

Intellectual Property and New Media Technologies: A Framework for Policy Development at AAU Institutions

A Report To The AAU Digital Networks and Intellectual Property Management
Committee by The Intellectual Property Task Force

We are experiencing revolutionary changes in the growth and use of information technologies.¹ These great transformations require research universities to formulate or modify existing intellectual property policies that clarify for members of the university community their rights and responsibilities in developing content for the new digital media.² This document provides

¹ These growth patterns hardly need documentation. Consider only a few facts that will capture the rate of growth that we are experiencing. In 1897, 2 of the 10 fastest growing economic sectors in the nation were driven by science. In 1997, it was 9 out of 10. Seventy percent of all inventions reported by American industry are based on results of published American science. The new media are revolutionizing the modes of production and consumption of knowledge as a result of technological growth. Whereas today, 91 percent of all scholarly monographs sell fewer than 800 copies (perhaps half are sold to libraries), it is now possible for those authors to reach tens-of-thousands of people through use of digital technology and the Internet. Several more facts: The total volume of voice traffic on global phone systems will be superceded by the total volume of data traffic in 3 years; more than 50 million people in the United States and Canada are now on the Internet, twice as many as 18 months ago. Three years ago, all the phone networks in the world combined carried an average of 1 terabit per second. Today, companies are sending 3 terabytes per second down a single fiber thinner than a human hair. Since 1995, monthly traffic on the Internet has expanded from 31 terabytes to more than 3 petabytes, a 100-fold increase in 3 years. Universities are becoming increasingly aware that the knowledge that they produce is a valuable asset that drives economic and social change.

² In this document, we use the terms “new information technologies” and “new media technologies” interchangeably. Perhaps a more accurate term would be “digital media.” There is no standard usage. Although we will provide rough definitional boundaries between individual and university ownership of digital property, we have not here attempted to draw clear or sharp definitional boundaries around “digital media” or to define the boundary between individual faculty and university ownership. We believe that a university committee of faculty and administrators can draw such lines in difficult cases. As the University of Chicago policy notes: “The medium, whether print or electronic, is not the issue, but rather the kind of intellectual product. Hence, royalties from a text that is sold on a CD-ROM would be treated like those from a printed book. By contrast, an interactive, multi-media program that is designed to replace a class entirely would belong to the University. (Faculty would, even here, enjoy initial revenues,

member institutions with a framework that may help in formulating these policies. We suggest both general principles that might guide the construction of these policies and specific elements that we believe might be usefully incorporated into the policies. We are not attempting to be prescriptive. Given the various histories and organizational complexities of member institutions, we do not believe that the AAU should adopt a single policy. This is neither desirable nor feasible. Rather, the principles and policy elements that are set forth below are intended to be used as guidelines for member institutions when they turn to drafting their own policies, within their local cultures, with their local histories.³

The task force report has four sections. First, we present a set of general principles that could guide the crafting of a policy focusing on intellectual property and the new media. Second, we outline elements that we believe would usefully be included in these policies. Third, we examine very briefly some “easy” and “more difficult” cases as illustrations of the types of issues that may arise at research universities in the immediate future in the domain of new media content production. Fourth, we discuss briefly problematic areas that are apt to require difficult policy decisions. The task force believes this is a very timely subject that should be addressed sooner rather than later by member institutions. Furthermore, given our shared beliefs on the subject, we would prefer that the local outcomes lead to similar rather than widely disparate policies among the major research universities in this country.

and, as with inventions, would share significantly in all revenues such a program generated.)” [p. 6] The Stanford University copyright policy states limits on the University’s claims to ownership. [See Sec.1B and Section IV of this Report below.]

³ While the impetus for the creation of this document is the rapidly changing “digital environment,” the principles set forth in this report can be used by analogy in the development of other aspects of intellectual property policies, e.g., copyright policies covering any copyrightable works.

I. Some General Principles⁴:

Policies that are formulated or amended to cover intellectual property related to new information technologies, or new media, should begin by restating and reaffirming the core missions of the research university:

- The central mission is to create, preserve, and disseminate knowledge through teaching and research.
 - Toward that end, research universities have adapted their structures and organization when internal and external forces have required change. Today, the exponential growth in scientific and technical knowledge is permitting us to create, preserve, and transmit knowledge in new ways and to reach new audiences. These structural changes require adaptations by research universities. Within the context of this rapid change, we must also acknowledge and emphasize that the organizational principles of scholarly interaction and collaboration face-to-face will continue to be the primary basis on which scholarly and scientific work at advanced levels of research will be carried out.

⁴ This set of guidelines draws on multiple sources, but particularly on a policy recently adopted by the Faculty Council at the University of Chicago. This is now the Chicago policy. We quote from the December 1998 draft version provided by Geoffrey Stone, Provost. We also draw upon materials developed on this subject at Columbia University by Jonathan R. Cole (Provost and Dean of Faculties). The Stanford University policy is also quoted extensively in this report. We have also surveyed the AAU institutions to find out the number that had policies governing intellectual property in new information technologies and new media. We requested copies of each institution's policy statements for patents and licenses, copyright, new media technologies, and conflict of interest and conflict of commitment. Some of these materials were used in developing this report.

