Nonprofit Technology Transfer
Final Examination

Professor Hersey Fall 2002

Instructions

This is a three-hour exam. There is no open book. The exam is separated into four parts, without time limitation as to any particular part. The attached answer sheet should be used for answers to Parts I-III. Blue books should be used for questions in Part IV. Please note the scoring value as the beginning of each part.

Part I: True/False (15 questions)

[Each correct answer is worth two points for a possible score of 30 points.]

Please identify the following statements as True or False (T/F).

1. Nonprofit organizations are participating in technology transfer through licensing in record numbers because it has been shown to be a major source of revenue for the majority of nonprofit organizations.

2. While the final claims covered by a patent license are not known until the patent issues, nevertheless, in the nonprofit sector patent licenses often become binding agreements well in advance of the patent issue date.

3. The granting of a patent license, by implication, includes the know-how associated with the patent.

4. It is unusual for a nonprofit organization's intellectual property policy to require assignment of intellectual property based on a "hired to invent" theory.

5. Under most nonprofit intellectual property policies, nonpatentable copyrighted works are subject to a different set of ownership criteria.

6. The federal government has streamlined its regulations regarding the disposition of intellectual property developed by nonprofits under federal funding by requiring all federal agencies to recognize Bayh-Dole as applicable to inventions, software, copyrights and data.

7. A company exclusively licensed to an invention made in a federal laboratory under a CRADA does not have to worry about Bayh-Dole limitations.

8. Intellectual property policies requiring written assignment agreements are more apt to be construed as binding by the courts than intellectual property policies that do not contain such a requirement.

9. As long as an invention disclosure form identifies at least one true inventor, any license subsequently issued cannot be challenged.

10. Where a "subject invention" is licensed without reserving rights to the federal government, the government can only recapture lost rights through march-in.

11. Although an exclusive licensee may be granted a right to sublicense any or all of the rights included in its license grant, it is also true that the licensee may be required to pay a royalty to exercise such right.

12. While there are different methods for assessing the potential value of a patent during licensing negotiations, the most appropriate indicator of value is always the future profitability of the patent to the licensee.

13. Material transfer agreements are difficult to categorize as bailments, licenses or simple contracts because they often contain elements of all three.

14. The current dialogue over how nonprofits exploit Research Tools mainly has to do with nonprofit reach-through rights.

15. While nonprofit recipients of federal funds have generally instituted conflict of interest policies, the main purpose of these policies has been to ensure that no faculty member owns 100% of a start-up company.

Part II – Matching (20 questions)

[Each correct answer is worth 1 point for a possible score of 20 points]

Each term or phrase below has a corresponding phrase that best explains or defines it. Please match each term or phrase 1-20 with the phrase A-T that best corresponds with it.

1. non-assert
2. fundamental research exemption
3. Sierra Club cases
4. DEC
5. Rule of reason
6. March-in
7. UBMTA
8. Significant financial interest
9. The Technitrol case
10. Alt. IV
11. FAR
12. royalty stacking
13. CRADA
14. automatic stay
15. Net Sales Revenues
16. open source licensing
17. Georgia Pacific factors
18. "hired-to-invent"
19. Option
20. equity ownership

A. relied on by universities to avoid restrictions on the free flow of information
B. sometimes used as a measure for royalty payments
C. often not applicable to university faculty
D. government right that protects against a failure to commercialize
E. an agreement often used for deferring a full license
F. potentially creates an institutional conflict of interest
G. when used, pre-empts a nonprofit's Bayh-Dole rights
H. permits copyright ownership
I. case precedent for a "close and umbilical relationship"
J. a test currently applied by the Justice Department
K. established nonprofit royalty boundaries recognized by the IRS
L. a loosely applied licensing strategy
M. subject to Stevenson-Wydler
N. often pre-empts the termination clause in a license
O. a judicially-recognized measure of damages
P. a licensing complication sometimes caused by terms of an MTA
Q. is not applicable to Other Transactions
R. patent rights grant for which there is generally no royalty paid
S. agreement favored by the nonprofit community
T. a measurement of concern to some government agencies

PART III - Multiple Choice (15 questions)

[Each correct answer is worth 2 points for a possible score of 30 points]

There are 5 short hypotheticals below. Although they all involve your favorite professor, Prof. I.M. Smart, and his graduate student, G. Whiz, each stands alone as a situation and should be read on its own facts. Please indicate the best answer for each question from the choices given. Professor Smart is reproduced here to help out should you need to call on him.



