

AD HOC TECHNOLOGY TRANSFER ADVISORY COMMITTEE

**REPORT TO PRESIDENT PELTASON ON
THE UNIVERSITY OF CALIFORNIA
TECHNOLOGY TRANSFER PROGRAM
March 8, 1994**

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I. Introduction and Overview

The Ad Hoc Technology Transfer Advisory Committee was given the task of examining the structure, governance and overall approach to technology transfer within the University of California system and recommending a prescription for change. This review, whose results are presented in this report, is built on ongoing discussions, reports, and debate that have been carried out over the last ten years. Since the present active phase of technology transfer began at the University, much of the debate within the institution has been framed in terms of decentralization versus centralization.

The Committee examined the issues and found merit in the idea of decentralization where it meets campus and Laboratory needs. The concept of decentralization alone, however, is inadequate. For example, some campuses and Laboratories may prefer not to undertake the entire burden of operating campus/Laboratory-based licensing. As a result, the Committee recommends a more refined approach to respond to the needs of each campus or Laboratory. The term "distributed responsibility" may more accurately reflect this campus/Laboratory-tailored approach. But structural changes alone are not sufficient. Thus the Committee also calls for change in the current approach and a clarification of the goals of the technology transfer program, including a recommitment to carrying out technology transfer within the framework of the University's academic culture and values.

II. Background: Technology Transfer at the University of California

A. Evolution of the University of California Patent Program

Since 1926, the University of California has required certain employees to report patentable inventions to the University. Initially the patent program's focus was limited to meeting contractual obligations to research sponsors, and the University had no mandatory assignment policy. Authority over intellectual property was under The Regents at this time, and the Patent Policy was administered by the General

Counsel's Office.

The University adopted a mandatory assignment policy in 1963, which required all University employees or researchers using University funds or facilities to assign their inventions to the University. In 1973, responsibility for the administration of the patent program was moved to a Board of Patents, consisting of administrators and faculty, appointed by The Regents. As the patent program grew, a more complex administrative structure was required. The UC Patent, Trademark and Copyright Office (PTCO) was founded in 1979 to meet the regulatory compliance requirements of sponsoring agencies, primarily the Federal Government, and to assist individual inventors in the commercialization of their patentable ideas. From 1979 to 1985, PTCO reported to The Regents and was advised by the Board of Patents.

A major change was made in Federal patent law in 1980, with the passage of P.L. 96-517, which enabled universities to retain title to inventions made under Federal grants and contracts. A further change in Federal law, P.L. 98-620, passed in 1984, removed some licensing restrictions and permitted universities to elect title to inventions coming out of the Department of Energy Laboratories.

In 1985, the Patent Policy was changed to a Presidential Policy, and responsibility for administration of the patent program was moved to the President. At the same time, the Office of the President asked Peat Marwick to assess PTCO operations and make recommendations for improvements. This was partly in response to ongoing campus and Laboratory dissatisfaction with service provided by that unit. Even at that time, decentralization was seen as a possible solution to the shortcomings of PTCO. The report, dated December, 1985, made several recommendations about ways to improve and professionalize the management of PTCO. The report also contained a discussion of several different approaches to administering the patent program: remaining with the status quo, investing more resources in PTCO, using an outside patent management organization, and decentralizing implementation to the campuses and Laboratories. The report made no recommendation among these alternatives. (The Peat Marwick discussion of decentralization is attached as Appendix I).

Peat Marwick was retained again in 1987 to provide a further review of PTCO operations and recommend further improvements as dissatisfaction with the unit's services continued to be expressed within the University community.

In 1989, the University responded to continued requests for more campus and Laboratory-oriented services and attempted to address the unique needs of the individual campuses and Laboratories regarding technology transfer. Peat Marwick assisted the University in developing three alternative models for campus/Laboratory involvement. Each campus or Laboratory was given the opportunity to adopt the model best suited to its individual needs. Berkeley and UCLA and the three

Laboratories elected full delegation of licensing authority. Davis, Irvine, San Diego, and San Francisco followed an intermediate model, establishing a Technology Liaison Officer to coordinate with the PTCO. Santa Barbara, Santa Cruz, and Riverside followed the full-service model. These adjustments in relationships and responsibilities have not turned out to be final end points, but rather steps in a longer process, as many campuses have now expressed an interest in a more refined analysis and response to their local needs.

In 1991, the PTCO's name was officially changed to the Office of Technology Transfer (OTT) to reflect a mission more exclusively focused on the transfer of University technology to the private sector, principally through licensing, and to recognize the fact that the Office would no longer be involved in copyright and trademark matters. Authority over copyright matters had for some time been delegated to the campuses and Laboratories, so the need for centralized support was seen as minimal. Trademark administration was to be primarily handled by the campuses and Laboratories with legal advice from the Office of General Counsel.

