduced to practice in the performance of this research shall vest in the University, which shall have the sole right to determine the disposition of any patents or other rights resulting therefrom in whatever manner it deems appropriate to protect the public interest and the equities of the parties."

5.2 Non-exclusive license to sponsor

For institutions which normally retain title to inventions made in the performance of industrially sponsored research, the right most frequently granted to the sponsor is an irrevocable, non-exclusive license for the life of the patent. It may be the only right granted, or it may be granted in conjunction with a limited term, exclusive license, or with an option to acquire an exclusive license. The non-exclusive license may be royalty-free, or royalty-bearing as discussed below.

A representative clause granting a non-exclusive license follows:

"Title to inventions conceived and/or reduced to practice in the performance of this research shall vest in the university, which shall have the sole right to determine the disposition of any patents or other rights resulting therefrom, provided that upon issue of any patent on any such invention, the University shall grant to the sponsor an irrevocable, royalty-free, (royalty-bearing) non-exclusive license to make, use and sell such invention, but without the right to sublicense, for the term of such invention."

There are a number of comments which should be made in connection with this type of clause.

a. Discretionary filing

As this sample clause is written, the university is under no obligation to file patent applications on resulting patents and is in a position to evaluate inventions and determine which it wishes to pursue. However, some sponsors are sufficiently concerned with patents that they would wish a firmer commitment with respect to identifying inventions and ensuring that all inventions in which either party is interested are pursued. This is covered in Part 7.

3.5 Statement of Work

Broadly defined, flexible research support is highly desirable to a university. Nonetheless, the statement of work should, insofar as possible, define in specific terms the area of research and the elements, tasks or objectives whenever patents are an important consideration. General work statements without specificity give rise to unpredictable conflicts in patent rights and obligations.

Some umbrella or institutional agreements define broad areas within which specific projects will be agreed on by the parties. In such cases, some universities avoid conflicts by including in the umbrella agreement a statement that patent rights will be negotiated in good faith once an individual project has been identified, or by agreeing that certain defined rights in inventions made in the performance of the research will be granted, but "subject to third party rights" or "to the extent the university is able to do so."

3.6 Review for potential patent conflicts

It is, of course, desirable to identify conflicts before they arise and some sponsors ask that they be informed in advance of any potential conflict. This is reasonable to a point, but is difficult where it is stated in such broad terms as "University will not enter any contracts which create any conflict in obligations" as cited above in Section 3.4.

A more manageable approach used in some major institutional research agreements is as follows:

"University's Administrative Representatives shall, prior to the execution of any and all Project Authorizations and periodically thereafter, review with the Principal Investigators the current and proposed assignments of Personnel performing research under this Agreement to determine whether said Personnel are also performing, or propose to perform, related research under any other agreement between University and a third party. University's Administrative Representatives shall discuss their findings with Sponsor's Administrative Representatives. If in the opinion of Sponsor's Administrative Representatives it is warranted, the Committee for Administration will request that University's Patent Counsel review the situation to determine whether any potential conflict exists between the obligations undertaken or proposed to be undertaken by University with respect to patentable inventions under Articles VI through IX of this Agreement, and those obligations undertaken by University with respect to such other agreement. If a potential conflict does exist, University's Patent Counsel will so report to the Committee for Administration, which will request such University Personnel to elect which of the potentially conflicting projects they choose to participate in."

3. CONFLICTING PATENT OBLIGATIONS

In negotiating patent clauses, industrial research sponsors may seek assurance that the rights they acquire are not subordinate to or in conflict with rights acquired by other sponsors in the same inventions. They may, as discussed under commingling in the previous section, wish to avoid any Federal rights which would subject the inventions to the requirements of Public Law 96-517. Whatever they may feel about Federal rights, it is quite likely that they will wish to ensure that other industrial sponsors have not already, or do not thereafter, acquire rights from partial support of the same or closely related research by the same investigators.

In order to minimize conflicts in patent obligations to industrial sponsors there are a number of matters which should be carefully considered:

3.1 Terminology

There are a variety of terms used in contracts to define the inventions to which an industrial sponsor acquires rights. These include inventions:

- resulting from
- arising from
- made
- made and conceived
- conceived and reduced to practice
- conceived and/or reduced to practice.