- The norms and values of scholarly and scientific work at the research university must be reaffirmed. The development of information technology and use of the new media must be consistent with the normative code of the university. This code supports:
 - Open, free exchange of ideas;
 - Publication in scholarly and scientific journals;
 - Meritocracy, which rewards people on the basis of the quality of their work;

 - Organized skepticism, which enjoins faculty and researchers to withhold judgments about the validity of ideas until those ideas are tested and the weight of evidence dictates their acceptance;

 - Common ownership of goods, which holds that research and scholarship are products of social collaborations and are assigned ultimately to the community. Research carried out primarily with an aim and anticipation of proprietary interest and profit is incompatible with the aims of the university.

- Therefore, the policies or rules used to govern the new technologies and their development “should not interfere in any way with the ability of faculty members to pursue their research and freely present their ideas to their colleagues, their students, and the world at large.” [Chicago, p. 1]

- “The creation and dissemination of knowledge is a collective enterprise at a university. Work in the classroom, library, or laboratory is necessarily a joint venture. Even when faculty members

teach a class that they have prepared at home with their own materials, the work is itself supported by the salary the faculty members enjoy and all the other support – intellectual, financial, logistical, and otherwise – that the University provides. When, for example, a program in a professional school generates substantial revenue, the program must be seen as a product of the University as a whole. Individual faculty members as well as the School itself are part of a larger enterprise, and this must be recognized along financial as well as other dimensions.” [pp. 5-6 of Chicago]

II. Elements in a Policy for Research Universities on Intellectual Property and New Media Technologies

- **Ownership:** On the basis of these principles, the university should own the intellectual property that is created at the university by faculty, research staff, and scientists and with substantial aid of its facilities or its financial support.⁵

⁵ The university can contribute substantially to the creation of new media materials through intellectual, financial, and reputational capital. Because the very nature of universities involves joint ventures and collaborations, the conversation about intellectual property rights should not be cast in dyadic terms – the faculty and the administration. The stakeholders in the university’s intellectual property include current faculty, students, research officers and staff, as well as future generations of each of these groups who will benefit at the time from the assets that have been invested and preserved by the University.

- **Custom and traditional patterns of ownership:** Ownership of intellectual property and the sharing in economic returns from the licensing or sale of that property are two distinct matters. For example, while as “a general matter, ... the University should own the intellectual property created under its auspices or with its resources... ” (Chicago, p. 1), by long-standing custom, the faculty receives the royalties on their texts and monographs, whether distributed in print or electronically. Because of this historical pattern, this practice should not change.⁶ Similarly, intellectual property leading to patents, which is created at the university with support from government funds and with university facilities and resources, is owned by the university. However, in these cases the economic returns for licensing of that property are typically shared in various ways among the creators of the work and various units at the university.
- **Creation of works as inherently collaborative and sharing of returns:** Since the university views the creation of content as a collaborative effort, the revenues generated from its intellectual property should be shared among the individuals and groups that were part of its creation: the

⁶ Discussions of intellectual property and the new media (or new information technology) too often become debates over whether products of the new information technology are more like books and texts (thus governed by customary rights of the individual faculty members) or like inventions and patents (where intellectual property is owned by the university under policies derived from the Bayh-Dole Act of 1982). We believe this focuses on the wrong question. The focus should be less on the product and more on the process through which it is created. Harvard Professor Dennis P. Thompson, in a recent article in *Educom Review*, takes up this point: “The question of whether information technology products are more like books or more like inventions is ... precisely the wrong one to ask. It focuses attention on the nature of the product instead of the way it is created. A simple shift of perspective – from attributes of the product itself to the circumstances of its creation – is an essential step in developing a coherent policy for information technology products ” (Volume 34, Number 2, pp. 14-21, March/April 1999). The discussion should focus on the bases of creation of works, the status of the contributors, the resources and facilities necessary for creating the work, rather than on analogies between the products of creative work. This position is consistent with the Chicago policy that looks at “products” as resulting from collaborative enterprises. (See, footnote 2 above.)

scholars and scientists, the schools and departments, and the larger university.

- **Reinvestments in research and teaching:** The revenues generated from intellectual property should be visibly reinvested in the teaching and research enterprises of the university – to seed new initiatives, to enhance quality, and to hold down the costs of education.
- **Protection of the University’s Name:** Perhaps the most important university asset that requires protection is the use of its name. Improper use of the name could adversely affect the prestige of the university or debase the value of its scientific and scholarly “currency.” When a university’s name is used as a possible sponsor of a work, there are larger university interests involved. When universities either join with external companies or create new media content, the quality of those relationships and work affect the value of the university’s currency – its reputation for producing quality. Use of the university’s name in connection with a program or course produced by a faculty member is itself use of a significant university resource, thereby triggering a university interest in the intellectual property. Therefore, faculty members “... must be vigilant when using new information technology as elsewhere to ensure that they do not engage in activities that give the appearance of being sponsored by the University.”⁷ [Chicago, p. 2]

⁷ This leads to a set of questions: What are the appropriate boundaries for the use of the university’s name? Under what conditions does it represent an infringement on the university’s rights? Under what conditions is it permissible?