A. Professor I.M. Smart, a tenured professor in the department of mechanical engineering at Cum Laude University, has made an invention while employed by Cum Laude U. The good professor has told his colleagues about his discovery, but refuses to disclose it to the Cum Laude Technology Transfer Office (TTO) because he believes his discovery is owned by him, personally. He has told his colleagues that he intends to file a patent application on the invention and will try to convince his research assistant and co-inventor, G. Whiz, to join him in filing the application. G. Whiz is concerned because she believes that Cum Laude U owns the invention.

1. Based on the above fact situation, G. Whiz's best course of action is to:

    a. hire her own patent attorney to file an application on her behalf
    b. tell Professor Smart she will not sign the patent application
    c. re-read Cum Laude U's patent policy and discuss the situation with Professor Smart
    d. submit an invention disclosure to Cum Laude's TTO

2. Cum Laude U's strongest case for ownership of the newest Smart-G. Whiz invention is:

    a. Although he has forgotten about it, Prof. Smart signed the Cum Laude invention assignment agreement when he joined the faculty.
    b. Regardless of Prof. Smart's situation, Cum Laude owns the invention because G. Whiz, a graduate student, is a co-inventor.
    c. Professor Smart reduced the invention to practice using Cum Laude U's facilities.
    d. Professor Smart and G. Whiz jointly conceived the invention at the University while working on a "smart-wizard" brain implant under a Department of Defense research program.

3. If Cum Laude University is successful in claiming ownership of the "smart-wizard" invention, prior to granting a license to commercialize the invention, it will have to be careful to:

    a. review the funding of Professor Smart and G. Whiz
    b. make sure that neither Professor Smart nor G. Whiz holds an equity position in the prospective licensee
    c. issue a license to the highest bidder
    d. wait for the patent to issue

B. Professor I.M. Smart and his research assistant, G. Whiz, are working on yet another invention, but in order to do some necessary experiments, they need biological materials owned by World Drug, Inc., a global pharmaceutical company. World Drug is willing to provide the needed materials, but requires an MTA to be signed prior to sending the materials to Professor Smart. Under the terms of the MTA, World Drug is insisting upon (i) an exclusive, royalty-free license to new uses of its materials discovered by Professor Smart and/or G. Whiz; (ii) rights to any improvement patents filed by Cum Laude University for a period of five years after termination of the MTA; (iii) ownership of all derivatives of its materials made by

anyone at Cum Laude; and (iv) a right of review of all publications mentioning the World Drug materials.

1. Assuming that Professor Smart's research is funded by the U.S. government, the most important term of the MTA that Cum Laude will need to get changed is:

    a. rights to improvements
    b. ownership of derivatives
    c. the royalty-free exclusive license
    d. publication review

2. If Professor Smart finally realizes that the Cum Laude TTO can be useful and asks the TTO to negotiate the MTA with World Drug, Inc., the licensing outcome most likely to contribute to the successful commercialization of a new Smart-G. Whiz invention made with World Drug materials is:

    a. a time-limited option for a royalty-bearing exclusive license
    b. a royalty-free, non-exclusive worldwide license
    c. a royalty-free license for internal non-commercial research
    d. no license rights granted

3. Taking into consideration World Drug's four requirements listed in the MTA and Professor Smart's need for the World Drug materials, the most reasonable negotiation position for the Cum Laude TTO to take is:

    a. No rights to improvements, no ownership of derivatives, no license rights and no publication review
    b. No rights to improvements, no ownership of modified derivatives, an opportunity to discuss licensing rights, a limited period of publication review
    c. No rights to improvements, ownership of progeny only, a royalty-bearing non-exclusive license without right to sublicense, a right to a copy of publications with no right of review

d. Rights to improvements made by Cum Laude U for a period of one year after the MTA terminates, an exclusive, royalty-free right to derivatives, an exclusive license to inventions made using the materials for a royalty of 1% of World Drug's sales of licensed products, a right to review a publication prior to submission for publication.

C. G. Whiz, a graduate student in the laboratory of Professor I.M. Smart, is very excited. She has developed an algorithm and written a computer program that will manipulate brain waves in a manner to permit the brain to immediately and completely review all possible options for solving a problem and come up with the best solution in a matter of a few nanoseconds. Professor Smart has been working on a method of implanting a device to enable the brain to use G. Whiz's algorithm and software, but has not yet developed the device, itself. To promote the development of the necessary device, Professor Smart has decided to raise venture capital and to start a company. In order to be successful in developing the total process (called "Turbo-brain"), he will need to get license rights to the algorithm, computer program and to the method of implantation from Cum Laude University. Sally Forth, a licensing officer at Cum Laude, has been assigned the Turbo-brain case for licensing.