The most precise terms, which are words of art under patent law, are "conception" and "reduction to practice." Whether rights are based on the invention being "conceived and reduced to practice," or "conceived and/or reduced to practice," can have significantly different results, as discussed in Section 3.2.

Whichever is used, it is desirable to refer to inventions conceived or reduced to practice "in the performance of research under this agreement," or "in accordance with this agreement," or "in performance of the research set forth in the statement of work," etc. This will avoid the ambiguity of phrases such as "during the period of this agreement," "in connection with this agreement," "as a result of this agreement," etc.

3.2 Conception vs. reduction to practice

From the standpoint of the university, there are some advantages to giving an industrial sponsor rights only to inventions conceived and reduced to practice in the performance of the research contract.

2. COMMINGLING: THE CREATION OF FEDERAL RIGHTS

In Unit 2 of this series we reviewed the Public Law 96-517, and discussed the question of commingling, i.e., the acquisition of Federal rights in an invention where the conception and/or reduction to practice was supported in part from Federal funds.

It becomes important, therefore, in negotiating industrial agreements, to determine at the outset whether the contract is likely to result in inventions in which the Federal government may already have, or may in the future acquire rights.

2.1 Federal rights already acquired

It is not unusual for an industrial sponsor to support research which may involve the reduction to practice of inventions conceived under Federal sponsorship.

Where that may be the case, the industrial sponsor should be made aware of any such inventions and the nature of the Federal rights to the extent such inventions and rights have already been identified. The likelihood that there may be others not yet identified should also be evaluated. Finally, the contract should contain provisions preserving the university's right and ability to fulfill its obligations to the Federal government.

Assuming that the university is to retain title in all inventions resulting from the industrially sponsored research, Federal rights can be preserved in a number of ways:

- a. By a clause providing that "All rights granted hereunder shall be subject to Public Law 96-517 and to the constraints set forth therein."

These constraints, as discussed in Unit 2 of this series, relate to the terms of exclusive licenses, march-in rights, limits on the assignment of title, preference for domestic manufacturers, royalty-free licenses to the Federal government for government purposes, etc.

- b. By a clause providing that whatever patent rights are granted will be granted "subject to the rights of third parties," or "to the extent the University has the right to do so."

Where the university and industrial sponsor agree that the sponsor will acquire title to inventions, it is doubly important that

1. The first part of the report is a general introduction to the subject of the study.

2. The second part of the report is a detailed description of the methods used in the study.

3. The third part of the report is a discussion of the results of the study.

4. The fourth part of the report is a conclusion and a list of references.

5. The fifth part of the report is a list of appendices.

6. The sixth part of the report is a list of figures and tables.

7. The seventh part of the report is a list of abbreviations and symbols.

8. The eighth part of the report is a list of acknowledgments.

9. The ninth part of the report is a list of footnotes.

10. The tenth part of the report is a list of references.

11. The eleventh part of the report is a list of appendices.

12. The twelfth part of the report is a list of figures and tables.

13. The thirteenth part of the report is a list of abbreviations and symbols.

14. The fourteenth part of the report is a list of acknowledgments.

15. The fifteenth part of the report is a list of footnotes.

16. The sixteenth part of the report is a list of references.

17. The seventeenth part of the report is a list of appendices.

18. The eighteenth part of the report is a list of figures and tables.

19. The nineteenth part of the report is a list of abbreviations and symbols.

20. The twentieth part of the report is a list of acknowledgments.

21. The twenty-first part of the report is a list of footnotes.

22. The twenty-second part of the report is a list of references.

23. The twenty-third part of the report is a list of appendices.

24. The twenty-fourth part of the report is a list of figures and tables.

25. The twenty-fifth part of the report is a list of abbreviations and symbols.

26. The twenty-sixth part of the report is a list of acknowledgments.

27. The twenty-seventh part of the report is a list of footnotes.

28. The twenty-eighth part of the report is a list of references.

29. The twenty-ninth part of the report is a list of appendices.

30. The thirtieth part of the report is a list of figures and tables.

Introduction to
PATENT CLAUSES IN INDUSTRIAL RESEARCH AGREEMENTS

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Other such agreements have some or all of the elements described in 10.1.d. above, so that the University retains some of the same rights it would have had by retaining ownership and granting the sponsor a royalty-bearing, exclusive license with due diligence requirements and march-in rights. This type of agreement is reflected in the following clauses:

"1. UNIVERSITY shall be responsible for ensuring disclosure to SPONSOR of any and all inventions within thirty (30) days of discovery, conceiving, or finding of an invention by any investigator engaged in research activity funded by SPONSOR under this Agreement.