Despite impressive increases in income and in the rate of disclosures since the staff build-up that began in 1989, OTT remained subject to criticism from the campuses. Criticism of OTT continued to mount as the unit was associated with various proposals, widely publicized and somewhat controversial, to establish for-profit and not-for-profit independent entities to enhance the commercialization of UC research. A specific proposal to establish a for-profit corporation and a not-for-profit foundation was incorporated into the President's Economic Development Initiative which was announced to The Regents in December, 1992.

B. Recent Reports on Technology Transfer

The debate and discussion that arose from campus criticism of OTT's operations and the more general controversy around the announcement of the proposal to create separate entities to commercialize UC research led to two major reports, one commissioned by the Academic Council, the other by the President:

1. The "Report to Academic Council" by the Task Force on Technology Transfer, chaired by Arnold Binder, June 9, 1993 (the "Binder Report"). (Appendix II)

The Task Force recommended:

- o Each campus should have authority to set up its own technology transfer apparatus, with advice and help provided by a central agency to the extent desired by the campuses

- o Oversight of such campuses by [the Office of the President unit] should be restricted to determinations that Regents' and Presidential orders and regulations are being followed
 - o Creating a new Foundation is not only unnecessary, but would add to the level of bureaucracy and would be less responsive to faculty oversight
 - o It is unwise to proceed with formation of a for-profit company at this time
 - o OTT should be disbanded. An appropriate portion of the resources now allocated to OTT should be allocated to the campuses or, perhaps, to regional centers.
2. "The Technology Transfer Program of the University of California. A Report to President Peltason," by Theodore L. Hullar, November 1, 1993 (the "Hullar Report"). (Appendix III)

Chancellor Hullar recommended:

- o Technology transfer should be faculty-centered, and it should be campus-centered to the fullest extent possible. The technology transfer program should serve faculty members and other inventors and be seen by them as an appropriate and legitimate function for the University.
- It follows that responsibility and authority for technology transfer should be as close to the point of faculty and campus initiative as possible, consistent with Universitywide and Regental authorities and responsibilities and sound management principles.
- o The technology transfer program of UC should be integrated with other University programs related to economic development, including programs designed to foster collaborative relationships with business, industry and government. It should also be integrated into the values, policies and principal functional units and activities of the University.
 - o ... A strong academic connection and ethos [should be established and maintained] within the total technology

transfer program [to] ensure that it permeates all aspects of the technology transfer program, irrespective of which officer has operational responsibility for technology transfer.

- o [It should be recognized] in policy, organization, and action that technology transfer has major academic/intellectual components as well as business/finance components, thus giving it more of a "hybrid" quality than many functions the University carries out.
- o [The University should] move ahead--carefully, deliberately, cautiously, expeditiously--with decentralization of key OTT functions to the campuses.

III. The Ad Hoc Technology Transfer Advisory Committee

A. Committee Formation

Senior Vice President Kennedy reported to The Regents on the status of the University's technology transfer program at the September, 1993 meeting. In his remarks he announced that, following widespread consultation with the campuses and Laboratories, the President had decided to defer action on the proposal to establish a for-profit corporation and/or a not-for-profit foundation. He also announced that the President had asked that a new technology transfer advisory group be convened. (Senior Vice President Kennedy's report to The Regents is attached as Appendix IV.)

On October 1, 1993 an Ad Hoc Advisory Committee was named with the following charge:

1. To review the various studies, recommendations, analyses and plans regarding the technology transfer function which have been prepared over the last several years and advise the President on the most appropriate and effective (i) objectives for a University program, (ii) organizational structures at a systemwide and Campus/Laboratory level, and (iii) programs to implement the University's objectives; and
2. To recommend an on-going consultation mechanism to the President in the area of technology transfer so that the University's objectives, organization, and programs can respond in a timely way as issues arise in this area of interest.

The Committee's membership consists of one representative from each campus and Laboratory, appointed by the respective Chancellor or Laboratory Director, three representatives appointed by the Academic Council, and one representative each from the Office of the Provost and Senior Vice President--Academic Affairs and the Office of the General Counsel. (A membership list is attached as Appendix V.)