1. Prior to considering Professor Smart's request for license rights, the most important thing for Sally to do is:

   a. Talk with Professor Smart's dean
   b. Review Professor Smart's outside activities disclosure
   c. Seek the advice of her outside patent attorney as to the number of inventions involved in Turbo-brain and who are the inventors
   d. Do a comparative market analysis to establish a range of royalties to discuss with Professor Smart

2. Sally is concerned that if she licenses Professor Smart's company, she will have set up a conflict of interest situation for both Professor Smart and for Cum Laude University. The best way for Sally to avoid the conflicts is to:

a. turn the Turbo-brain technology over to an outside professional patent licensing firm to handle the licensing
b. remove Professor Smart from the licensing negotiations and turn any equity taken by Cum Laude over to the Cum Laude official managing the endowment
c. sign an agreement with Professor Smart that in the event he sells his interest in the start-up company, he will give Cum Laude a right of first refusal to buy his stock
d. tell Professor Smart that as long as any stock in the start-up is owned by his wife and she, not he, runs the company, then both he and the university will be on solid ground.

3. Cum Laude University has a policy of generally recognizing student ownership of copyrightable works developed by students while at Cum Laude unless doing so breaches contractual obligations of the University. Assuming that G. Whiz, as a student, falls under this policy, Sally will have to consider taking the following action prior to licensing the Turbo-brain technology:

    a. filing a patent application on G. Whiz's algorithm
    b. determining the funding situation under which G. Whiz was working with Professor Smart
    c. signing an agreement with G. Whiz for joint ownership of any copyrightable materials included in the Turbo-brain technology package
    d. requiring Professor Smart to warrant that his start-up company has acquired all rights to those components of the Turbo-brain technology not owned by the University

D. In reviewing the sponsorship of the research programs that generated the Turbo-brain technology, Sally Forth discovers that funding was provided under a contract between Cum Laude University and the Department of Defense. Sally knows that she must carefully take into consideration any rights of, and obligations to, the government that might result as a consequence of the DoD funding. Professor Smart acknowledges the government rights, but views them to be of no

consequence. He has never read the contract that provided funding for his project and doesn't intend to ever read it since he has better things to do with his time.

1. In considering any possible government rights and limitations on licensing the Turbo-brain technology, Sally must consult:

    a. The Federal Technology Transfer Act of 1986
    b. The Cum Laude University intellectual property policy
    c. The U.S. Copyright Act of 1976
    d. The DFARs

2. As a consequence of government funding and due to the application of Bayh-Dole on the patents making up the Turbo-brain technology package, Sally must ensure that if the license she grants is exclusive, she licenses the package:

    a. to a small business
    b. to a company other than one in which the inventor holds an equity interest in excess of 10%
    c. subject to the substantial manufacture requirement
    d. to a U.S. company

3. Recognizing the government's rights in the Turbo-brain technology, if the package is licensed to Professor Smart's company, the company will be required to:

    a. pay a portion of its net proceeds to the government as a royalty
    b. permit government contractors to utilize the license technology
    c. issue sublicenses to small businesses
    d. indemnify the government for product liability

E. Professor Smart has been successful in finding venture capital funding for his start-up company. Cum Laude University's TTO has decided that, based on the start-up's business plan, licensing the start-up is a reasonable business proposition for the Turbo-brain technology. The new CEO for the start-up who is negotiating the license has never

dealt with a nonprofit before and a number of issues have arisen during the negotiation process. Sally Forth, still in charge of the case, has several decisions to make. In doing so, she realizes she must balance the commercial interests of the start-up, the stated mission of Cum Laude University to support education, research and the dissemination of knowledge, and the public interest represented by the use of taxpayer funds in support of the research program under which the Turbo-brain technology was developed.

1. The CEO has insisted upon an exclusive license to the entire package of Turbo-brain technology, forcing Sally to consider seriously:

    a. an article appearing in the Manchester Union-Leader proclaiming the licensing of Professor Smart's company as an "insider" deal typical of those entered into by Cum Laude U.
    b. the extent to which any rights which the University wishes to retain should be specifically addressed in the license
    c. whether G. Whiz, whose productive future use of the technology are likely to be cut off, will sue the university because she has not been offered a position with the start-up and therefore has not received benefits from the licensing arrangement equal to Professor Smart's
    d. whether the insurance policy the company has offered to put in place naming the University as an additional insured should be doubled

2. The start-up's CEO is concerned about the long path to development of the Turbo-brain technology and believes the University should share in the risk. Consequently, he is urging the University to commit to purchasing a block of stock during the first public offering in addition to the initial 5% equity position he is offering as consideration for the exclusive license. He also believes it is reasonable for the University to provide the start-up with use of its facilities to conduct early-stage R&D thereby saving the start-up from investing its scarce financial resources in renting space and equipment. He argues that

everyone will benefit from such a transaction. Sally's response should be primarily influenced by:

a. whether the deal represents the most profitable return she can negotiate for the University
b. the potential for the start-up's employees to damage valuable equipment if university facilities are used
c. Professor Smart's intention to leave the University to work at the start-up
d. an article in the Manchester Union-Leader disparaging the deal as yet another example of institutional conflict of interest for Cum Laude University