- **Formal Written Policy:** The university should have a formal written policy (one that is easily available for review by members of the community) that describes clearly the bases of distribution of revenues derived from the new media content.
- **Limits:** While the university may own the intellectual property, it should not assert a financial interest in all cases where the new information technologies are used to create teaching and research new media content:
 - When revenue returns on this form of intellectual property are very limited, the faculty or researchers should receive the entire returns or a very substantial portion of them. A university financial interest (other than to recover any direct expenditure it has made) may not be activated until a threshold level of revenue is achieved.
 - Again, where tradition has it that the university has ceded whatever rights it might have had to the faculty (for the content of books, monographs, and texts), it is unreasonable and impractical to reassert a claim on this intellectual property. Scientific and scholarly articles may represent a special case.⁸

⁸ While we know of no formal policy that varies from this belief in the property rights of the individual faculty or researchers, there is some discussion of positive functional consequences for faculty and universities of limiting those rights when they are linked to the publication of scientific and scholarly papers published in peer-reviewed journals. Two decades of ten percent annual inflation in library subscription costs make it imperative that AAU institutions and faculty join in creative strategies involving alternative methods of distributing scholarly communications in an effort to keep these materials within the financial reach of the Academy. Some methods might involve changes in traditional copyright ownership. One proposal that aims to curb the escalating costs of scientific and scholarly publications, which have increased by 169 percent since 1986 compared with CPI growth of 46 percent, was proposed by David E. Shulenburg (Provost, University of Kansas). In an unpublished paper, "Eliminating the Scholarly Communication Crisis from Here to **NEAR**," Shulenburg proposed a change in control of the copyright of scientific and scholarly papers after a 90-day period of exclusive rights to the publisher. In contrast to today's norm, where scholarly journals require that intellectual

- **Early Disclosure:** Because information technology can change rapidly, the most important obligation of faculty who exploit such technologies is early disclosure of what they are doing to their deans or the chairs of their departments. The disclosure can be less formal than it often is for discoveries and inventions, but it should also come much sooner. “Only with such disclosure can the University have a good sense of how new information technologies are being used and how the administration can fulfill its obligation to support such work.”⁹ (p. 2) Mechanisms should exist for the faculty to disclose to

property rights be transferred from author to journal prior to publication and be held by the publisher “nearly into infinity,” he argues that “exclusive ownership rights would be truncated to a period of ninety days after which an electronic version of the paper would be deposited in **NEAR**” (National Electronic Article Repository)[quoted from p. 5 of the preprint]. Shulenburg argues that “Journal subscribers will continue to pay for more timely access to information. But free or low cost access after 90 days would surely depress the extraordinarily high prices now charged by some journals and curb the publishers’ ability to increase those prices seemingly without limits.” (Ibid., p. 5) Shulenburg notes, “Without universities that pay the salaries and contribute the space, supplies and equipment to scholars, much less new knowledge would be generated. Universities receive the funds to make expanded knowledge creation possible from all levels of government, and from foundations, private contracts and tuition paid by students. The majority of the value added by universities comes from these sources and it is time that an appropriate portion of this value be claimed on their behalf to ensure future creation and transmission of knowledge. This proposal returns the appropriate proportion to universities while allowing others who have marginally added value to be compensated for doing so.” [Ibid. p. 6] Shulenburg suggests that federal legislation “requiring that the work published in scholarly journals by U.S. faculty members be deposited in **NEAR** within 90 days of the date of publication” would be one mechanism for institutionalizing this change. Under no circumstance should AAU institutions restrict the right of faculty to submit their scholarly and scientific work to the outlets of their choice. Another proposal would be to have universities act as “a licensing agent” of faculty in negotiating copyright restrictions with journal publishers. [Jane Ginsburg, Morton L. Janklow Professor of Literary and Artistic Property Law, Columbia University School of Law suggested this possibility in a private conversation.] Whether or not such a set of proposals would have a chance of being implemented is worth further discussion. Whether faculty members at universities would agree with such a change is another major issue. The AAU Intellectual Property Committee might usefully discuss these proposals and variants on them.

⁹ As the University of Chicago policy notes (p. 2), “Asking faculty to disclose such activities, of course, does not itself imply that limits should be put on any faculty member’s ability to pursue research in whatever direction it goes. Such limits are inappropriate unless some other policy is implicated, such as ... [a university’s] rules on conflicts of interest, conflicts of commitment, or

appropriate university officers their efforts to develop new technologies or new media when they intend to commercialize the product. Faculty should disclose efforts and obtain appropriate approvals when those outside the university are proposing to pay them to develop new teaching content or new media technologies for commercial use.

- **Creating University “Utilities”:** If research universities expect to share the value of intellectual property derived from new information technologies, then it may be a good idea to support the creation of digital content through the development of some forms of “university utilities” that can be used by faculty, researchers, and students, to create various forms of new digital media content:
 - Universities might consider providing opportunities for those in the faculty interested in content-driven teaching technologies to develop the new media and to maximize their value.
 - Utilities could be created that can be used by faculty to develop content-based, new media teaching materials.
 - If faculty and researchers do not have facilities on campus to help develop new digital content, they are, of course, more apt to look for alternative means outside of the university. This in turn is apt to increase disputes over ownership of the created works.

unless they involve the sponsorship or appearance of sponsorship by the University. In this respect, work using new technology is no different from any other.” In the final section below, we will discuss briefly issues related to conflict of commitment policy as they might be related to the development and use of new media by faculty.