"2. SPONSOR shall have an additional ____-month period from the U.S. filing date in which to file counterpart patent applications covering said invention in countries foreign to the United States. SPONSOR shall provide UNIVERSITY with copies of all U.S. patent applications, Patent Office actions and amendments at the time they are filed or received by SPONSOR, and shall provide UNIVERSITY with serial number and filing date information for foreign-filed applications and with copies of all foreign patents which issue thereon.

"3. Within ninety (90) days after the filing of a patent application by SPONSOR as provided in Section 2, UNIVERSITY shall make assignment to SPONSOR of the entire right, title and interest in and to said patent application and in and to the invention or inventions described in said patent application without further compensation. In order that UNIVERSITY may accomplish said assignment, UNIVERSITY shall require each investigator engaged in research under this Agreement to execute an "Invention and Patent Assignment Agreement" form, attached hereto and made a part hereof as Appendix "B".

"4. In the event SPONSOR fails to file foreign patent applications within the periods set forth in Section 2, or having filed an application elects to discontinue prosecution of such application, SPONSOR shall upon request from UNIVERSITY assign back to UNIVERSITY all patent rights for each of those countries in which no application is filed or prosecution is discontinued. Any assignment back to UNIVERSITY from SPONSOR will be subject to a right in SPONSOR of an irrevocable, nonexclusive, royalty-free license to make and use within SPONSOR for purposes of research and development, but not for production or sale, any subject matter assigned back to UNIVERSITY.

"5. In the event of issuance to SPONSOR of a U.S. or foreign patent which issues from a patent application assigned to SPONSOR from UNIVERSITY, SPONSOR shall grant to UNIVERSITY an irrevocable, nonexclusive, royalty-free, non-transferable license to make and use the subject matter of any such patent, said license being limited to research, teaching and development activities practiced at UNIVERSITY.

1. INTRODUCTION

Of all the clauses contained in research agreements with industrial sponsors, those relating to patent rights are likely to require the most time consuming negotiations. In addition, where patents are an important consideration, clauses relating to the dissemination of research results may also be essential, since publication has a direct impact on patent rights.

Most university patent policies provide that the ownership of inventions made in the performance of a research agreement will normally vest in the university. The rationale for this and some typical implementing clauses are set forth in Part 4 of this paper.

The rationale and clauses applicable to situations in which an industrial sponsor acquires ownership to inventions are set forth in Part 10.

Before addressing these, however, the question of conflicts and commingling should be considered and this is addressed in Part 2. The discussion of commingling in Part 2 assumes that the reader is familiar with material on commingling which is contained in Unit 2 of this series, "Patent Rights under Government Contracts".

10. TITLE IN THE SPONSOR

As noted in Item 23 of the NACUBO Survey included in Unit 3 of this series, 27 universities indicated that they would permit a research sponsor to acquire ownership in inventions. In practice this occurs in a variety of ways. The sponsor may acquire title in specific inventions resulting from the research under specified circumstances, as, for example, when the university elects not to pursue an invention and the sponsor is permitted to do so in its own name. On the other hand, the research agreement may provide the sponsor with ownership to all resulting inventions. Such agreements may be an exception to the university's normal patent policy and permitted only under unusual circumstances, or it may simply be one of the alternatives which the university normally makes available where no Federal rights apply.

10.1 Rationale for sponsor acquiring title

One industrial sponsor which seeks title to inventions resulting from the research which it sponsors, argues that:

- a. The company is interested in emerging technologies that will provide the basis for new products in an intermediate time frame. The best way to achieve this objective is for the company to draft and apply for any patents which evolve from the supported research and for the company to hold title to any issued patents.
- b. The company, as opposed to the university, is in a better position to judge the commercial merit of an invention and to interpret this judgement into a sound enforceable patent.
- c. Holding title to the patent is necessary in order to justify the very large expenditures which are required to develop and commercialize the invention.
- d. When the company acquires title, the interests of the university and the public can be protected by contract provisions such as the following:
 1. Limits are placed on the time which the Sponsor has to file U.S. and foreign patents. Rights to inventions on which the Sponsor does not wish to file are returned to the University.
 2. The Sponsor agrees to commercialize patented inventions resulting from the sponsored research through internal development or through licenses within a specified time. If it fails to do so title will revert to the university.

the question of possible Federal rights in any of those inventions be thoroughly reviewed since Federal rights in an invention will preclude the granting of title. In that event, the contract should define the nature of the license rights which the sponsor will acquire when title cannot be granted.

