

Chapter 18

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# Research and Sponsored Programs

*by*

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**S**ponsored programs are the activities of a college or university that are financed by external funds and that support various instructional, research, or public service functions of the institution. Organizations provide external funds to an institution to support and promote research and other activities; to aid in the development and transmission of new knowledge to society; to train individuals for participating in complex technologies; and to provide support for expanding and building specialized facilities and equipment. This is discussed in greater detail in chapter 2, Planning. When an institution receives external funds, it must manage those funds and support the faculty member responsible for carrying out the program for which funding has been awarded. In this way, the institution is a service provider to a client (the faculty member). In most institutions, management of the funds is provided primarily by the business office. In some organizations, the financial or business officer is responsible for financial and administrative aspects of the program and an academic office is responsible for programmatic aspects; in other institutions all the activities—fiscal, administrative, programmatic—are combined in a single office. How an institution organizes to support its research and sponsored activities depends on a number of factors, including size, volume, organizational philosophy, amount of stewardship demanded (by the institution or the federal government), and people involved.

The growth of sponsored programs offices as specific units within an institution has been because of various pressures, both external and internal, on institutions of higher education. Originally, sponsored programs offices were organized to provide support to faculty in the preparation and submission of research proposals to external sponsors. Twenty or 30 years later (in the 1970s and 1980s) functions that had been focused in accounting offices relative to billing and financial reporting began to find their way into more broadly based sponsored projects offices. The 1990s, clearly, was viewed by many as the decade of compliance, as sponsored projects offices assumed more and more responsibility for developing and managing a wide range of compliance issues. These issues are central to appropriate management and stewardship of sponsored programs and have been joined in importance with the advent of electronic research administration initiatives. In fact, these two issues (compliance and electronic research administration) are the

two new complexities that central research administrative offices are dealing with as institutions move into the 21st century.

Sponsored programs demand stewardship and accountability in the management of funds on behalf of the external sponsor. Generally, sponsored-program funds (as distinct from gifts) have extensive reporting and management requirements connected with them, as well as specialized technical reporting and administrative support requirements. The complexity of sponsored-program activities and their impact on the host institution cannot be underestimated. Demands on space, facilities, cash flow, and personnel must be carefully considered. The finance or business officer needs to be aware of these requirements and understand, in detail, the requirements of the sponsor when accepting these funds.

Regardless of the size of the externally funded research and other sponsored programs at an institution, the effect of such funding must be carefully weighed when looking at overall institutional goals and objectives. In light of developments concerning indirect costs at some institutions and the pressures within some states for budget cutting, the amount and type of support in the sponsored-program arena becomes an even more critical element for an institution and one for which careful planning must be made. Sponsored-program funds quickly become interwoven with the fabric of an institution; the loss of such funds can have dramatic negative effects on an institution's academic programs and financial plans.

The college or university financial or business officer has legal and fiduciary responsibility to safeguard all institutional funds, including funds from external sources. Included in this responsibility is the necessity to respond to the growth of sponsored programs and to provide appropriate leadership in the formulation and management of policies that impact the sponsored-program activities of the institution.

This chapter presents general principles and significant procedural requirements applicable to any type of sponsored program. It discusses the complex areas of administration made necessary by an ever-increasing number of sponsored-program requirements. Faculty often need to be reminded that grants, cooperative agreements, memorandums of understanding, contracts, and subcontracts (the basic instruments that authorize an institution to embark on a specific sponsored project) are made to the institution, not to the individual. Consequently, the institution is legally responsible for the projects and for fulfilling sponsor requirements. A faculty member (usually the author of a proposal and generally called the "principal investigator" or "project director") is the individual with the scientific

or technical expertise to carry out the proposed activity and the client who receives service and support from the institution. The different roles of the faculty and personnel in the sponsored-programs administrative area are important, and adequate understanding and communication between them are critical. Sound and prudent policies for the administration of sponsored programs must be developed, and the principal investigator must be allowed the maximum flexibility possible in meeting the objectives stated in a proposal and the subsequent award.

An interesting development, in general, is the increasing complexity of awards from nongovernmental organizations. This has presented institutions with issues that heretofore have remained in the purview of federal and corporate sponsors. Stated another way, these organizations—while maintaining their nonprofit status—are making significantly greater demands for administrative, fiscal, and compliance activities than in the past. In many ways these demands are very similar to those mandated by the government and preferred by corporate sponsors. Perhaps the best example of this is in the intellectual property area, where nonprofits are trying to incorporate terms related to revenue sharing and of management of intellectual property licensing. This aspect of university-sponsor relations has increased in complexity over the past several years and presents new challenges to institutions and suggests the need for increasing vigilance in this area.

## ADMINISTRATION

The activities associated with sponsored programs generally include functions of stimulating and supporting the development of such programs, supporting recognition and incentive activities, and providing general research administration support. These activities may include functions such as:

- assistance with conceptualization of ideas;
- identification of potential sources of support;
- preparation of the proposal and budget;
- review and submission of the proposal;
- negotiation of the award;
- establishment of an account;
- management of awards, purchasing, and property;
- financial reporting;
- management of intellectual property (generally defined as encompassing

patents, copyrights, software, trademarks, trade secrets, and research know-how);

- technology transfer;
- specialized certifications and assurances, including compliance with federal regulations regarding use of small and disadvantaged businesses, affirmative action, and protection of civil rights;
- ensuring compliance with requirements concerning the use of animals and humans in research;
- biohazard and radiation safety;
- preparation of facilities and administrative cost proposals;
- closeout and audit;
- review and management of subrecipients; and
- archiving of records.