- **Principles of revenue sharing:**

While the division of revenues derived from new media content is apt to have a different cost basis from inventions, the existing rules for revenue sharing based on patent and licensing income is apt to be a good first approximation of distribution rules governing new media.

- If possible, generally applicable formulas for sharing the returns on new media content among individual faculty, departments, schools, and the “university” should be established and widely distributed to the faculty, research staff, and students. However, it may turn out that it is far more difficult to establish general formulas in the case of new media content than in the case of patents since there are likely to be widely different production costs associated with different types of media content and different types of works. In the absence of general formulas, agreed upon “fair formulas” for distribution of revenues should be developed for various forms of content developed at the university.¹⁰
- Thus, revenue sharing rules that govern the distribution of revenues derived from patents and licenses at the university may, in fact, represent only a point of departure for establishing fair revenue sharing principles related to revenues derived from multiple forms of new digital media content.

¹⁰ Of course, establishing agreed upon “fair” distribution formulas will not be easily accomplished, given the various interests at work in the university. It should be possible to establish generally acceptable revenue-sharing parameters for various forms of new media content, if it proves difficult to develop a single set of rules.

- **Principles of competition:**
 - Full-time faculty at one university should not be permitted, in principle, to develop commercially related new media technology of content for another university or for a private company without the home university's approval.¹¹
 - If the faculty or research staff develop intellectual property in the new media ostensibly without reliance on university resources or facilities, and not for use at the university (e.g., in courses), the university may not have a demonstrable interest in those products.¹²

- **Dispute resolution:**
 - The university should form a standing committee that will review policy on a regular basis. The committee should recommend policy changes that are required to respond to the rapid development of new forms of information technology and new types of relationships that develop among the university, its faculty members, and external for-profit companies (i.e., those “partners”

¹¹ This represents a “gray area” that will be linked for many universities with their conflict of commitment and conflict of interest policies. How can this be distinguished from traditional forms of consulting? Do we distinguish between work for another university as opposed to work for a for-profit company developing new media?

¹²This is apt to be a contested area. In such events, where should the burden of proof rest? What does it mean for a faculty member to create a commercial product entirely independently of his or her university position? If the intellectual property is in the general area of the faculty member's teaching or research at the university, the burden of proof should probably rest with the faculty member.

who are either directly or indirectly involved in the creation of new media content that will bear the university's name or claim its sponsorship). The committee should hear and adjudicate disputes over interpretations of university policy in this area.¹³ Its members should be appointed by either the President or Provost, and should include members of the faculty.

- If faculty and others in the university community are unclear about how the policy applies to their work, they should seek counsel as early as possible from an officer of the university who has been designated by the President to oversee compliance with the intellectual property policy.
- **Cautionary notes on negotiating possible joint ventures with for-profit, new media businesses:**

The front-end costs of creating new media content are often high. It is quite likely that many universities will not be in a position to self-finance the start-up costs of creating high quality content. This is apt to lead to a variety of joint ventures with for-profit companies which will supply the capital for the joint venture and which will negotiate with the university for control of the intellectual property. Here are a number of cautionary notes and larger concerns that university

¹³ Initially, there will be many gray areas that are apt to be part of contested zones. For example, if university ownership is predicated upon "substantial" or "significant" investments in the creation of the content, then what are the emerging definitions of these terms, what constitutes "significant" investments? What forms of core support of the faculty are to be included or excluded from these definitions? What constitutes reasonable boundaries beyond which there is a "conflict of commitment?" Under what conditions may a member of the faculty use the name of the university for personal gain from outside ventures, when the name of the university may be the most valuable part of the "advertisement" of the new media content? Case law and/or legislation will undoubtedly decide some of the questions raised here.

representatives should have in mind when they work on possible joint ventures:

- Do all that is possible not to lose control of the intellectual property;
- Make sure that negotiators have in the agreements mechanisms for recovering the intellectual property under very specific conditions;
- Strictly control the use of the “brand-name” by the for-profit partner;
- Maintain quality control of the content of the products over time so that the university can be sure that “its” product is not being billed as “state of the art” when, in fact, the university knows that the field has developed beyond the content in the product;
- Keep the “deals” as flexible as possible (i.e., non-exclusive), so that the university can enter into multiple relationships for its intellectual property without violating prior agreements;
- Be extremely careful to do the necessary legal review of each agreement for possible violations or problems related to the university’s tax-exempt status.
- Be as sure as possible about the actual intent of the for-profit partner;
- Gather as much information as possible about the backgrounds and intentions of the partners; identify the actual sources of financing of the projects; beware of potential conflicts-of-interest among people outside the university who may be involved in the joint venture.

- Explicitly retain the right to produce and publish research that is derived from the ideas and materials contained in the jointly ventured product.

III. Some “Easy” and “More Difficult” Cases

By way of illustration, the task force thought it would be useful to describe briefly three straight-forward case situations that could be handled fairly easily under policy parameters of this framework, followed by two hypothetical cases that could pose some significant interpretative problems for those at the university dealing with intellectual property disputes.