2.2 Potential Federal rights

Some industrial sponsors are quite willing to fund research which is also being supported by a Federal sponsor and to accept the licensing constraints imposed by P.L. 96-517. In such cases the contract clauses cited above are appropriate.

Other sponsors, however, may wish to preclude the possibility of any Federal rights in inventions arising from the research, and may wish to include a clause under which the university agrees not to accept any Federal support which would constitute "commingling" and which will thereby give the Federal government an interest.

It is more common, however, for the sponsor to seek contract assurances that the University will take steps to avoid or minimize the acquisition by any other sponsor, Federal or private, of patent rights which limit or are in conflict with those acquired by the Sponsor. This is the subject of the next section.

9.2 Publication

The University's right to publish is frequently preserved by a clause of the following type:

"University is free to publish the results of this research after providing a copy of the proposed publication to the sponsor."

Where a sponsor is not particularly interested in patents or is satisfied with a license to whatever patents the university itself chooses to acquire, this clause may be adequate.

Where, however, the sponsor is interested in patents and may wish itself to pursue those which the university does not, it will usually request that the clause be modified to provide for a delay in publication to protect patent rights.

a. Delay in publication

Where sponsors wish an opportunity to review publications in order to ensure that patentable inventions are not overlooked, it is not unusual for a university to agree to delay publication for this purpose. (In addition, in situations where the university has accepted proprietary data of the sponsor as background information, this also gives the sponsor an opportunity to identify any such data which has been inadvertently included in the publication.) A typical clause might read as follows:

"The University is free to publish the results of this research after giving a copy of the proposed publication to the sponsor at least 30 days prior to the intended publication date, to allow the sponsor to review for patentable subject matter (or to ensure against the disclosure of any proprietary data of the sponsor)."

Where publication delay is long enough in practice, as is often the case with publications in professional journals, it is assumed that the parties will have time to conduct the review and do whatever is appropriate to protect patent rights.

b. Delay in publication plus extension

Because foreign patent is such that any publication of any nature prior to filing, whether oral or written, in any part of the world, may eliminate the possibility of foreign patent protection, some industrial sponsors are concerned not only that patentable subject matter be identified, but that the university secures patent protection by filing prior to publication, or allows the sponsor time to obtain such protection.

For one thing, it will avoid the conflict which could arise where rights are acquired by the sponsor on the basis of reduction to practice only. If the same research, or closely related research, involving the same personnel, had previously been funded by others, then the current sponsor may acquire rights based on reduction to practice, but a prior sponsor may already have acquired rights based solely on conception.

On the other hand, if an industrial sponsor acquires rights to an invention solely by reason of conception, and then does nothing with it, this could destroy the opportunity to get another industrial sponsor interested in sponsoring further research necessary to reduce the invention to practice.

These points notwithstanding, if it is agreed that an industrial sponsor will acquire rights based on either conception or reduction to practice, the parties will have to negotiate provisions which will deal with preexisting rights or help to avoid future conflicts, as noted in the following sections.

3.3 Limitations on rights

In order to deal with preexisting rights in third parties, a university may use the clauses already cited under Section 2.1, which provide that whatever patent rights are granted will be "subject to the rights of third parties" or to inventions made in the performance of the research "to the extent that the university has the right to do so."

As noted earlier, however, a sponsor may not wish to accept these open ended clauses without a careful review of what may be covered, and may wish to adopt some mechanisms for ensuring that third parties do not acquire such rights in the first place.

3.4 Restrictions on other funding

Some sponsors request a statement in the contract that the university will not accept support from other industrial sponsors (or any sponsor), for the specific work to be performed under the agreement. Universities generally have accepted such clauses on the theory that a sponsor should be entitled to be the sole sponsor of the particular research project once it is defined except where it is understood at the outset that the program is multiple sponsored and the funds will, in fact, be commingled.

