SOCIETY OF UNIVERSITY PATENT ADMINISTRATORS

SURVEY OF UNIVERSITY PATENTS AND LICENSES: PRELIMINARY RESULTS

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This survey was conceived to provide feedback concerning the actual commercial use to which recent university-derived inventions had been put. A task force group, organized under the aegis of SUPA President Raymond Woodrow, concluded that meaningful data and reasonable conclusions might be obtained by surveying the patents issued from 1969 to 1975, inclusive of both years, to those universities, university-affiliated foundations and their assignees most active in development and administration of inventions arising from research in the institutions.

A questionnaire believed to elicit the needed information, but short enough to impose little burden on the recipient, was developed and circulated to 79 institutions. Each questionnaire referred to a single patent by number. A copy of the questionnaire is attached hereto.

Presented at the Atlanta, Georgia Meeting of the Society of University Patent Administrators, February 6, 1978

The patent numbers were derived from a computer printout provided by the U.S. Patent and Trademark Office. The listed patents were obtained by the PTO from the names of the institutions as assignees. Since some inventors at some institutions had assigned their patent rights to patent administration organizations, such as Research Corporation and Battelle Development Corporation, patents assigned to these organizations were added to the PTO lists. In addition, some respondent institutions themselves added patents which had not been picked up in the PTO printout.

All lists and completed questionnaires were sent to Research Corporation where they were checked, coded and entered into a computer data base so that the data could be selected, sorted and analyzed.

This paper summarizes general conclusions and reports the most obvious features which have stood out in the brief analysis performed to date.

General Comments

... Twenty-nine of the original 79 institutions responded, a return of about 37%.

... The 29 institutions responding reported on a total of 498 patents. Seven of these institutions had 25 or more patents assigned to them.

... The 50 institutions that did not respond had a listed total of 1,288 patents, including those assigned to patent administration organizations. Among these 50 institutions, ten had more than 25 patents assigned to them and four had 50 or more patents assigned.

... There is no clear indication of consistently increasing patent activity within the period by the survey respondents. The total number of patents issued annually to the 29 respondents ranged from 42 to 85 (average 71). The year 1969 was abnormally low - 42. If this year were omitted the range would be 65 to 85 (average - 76).

Sponsorship and Ownership

... The dominant sponsor of the research leading to the patents is the Federal Government, (56.5% of the total patents obtained by the 29 respondents), followed by the universities themselves (30% of the total). Industry accounted for about 5%, state governments and other sponsors, about 3%, the remainder (5.5%) were not specified by the respondents.

... The dominant assignee of the patents is the universities themselves - about 67% of the total patents of the 29 respondents. Patent administration organizations are the assignees of about 22%; the Federal Government, 3.5%; industry, 2.5%; miscellaneous others 4%; and unspecified, 1%. No patents were assigned to state governments.

... Universities own far more patents than they sponsor, while the Federal Government owns far fewer. Patent administration organizations, which were not sponsors, hold about 22% of the total number of patents in the sample.

... The dominant sponsor-assignee combinations are:

	Number
Sponsored by Federal Government assigned to a university	191
Sponsored by and assigned to a university	110
Sponsored by the Federal Government, assigned to a patent administration organization	60
Sponsored by a university, assigned to a patent administration organization	37
Other or no information given	100

Licensing Success

Licensing success is defined as having occurred if a patent had been licensed as of December 31, 1976. A patent unlicensed as of that date is not necessarily a permanent licensing failure, since it may become licensed in the future.

... Information on licensing success was available for 467 of the 498 patents (94%).

... Of the 467 patents, 193 (41%) had been licensed by the date of completion of the questionnaire, and 274 (59%)had not.

... As would be expected the more recently issued patents are somewhat less likely to be licensed, but a firm direct relationship to age of the patent is not apparent over the seven-year period of the study.

... Licensing experience classified by sponsor-assignee combinations is given in Table I. Federal Government sponsored patents have a higher licensing success rate than do those sponsored by universities. The universities appear to have a somewhat higher licensing success rate than do the patent administration organizations.