How inclusive an institution is in placing these responsibilities within a sponsored projects office depends on the philosophy of the institution and whether or not the combining of functions in a single office is viewed as positive. Clearly, in recent years the trend has been toward combined (or at least colocated) offices.

## ORGANIZATION AND STAFFING

Because sponsored-program activities may span almost every area of an institution, coordination is a vital requirement for effective sponsored-program administration. This coordination should begin with the president. Below this level there may be various organizational structures. As indicated earlier, the appropriate structure depends on the institution's overall management philosophy, volume of the sponsored-program activity, organizational structure, and the quality and experience of personnel involved. There is no single correct way to organize sponsored-program administration; each institution must determine its most effective organization but certainly a close relationship between pre- and postaward is essential.

In any organizational structure, cooperation, communication, and coordination among offices are vital. In managing sponsored programs, however, these needs are especially critical, because functional responsibilities often cross organizational lines. For example, management of intellectual property involves sponsored programs offices (reporting/compliance), technology licensing (marketing),

and the finance office (accounting and fiscal management). Responsibility for humans and animals used in research cuts across individual project lines and involves the principal investigator, faculty committees, administrative hierarchies, and often federal and local compliance offices. There is also a need to provide for management on topics such as changes in scope or principal investigator and approval for any budgetary and duration changes in a project. Knowledgeable individuals need to know when institutional and/or sponsor prior approval is required. In addition, interpretation of rules and regulations, management of equipment, and providing assurances and certifications are critical to adequate stewardship of sponsored awards. The penalties for mismanagement may sometimes be severe (e.g., debarment of the institution) but always tend to be embarrassing to the institution and may affect the principal investigator's ability to receive follow-on funding for a project. In addition, sponsored-program administration offices generally have some responsibility in areas such as relationships with subrecipients, accounting, fiscal and administrative reporting, billing of cost-reimbursable contracts, and management of letters of credit. Typically, offices with these responsibilities report to the financial or business officer, although they may report to a vice president for research or a chief academic officer if appropriate controls and communications are in place.

A number of institutions have separate affiliated foundations that accept and carry out sponsored-program administration. Research foundations might support only a part of the sponsored-program activity, such as administering the postaward activities and handling intellectual property matters, or they might, as "full service" foundations, handle preaward proposal development, proposal processing, accounting, and postaward activities, as well as having responsibility for compliance with regulations concerning animal care and human subjects.

### TYPES OF SPONSORS

Higher education institutions rely on the federal government as the major funding source for sponsored projects. However, in recent years many large institutions find that industrial sources are increasing their sponsorship of research programs—individual projects for individual faculty and, increasingly, large, multi-activity consortia. On average, however, more than 50 percent (and often much more) of a typical institution's sponsored programs are funded by federal sources. While cabinet-level departments of the federal government have extramural programs that provide such funding opportunities, they are mainly concentrated in

the Departments of Agriculture (USDA), Defense (DOD), Education (ED), Energy (DOE), and Health and Human Services (HHS). Independent federal agencies also provide funding opportunities, notably the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), and the Environmental Protection Agency (EPA).

As funding from nonfederal sources has become more significant in the last decade, an institution can no longer rely on agencies of the federal government as the predominant sponsors of externally funded activities. Particularly for public institutions, state agencies can be a significant funding source for research and other sponsored activities. Additionally, governments at the county and city levels may be a source of support, particularly when a higher education institution can provide specialized services not otherwise available to the local governmental agency.

Another source institutions look to for at least a portion of their sponsored activity is private foundations or other nonprofit entities. Foundations have traditionally been a small source of support for sponsored programs, but such funding has increased in recent years. These relationships generally do not have as many regulatory or procedural compliance requirements as do grants and contracts from federal or state sources. However, because foundations are often a source of gifts to the institution, these relationships may pose additional challenges if there is a need to coordinate proposals with the development office. Coordination with the development office is also necessary when funding for sponsored programs comes from corporate or industrial sources. A contractual gift or grant relationship with corporate or industry sponsors, particularly for research programs, can pose special difficulties in negotiation, particularly in the areas of intellectual property, publication, and data rights. Other potential sources of external funds are foreign governments, corporations, and other international organizations as well as local and state governments and not-for-profit organizations. Receiving funds from international sources requires special knowledge of international laws, intellectual property rights, and currency exchange.

In seeking support from industrial and corporate sponsors, the institution needs to be aware of the range of significant issues that must be addressed relative to such sponsorship. For example, support from industrial sources is generally of shorter duration and less stable for long-term basic (or fundamental) research projects than from federal sponsors. The work tends to be more directed than funding via grants and cooperative agreements from the federal government (although not much different than the restrictions placed on some contract activities supported

by the government) and there tend to be more deliverables required (including more frequent progress reports). Although there are fewer cited regulations than in federal awards, certain terms and conditions (notably related to ownership and management of intellectual property and to restrictions on publication) are far more difficult to negotiate and often cause extensive delays in finalizing research agreements.