Some industrial sponsors request the inclusion of contract language to the effect that the university will not undertake work in related areas for other sponsors, (or that the principal investigator and his research team will not do so), or that related work will not be performed for the sponsor's competitors, or that no research will be undertaken by the university (or research team) which will create a conflict in obligations.

Although provisions of the latter type undoubtedly help to reduce patent conflicts, they raise other questions of policy with which most universities have great difficulty and should be approached cautiously.

8. LICENSE TERMS AND CONDITIONS

Research contracts with industrial sponsors deal with the terms and conditions of license grants in a variety of ways.

In some cases, the contract simply states that the sponsor shall be entitled to certain licensing rights as set forth in a separate agreement. The separate agreement spells out the sponsor's license rights and/or the options it may elect. This agreement, sometimes referred to as a License Option Agreement, is then executed in conjunction with the research contract. It resembles a license agreement but the royalty rates and certain other specifics may be left for subsequent negotiation once an invention is identified.

In other cases, the sponsor's options are spelled out in the contract at a level of detail comparable to that in the option agreement. The legal effect is the same in either case, but some universities which make research contracts available as public documents, except for the business and financial details, prefer to have these details in a separate option agreement so that the research contract can be made available without editing and deletions.

In the majority of cases, however, it appears that research contracts take the middle ground and contain clauses which cover the most important rights to be granted but leave the rest of the license agreement to be negotiated when the invention is identified. In general, such research contracts will at least cover the following:

- Ownership of inventions.
- Right to non-exclusive or exclusive licenses
- Exclusive License terms: length, sublicensing obligations, performance requirements, applicability of PL 96-517, etc.

In conjunction with such contracts, the sponsor may wish to study the university's standard licensing agreement in order to anticipate whether any problems could arise later which might best be addressed at the outset.

4. TITLE IN THE UNIVERSITY - A RATIONALE

While the patent policies of educational institutions differ in a number of respects, most university policies provide that the ownership of inventions made in the performance of a research agreement will normally vest in the university. Question 23 of the NACUBO Survey reproduced in Unit 3 of this series gives some feeling for the practices of those surveyed in 1978.

4.1 Rationale for university retaining title

Universities which retain title to such inventions assert that by doing so they are in a better position to:

- a. Fulfill their obligation as a university to serve the public interest by ensuring that inventions arising from university research are developed to the point of maximum utilization and availability to the public and will not be used to the detriment of the public interest by the unnecessary exclusion of any qualified user or by any other means.
- b. Share with inventors the proceeds of royalty-bearing licenses in recognition of their inventorship and as an incentive to spend the time and effort necessary to properly disclose the invention, participate in its evaluation, assist attorneys involved in filing patent applications, and advise potential licensees.
- c. Provide the University with a share of the royalties not only to help pay the costs of the patent program, but also to support selected education and research programs in recognition of the university's investment in facilities and personnel without which such inventions would not have been possible.
- d. Minimize or facilitate the resolution of conflicts in patent rights and obligations between industrial sponsors, and between industrial and Federal sponsors where research sponsored by industry may lead to the reduction to practice of inventions conceived under Federal sponsorship. Conflicts can be minimized and the equities of the parties more effectively recognized, through licensing mechanisms, when title to the inventions is not at issue.
- e. Ensure that the university can pursue with third party licensees those applications which are of no interest to the sponsor and which might not otherwise be developed to the point of commercial availability.

ownership. Where title is in the name of the sponsor, the joining of the university in the suit is less likely to occur, unless the university is "an indispensable party" in the legal sense.

7.2 Filing by sponsor

It may, of course, be agreed from the outset that all filing of patent applications will be done by the sponsor. In some industries, companies prefer to have this done by their own lawyers whom they consider more specialized and expert in their field. Whether such lawyers will give attention to claims and fields of use not specifically within the company's area of interest can be argued.

Where it is agreed that the company will do the filing, a clause such as the following might be used; or any clause which simply reverses the approach in Section 7.1 above.

"The Company may, at its own expense and in consultation with the University, file and prosecute a patent application(s) on the invention in the United States. The Company will also select countries for the international filing of such application(s), and all filing, prosecution and maintenance costs will be the responsibility of the Company. In the event the Company elects not to take a license under such patent(s), the responsibility for such filing, prosecution and maintenance costs shall revert to the University. The University may supplement the list of countries for international filing but, unless the Company agrees to pay for the filing and prosecution in any of these additional countries, these costs will be paid by the University."