... Universities are more successful in licensing patents sponsored by the Federal Government than those sponsored by themselves

... Patent Administration organizations are almost twice as successful in licensing patents originating from Government-sponsored research as those originating from the universities. This difference may be related to the selection process through which such organizations receive inventions from the universities.

... The overall licensing success rate of assignees is as follows:

Universities - 40%

Patent administration organizations - 33%

Federal Government - 12%

... The overall licensing success rate of sponsors is:

Federal Government - 43%

Universities - 27%

Industry - 77%

... Those universities which use patent administration organizations assign fewer than 40% of their patents to these organizations.

Licensing Terms

... Exclusive licensing predominates over non-exclusive licensing, two to one.

... Exclusive licensing takes two forms - exclusive for the life of the patent and limited-time exclusive with exclusive for the life of the patentslightly more used than limited-time exclusivity.

... Licenses granted by universities are more likely to be either exclusive for the life of the patent or non-exclusive; those granted by patent administration organizations are more likely to be time-limited exclusive.

... Three-fourths of the patents are licensed to a single licensee; 15% are licensed to two licensees; 8% are licensed to three to six licensees; and the remainder are licensed to over six licensees.

Royalty Income

Useful information on royalty income is available from only about 80% of the licensed patents. Presumably many responses marked "no information available" reflect a lack of income. In addition, the zero to $10,000 level may include a number of patents returning zero income.

... Only five percent of the patents have brought in over $100,000 in total income; 30% were in the $10,000 to $100,000 range; and 65% were in the zero to $10,000 range.

... No single type of license is clearly the most successful financially. On the other hand, no strong argument can be made for long-term exclusivity based on income alone.

... From the data available it was not possible to obtain a clear picture of the relationship of the income received to the length of time over which receipt was obtained, except to note that the larger amounts of total income were received over 5 year periodsor longer.

Development Cost and Risk Capital

The data on development cost and risk is quite sketchy, probably because the licensors are frequently unaware of the licensees activities in this area. Data are available for only 135 of the 498

patents in the total sample, of which 48 patents were licensed in package arrangements.

... About 45% of the 135 patents required development cost and risk capital in the range of $5,000 to $50,000 to bring the invention into public use; 17% required $50,000 to $500,000; 15% $500,000 to $5,000,000; and 23% over $5,000,000.

... The highest development costs and risk capital requirements were associated with the patents which were licensed exclusively, either for time-limited period or for the life of the patent.

... As would be expected there appeared to be a direct correlation between the development costs and risk capital expended and the corresponding royalty income, but insufficient data are available to develop further this relationship quantitatively.

Conclusion

The data in this first survey have turned up no real surprises, but have given some quantification to what have heretofore been qualitative premises. However, little light has yet been shed on the detailed uses that have been made of licensed patents emanating from universities, particularly in the areas of development costs, capital investment and royalty income.

It would be most helpful to redesign the questionnaire and submit it only to those institutions which have had licensing success in order to obtain non-proprietary financial data on the use of specific patents.

It would also be most helpful if similar data could be obtained from those institutions, some 12 in number, heavily engaged in licensing, but who did not respond to the initial survey.

Further analysis of the data available in the present survey should be continued. This might well be done by a SUPA task force which would direct and/or engage in this additional analysis.

W. Marcy
2 February 1978

University

University Patent Questionnaire

1. Patent Number_____ Application Date_____ Year of Issue_____

2. Patent Title_____

_____

3. Research Sponsored Primarily by: Federal Govt._____ State Govt._____

Industry_____ University_____ Other_____

4. Invention or Patent Rights Assigned to: Federal Govt._____

State Govt._____ Industry_____ University_____ Patent Management

Organization (name)_____ Other (Please explain)_____

_____

5. Patent Licensed to Industry: Yes_____ No_____ If yes,

Exclusively for Life of Patent_____ Exclusively for

Limited Period_____ _____ Nonexclusively_____ Number of

Licenses_____

6. Approximate private development cost and risk capital expended by the licensee(s) to December 31, 1976 to develop and bring invention to public use $_____.

