

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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Mr. Michael J. Holland
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Washington, D. C. 20502

Dear Mr. Holland:

The Massachusetts Institute of Technology is pleased for the opportunity to provide a response to the NSTC request for comment with regard to Research Business Models that was published in the Federal Register on August 6, 2003. This letter will begin with some general comments about the nature of the research enterprise between the federal government and the higher education community and then will address the specific items listed in the August Federal Register.

GENERAL COMMENTS

Clearly, the partnership between the federal government and the higher education community in the United States is one of the most productive and effective ways advances in research have ever been achieved. This relationship is unique in the world and whatever is done to enhance and strengthen that partnership must recognize the key factors that have made it as successful as it is. This is not news to OSTP. The joint Marburger-Daniels memorandum of June 5, 2003 recognized this partnership when it said "Science and technology contribute significantly to the highest priorities of this Administration....the President's FY04 budget sets forth a research and development (R&D) agenda...that reflects these priorities and seizes important opportunities for discovery and development while sustaining the basic R&D machinery needed for continued U.S. leadership in science and technology."

In this regard, research universities are unique as recipients of funding from the federal government. Not only does research done at universities push the frontiers of knowledge, it also provides training and education to the next generation of researchers, whether they remain at universities or move into the private sector. OMB A-21, when originally drafted, recognized this duality of research and instruction and helped solidify this duality as a strength of the higher education research enterprise.

This supports the contention that research at institutions of higher education is not a “business” as suggested in the request for comment. Most universities, including MIT, do not see the research undertaken by our faculty, researchers, and students as a “business” in the classic, corporate sense. As important as the enterprise is, and as critical as funding to the nation’s universities is, one cannot see the partnership *first* as a business. Nonetheless, MIT recognizes that efficiency, streamlining, and considering new and more effective ways to carry out the enterprise is of value to both parties.

In looking at the relationship between the parties, two specific areas are of particular concern to universities: (i) the increasing regulatory requirements that are being imposed on the higher education community without regard to the collective burden that this places on the institutions, and (ii) the costs associated with these increased requirements. Specifically, we are concerned about

- ◆ the problem of unfunded mandates (for many institutions the 26% cap on the “A” part of “F&A” is extremely burdensome. This cap hasn’t been changed in a decade, but costs have spiraled during that time)
- ◆ the shifting of direct costs from the federal government to the university recipients of awards (cost sharing; addressed in specific comments)
- ◆ the increasing cost of multi- and interdisciplinary research (addressed in specific comments)

SPECIFIC COMMENTS

Accountability

The issue of accountability is—among all these areas requesting comment—perhaps the most critical. As the PRD-4 report stated “Accounting and accountability are not the same.” This is the principle that the NSTC should uphold. There are numerous examples of quality research being performed but which resulted in a lengthy interchange between the university and the government on the accounting for the expenses supporting that research project.

How should research accountability be recognized? There are currently in place numerous ways to judge the merits and appropriate expenditure on a research project. First and foremost, the investigator is required to submit technical reports to the sponsor describing accomplishments (both positive and negative). In addition, referred papers appear in journals citing research results, making those results open to the public. Finally, if a research project is not achieving its goals, the project simply isn’t refunded. In this way, quality of the research becomes the prime determinant of accountability. Additional approaches to determining accountability of the research itself would be oral presentations at meetings, public seminars, creation and protection of intellectual property through the transfer of technology to the public.

What, then, about the accounting? Remember that accounting is different from accountability. The government has a right to be assured that the accounting for any funds it provides to a recipient is appropriately spent. Financial reports should be

submitted in summary form; auditors should review through the single audit concept those reports to determine that no unallowable costs were claimed, and financial reports should support the technical activities described in the progress reports. The regulations that appear in OMB Circulars A-21 and A-110, as well as in the Federal Acquisition Regulations, supplemented by the audit requirements of OMB Circular A-133 provide adequate review and assurance to the government of the accounting for research awards.

In summary, the question should be asked, “Did the government receive the research that it paid for?” Whether the research had spectacularly good results pointing to a new area of study or the research merely confirmed that a particular approach was not feasible, the outcomes were of benefit. That should be the basic issue and should be the way to demonstrate the return on federal investment.

Inconsistency of Policies and Practices Among Federal Agencies

Before identifying areas where practices and policies are inconsistent, it is important to mention one place where they are consistent: the Federal Demonstration Partnership (FDP). Through this cooperative government-higher education effort, some 12 federal agencies and more than 90 institutions of higher learning have joined to utilize (for the most part) common terms and conditions for grants (and some cooperative agreements) across the agencies and institutions. This type of effort is essential in reducing costs and promoting appropriate efficiencies. The difficulty most universities see is that the FDP terms and conditions are not applied to all assistance (grants and cooperative agreements) awards and are not applied at all to contracts. We urge that a long range goal of the NSTC is to broaden the application of the FDP terms to other awards.