Another approach to filing by the Sponsor is reflected in the following provisions:

"1. When Sponsor has indicated its interest in a license under prospective Patent rights to an invention it shall promptly cause its patent attorneys to file and prosecute in good faith a United States Patent application on such invention. Sponsor shall also effect the filing and good faith prosecution of foreign Patent applications corresponding to the United States application in whatever countries Sponsor by written notice to the University indicates its interest in a license under prospective Patent rights.

"2. Until such time as Sponsor notifies the University in writing that it no longer has an interest in a license, or until the expiration of the time specified in Paragraph ____ during which time Sponsor has not given notice of its election to take a license, Sponsor agrees to bear the cost for filing and prosecution of Patent applications under Paragraph 1 and the issuance and maintenance of Patents thereon. Sponsor shall not be required to prosecute any such Patent application beyond the point of final rejection by the assigned Primary Examiner in the United States Patent and Trademark Office or the equivalent stage of prosecution if a foreign application. The University, at no cost or obligation or liability

b. Royalty-free or royalty-bearing

Although non-exclusive licenses granted to research sponsors have at many universities been granted royalty-free, an increasing number of universities are seeking royalty-bearing non-exclusive licenses since the non-exclusive license in the sponsor is a disincentive for other industrial companies to invest funds in developing a marketable product. This is particularly true where the sponsor has acquired license rights based solely on the conception of the invention, so that further investment would be required to reduce it to practice and develop its commercial potential, and where the sponsor is sufficiently large to capture a significant portion of the market if it entered the market on a royalty-free basis.

In addition, some universities which might normally grant a royalty-free, non-exclusive license, prefer royalty-bearing, non-exclusive licenses in situations where the sponsor is dominant in the field, or is an industrial association comprised of companies which are, in the aggregate, dominant in the field. Where a royalty-free license might aid a sponsor in maintaining market dominance, anti-trust considerations might also apply. In any event, the opportunity for granting royalty-bearing licenses to third parties may be so limited that the income to the university may be inadequate to offset the expense of seeking and maintaining patent protection and sharing royalties with the inventors.

c. Sublicensing

Under a non-exclusive license, the right to sublicense is not usually provided since it may put the university in competition with the licensee in offering attractive sublicensing terms to potential sublicensees.

5.3 Exclusive, limited-term license to sponsor

In recent years, universities which retain title to inventions resulting from sponsored research appear to be more willing than previously to provide industrial sponsors with exclusive patent licenses, where requested, and to view them as an appropriate vehicle for the effective transfer of the technology.

In most cases, the rights granted are a limited-term (less than the life of the patent), exclusive license (or an option to acquire such a license). The following clause is typical:

"Title to any invention conceived and/or reduced to practice in the performance of this research shall remain with the University, provided, however, that the University shall grant to the sponsor an irrevocable, royalty-free, (royalty-bearing) non-exclusive license to make, use and sell such invention, but without the right to sublicense, for the term of any patent thereon.

7. RESPONSIBILITY FOR FILING AND ALLOCATION OF COSTS

7.1 Filing by the university

In Sections 5.2 and 5.3, we noted that sponsors interested in exclusive licenses may also wish assurances that the university will be active in identifying inventions and pursuing patent protection on all those in which the sponsor is interested. A typical clause to this effect is the following:

"Title to inventions conceived and/or reduced to practice in the performance of this research shall vest in the university, which shall take steps to file patent applications in the United States at its expense on all patentable developments. Upon issue of any patent on any such invention, the University shall grant to the Sponsor...."

The university, however, may not wish to commit itself in advance to seeking patent protection at its own expense by filing on all inventions, whether or not they appear to have commercial potential. For that reason, it may be necessary to consider other options, such as permitting filing by the sponsor when the university elects not to, and/or providing that the sponsor share the costs. A sample clause addressing this option is as follows:

"1. University shall file or have filed in a timely manner at its own expense a United States patent application or applications on all inventions arising out of the performance of this research and shall diligently prosecute such applications. Sponsor may make a written request to the University to file a United States patent application on any invention identified to the University by the Sponsor.

"2. Where the University for any reason elects not to file such a patent application in the United States or in a foreign country, University shall notify the sponsor promptly and the Sponsor shall have the right to file such application at its own expense in the name of the University."