7. Total royalties received by university (including inventors' share)

0-$10,000_____ $10,000-100,000_____ More than $100,000_____ over a

period of _____ years.

8. Please discuss any important or unusual aspects of this patented invention which will illustrate the role which university inventions can play in contributions to society if the university has control over invention dispositions.

Table I

Licensing Experience by
Sponsor-Assignee Combinations

Sponsor	Assignee	Licensed	Not Licensed	Ratio: Licensed / Not Licensed
Federal Government	University	86	94	0.91
University	University	32	75	0.43
Federal Government	Patent Assistance Organizations	25	35	0.77
University	Patent Assistance Organizations	8	29	0.28
	Totals	151	233	

SOCIETY OF UNIVERSITY PATENT ADMINISTRATORS

SURVEY OF UNIVERSITY PATENT POLICIES AND PATENT ADMINISTRATION

Early in 1977 a survey was made of the patent policies of universities having individuals as members of the Society of University Patent Administrators. As far as is known this is the first such survey since the publication in 1962 by the National Academy of Sciences--National Research Council of "University Research and Patent Policies, Practices and Procedures." The latter document was primarily a compilation of the patent policies exactly as furnished by the institutions surveyed, although there was some analysis of particular aspects.

The present survey, for which forty eight (48) major research institutions provided data, was designed quite differently. It was based on a carefully constructed questionnaire that was tested at six institutions and further refined before distribution. A copy of the questionnaire is included as Appendix A. The institutions responding are listed in Appendix B.

The analysis of completed questionnaires has been reasonably simple for many questions. However, the wide divergencies in university organizations and practices have resulted in a large variety of different answers to some questions. Sometimes there were multiple answers to the same question by the same institution. In the remainder of this paper the answers to the various questions are tabulated, and the results and their implications are discussed. In questions involving titles where there are so many variations, answers have been grouped by what seemed to be reasonably equivalent titles. Generally, where only one institution responded in a particular way to a particular question, such answers have been grouped as "other."

1. Name of Institution - See Appendix B

2. Who authorized your Patent Policy?

Trustees or Regents (or equivalent)	37
Presidents or Chancellor (or equivalent)	5
Faculty	2
Other (state law or agency etc.)	4
	48

Some institutions checked more than one answer, which has been interpreted to mean that more than one acted upon the policy. In such cases, only the highest ranked body has been counted.

3. What office administers the patent policy?

(Answers)		
	Research Administration Office	18
	Vice President or Dean of Research	10
	Research Foundation	8
	Vice President Administration	3
	Patent Committee	3
	Patent Office	3
	Other	3
		48

4. To whom is that office (in 3 above) responsible?

(Answers)		
	Vice Chancellor, Vice President, or Provost etc.	24
	President	12
	Trustees	3
	Director of Foundation	3
	Dean	3
	Other	3
		48

5. Is there a Patent Committee?

Yes	34
No	14
	48

6. What is the composition (of the Patent Committee)?

(Answers)	Faculty and administration	23
	Faculty only	7
	Faculty, administration and students	4
		34

It is interesting to note that four institutions have patent committees which include students (presumably graduate students).

7. What are the functions of the Patent Committee?

(Answers)	Formulate patent policy	22
	Determine royalty distributions	16
	Decide on patenting inventions	26
	Negotiate license arrangements	2
	Other	5
		71

This question had multiple answers and it is not clear that all functions were described. For example, some patent committees may be involved in arbitration (see 16 below) but this item was only mentioned once.