You will be provided with ample evidence of specific places where policies and practices are inconsistent among federal agencies. Because the lists you receive will be extensive, we decided to provide a partial list here, with limited comments, but are ready to provide more information if you would like:

1. **Marking awards and BAAs and RFPs sensitive but unclassified.** As you may know, this is a specific area of concern for universities. It raises the issue of openness in research and the viability and applicability of NSDD 189.
2. **Conflict of Interest regulations.** NIH and NSF have adopted financial conflict of interest policies, but they differ in small but significant points which causes administrative issues for universities who either have to adopt two sets of implementing policies or the most restrictive parts of each. More importantly, other agencies have not issued regulations in this area.
3. **Misconduct in Science regulations.** Again, NSF and NIH are the only two agencies which have implemented formal regulations. Further, since the federal wide change in the definition of misconduct in science, only one agency (NSF) has issued regulations implementing the new definition. This is extremely difficult and troublesome for universities as they manage their institutional programs in this extremely sensitive area.

4. **Exclusions/changes from standard A-110 terms on FDP awards.** Although the standard FDP terms are extremely useful to universities, there are even places within these terms where agencies have taken exception to selected “standard” FDP terms and conditions. Although we recognize the need in certain places, a move toward more uniformity would be welcome.
5. **Payment of academic year salary to faculty.** Again, the policy varies widely among agencies and, more importantly, can vary even within one agency.
6. **Limitation on salary levels.** Although these limitations are generally statutorily based (such as the NIH limitation), it creates disincentives for faculty to seek certain types of funding, or it creates a financial burden on an institution to supplement what the agency pays to bring an investigator to full salary.
7. **Audits.** When OMB A-133 was adopted, it regularized what was known as the “single audit.” This was a positive step, but subsequent changes in the administration of that circular is beginning to create problems. The latest difficulty is the requirement of institutions of higher education to be responsible to do site visits and other more extensive audits of other institutions of higher education who serve as subrecipients on federal awards. [This issue is being addressed by the FDP currently and we are attaching information on this effort.]
8. **Cost sharing.** Agencies differ substantially in their requirement for cost sharing on research awards. MIT welcomed the NSF position on cost sharing as described most recently in its Important Notice 123 and we urge that the clarity of the NSF position be carried into other agencies as a standard policy and procedure.
9. **The issue of the OMB circulars.** Written originally as policy documents, the circulars have become more precise and transaction oriented. For example, the A-21 requirements for payroll distribution (“effort reporting”) are excruciatingly detailed and subject to any different interpretations. Perhaps the most emotional of the more recent changes is the issue of the payment of administrative and clerical salaries, but it is by no means the only issue of concern. With regard on OMB Circular A-21, a major issue for MIT is the increasing limitation on reimbursement through the F&A process of costs incurred for legitimate research purposes. Equally importantly, the inconsistent application of the requirements of OMB Circular A-110 have created problems. As cited above, the use of the FDP standard terms and conditions would be an asset, we believe, to both the government and the university community.

In regard to specific examples, we call your attention to the COGR document recently submitted to OSTP on the increase in recent years of regulatory burdens – both in terms of time requirements and financial burdens, many of which are not value added for colleges and universities.

In addition, the Federal Demonstration Partnership is in the process of a long-term study of institutional burdens (IRAB, Initiative to Reduce Administrative Burdens) related to the OMB circulars. We are attaching to this letter the white papers which have been produced describing a number of on-going initiatives.

Inconsistencies Among Universities. There are a number of issues on which institutions vary among themselves with regard to the research enterprise. Again, some will be mentioned with introductory comments:

1. **F&A waivers or reductions.** MIT does not waive or reduce the collection of F&A on research awards. If not paid by the sponsor (federal or non-federal), the department/laboratory/center must provide the funding or the proposal will not be processed. This is not standard across the university community. Although we do not argue that every institution must respond like MIT, it is fair to point out that this is an area of institutional inconsistency.
2. **Acceptance of certain terms/conditions of awards.** Institutions have a variety of policies and practices; in many instances, what one university will accept (for example, restrictions on publications), another will not. This creates differences between institutions and can lead to difficulties for both sponsors and recipients of funding. We suspect it is difficult for a federal sponsor to understand why—in placing awards at a number of institutions under one program announcement—the terms and conditions must often be negotiated individually.