## TYPES OF SUPPORT

The Federal Grant and Cooperative Agreement Act of 1977 identifies two general categories of federal support: assistance and procurement. Three basic types of instruments—grants, cooperative agreements, and contracts—are used to fund assistance or procurement projects.

### Assistance

The legal distinction between “assistance” and “procurement” is important because of the types of regulations that accompany each. A distinction often made between assistance (i.e., grants and cooperative agreements) and procurement (i.e., contracts) is that a grant is awarded for what the institution wants to do and a contract is awarded for what the sponsor wants the institution to do. The principal purpose of assistance is the transfer of money, property, services, or anything of value to accomplish a public purpose of support or stimulation authorized by statutes. The Federal Grant and Cooperative Agreement Act provides that funds for assistance be awarded in the form of grants or cooperative agreements. The purposes of both are similar, but cooperative agreements are defined as the instrument of choice when “substantial involvement” in the research on the part of the funding agency is anticipated. The primary advantages in using assistance awards as the instrument for carrying out research is that the work description is generally written in broad, flexible terms allowing the principal investigator initiative in carrying out the research activities. Although both grants and cooperative agreements are included in the definition of assistance, there are differences between the two. For example, a grant is not likely to carry publication restrictions, and title to equipment purchased with grant funds usually rests with the grantee. Reports are generally more frequent with cooperative agreements and the technical oversight of the activity is far more robust with cooperative agreements.

## **Procurement**

The act states that a contract (which is defined as “procurement” rather than “assistance”) should be used as the legal instrument whenever the principal purpose is the acquisition by purchase, lease, or barter of property or services for the direct benefit or use of the federal government. A contract may include clauses based on statutory requirements that are not applicable to basic or applied research activities. Often these clauses are included in error; sometimes they are included because the sponsor is unaware of special circumstances related to certain types of institutions (for example, a state institution may not need to carry some types of insurance that independent institutions must have). Where possible, such clauses should be negotiated out of awards.

## **SPONSORED-PROJECT MANAGEMENT**

### **Preaward Activities**

At most institutions, preaward activities are carried out in a sponsored-programs office or in an academic division or unit on the campus. Many universities have sophisticated funding-search processes to identify potential sponsors for research programs. The processes may include computerized sponsored-programs databases, such as those of SPIN, COS, and IRIS. Once a potential funding source has been identified, the principal investigator prepares a proposal for consideration for funding. In many cases, particularly for foundations and other nonfederal funding sources, the sponsor requests a preproposal and, based on that preproposal, may ask for a formal proposal committing the institution. Preproposals generally are short (three to five pages); they describe in general terms the activities to be undertaken, the goals and objectives of the project, and a general funding level needed to carry out the work, although at this stage there is seldom any detailed budget or budget justification. In most cases, institutional central offices do not request or require signoff of the preproposal, but are available for consultation if the need arises. This will change with the preparation and submission of the final proposal. Although responsibility for preparation of the proposal lies primarily with the principal investigator, sponsored-programs offices generally support the development of the proposal by assisting with preparing proposal budgets, providing certifications and assurances, and ensuring that the proposal meets the guidelines of the institution and the potential sponsor. Major project proposals that may involve special collaborators or subrecipients, space requirements, or

funding arrangements are often developed by a team that includes faculty and sponsored-programs administration personnel.

Because a proposal is a formal document that binds an institution to its terms, it must be thoroughly reviewed prior to submission. Depending on institutional organization in general and the program requirements in particular, review may be accomplished at various academic levels, in addition to special reviews performed by financial or business officers or experts in fields such as animal care or hazardous waste. Normally, these specialized reviews are performed in a number of offices (e.g., the business office, the facilities office, the human resources office, the risk management office, the animal care office). Some institutions, however, have centralized this review in the sponsored-programs office, and personnel in that office are responsible for securing approvals, if required, from other institutional offices. This method is often viewed positively by faculty who prefer not to have to seek individual approvals from a number of offices. It also is a process that is likely to change when institutions move to electronic processes since multiple reviews or notifications can be done at the same time.

After the review is complete, an official authorized to commit the institution should sign off on the proposal. If the office responsible for submitting a proposal is not the same as the office responsible for administrative management of the award after it is made, coordination between these offices prior to submission of the proposal is essential.

Administrators should develop some type of internal transmittal document for signature by the appropriate campus officers. This document should include information about:

- the availability of space;
- any special health or safety considerations;
- the use of animals or humans in research;
- the agreement to comply with institutional and sponsoring agency requirements;
- cost-sharing requirements (if any);
- the identification of consultants and subrecipients;
- special restrictions or requirements involving intellectual property, publications, or proprietary information;
- any unusual or special requirements needed to carry out the proposed program successfully; and

- commitments made by the institution that extend after the sponsored funding period ends.

This internal transmittal form serves to document the agreement (concurrency) of all parties and should be signed by the principal investigator, the department chair, the appropriate dean, other responsible individuals (such as the chair of the human subjects committee or the institutional animal care and use committee), and the sponsored-programs officer. An internal approval document is particularly important if the formal proposal does not provide for any signatures other than those of the principal investigator and the person authorized to sign for the institution. Note, however, that requirements for internal signatures are institution-specific. The sponsoring agency does not require multiple signatories and, therefore, institutional practices vary. In fact, the practice may vary between units within the same institution, based on the requirements of individual units.