8. Does the Patent Policy cover?

(a)	Faculty	47
(b)	Professional staff	47
(c)	Non-professional staff	43
(d)	Graduate students employed by university	46
(e)	Graduate students not employed by university	25
(f)	Undergraduates employed by university	42
(g)	Undergraduates not employed by university	21

One institution has not finally adopted a patent policy which accounts for the fact that the maximum number is 47 rather than 48. The significant

decrease in coverage for both graduate and undergraduate students not employed by the institution undoubtedly relates to the fact that employment and the payment of salary is used in many cases as the basis for a university claim to equity in inventions, rather than the provisions of funds or facilities as the basis of the claim. This is discussed more thoroughly at 15 below.

9. Does your institution control the disposition of patent rights by either (it is understood that a sponsor may subsequently take control)?

(a)	Taking title to inventions	36
(b)	or Directing or approving disposition by inventors	11
(c)	or is The referral of an invention to the university voluntary if there is no sponsor requirement	11
		58

Of the above, eight institutions checked both of the above first two categories (a) and (b) which is hard to understand unless it means that the policy is covered by (b) but in some or many cases the inventor is required or elects to give title to the institution as provided for under (a). However, two of those same eight also checked (c), which is even harder to understand unless the responders were endeavoring to cover both inventions in which the institution has an equity and those in which it does not (see 15 below). The remaining nine in category (c) constitutes a surprisingly large number in which the institution exercises no control at all (unless there is a sponsor requirement).

On balance, although the number in (b) is less than one third that in (a), a policy as in (b) of directing or approving disposition by inventors provides much greater flexibility in actual practice. Title can be directed to the institution if desired, to a patent management firm if desired, to the Government or another sponsor if necessary, etc., without

having in the latter instances the necessity of title first going to the institution.

10. Do you enter into agreements with possible inventors (see 8 above) to establish patent rights (complete only one response).

(a)	For all possible inventors	16
(b)	For all possible inventors who participate in sponsored research	8
(c)	For all possible inventors who are employed	14
(d)	For all possible inventors who are employed just in sponsored research	6
(e)	No agreements with any personnel	4
		48

The twenty four institutions who responded affirmatively to (a) or (b) are well covered insofar as the requirements of sponsored research, particularly Government sponsored, are concerned. Institutions covered by (c) and (d) are not fully covering the obligations of sponsored research, since these obligations extend to all personnel who participate in or perform part of the work, not only those who are employed and paid from a grant or contract. The four institutions answering yes to (e) are not complying unless the terms of the applicable patent policy can be held to be as legally binding as an individual agreement.

For inventions which result from research which is not sponsored, the thirty institutions designating (a), or (c) are all reasonably well covered, except that (c) would not apply, for example, to graduate students who make an invention but are not employed. The other seventeen have a gap part of whose explanation is the eleven who responded to 9(c) where referral of an invention to the university is entirely voluntary (unless there are sponsored research requirements).

11. Do you use or have you considered using a single agreement to cover

both patents and copyrights?

(Answers)	Yes	13
	No	35
		48

12. Is one or more patent management firm used and if so give names?

(Answers)	Yes	40
	No	8
		48

Research Corporation was predominant, followed at a distance by Battelle, University Patents Inc etc.

13. If the institution (not a patent management firm) decides to make a patent application, what office makes this decision?

(Answers)	Patent Committee	11
	Research Administration	9
	Assoc. Provost, V.P., or Dean for Research	9
	Research Foundation	4
	President	3
	V.P. Business or Finance	2
	Patent Office	2
	Other (State, Bd. of Regents, Inventor,etc)	5
	No Answer (presumably don't)	3
		48

14. Does your patent policy require reporting by those covered by the policy (see 8) of:

(a)	<u>All</u> inventions made even if there is no institutional or sponsor equity	19
(b)	All inventions made on which patents are applied for, even though there is no institutional or sponsor equity	5
(c)	All inventions made where there is some institutional or sponsor equity	19
(d)	Only those inventions made which must be reported to a sponsor	5
		48

The institutions which are most diligent in pursuing technology transfers and use by the public of their inventions are most likely to fall in Group (a). Group (d) appear to have little interest, with the rest of the institutions falling in (b) or (c).