Case 1: The Amiens Cathedral Project

One of the world’s leading experts on high Gothic cathedrals is tired of displaying his architectural illustrations of Amiens Cathedral in two dimensions and with two slides viewed side by side. He is fed up with comparing and contrasting. He has heard about the new digital technologies and begins to explore the possibilities of creating a data-rich, audiovisual work on Amiens that links to historical and philosophical works, to other architectural materials, to materials on the growth of medieval and Renaissance towns, etc. He wants to provide his students with proper historical, literary, and musical contexts. He knows nothing about new information technologies. He comes to the Provost’s Office where, he has heard, the receipts from revenues of biotechnology intellectual property are being reinvested in new scholarly and teaching initiatives. The Provost’s Fund invests resources to seed innovative projects, and it offers the Amiens project a \$50K budget to develop new media tools. The art historian is linked collaboratively with faculty in the Graduate School of Architecture who are working on computer-assisted design and with

others in the School of Engineering and Applied Science. The University supports the technical development of new media content by the world-class art historian. A \$50K investment produces in due course a \$750K matching grant from the NEH, and the University helps the scholar to develop a program for new media works in art history and to raise funds to match federal grants. The project leads to the creation of several new media products, and leads to the creation of a collaborative group that goes on to create multiple products. Indeed, many scholars in the Department of Art History, who had been highly skeptical of the use of new media in teaching art history, become “converts” to the new innovative techniques. Who owns the new digital content?

This case seems entirely straightforward. There is no dispute over ownership of the intellectual property. Beyond core levels of support, the faculty member clearly has made use of a substantial contribution by the University in creating the product. Beyond the financial investment, the University has provided much of the original materials from its libraries and the technical support needed to create the product. It is a true collaborative enterprise. There should be no dispute over ownership under the policy.

Case 2: Using the University’s “Utilities”

The University has developed a Center for New Media Teaching and Learning that offers technical assistance in developing new information technologies to faculty, research staff, and students. It helps faculty develop software or course material and supports the technical and scholarly personnel who are developing content. A faculty member uses this facility to develop content; she also uses the rare books and manuscripts collection in the university library (i.e., illustrations from the library are used in the course product, and the product benefits from extensive help from expert librarians); students are used as

course assistants in the course and students are used as part of the audience for the course.

Here, again, the case seems fairly simple. The faculty member has been part of a collaborative group creating the product and would not have been able to develop the technical aspects of the work without the expertise and knowledge of those working in the Center for New Media Teaching and Learning. Beyond personal support, the faculty member has used substantial resources and facilities provided by the University to create the new media product.¹⁴

Case 3: Hypothetical abuse of the University's Name

A member of the Department of Political Science of the University produces a new media video course, "Machiavelli and Rational Choice Theories in the History of War and Conflict," that has been funded by a major publishing company. He has worked as a consultant to that company, receiving substantial personal compensation for his efforts. The publishing company has used its resources to develop the technical features of the new media course. The professor has derived this course over 10 years of highly successful "off-Broadway" teaching experiences at the University. He is charismatic, charming, witty, and has the looks of Cary Grant. He has used University facilities to develop the course and a half-generation of his students to sharpen his wit. The major publishing house has a contractual agreement with the individual faculty member that permits it to suggest (albeit somewhat ambiguously) that this

¹⁴ Although this case may be a relatively simple one, it does pose certain types of problems that are apt to be raised by some members of a university community. How does this support differ from support that a university might provide a faculty member in producing a monograph or a textbook? Why are the resources and facilities here distinguishable from those that are part of the core facilities and resources provided scholars at the University for research and teaching, regardless of the form that the product takes?

course, which is being widely advertised by the publishing house, is “sponsored” by the University.

Meanwhile, the University has no contractual agreement with the publishing house for the use of its name. The faculty member has not received permission from the University to attach its name to this product. And, as charismatic as the professor is, it is fairly clear that the “value” of the product is derived to a substantial degree from the “brand name recognition” associated with the University’s reputation. Has the faculty member violated the policy of full disclosure and the feature of the policy that proscribes the use of the University’s name when attached to new media products that are not approved by the University? The faculty member is deriving substantial personal benefit from his association with the University’s name; has failed to inform the University of his arrangement; and has not permitted the University to have any say in the quality control of the products being attached to its name. This would appear to be a violation of the policy where the University has the right to protect its name against misuse.¹⁵

Case 4: A More Difficult Hypothetical Case

The Walt Disney company decides to start a “virtual university.” It will hire academic “stars” from the great research universities and will build and market new media courses based on the content provided by the stars. If the

¹⁵ Moreover, by deriving benefits from use of the University name in the manner described in this example, the faculty member is really making significant use of University resources, and the University should have an ownership interest in the intellectual property created. Of course, faculty members continually refer to their position at the University when they make appearances on television or radio and when they author book reviews and articles in non-scholarly publications. University faculty and administrators are often displeased when such

“academic stars” have other “star qualities,” they will be used on camera. If they do not have video appeal (determined by market testing techniques), Disney will hire actors to “perform” the content.