A proposal should be submitted to a potential sponsor only if the institution is prepared and qualified to undertake the proposed work. The same proposal may be submitted to different sponsoring agencies, but multiple submissions should be made known to each potential sponsor. When an external agency decides to fund the proposal, the institution should communicate with its other potential sponsors and either modify those proposals so that the work is not overlapping or withdraw the proposals.

### *Automated Systems*

In the late 1970s and early 1980s, the fledgling use of automated systems expanded dramatically in the sponsored-projects area. In the preaward area, the SPIN and IRIS systems allowed faculty to perform automated searches on funding sources at the federal level. In the last several years, these two systems have been augmented by the COS and RAMS systems and, more importantly, by automated systems created by almost every federal agency to allow electronic, remote access to research opportunities. While many institutions subscribed to one of the systems, some institutions independently developed their own automated systems. In many instances, these expanded to more comprehensive sponsored-program management systems that tracked proposals and awards, provided postaward management information, and allowed automatic billings on contracts and grants. Such systems have become more sophisticated and, coupled with computer-based financial systems, now allow financial or business and sponsored-program officers significant management information on these activities. (See the section on New Developments, for a more extensive discussion.)

### *Preaward Compliance Activities*

In managing both the preaward and post-award activities of sponsored programs, compliance with institutional and agency policy is essential. Many of these mandated compliance requirements are associated with preaward (i.e., proposal development and submission) functions. These are discussed more fully in the Compliance Issues section.

### **Negotiation and Award**

Negotiations take place at various stages of the process when applying for external support. Quite often (particularly in the case of industrial sponsors) there is informal negotiation between a principal investigator and a program officer concerning the scope of work, outcomes, and time frames for a particular activity. In certain instances, but only when initiated by the potential sponsor, negotiation and discussion between the principal investigator and program officials may occur after the submission of the proposal and before the formal award. Federal regulations on lobbying and procurement integrity, however, either prohibit any contact or proscribe stringent conditions under which any contact between an institution or its personnel and a potential federal sponsoring agency or its personnel may take place. Institutions are cautioned to review such regulations with care before initiating a contact with a federal agency after submission of a proposal.

Because external awards are made to the institution and not to the principal investigator, formal negotiation of contracts and grants should occur between an authorized institutional official and the contract or grants officer of the external organization. It is important that the sponsored-programs officer include the principal investigator in the process, but only the authorized institutional official should have formal contact with the sponsoring agency. Faculty members need to be aware that they cannot commit the institution to an agreement; in addition, they must be cautioned that, although they may reach oral or written agreement with program officers, these agreements and commitments are not binding until approved by both the institution and the contracts or grants officer at the sponsoring agency.

Successful negotiation results from the joint efforts of the principal investigator, the sponsored-programs officer, and the contracts or grants program officer of the sponsoring agency. There is generally only minor negotiation on grant awards, limited in most instances to the funding available and the amount of the proposed activity that can be accomplished with that funding. In the area of con-

tract awards, however, significantly more can and should be negotiated, with emphasis on patents, copyrights, title to equipment, and publication restrictions, if any.

Institutional negotiators must be cognizant of the policies of the institution. Both the principal investigator and the sponsored-programs officer must realize that a proposed reduction in funding, particularly if it is substantial, will result in a reduction in the scope of work. Sponsored-programs administrators should work with principal investigators to provide revised scopes of work and should accept a grant or contract only when the faculty member is confident that the funding is sufficient to carry out the intended work. Major program negotiations involving special financial arrangements, rental of space, and impact on cash flow should include a representative of the financial or business office.

When concluding complex negotiations, particularly with federal sponsors, the sponsored-programs officer should perform a detailed and careful review of the terms and conditions of the award to ensure that all material issues have been addressed. In fact, a review of the terms and conditions should be performed on all awards prior to acceptance. Such a review should provide assurance that:

- the award complies with the policies of the institution;
- the award does not make an undue long- or short-term commitment of institutional resources;
- the scope of work can reasonably be accomplished by the principal investigator; and
- the timely submission of technical and fiscal reports is possible.

## Acceptance

### *Grants*

Many grants, particularly from the federal government, are unilateral and thus do not require formal acceptance by the institution. In such cases, the granting agency normally provides an institution with an award letter that states the terms and conditions under which the award is to be administered or incorporates these conditions by reference. In other instances, where formal acceptance of a grant is required, an institutional signature on the award document signifies acceptance of standard terms and conditions incorporated by reference or special conditions, which are normally attached to the signature page. Sponsored-programs officers and/or a financial or business officer should carefully review the

terms and conditions of each award to ensure that its acceptance does not violate institutional policy or procedure and that the institution can comply with the terms and conditions of the award. On unilateral awards, the expenditure of funds is viewed as acceptance of the terms of the award.

### *Contracts*

In the case of contracts, particularly those negotiated with the federal government, the institution must take special note of the clauses incorporated by reference as well the clauses attached to a specific award. A contract award is normally effective only once the document has been signed by both parties. An institution should take the initiative in requesting modification of provisions, if necessary, to accommodate institutional policies or procedures. Requests for modifications should be negotiated with the sponsor and should be a condition of acceptance of an award.