15. What is the basis of the institution's claim for institutional equity in an invention, i.e. what is the legal consideration for the university to obtain rights

(a)	Payment of salary or stipend	29
(b)	Provision of funds or facilities	34
(c)	Other (patent services furnished to inventor, state legal requirement etc)	7
		70

There were twenty two institutinns that answered yes to more than one of the above questions. Twenty one of these answered yes to both (a) and (b). In actual fact, there is a real question as to whether the citation of salary or stipend (covered by (a)) as a consideration for patent rights is reasonable or possibly even legally enforceable.* Faculty are not employed to develop patentable inventions, their salaries and promotions are not based upon the value of inventions they do make, and where they have tenure, according to Blackwell*, "the agreement by the college to continue to employ them would not, so far as they are concerned, constitute consideration."

A single consideration, the provision of funds and facilities for research, does not have the above handicap and can be used for both employed and not employed inventors (such as students). It also means that the institution would have no equity (unless the inventor elects to handle it through the institution) in an invention whose conception or reduction to practice

*See College Law, by T.E. Blackwell, pgs. 175-180, American Council on Education, 1961

does not involve university funds or facilities.

16. Is arbitration or some other form of decision-making provided for in the event of a disagreement as to the institution's equity or rights in an invention?

(Answers)	Yes	27
	No	21
		48

The absence of arbitration provisions in twenty one institutions is somewhat surprising.

17. Does the university ever relinquish its rights to an invention back to the inventor?

(Answers)	Yes	40
	No	8
		48

If so, under what circumstances?

(Answers) Miscellaneous, mostly where sponsor and university elect not to patent.

18. Does the institution ever handle inventions for inventors in which it has no equity?

(Answers)	Yes	22
	No	26
		48

If yes, what are the conditions?

(Answers) Miscellaneous, often paying more than normal royalties to the inventor, etc.

19. If the institution retains patent rights for inventions, what share of royalties is paid to inventor(s)? Net or gross?

(Answers)	Maximum possible	1
	Net 80% scaling down to 25% as total royalty increases	2
	Gross 50% plus first $3,000, then 25% to $13,000, then 15%	2

Net 60% 0-$25K, 50% $25-50K, 40% $50-75K, 30% above	1
Net 50% plus first $1,000 of university net	1
Gross 15% plus 50% of additional net	1
Net 50%	6
Net 50% or gross 25%	1
Net 50% maximum, 20% minimum by arbitration	1
Net 50% after first $5,000 net	1
Net 50% until expenses, then 20% of gross	1
Net 42.5%	1
Net 40%	1
Net 40% 0-$50K, 30% $50-100K, 15% above	2
Gross 15% until costs recovered, then 40% net	1
Net 33%	1
Gross 28%	1
Net 25%	5
Gross 20%	1
Gross 15%	9
Net 15%	4
Case by case	3
No answer	1
	48

Although the difference between gross and net royalties vary widely from patent to patent, the attempt has been made to list the answers to this question in such a way that the amounts to inventors in proportion to total royalties decrease as one reads downward. The median answer is an amount of 33% of net royalty income for the inventor. Although exact comparisons with the 1962 National Academy report referred to earlier are not possible, it appears that royalty shares to inventors have increased considerably. Also, the sliding scale giving the inventor a

large initial share but then scaling downward (evidenced in five of the answers above) seems to be a relatively new development. There is something to be said for this arrangement because cooperation among researchers will be less jeopardized if the potential rewards to one who is legally named as inventor are not too large.

20. What disposition is made of institution's share of royalties?

(Answers)		
	Research	26
	General funds of institution	10
	Research and patent costs	6
	Education and research	3
	Patent costs	2
	Other	1
		48

21. What steps if any are taken to assure that all inventions are properly disclosed?

(Answers)		
	None (although patent policy may require)	23
	Regulations	11
	Periodic reminders	8
	Periodic meetings	5
	Special educational program	4
	Annual invention statement	3
	Other	2
		56

As is evident, eight institutions used more than one method of obtaining invention disclosures. In fact it is more than likely that a greater number used more than one method but did not report as such.