In one of its first pilot efforts, Disney approaches Professor Simon Schama from Columbia with an offer of \$250,000 plus royalties to create a course on the French Revolution, which is derived in part from his best selling book, Citizens. The course will be produced at Disney, using Disney personnel, technology, and its vast distribution network. Schama would be identified as a University Professor at Columbia, but there would be no indication that Columbia was involved in the production of the course. Schama, with experience in creating films, is going to write the content and teach the course. Schama will be using Columbia facilities to prepare the content of the course insofar as he uses its libraries, offices, computer facilities, etc. – normal uses associated with his faculty status. Of course, he is also using the cumulative stock of knowledge that he has stored since he began studying history, which was long before he came to Columbia. He would be receiving his normal salary, but during the production time for the virtual course he asks for an unpaid leave to work on the project.

Does the University have a claim to any part of the intellectual property that Schama creates for the Disney project? If the University had been developing its own new media content for broad distribution, would it have a right of first refusal? Should any of the revenues received by Schama on this project go to the University? If so, on what basis?

Case 5: The Hypothetical Case of “Guns for Hire”: Two examples of new media “free agency.”

Example 1: Conflict of Commitment?

Stanford decides to offer an Internet-based course in astrophysics. It comes to Princeton’s Jerry Ostriker, who is a world-renowned astrophysicist and an exceptionally able teacher, and proposes that he create the course for Stanford, using Stanford’s personnel and facilities, as well as its technology and other resources. Stanford would note in advertising the course, that Ostriker was a professor at Princeton, but does not offer to share the revenues generated by this popular course with Princeton. Ostriker says that if he were to take on the project, he would not spend more than one day a week on it during the academic year and would spend only those times during the summer months that were not covered by his Princeton salary. Under its intellectual property policy, Stanford has an option to pay Jerry a “fee for service” or to offer him a royalty stake in the revenues generated from his new media course. Ostriker is tempted, but is concerned that he might be violating the Princeton policy on new media intellectual property, which follows closely the policy outlined above. If Jerry were to work on the Stanford project, would it constitute a “conflict of commitment?” Would Princeton be in a position to stop Jerry from taking the project on while he continued as a professor with tenure at Princeton?¹⁶

Example 2: “String Theory” on the move

¹⁶ Upon review of this case, the full AAU Digital Network and Intellectual Property Management Committee may want to take the position that a full-time faculty member at one university should not be able to create a course for another university. This goes to the core of a university’s business and, therefore, may be viewed as a conflict of interest and commitment.

Professor Brian Greene conducted research in the area of “string theory” and taught difficult courses in mathematics with great success while a faculty member at Cornell. Three years ago, Professor Greene joins the faculty at Columbia and continues to write a book about string theory, The Elegant Universe, for a wide audience. With substantial financial support, he creates a web-based Internet course in mathematics that turns out to be highly entertaining and equally successful in its audience appeal. Under Columbia’s intellectual property policy (which is consistent with the principles and elements outlined in this report), the collaborative effort leads to the creation of a product owned by the University. Professor Greene receives the standard distribution of revenues on the return for this Internet course. After completion and widespread use of the course, Greene receives offers from Harvard and Berkeley, and he weighs these offers against Columbia’s effort to retain him. Professor Greene raises the question of whether he would have the right to use the web-based course, without having to pay standard fees, were he to move to another university? Is the intellectual property that Professor Greene helped to create, in fact, portable? Suppose that Professor Greene moves from Columbia to another university and creates a new version of his course at his new location. The new version has a striking resemblance to the earlier one. Who owns the “new” property?¹⁷ Suppose that Professor Greene teaches his course at Columbia, but the course is made available to students at Cornell and Duke through the Internet and video conferencing. Students at all three schools receive credit for the course. Students pay tuition for Greene’s course to each of the schools. Columbia pays Professor Greene his salary and benefits. Should Columbia be entitled to any portion of the tuition revenues for this course that is going to Duke or Cornell?

¹⁷ It seems entirely appropriate in such a case to permit Professor Greene to make continuing use of the work he created at Columbia, but it is equally appropriate that Columbia retains a continuing ownership interest in the work created while at Columbia.

IV. Boundary Problems and Likely Contested Zones Involving Intellectual Property in the New Digital Media

No broadly written policy on intellectual property in the new media will be able to avoid some significant boundary problems. As universities craft or modify their policies in these areas, they ought to think through how to handle a number of problems that will arise in gray areas. As a guide to that effort, we outline a number of areas that are apt to pose problems for members of the university community when making decisions about rights and obligations related to new media technology.

- **Definitional matters of importance**

What constitutes a “significant contribution” or “substantial contribution” to the creation of a work? What constitutes resources or facilities that guarantee a university interest in the created content? Are there “core” types of support, such as faculty compensation and normal library and computer technology use, that lie outside the boundary of “resources,” “facilities,” or “substantial contribution?”¹⁸

Those universities that have considered the issue of intellectual property rights as they relate to copyright have defined the university’s reach as linked to use of university resources and facilities. For example,

¹⁸ Independently of the definitional issues discussed here, the general principle that most of what is created at the university involves collaborations as well as use of the university’s facilities and resources in ways that lead to the university’s claims on the intellectual property rights of the created product, will itself be open to dispute at some universities.