As mentioned earlier, it is often more difficult and time consuming to negotiate awards with industrial and corporate firms than with the federal government. Corporate sponsors generally want title to intellectual property created under the award, approval of publication in advance, and title to equipment purchased under the project. Many colleges and universities have policies that often preclude transfer of title to intellectual property, generally do not permit publication approval, and often do not yield equipment back to the sponsor. Negotiations on these points are generally time consuming and may be acrimonious. Many large institutions, therefore, begin negotiations by providing sponsors a “sample” agreement to which they can react. This may lead to speedier and more satisfactory negotiation although there are times that formal policies of the industrial firm and the institution simply will preclude agreement on a project.

### **Establishment of an Account**

Following receipt of an award, the institution should establish an account or a series of accounts, where appropriate, for the project. The account should comply with institutional business processes and at the minimum should indicate:

- project title;
- sponsoring agency (if flow-through funds, both the original sponsor and proximate sponsor should be identified);
- sponsor identification number;
- *Catalog of Federal Domestic Assistance* (CFDA) number, if appropriate;

- institutional budget number;
- grant or contract number;
- principal investigator and coinvestigators;
- department(s);
- beginning and ending dates;
- budget detail (depending on the policies of the institution, the degree of detail might vary considerably from a lump sum with total flexibility to a detailed categorization with no flexibility);
- facilities and administrative cost rate;
- type of agreement;
- billing requirements (letter of credit, advance, progress, cost-reimbursable);
- reporting requirements (technical, financial, intellectual property, property);
- prior approval requirements (if any);
- cost-sharing requirements (if any);
- title to equipment and real property; and
- any other special requirements.

This information should be provided to all parties responsible for the project. In addition, institutions might consider whether—in advance of establishment of an account or even acceptance of the award—it wishes to have the concurrence of the investigator and the investigator’s administrative unit to adhere to the terms and conditions of the award.

### **Postaward Activities**

An office in the institution, normally the sponsored-programs office, should act as the liaison between the principal investigator and the sponsoring agency and between the principal investigator and other offices at the institution whose functions include handling or processing sponsored project documents. This office should be responsible for monitoring and approving changes in the award, as well as seeking the sponsor’s approval where required. The need for prior approval of changes varies with the type of sponsor and type of project (i.e., research or non-research), but such changes generally encompass a broad range of activities, including:

- change in the scope of work;

- change in the principal investigator;
- change in the budget;
- purchase of equipment;
- foreign travel;
- construction or alteration of facilities;
- subrecipients and major subcontractors;
- consulting arrangements;
- period of performance extensions; and
- carryforward of funds.

Office of Management and Budget (OMB) Circular A-110, *Uniform Administrative Requirements for Grants and Other Agreements with Institutions, of Higher Education, Hospitals, and Other Non-Profit Organizations*, allows recipients of federal funds the right, on research grants, to waive prior approval on most budget changes and to approve carryforwards, no-cost extensions, and preaward costs up to 90 days in advance of a project's starting date. Even with institutional ability to manage most of the heretofore agency approvals, certain approvals—namely change in scope, reduction of time, and change in principal investigator—are reserved to the sponsor. Institutional business, financial, and sponsored programs officers should develop internal systems that provide adequate stewardship of federal funds while permitting principal investigators the same degree of flexibility as is provided by federal agencies.

Because the institution is legally responsible for all aspects of an award, it is in principle responsible for the conduct and progress of research on that award. In practice, however, responsibility for meeting the technical and scientific terms of an award belongs to the principal investigator. A sponsored-programs officer must ensure that the principal investigator submits reports in a timely fashion and in adequate detail to fulfill the award's technical requirements and must ensure that other offices of the institution comply with various requirements imposed by the agency.

A concern in dealing with sponsored programs is the issue of subrecipients. The prime recipient of federal grant funds is responsible for monitoring the activities of subrecipients. A subrecipient is defined as a legally constituted organization or institution that helps the prime grantee carry out the scope of work identified in the proposal. Federal regulations require an institution to distinguish between a subrecipient (which helps to carry out the research program) and a sub-

contractor (which provides goods and services but does not participate in the scope of the work itself). OMB Circulars A-110, and A-133, *Audits of Institutions of Higher Education and Other Non-Profit Institutions*, require that the prime recipient be responsible for activities of the subrecipients and monitor their performance. In such a relationship, the prime recipient is viewed as the sponsor of the activity and is thus mandated to carry out all of the monitoring functions required of the agency funding the research.

Both circulars are instructive, not only for reviewing the text of the regulation, but also for reviewing the information provided by OMB in the publication of the final rule for each. The full text is accessible in the *Federal Register* and the OMB comments generally provide much information on the thinking of the agency in adopting the regulation. This is particularly true of the subrecipient issue, since OMB Circular A-133 provides an exceedingly useful definition of and rationale for the circular's treatment of subrecipients. In addition, the A-133 compliance supplement provides similarly useful information.