Regulatory Requirements. Although some of these items have been mentioned previously, we want to list them again, and provide additional examples:

1. **Conflict of Interest regulations.** As mentioned earlier, this is an area where we strongly believe that the financial conflict of interest regulations should be standardized across agencies.
2. **Misconduct in science.** Same comments as earlier. As a specific example, the government-wide definition of misconduct in science has been formally issued for 2 years, but only one agency (NSF) has revised its internal regulations to adopt the new definition.
3. **Notices of Grant Awards.** Currently, award notices come to us in a variety of ways (electronic award, electronic notification of award, paper). Furthermore, there is no standardization/consistency on the format or structure of the award. To standardize the formal award itself (perhaps one form for assistance awards and another for procurement awards) would be a step in the right direction and allow institutions to develop templates to put the award information into their institutional databases in a consistent manner.
4. **Single Letter of Credit System.** Although we had understood that there would be only two systems which institutions needed to comply with, we currently have more than a dozen letter of credit (LOC) systems at MIT. Additionally, it would be beneficial to us (and to other institutions who carry out research for the DoD agencies) to be able to draw down funds through LOC for DoD awards, rather than the current systems which we now use.
5. **Reporting of Balances,** current or cumulative. Different agencies now require reporting of cumulative expense balances in different ways (for example, the difference between NIH, NSF, and EPA). Standardization in this area would be welcome.

6. **Web Based Reporting System.** All agencies require reporting—technical, financial, administrative. There has been much effort devoted at some agencies to electronic reporting (the NSF FastLane system and NIH’s i-Edison are but two examples), but a standardized system for reporting all required data is critical.

Research Support, Infrastructure, and Multidisciplinary Research

1. High risk research is essential to maintaining a cutting edge superiority at our colleges and universities. Often this type of research does not have a “quick” turnaround and the benefits may not be seen for years. However, the federal government should consider at all agencies some funding for high risk, high payoff research.
2. With the growth of large multi-disciplinary programs for large-scale integrated research, there is a critical need both for infrastructure support (which is often lacking) and for long term commitments for such undertakings. Programs such as the Material Science programs and the Centers of Excellence and Engineering Research Centers programs have demonstrated the value of such integrated research. Awards which guarantee (with adequate progress) multiyear funding for large centers encourage institutions to commit significant resources for these awards because they have reasonable assurance that the centers will remain in place. This should be expanded.
3. Even individual awards (such as the NSF awards to individual investigators and the NIH RO1 awards) should be increased in size and duration. It is not efficient for principal investigators to spend their time writing renewal applications for continuing work, when the research has been extremely productive. Agencies such as NSF have been working to increase their award size and duration and they, as well as others, deserve support here.
4. Research infrastructure needs are critical. Over the years studies have been performed about the need for infrastructure, especially (but not limited to) bricks and mortar. The recent study completed for the NIH on the financing of research facilities (the Richardson report) is just one of a number of projects which demonstrate the need for such support. Not only are there needs for facilities (the “F” part of F&A) but there is an equal need for support for the “A” part. An increasing concern to MIT and other universities is the “unfunded mandate”—compliance requirements imposed on the research enterprise but not funded by the government. As these costs continue to rise, it becomes more critical for universities to have sufficient funding for this infrastructure.

Information Technology. We believe this is an area of both greatest promise and, at the same time, greatest challenge. It has been almost a decade now that federal agencies have been describing electronic research administration as the way the research enterprise will be conducted. Through the years, perhaps the most successful of the agencies in implementing eRA has been NSF, with its FastLane program. Other agencies have made significant strides – NIH and ONR to name just two – and other agencies are utilizing a variety of electronic systems to carry out their business. The problem from our perspective is the number of these systems – each of which is basically individualized and unique. The NIH Commons which became the Federal Commons and is now

becoming eGov is a step in the right direction. However, there are serious issues which still need to be resolved for eGov to become the standard across the government. Not only must all agencies support eGov, but the number of individualized supplemental information which agencies might require needs to be restricted. The TS194 (transaction set for research proposals) provides a mechanism for standardization, and it (or its successor process) should be explored for adoption government wide. Not until the federal agencies can settle on one process and require its use as a standard (rather than just for selected programs in selected agencies) will all universities be able to invest in the resources necessary to comply. For eGov to become the *de facto* standard will require a significant investment by the government and the higher education community. We do believe that significant steps have been taken and we encourage continued development in this area. As an institution which is supporting the work of the Federal Demonstration Partnership, we support the FDP initiatives in this area and urge OSTP to work closely with the FDP in this critical area.

We appreciate the opportunity to comment and look forward to provide additional information, should you so request.

Sincerely,

Julie T. Norris

Cc: Dr. Alice Gast
Mr. John Curry

Attachments