Stanford University’s copyright policy, which has one of the most well articulated policies on the definition of the University’s intellectual property rights to copyright material, contains the following language:

Copyright is the ownership and control of the intellectual property in original works of authorship which are subject to copyright law. It is the policy of the University that all rights in copyright shall remain with the creator unless the work is a work-for-hire (and copyright vests in the University under copyright law), *is supported by a direct allocation of funds through the University for the pursuit of a specific project, is commissioned by the University, makes significant use of University resources or personnel*, or is otherwise subject to contractual obligations. [Italics added] (RPH 5.2 Section 1A)

Stanford acknowledges academic tradition and does not claim ownership to books, articles, and similar works or ownership to “pedagogical, scholarly, or artistic works, regardless of their form of expression” except where the policy makes exceptions explicit.¹⁹ The policy defines specific types of works, including unpatentable software as falling beyond the scope of its ownership.²⁰ The policy statement also defines the “Use of University Resources”:

Stanford University resources are to be used solely for University purposes and not for personal gain or personal commercial advantage, nor for any other non-University purposes. Therefore, *if the creator of a copyrightable work makes significant use of the services of University non-faculty employees or University*

¹⁹ For example, the policy states, “The University claims no ownership of popular nonfiction, novels, textbooks, poems, musical compositions, unpatentable software, or other works of artistic imagination which are not institutional works and did not make significant use of University resources or the services of University non-faculty employees working within the scope of their employment.” [Sec. 1B]

²⁰ The Stanford policy does discuss conditions under which the University claims ownership of certain types of courses taught at Stanford and courseware developed there: “Courses taught and courseware developed at Stanford belong to Stanford. Any courses which are videotaped or recorded using any other media are Stanford property, and may not be further distributed without permission from the cognizant academic dean ... Blanket permission is provided for evanescent video or other copies for the use of students, or for other University purposes. Prior to videotaping, permission should be obtained from anyone who will appear in the final program.” [Sec. 1F]

resources to create the work, he or she shall disclose the work to the Office of Technology Licensing and assign title to the University. Examples of non-significant use include ordinary use of desktop computer, University libraries and limited secretarial or administrative resources. Questions about what constitutes significant use should be directed to the appropriate school dean or the Dean of Research. (Section 1H) [Italics added]

Finally, Stanford defines the scope at the University of the Copyright Act's "work for hire" provision (that is, "a work prepared by an employee within the scope of his or her employment") to include:

Works prepared by employees in satisfaction of sponsored agreements between the University and outside agencies. Certain commissioned works also are works for hire if the parties so agree in writing.

The employer (i.e., the University) by law is the "author," and hence the owner, of works for hire for copyright purposes. Works for hire subject to this principle includes works that are developed, in whole or in part, by University employees. For example, under Section 1.H of this policy, [the section quoted above on "the use of University Resources"] significant use of staff or student employee programmers or University film production personnel will typically result in University ownership of the copyright in the resulting work. Where a work is jointly developed by University faculty or staff or student employees and a non-University third-party, the copyright in the resulting work typically will be jointly owned by the University and the third party. In such instances, both the University and the other party would have nonexclusive rights to exploit the work, subject to the duty to account to each other. Whether the University claims ownership of a work will be determined in accordance with the provisions of this policy, and not solely based upon whether the work constitutes a work-for hire under the copyright law. For example, copyright in pedagogical, scholarly or artistic works to which the University disclaims ownership under this policy shall be held by the creators regardless of whether the work constitutes a work-for-hire under copyright law. University ownership in a work for hire may be relinquished only by an official of the University authorized to do so by the Board of Trustees. (Ibid. Section 5B)

Although the policies of Stanford and some others are fairly specific, there clearly will remain open questions about the definitions of what basic resources of the university may be used by faculty in creating works that do not fall under the "ownership" provisions of the policy. In short, some complicated cases will pose boundary problems that will have to be adjudicated as they emerge for review. They will test the boundaries

of the policy. Nonetheless, universities should be as clear as possible at the outset about what constitutes “substantial” or “significant” resources, or any other basis for the claim that the university has the intellectual property rights to the created work(s).

- **Conflict of commitment**

Many research universities have poorly defined “conflict of commitment” policies. A typical policy will permit a faculty member to spend up to one-day-a-week engaged in outside activities and to receive additional compensation for as much as three summer months in addition to the 20 percent or one day a week provision. Most policies do not attempt to place any boundaries on the types of outside work that would require agreement with the university (other than those covered by university conflict-of-interest policies). The definition of what constitutes “a day,” what defines a week of work, what constitutes work above and beyond the definition (for example, work on weekends) remains ambiguous, and enforcement of existing provisions beyond formal reporting is lax, if extant, at most research universities.²¹ There are many reasons why universities may choose not to monitor closely their faculty members’ time-budgets, not least of which is the administrative nightmare it might create.

However, the development of the new information technologies may lead to a set of new conflict of commitment problems for universities.

²¹ The University of California reviewed its conflict of commitment policies in 1998. In the final report, there was a summary of policies at other major research universities, including limits on time for outside activities by faculty and some staff.