3. Along with the license of the patents and computer program associated with the Turbo-brain, the start-up CEO is demanding an exclusive license to know-how, as well as an outright assignment of the trademark "Turbo-brain". Considering the options from the perspective of what you've learned about the licensing of intellectual property belonging to nonprofit organizations, Sally's best alternative is:

a. offering a non-exclusive license to both the know-how and the trademark
b. offering a non-exclusive license to the know-how and agreeing to assign the trademark
c. agreeing to exclusively license both the know-how and the trademark
d. agreeing to non-exclusively license the know-how and exclusively licensing the trademark

PART IV – Essays (Choose 2 out of 3)

[Each essay will be scored on the basis of 0-10 points for a possible combined total of 20 points. Only the first 2 essays you choose will be scored, so don't waste time answering all 3. Please use your bluebooks and be sure to record the numbers of the essay questions you are answering.]

1. You have been retained by Superior University to assist in developing an intellectual property policy for the institution. Superior has not had a policy in the past but has relied on threats of cutting off research funding if inventions are not assigned to the University. The University is aware that it is only a matter of time before the faculty challenge its methods of obtaining title and to avoid that unpleasantness has have come to your law firm for advice. The University officials know little about intellectual property and the faculty know less. How would you go about developing a policy to present to your client? What would you suggest as the basis for determining ownership? What elements would you consider absolutely necessary to cover? How would you suggest the new policy be presented to Superior's faculty and staff?

2. The patenting and licensing of research tools has become controversial as universities are being blamed for impeding the progress of scientific discovery through the overly aggressive patenting and licensing of inventions that are useful as research tools. Either in support of university discretion on patenting or in support of advancement of science through mandating access to research tools, develop a rationale for your position and propose solutions, if any, that might reasonably meet the needs and interests of both sides of the controversy.

3. Your law firm represents a U.S. company that is interested in licensing an invention from a nonprofit. You have been asked to conduct negotiations for the company, with the understanding that final approval on the agreement lies with the company. Your firm is being retained because your firm's profile includes expertise in intellectual property law as well as in overall business transactions. Your client has no experience in licensing technology from nonprofits and is relying on you to conclude an agreement that leaves nothing to chance. What will you cover in your initial due diligence inquiries? What license terms will you insist upon to protect your client? What valuation strategy will you pursue to protect your client if the licensor over-values the invention? What assurances will you require from the licensor in order to adequately protect your client from hidden risks? Please discuss your reasoning. A simple listing will not earn you a 10!

Nonprofit Technology Transfer Answer Sheet - 1
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PART I. True/False (check one)

	T	F
1.	___	___
2.	___	___
3.	___	___
4.	___	___
5.	___	___
6.	___	___
7.	___	___
8.	___	___
9.	___	___
10.	___	___
11.	___	___
12.	___	___
13.	___	___
14.	___	___
15.	___	___

PART II. Matching

Number 1-20	Letter A-T
1.	___
2.	___
3.	___
4.	___
5.	___
6.	___
7.	___
8.	___
9.	___
10.	___
11.	___
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13.	___
14.	___
15.	___
16.	___
17.	___
18.	___
19.	___
20.	___

Nonprofit Technology Transfer Answer Sheet - 2
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PART III – Multiple Choice (check one)

A. 1	**a.** ___	**b.** ___	**c.** ___	**d.** ___
A. 2	**a.** ___	**b.** ___	**c.** ___	**d.** ___
A. 3.	**a.** ___	**b.** ___	**c.** ___	**d.** ___
B. 1	**a.** ___	**b.** ___	**c.** ___	**d.** ___
B. 2	**a.** ___	**b.** ___	**c.** ___	**d.** ___
B. 3	**a.** ___	**b.** ___	**c.** ___	**d.** ___
C. 1	**a.** ___	**b.** ___	**c.** ___	**d.** ___
C. 2	**a.** ___	**b.** ___	**c.** ___	**d.** ___
C. 3	**a.** ___	**b.** ___	**c.** ___	**d.** ___
D. 1	**a.** ___	**b.** ___	**c.** ___	**d.** ___
D. 2	**a.** ___	**b.** ___	**c.** ___	**d.** ___
D. 3	**a.** ___	**b.** ___	**c.** ___	**d.** ___
E. 1	**a.** ___	**b.** ___	**c.** ___	**d.** ___
E. 2	**a.** ___	**b.** ___	**c.** ___	**d.** ___
E. 3	**a.** ___	**b.** ___	**c.** ___	**d.** ___