### **Closeout and Termination**

Closeouts of sponsored projects occur regularly and continually throughout the institution's fiscal year. Sponsored projects do not adhere to an institution's standard fiscal year; the institution must allow for orderly closeout of research accounts on an ongoing basis. Care should be taken to ensure that all closeout documentation is completed and submitted to the agency as prescribed in the notice of award or the terms and conditions referenced in that award. Generally, closeouts require submission of final fiscal and technical reports, reports of property and equipment, disposition requests or instructions, and submission of invention statements. Compliance with closeout terms and conditions is normally the responsibility of the sponsored-programs office, which works with the principal investigator on technical reports and invention statements and with the business office on financial, property, and other administrative reports. Care should be taken, even after submission of the final technical and fiscal reports, to maintain all the records relating to a project until all appropriate audits have been performed and the institution is free to dispose of the records. Although institutional practices vary, most institutions maintain all contract and grant records for at least seven years. The issue of retention time is often not seen as important, yet it is vitally important. Disposing of records too early can cause significant problems on audit. On the other hand, if records are kept indefinitely, an institution is required to produce these records (regardless of the retention period) if they are available.

Many institutions keep some records beyond the legal retention period, but identify only the most significant key data items, such as a copy of the award signature page, the funding period and amount, and often the closeout documentation, for indefinite retention.

For both grants and contracts, requirements for retaining financial and technical records may exceed the retention requirements for other types of records. There generally are additional requirements in closing out a research contract, particularly with regard to submission of financial documents. Retention requirements should be recognized and policies should be developed to comply with them. Institutions are often unaware that “records” in the federal vernacular applies to technical records as well as administrative and financial records. These are generally the most difficult to handle since technical records normally include the research notebooks generated by investigators and students, printouts from research experiments, and so forth. Some institutions have addressed this issue by making the principal investigator the custodian of the technical records, requiring him or her to seek approval to destroy the records but, at the same time, allowing an investigator who switches institutions to take research data and notebooks to the new institution.

Termination of a project by a sponsoring agency before its scheduled completion date is quite different from a routine closeout and must be dealt with carefully. On government contracts, terminations are usually the result of either default or mutual agreement to terminate. In either instance, the institution should review OMB Circular A-21, *Cost Principles for Educational Institutions*. The section “Termination Costs Applicable to Research Agreements” outlines what costs will be paid by the agency after termination. To deal effectively with early termination of both grants and contracts, an institution should have clear policies on severance pay and other benefits, since reimbursement of those costs is dependent on having written policies that are institutionwide and not applicable only to sponsored projects.

## COMPLIANCE ISSUES

### Compliance with Institutional Policies

In a number of areas, compliance with institutional policies is critical. Such compliance is important at the time of proposal submission, as well as during the lifetime of a grant or contract. In reviewing a proposal prior to its sign-off and sub-

mission, and in reviewing award documents before acceptance, an institution should examine, at a minimum, the following factors:

***Eligibility of the investigator.*** Is the person initiating the proposal eligible under the rules of the institution to be a principal investigator? (Some institutions permit only tenured or tenure-track faculty to submit proposals; others allow all faculty and staff to submit proposals. Still others allow senior research staff members to be principal investigators.) Is the faculty member eligible to be a principal investigator for the program to which he or she is applying? (Some programs have age or gender restrictions, some require citizenship or permanent immigrant status.)

***Academic program.*** Where required, have the appropriate department chairs and deans certified that the proposal is compatible with the goals of the department and college? Does the proposal contribute to the academic program of the institution? Does the proposal provide training and support for students? Does the proposal anticipate the offering of new courses, programs, or degrees? If so, have they been approved?

***Space.*** Is there sufficient space for the research program? Is the space adequate, not only in square footage but also in terms of utilities, floor loading, or other special requirements of the program?

***Salaries.*** Do the salaries comply with the institution's salary scales? Are adequate increments built in for future years? Are benefit rates appropriate? Do the principal investigator and others connected with the project have sufficient time available to carry out the research being proposed? Will the activity require additional staff? If so, are they included in the proposal budget? Have provisions been made for earned leave? The National Institutes of Health have legislatively imposed salary caps for individuals paid on research grants and contracts utilizing NIH funds. In January 2000, the NIH issued new regulations specifying the various capped levels and restricting reimbursement from NIH funds to the capped amount. This creates a problem for recipients, particularly for medical schools and health science institutions, since the balance of the funding for the effort provided must come from discretionary or institutional funds, and cannot be charged to the NIH project.

***Graduate students.*** Is the requested number of graduate research assistants adequate?

***Publications.*** Is the investigator free to publish his or her research results without restriction?

***Procurement.*** Does the institution have adequate policies in place to manage the acquisition of goods, services, and equipment needed for the project? Most colleges and universities have a procurement or purchasing office responsible for the acquisition of goods and services for the institution, including those required on sponsored-program accounts. The policies and standards adopted for the purchasing department should comply with federal regulations, in that the materials and services are obtained in an effective manner and in compliance with appropriate laws and executive orders. (See chapter 17, Procurement.)

***Technical reports.*** Are the number, frequency, and comprehensiveness of periodic technical reports acceptable?

***Sponsor supervision.*** Is the extent of supervision exercised by the external sponsor within satisfactory limits?

***Budget.*** Is the budget sufficiently detailed? Have all necessary direct cost items been included? Have increments been calculated for all budget categories for future years?

***Facilities and administrative costs (F&A Costs).*** Have the institution's F&A-cost rates been properly applied and included in the proposed budget? If not, is there adequate documentation of a sponsor restriction on recovery of F&A costs? Are approved institutional reductions (i.e., cost sharing) adequately documented and justified?