B. Summary of Conclusions

After reviewing the historical record and various reports and analyses, including the Binder and Hullar Reports, and after extensive discussions, the committee arrived at the following conclusions:

1. Principles

The technology transfer program at the University of California should be based on the following principles:

- a. It must serve and support the University's mission of teaching, research and public service, including the dissemination of knowledge for the public good.
- b. Technology transfer activities must be an integral part of the intellectual culture and research environment of the University. They must maximize on-going research support, including industrial research collaborations, rather than eventual gains from patent income.
- c. Enhancement of research and education must be given the highest priority. In this regard, it is essential to have continuing and substantive faculty involvement in the technology transfer program.
- d. The technology transfer program, to the greatest extent possible, must be faculty-centered, inventor-centered, and campus/Laboratory-centered; accordingly, the program should be decentralized to the campuses and Laboratories to the extent possible, consistent with the wishes and capabilities of the individual campuses and Laboratories.
- e. Even in a decentralized environment, certain policy and legal activities need to be conducted centrally. The

University as a whole, as one university, should continue to have a meaningful presence.

2. Objectives

The University of California's technology transfer program should have the following objectives: to transfer University-created technology to the private sector for the development of products and processes to benefit the public; to encourage and support research relationships with the private sector; and, as stated in the Patent Policy, "...to assist in obtaining funds for research, to provide for the use of invention-related income for the further support of research and education."

C. Recommendations

Drawing upon the above conclusions, the committee recommends the following:

1. The Office of Technology Transfer and the University's overall approach to technology transfer must be transformed in order to accomplish the above objectives in a manner that is consistent with the above principles.
2. The University must take steps to insure that the philosophy of technology transfer operations is compatible with the academic environment and that these operations are closely related to the University's education, research, and public service mission. This implies the establishment of an organizational structure that is clearly responsive to the faculty and to the needs of the campuses and Laboratories.
3. The University must reaffirm that the primary goal of its technology transfer program is to further the University's mission of serving society, not merely to generate income from the results of University research.
4. In order to make the University's technology transfer program more campus and Laboratory-centered, more faculty-centered, and more inventor-centered, campuses and Laboratories should, to the extent feasible, be able to design and shape their own technology licensing programs to fit their unique needs. This is consistent with the 1989 Peat Marwick report's call for three operational models, but it recognizes the need for an even more refined and flexible approach to establishing campus and

Laboratory technology transfer operations. Technology transfer services should be tailored to meet the needs of each campus and Laboratory from a list of basic functions and activities (see IV.D.1, below).

5. Some technology transfer functions must remain centralized:
 - to insure that The Regents' interests are protected and that their fiduciary responsibilities are carried out;
 - to insure policy consistency; and
 - to assist in fostering mutual assistance among campus and Laboratory technology transfer professionals.
6. It may also be advisable to offer centrally certain defined technology transfer services to achieve economies of scale and to insure that all campuses and Laboratories have adequate access to expertise. Sharing of specialized expertise and resources among campuses should also be considered and encouraged. For example, licensing professionals knowledgeable in plant patents or medical technologies at one location might be available on some basis to assist other campuses in those patenting and licensing activities.
7. The Patent Coordinators (usually the manager of licensing and/or other technology transfer activities at each campus or Laboratory) should be reinvigorated and serve as focal points for the communication and sharing of information regarding technology transfer problems and issues affecting all locations. Meeting periodically, the Coordinators will serve as a useful adjunct to the development and implementation of a successful systemwide technology transfer program.
8. The Ad Hoc Technology Transfer Advisory Committee should be converted to a standing systemwide Technology Transfer Advisory Committee. This committee should continue to include substantial faculty and Senate representation. It should advise on technology transfer policy and evaluate the effectiveness of the technology transfer program, as well as undertake periodic reviews of the implementation of the recommendations contained in this report.

IV. Next Steps

It is recommended that Senior Vice President Kennedy, assisted by his senior colleagues, lead a broad-based consultation process that would result in the reassigning of technology transfer implementation responsibilities and, accordingly, a reorientation of technology transfer within the UC system. These discussions should include the following steps:

A. Consultation

The campuses, Laboratories and Academic Council should be consulted about the recommendations of the Committee. In addition, the campuses and Laboratories should be surveyed about their needs, preferences and level of commitment to establishing and operating locally-based technology transfer services.

B. The Future of OTT

The Office of Technology Transfer needs to be transformed, based on the outcome of the campus/Laboratory/Senate discussions called for above, and based on the recommendations outlined above.

C. Assessment of Resources

A systematic analysis must be conducted of financial resources available to support technology transfer activities at a central office and at the campuses and Laboratories. Additional resources from the campuses and Laboratories, the Office of the President, or elsewhere, may be required to do the job that is needed.

D. Negotiation of Individual Campus and Laboratory Agreements

Recognizing that campuses and Laboratories may want different levels of autonomy or support in technology transfer, the Office of the President should negotiate twelve (if necessary) individually-tailored agreements, based on each campus's or Laboratory's interest, expertise, and resources, and on the general resources available within the University of California for these activities. Campuses and Laboratories that already have independent licensing operations may not wish to make any changes in their arrangements, but this will provide an opportunity for them to review and comment on these arrangements, to propose modifications if they wish, and to make suggestions about central services.