A number of potential problems were alluded to above, but they may involve questions of whether a faculty member at one university can (on his or her own time) create an Internet-based course for another university. Limits on outside activities that are carried out for new enterprises that focus on “virtual” education may also pose problems related to intellectual property and conflicts of commitment. A number of universities, such as Princeton, have well-defined conflict of commitment policies and reporting procedures that enjoy widespread compliance among the faculty.²² We would suggest that member institutions review their policies in terms of the new information technologies and their consequences for outside work opportunities for the faculty.

- **Guns for hire**

As major research universities develop their capabilities to create content that can be distributed widely for the education of audiences beyond the campuses, there are apt to be efforts among universities to “hire” some faculty at other universities to create content for them (without hiring them on a full-time basis). Beyond competition within the Academy, there are apt to be a new breed of “education entrepreneurs” who will seek to hire members of the faculty for “consulting” work leading to the creation of new media products. What rules, if any, should govern such activity? What limits, if any, should universities place on such work and the use of the university’s name?

²² The Princeton conflict of commitment policy is worth review since it is quite explicit about requiring faculty to receive permission from the University when they wish to teach at another school. However, many conflict of commitment problems arise in dealing with outside work by members of professional school faculty (i.e., particularly faculty in schools of law, business, and medicine). Having few professional schools, Princeton does not face that set of problems.

- **New media academic free agency**

Many universities have experienced the escalating costs associated with the recruitment or retention of “star” scientists and scholars. As much as we might deplore the costs of this competition, many of the AAU institutions are in fact in continual competition for quality, or at least perceived quality. The development of Internet-based educational enterprises, either by universities alone or in partnership with for-profit businesses, could lead to a new form of “academic free agency,” based this time on the ability of a faculty member to create extraordinary teaching content and materials that enable the university to reach large numbers of students and other audiences.

- **Portability of intellectual property**

The intellectual property rules that govern scientific discoveries, patents, and licenses are reasonably clear: the university owns the intellectual property and the rights are not portable. If scientists who have made a discovery that is patented and licensed leave the university, they do not carry the patent rights with them, although they may continue to receive a share of the returns from the licensing agreements. Is there any reason why copyrights to works created by a faculty at one university (which are owned by the university) should be more portable than results of scientific or technological discoveries or inventions? How would copyright “fair use” rules be applicable here, if at all?

- **Types of institutional arrangements with external partners**

The development and use of the new media technologies are apt to lead universities into partnerships with for-profit start-up companies or larger, well-established businesses. It is also apt to lead to new forms of collaboration among universities, which will marshal their collective intellectual capital to develop new courses as well as new forms of content-based educational materials. The nature of these partnerships or other forms of relationships will create important new challenges for research universities, some of which have been alluded to in this report. Not the least of these challenges will be the preservation of the tax-free status of the university when it joins with for-profit organizations to create course content. But other issues will be of great importance as well, including the crafting of agreements as full partnerships, as equity stakeholders in new companies, or as providers of intellectual property with well-defined limitations on its development and use. It could prove valuable for AAU institutions to maintain an on-going record of the “problems” that universities have encountered in crafting “deals” with other institutions with whom they are partnering. This “problem identification” role might be one that the AAU could usefully fulfill.

- **Appropriate use of the university’s name**

We have discussed the care that is needed in protecting the university’s name. It is critical that the protection be managed centrally at the university. All institutional agreements made by departments, schools, or other academic units of the University that involve the use of the university’s name should be reviewed by the President or an officer of the university designated by the President. There is a tendency at some universities that have highly decentralized structures to have individual,

entrepreneurial deans who believe they need only represent their own school's or program's interest. Agreements involving the university's name must fully represent the interests of the university as a whole and therefor should be reviewed by the central administration of the university. We strongly urge AAU institutions to monitor the uses and the potential abuses of the institution's name. In fact, there should be in each policy statement a clear requirement for central administration approval of agreements for new media content that involves the use of the university's name.

- **Division of revenues**

Although we recommend that discussion of the division of potential revenues begin with the rules already established for patents and licensing of discoveries and inventions, we realize that there are varying cost bases for the creation of new media products. Nonetheless, we urge that two principles be adopted in the process of determining distribution rules: first, that there be a fair distribution of revenues among those directly involved in the creation of works (i.e., faculty, departments, schools, divisions, and in some cases doctoral or post-doctoral students); and second, that the principle of collaborative creation lead "the university" to retain a significant share of the proceeds for investment in research and teaching activities that are critically important to the mission of the university but that may not generate their own revenues. Moreover, if the general pattern of academic productivity prevails here as elsewhere, this will be a "game of home runs": Ten to fifteen percent of

the faculty or units of the university will generate about 65 to 80 percent of the total revenues from these new media activities. Nonetheless, that predictable inequality should be limited by the role that the university can play in redistributing some of these revenues in ways that foster new enterprises, sustain the excellence of others that do not generate these kinds of revenues, and preserve the breadth of intellectual assets of the university for future generations of students and scholars. In short, in the area of new media, as elsewhere, the university should act as an intermediary between “the market” and the university’s own definition of need for resources to sustain the institution’s teaching and research mission.

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