***Human subjects.*** If the proposed project involves the use of humans as subjects in research, has that research been adequately reviewed by an institutional review board (IRB)? Does the research comply with government requirements?

***Use of animals in research.*** If the proposed project involves the use of live, vertebrate animals, has the research protocol been properly reviewed and approved by the institutional animal care and use committee (IACUC)?

***Recombinant DNA.*** If the proposed project involves recombinant DNA, has the investigator secured appropriate approval from the institution's recombinant DNA (biohazards) committee? Does the research comply with federal requirements?

***Insurance.*** Does the proposed research pose any special property liability or other insurance questions? In the case of contracts, is the appropriate Federal Acquisi-

tion Regulation (FAR) insurance clause cited? This is particularly important for state institutions that are self-insured for certain actions.

**Cost sharing.** “Cost sharing” refers to the institution’s bearing a portion of the cost of a project, generally defined as “more than 1 percent of total project costs.” “Matching,” on the other hand, refers to a substantial contribution (as much as 1:1) toward the cost of a project. Matching funds are normally requested for equipment grants and construction grants.

If cost sharing or matching funds are required, are the necessary review and approvals completed to make such commitments? Have the funding sources been identified? Is cost sharing reasonable in terms of the research being undertaken? If cost sharing is provided through the principal investigator’s time and effort, does the principal investigator have sufficient time for other duties?

The issue of cost sharing is perhaps one of the most contentious at the present time. The Office of Science and Technology Policy has issued a report in response to the Presidential Review Directive of 1998 asking that cost sharing problems and issues be resolved. A central issue is the extent to which cost sharing is required in program announcements and whether this places certain institutions at a disadvantage in competing for funds. A corollary problem is that of agency program officers asking for cost sharing when negotiating the award in cases where it has not been indicated previously as a requirement. A third problem is the cost of cost sharing to an institution (particularly with the advent of the cost accounting standards), which has posed new, complicated, and costly problems for institutions seeking funds from the government. In fact, the National Science Foundation tried to address this problem with Important Notice 123, which limits the cost sharing that program officers can require as a condition of an award.

**Long-term commitments.** Does the proposal contemplate institutional funding beyond the period of sponsor funding? If so, is institutional commitment to that support adequate?

**Intellectual property.** Do the patent and copyright terms, proposed or agreed to, comply with institutional requirements? Are patent assignment agreements on file for all persons who may be in a position to conceive, make, or reduce to practice inventions, improvements, or discoveries developed under the project? Have the sponsor’s copyright and rights-in-data terms been considered? Are they acceptable?

**Classified research.** Does the proposal contemplate the undertaking of any classi-

fied research? Is such work in compliance with institutional policy? Does the institution have facilities that are sufficiently secure for classified work?

*Completeness and compliance with sponsor limitations.* Is the proposal complete for submission? Have all the requirements of the sponsor and the institution been considered? Are they adequately addressed in the proposal or the proposed agreement? If certain information in the proposal is considered by the institution to be proprietary, are all such pages clearly marked? Is there an indication on the cover that proprietary material is included in the proposal? Have all requirements of the sponsor been met with regard to page length, type size, and so forth?

### **Compliance with Policies of External Funding Sources**

The Office of Management and Budget periodically issues management circulars applicable to agencies that fund activities at colleges and universities. These circulars provide guidance to federal agencies but only become directly binding on an institution when the agency implements the circular guidance. To ensure that the provisions apply with the effect of law to colleges and universities, federal agencies implement the circulars in a variety of ways. In practical terms institutions speak of “compliance with OMB Circular A-21” or “compliance with OMB Circular A-133” when, in fact, they mean “compliance with the implementing regulations that agencies have developed to carry out the mandates of the circulars.” This distinction is significant because, in certain circumstances, agencies are permitted to implement regulations that deviate from the language in the circular itself. In managing federal awards, it is important to know which regulations apply to grants, cooperative agreements, and contracts; which apply only to grants and cooperative agreements (“assistance” in federal terms); which apply only to contracts (“procurement” in federal terms); and which apply on an optional basis to grants or contracts.

#### *Applicable to All Federal Awards*

OMB Circular A-21 was issued on February 26, 1979, and has been amended many times since then. This circular contains the principles used for determining costs applicable to research, development, and educational services performed by colleges and universities under contracts, grants, and other agreements with the federal government. Circular A-21 also specifies the allowability and allocability of costs and describes the process used in developing facilities and administrative (indirect) cost proposals. The circular also includes, as one of its appendixes, the requirements for compliance with the four cost accounting standards that are

applicable to colleges and universities. The circular is used by a variety of institutional offices for purposes ranging from the organization of financial systems to the construction of the F&A proposal to a discussion of specific costs and their allowability.

OMB Circular A-133 was issued in 1990 and revised in 1997 (at the same time OMB Circular A-128, which was the audit circular for state and local governments and thereby applied to some state-supported higher education institutions was rescinded). This circular identifies audit standards and procedures for audits of institutions of higher education and other nonprofit institutions.