22. Does your institution have any institutional patent agreements (IPAs) with federal agencies? If so list agencies.

(Answers)		
	Both HEW and NSF	10
	HEW only	11
	NSF only	3
		24

It is somewhat surprising that more than half of the institutions responding have no IPAs.

23. In negotiating sponsored research agreements with industry, do you accept requirements for sponsor to obtain:

(a)	Title to all inventions	27
(b)	Exclusive license	26
(c)	Exclusive license for limited period	26
(d)	Exclusive license for limited period with march-in rights for lack of diligence	28
(e)	Non-exclusive license	31
(f)	Other	7
		145

Obviously many institutions gave more than one reply in the affirmative, and the average institution answered three questions in this way. The number of affirmative answers to (a) and (b) may raise some questions about the diligence of institutional endeavors for protection of the public interest. Where title to inventions is given to a sponsor as in (a), the inventor's normal share of royalties under a patent policy presumably disappears.

24. Under the arrangements described in 23 above, is there any provision for royalties or other reimbursements to the university, such as increased indirect costs?

(Answers)	Royalties	21
	Increased indirect costs	17
	None	10
		48

As in 23(a) above, where the compensation to the university for patent rights consists of increased indirect costs or is non-existent, the inventor's share of royalties presumably disappears.

25. For inventions owned or controlled by the institution and not assigned to a patent management organization, which of the categories of 23 above best describe the institution's policies for assignment or licensing.

(a)	Title to inventions	3
(b)	Exclusive license	11
(c)	Exclusive license for limited period	8
(d)	Exclusive license for limited period with march-in rights for lack of diligence	19
(e)	Non-exclusive license	13
(f)	Other	5
		59

Only eleven institutions indicated more than one answer. It is interesting to note that many more institutions are willing to give greater rights to a research sponsor (question 23) than they are to a licensee or assignee.

26. How many patents were applied for on your institution's inventions during the last ten years by:

(a)	Inventor	165 (known)
(b)	Institution	889
(c)	Patent management organization	554
(d)	Industrial sponsor	119
(e)	Government sponsor	60 (known)
		1787

Although the number for any one institution varies from 1 to 150 for the total of categories (a) through (e) combined, the average is 37 per institution, or about 4 per year per institution. 4 per year per institution does not sound like a large number, but over a ten year period the total for all institutions of 1787 is a sizable sum.

27. How many of the above patents issued - 937

28. How many of the patents in 27 were licensed - 469

A 50% ratio of patents licensed to patents issued is remarkably high. Unfortunately, the question was not asked as to how many were used or paid royalties.

The above analysis of the survey results provides some very interesting and hopefully helpful information. Despite the fact that a number of institutions did not reply (a few with large patent portfolios), the data provided and analyzed should be reasonably representative of the general community of research universities.

R. J. Woodrow
4/29/77

SUPA Questionnaire Concerning

University Patent Policies and Patent Administration

1. Name of Institution _____

2. Who authorized your Patent Policy?
   a. Trustees or Regents _____
   b. Faculty _____
   c. President or Chancellor _____
   d. Other (please specify) _____

3. What office administers the Patent Policy? _____

4. To whom is that office responsible? _____

5. Is there a Patent Committee? _____

6. What is its composition? _____
   _____

7. What are the functions of the Patent Committee? _____
   _____
   _____
   _____

8. Does the Patent Policy cover:
   a. Faculty _____
   b. Professional Staff _____
   c. Nonprofessional Staff _____
   d. Graduate students employed by University _____
   e. Graduate students not employed by University _____
   f. Undergraduates employed by University _____
   g. Undergraduates not employed by University _____

9. Does your institution control the disposition of patent rights by either (it is understood that a sponsor may subsequently take control):

   Taking title to inventions _____

   Or Directing or approving disposition by inventors _____

   Or is the referral of an invention to the university voluntary if there is no sponsor requirement _____