1. Campuses and Laboratories wishing to undertake decentralized licensing activities could elect to carry out some or all of the following activities locally:

- o General information dissemination about technology transfer programs, opportunities, policies
 - o Review of intellectual property clauses in contracts and grants
 - o Pre-disclosure counseling
 - o Patentability and marketing evaluation of new disclosures
 - o Accounting and records management
 - o Patent prosecution, under the general oversight of the Office of General Counsel
 - o Marketing
 - o Licensing of current disclosures
 - o Licensing of backlog of disclosed inventions
 - o Specified regulatory/contractual reporting
 - o Management of existing portfolio of licensed cases
 - o Providing specified licensing and other technology transfer services to other UC campuses and Laboratories
 - o Local public information
2. Consistent with III.C.5 above, the following activities should continue to be carried out centrally:
- o Policy development, coordination, and guidance
 - o Data management and communication associated with systemwide coordination
 - o Regulatory and legal reporting
 - o Legal (General Counsel)
 - Litigation

- Development of licensing agreement standard terms and conditions in areas of vital interest to The Regents
- Monitoring external patent attorneys, including oversight of patent prosecution services
- o Systemwide public information
- o Legislative analysis--liaison with Sacramento and Washington
- o Facilitation of information-sharing and mutual assistance among campus and Laboratory technology transfer professionals
- o Systemwide training and staff development
- o As necessary:
 - Patenting and licensing-related services for campuses that require central services
 - Licensing of backlog of disclosed inventions not accepted by the originating campus or Laboratory
 - Portfolio management of existing licenses from any campus (as negotiated) and those executed centrally

E. Enhancement of Information Systems

An expanded systemwide information system will be important to the success of a decentralized program.

F. Official Appointment of Standing Technology Transfer Advisory Committee

G. Time Line

1. Presidential approval of the general approach recommended by this report - March

2. Consultation with the campuses, Laboratories and Academic Council on the recommendations of this report - March and April
3. Review and analysis of University resources available to support technology transfer - March and April
4. Discussions with campuses and Laboratories on implementation - parallel with #2 above, with the goal of having campus (or new Laboratory) proposals by July 1 and agreements as soon as possible thereafter. (Final implementation of negotiated arrangements will take additional time.)
5. Appointment of standing Technology Transfer Advisory Committee - by May 1
6. Report to The Regents - May or June
7. Report to the Legislature - June or July

V. Conclusion

In concluding its review of the University's technology transfer program, the Committee reaffirms the importance to UC's teaching, research and public service activities of a flourishing and active technology transfer program. The Committee endorses appropriate initiatives to promote technology transfer. It also emphatically recognizes the importance of effective technology transfer to the maintenance of a vigorous economy in California and the nation. It is the Committee's belief that the steps recommended here are essential to the building and maintenance of such an effective technology transfer program.

The University will now enter into a complex process of discussion and reallocation of resources that will result in changed relationships and responsibilities. It is hoped that a spirit of mutual support and a willingness to accommodate different needs and interests among campuses and Laboratories will prevail.

Chancellor Hullar wrote in his report:

"For better or worse, many of the issues facing the University in its efforts to improve its technology transfer program have been condensed into and focused on a debate over the degree to which technology transfer should be centralized or decentralized. The public relations and emotional issues...have further clouded a cogent consideration of the alternatives and management needs." (Hullar Report, page 11)

Decentralization has been on the table for at least 10 years now. It is the conclusion of this Committee that as a first step in creating a more campus/Laboratory-centered, faculty-centered, and inventor-centered technology transfer program, the University must at last come to terms with and resolve the need to bring technology licensing closer to the academic enterprise, by establishing a new system of distributed responsibility.

The task that lies ahead is to integrate technology transfer into the University's academic life, support faculty invention and creativity, and (in the words of the Patent Policy), "encourage the broad utilization of the results of University research, not only by scholars, but also in practical application for the general public benefit."

APPENDICES

- I. "Decentralize Implementation to Campuses" from "Review of University Patent Policy and Function of the Patent, Trademark and Copyright Office," Peat, Marwick, Mitchell & Company, December 1985.
- II. "Report to Academic Council" by the Task Force on Technology Transfer, chaired by Arnold Binder, June 9, 1993.
- III. "The Technology Transfer Program of the University of California. A Report to President Peltason" by Theodore L. Hullar, November 1, 1993.
- IV. "An Update on the University's Recent Progress in Technology Transfer." Speech to The Board of Regents, V. Wayne Kennedy, September 24, 1993.
- V. Membership of the Ad Hoc Technology Transfer Advisory Committee.