The foregoing clause provides that the university pays the cost when it files, whether at its own initiative or at the request of the sponsor, and the sponsor pays only for the filing which the university elects not to pursue. A somewhat different approach is reflected in the following clause, which provides that the sponsor only gets rights to inventions on which it recommends filing and for which it pays half the filing and related costs, except that if the university fails to follow the sponsor's recommendation, the sponsor may pursue patent rights at its own expense in the university's name.

discovery, whichever occurs first, and at reasonable royalty rates to be negotiated at the time of the license agreement, but such rate not to be less than ____ nor more than ____ percent of the net sales price of the invention."

c. Sublicensing and performance criteria

An exclusive license usually gives the Sponsor the right to sublicense others at reasonable royalty rates. Apparently most universities do not make such sublicensing mandatory under exclusive limited-term licenses, but do require (1) performance milestones and/or minimum annual payments as incentives for the licensee to develop the technology and ensure that it becomes available for the benefit of the public, or (2) other forms of assurance that commercialization will be diligently pursued.

The initial period of exclusivity is sometimes extended under special circumstances or with contractual assurances that licensing will be pursued as diligently as it would be by the university. These contractual assurances may include mandatory sublicensing, performance milestones, arbitration procedures, etc.

Any exclusive licensing subject to P. L. 96-517 because of Federal rights in the invention must, of course, meet the requirements of OMB Circular A-124, as set forth in Unit 2 of this series.

5.4 Exclusive, full-term license to sponsor

Universities which adopt the philosophy that they have an obligation to ensure the transfer of technology through patents in the public interest tend to resist the granting of exclusive licenses for the life of the patent except under special circumstances, such as settlement of a possible litigation claim, settlement of an interference action, or as a possible alternative to assigning title or granting joint ownership, etc.

Where universities do grant a life of the patent exclusive to an industrial research sponsor, they may require assurances such as mandatory sublicensing on a non-discriminatory basis to all qualified parties and an arbitration procedure for any appeals.

A sample clause is as follows:

"Title to any invention or discovery conceived or first reduced to practice in the performance of this research shall remain with the University; provided, however, that the University shall grant to the Sponsor an irrevocable, exclusive license with mandatory sublicensing at reasonable terms on a non-discriminatory basis to all qualified parties for the term of any patent thereon, to make, have made, use and sell such invention or discovery, such license to be at reasonable royalty rates to be negotiated at the time the invention or discovery is made."

reasonable royalty basis. The royalty income earned on the licensing of patent applications/patents hereunder, whether licensed by Sponsor or the University, shall be equally apportioned between the Sponsor and the University."

Whether this approach is preferable may depend on the nature of the market, the nature of the sponsors marketing capability, and other factors.

As an alternative or modification to the coordinated approach reflected in the foregoing clause, the parties may agree that one of them will act as the sole agent of both with respect to patent licensing, and receive back from the other party an exclusive license to that party's joint rights.

6.2 Joint research programs

Joint title is most frequently granted in situations in which the sponsor and the university are engaged in joint research, and the first problem is to define what this means. Joint research may be variously defined to include the sponsor and the university conducting portions of the same project, or conducting separate but closely related projects in parallel. It may involve sponsor personnel participating in the University research and/or University personnel spending time in the Sponsor's laboratories.

There are a variety of approaches to defining ownership of inventions on joint research. Allocation of ownership rights may depend on the affiliation of the inventor, the location of the research, the definition of what is "in the performance of research under this agreement," etc. The complications of these different approaches are beyond the scope of this section. The following sample clauses, therefore, deal with the relatively simpler case of research performed solely at the University with Sponsor personnel participating.

a. Ownership based on affiliation

One of the simplest arrangements, based on the inventor's affiliation, is the following:

1. "Title to any invention made solely by a Sponsor employee shall vest in Sponsor. University shall have the right to use any such invention internally for its own purposes.
2. "Title to any Invention made solely by a University employee shall vest in the University, Sponsor shall have the license rights defined elsewhere in this agreement.
3. "Title to any inventions made jointly by employees of Sponsor and University shall be jointly owned."

Where ownership is joint the parties may wish to agree on a coordinated approach to the licensing and sharing of royalties as discussed in 6.1 above.