10. Do you enter into agreements with possible inventors (see 8 above) to establish patent rights (complete only one response):

   a. For all possible inventors from 8 above (specify a,b,c,d...etc)

   _____

   b. For all possible inventors from 8 who participate in sponsored research (specify a,b,c.....etc) _____

   c. For all possible inventors from 8 who are employed (specify a,b,c.....etc) _____

   d. For all possible inventors from 8 who are employed just in sponsored research (specify a,b,c...etc) _____

11. Do you or have you considered using a single agreement to cover both patents and copyrights? ____ _____

   _____

   _____

12. Is one or more patent management firm utilized and if so give names?

   _____

   _____

   _____

13. If the institution (not a patent management firm) decided to make a patent application, what office makes this decision? _____

   _____

14. Does your patent policy require reporting by those covered by the policy (see 8) of:

   a. All inventions made even though there is no institutional or sponsor equity _____, or

   b. All inventions made on which patents are applied for, even though there is no institutional or sponsor equity _____

   _____, or

c. All inventions made where there is some institutional or sponsor equity _____, or

d. Only those inventions made which must be reported to a sponsor _____

15. What is the basis of the institution's claim for institutional equity in an invention, i.e. what is the legal consideration for the university to obtain rights?

a. Payment of salary or stipend _____

b. Provision of funds or facilities _____

c. Other _____

16. Is arbitration or some other form of decision-making provided for in the event of a disagreement as to the institution's equity or rights in an invention? _____

_____

_____

17. Does the institution ever relinquish its rights to an invention back to the inventor? _____. If yes, under what circumstances?

_____

_____

18. Does the institution handle inventions for inventors in which it has no equity? _____If yes, what are the conditions?

_____

_____

19. If the institution retains patent rights for inventions, what share of royalties is paid to inventor(s)? Net or gross?

_____

_____

20. What disposition is made of institution's share of royalties?

_____

21. What steps if any are taken to assure that all inventions are properly disclosed? _____

_____

22. Does your institution have any institutional patent agreements (IPA's) with federal agencies? _____. If so, list agencies _____

_____

_____

23. In negotiating sponsored research agreements with industry, do you accept requirements for sponsor to obtain:

a. Title to all inventions _____

b. Exclusive license _____

c. Exclusive license for limited period _____

d. Exclusive license for limited period with march-in rights for lack of diligence _____

e. Nonexclusive license _____

f. Other _____

_____

24. Under the arrangements described in 23 above, is there any provision for royalties or other reimbursements to the university, such as increased indirect costs? _____

_____

_____

_____

25. For inventions owned or controlled by the institution and not assigned to a patent management organization, which of the categories of 23 above best describe the institution's policies for assignment or licensing?

_____

_____

_____

_____

26. How many patents were applied for on your institution's inventions during the last ten years by:

Inventor _____

Institution _____

Patent Management Organization _____

Industrial Sponsor _____

Government Sponsor _____

27. How many of the above patents issued? _____

28. How many of the patents in 27 were licensed? _____

APPENDIX B

Institutions Responding to Patent Survey

University of Akron
Ball State University
Boston College
Brown University
University of California Systemwide
California Institute of Technology
University of Cincinnati
Colorado State University Research Foundation
Concordia University
University of Connecticut
Cornell University
University of Dayton
University of Delaware
University of Denver
University of Georgia
University of Guelph
University of Houston
University of Illinois at Urbana-Champaign
University of Iowa
University of Kansas
Kansas State University
Kent State University
University of Kentucky
Universite Laval
University of Maryland
University of Michigan

University of Minnesota
University of Mississippi
University of Nebraska
University of New Mexico
Research Foundation of State University of New York
University of Oklahoma
University of Oregon
Princeton University
Purdue University
Rockefeller University
Rutgers University
Salk Institute
Simon Fraser University
University of Southern California
Southern Illinois University
Texas A&M Research Foundation
University of Toledo
University of Virginia
Virginia Polytechnic Institute and State University
Washington State University
University of Wisconsin
Yale University