### *Applicable Only to Grants and Cooperative Agreements*

OMB Circular A-110 was issued on July 1, 1976, and revised on September 30, 1999. This circular specifies standards for obtaining consistency and uniformity among federal agencies in the administration of grants and other agreements. These standard requirements are intended to prevent the proliferation of varying and often conflicting requirements that had been imposed by federal agencies as conditions of grants and other agreements; exceptions to these requirements for uniformity are granted only in unusual cases. Since the circular is applicable to federal agencies and requires agency implementation to be published prior to being effective for colleges and universities, it is important to review the specific agency implementation of A-110 when determining the administrative applicability of any specific section of the circular. Every major research agency has published its implementation of A-110 and all have Code of Federal Regulation (CFR) citations (with the exception of NSF, which can issue its implementations within its grants manual and not via the CFR process).

### *Applicable Only to Contracts*

Contracts are managed in accordance with the Federal Acquisition Regulations. These regulations were intended to codify established policies and procedures for acquisitions by all federal agencies. They prescribe the policies, procedures, and regulations that apply to all procurement actions of the federal government. Federal agencies are permitted to issue supplements to FAR when statutory regulations require deviation from FAR or when an agency has secured a FAR waiver. When an institution receives a contract, therefore, it is critically important to review that contract for clauses that are agency specific (i.e., published in the agency's FAR supplement) rather than government general regulations (i.e., published only in the FAR itself).

## Nonfederal Regulations

Although the largest part of an institution's sponsored-programs activity is with the federal government, institutional management should be knowledgeable about the compliance requirements of nonfederal sponsors. Awards from state and local government normally include requirements somewhat different (and perhaps more restrictive) than those imposed by the federal government. Awards from private or industrial sources may have even more stringent requirements with regard to patents, publications, and rights-in-data, although such awards generally have fewer requirements with regard to specific approvals required to carry out the research.

## CERTIFICATIONS AND ASSURANCES

Public policy sets a number of requirements with which institutions must comply, both in applying for and in receiving federal funds. State-level and private funding sources have adopted many of the public-policy requirements in their programs, so institutional management must be aware of these requirements regardless of the funding source. These requirements have been instituted to ensure safety and protection for individuals who are participating in research projects and for the community, when biohazards or other potentially dangerous materials are used in research, and to uphold ethical standards of honesty and fairness.

Certifications provide assurance to the sponsor that the institution carrying out the work is aware of applicable requirements, including restrictions on the use of drugs and alcohol, debt delinquency, lobbying, debarment, scientific misconduct, and financial conflicts of interest. These are just a few examples of the types of certification and compliance statements that must be included in proposals and are reviewed on audit. Generally, certifications are divided into areas of individual rights (antidiscrimination, privacy); protection (environmental protection, protection of living organisms); employee directives; fraud, waste, and abuse; and specific administrative requirements of individual federal agencies. Failure to comply with certification and assurance requirements may subject an institution to fines, reimbursement for awarded funds, and/or debarment and suspension.

In recent years, sponsored-programs offices have recognized the breadth and complexity of the compliance requirements and have identified individuals who, as institutional compliance officers, are responsible for monitoring compliance with all such requirements, whether imposed by governmental or nongovernmental

tal sponsors. Where the size of the sponsored-programs office precludes such specialization, institutional officials should clearly identify which offices at the institution are responsible for ensuring compliance with specific regulations.

## **Animal Welfare**

Higher education institutions have a legal responsibility to ensure that animals used in research and instructional activities receive humane care and treatment. Current law provides for regulating the transport, sale, housing, care, handling, and treatment of such animals. These regulations are codified in the Animal Welfare Act as well as in regulations promulgated by the USDA. In addition, organizations performing research using animals must comply with Public Health Service Policy on Humane Care and Use of Laboratory Animals, which is based on the Health Research Extension Act of 1985. Its intent is expressed in the guidelines of the National Institutes of Health (NIH) publication, *Guide for the Care and Use of Laboratory Animals*. Most federal and nonfederal granting agencies have adopted these regulations by reference in their guidelines. An institution will not be awarded federal funds for research until it files an approved Animal Welfare Assurance with the NIH's Office of Protection from Research Risks (OPRR). Such an assurance is granted on submission by an institution of its policies and procedures relating to the care and treatment of animals used in research, a list of the members of its animal care and use committee, and certification that it will review all animal use protocols prior to the initiation of any research involving those animals.

To implement these regulations, an institution must appoint and maintain a committee (the institutional animal care and use committee) to provide oversight of its animal care program. The committee, furthermore, must be appointed by the institution's chief executive officer and report to a senior institutional officer. It must consist of at least five members, including at least one veterinarian, one outside community member, and three individuals involved in animal research. Annual reports must be submitted to the OPRR and the USDA and must include any change in the program or facilities that would place an institution in a different category from that specified in its NIH assurance, any change in the direction of the animal care and use program, and any change in membership of the committee. The annual reports must also include notice of an agreement to conduct institutional inspections at least semiannually. (See also chapter 14, Environmental Health and Safety.)

The issue of animal care and protection is one that continues to attract atten-

tion. Faculty and institutional officials should be cognizant of the tensions and conflicts that can arise and should have clear and precise institutional policies for research using animals as well as policies for communication with the media about animal use issues.

### **Affirmative Action**

Institutions using federal funds must meet standards for affirmative action set forth by the U.S. Department of Labor. (For a full discussion of this subject see chapter 12, Human Resources and Benefits Administration.)

### **Human Subjects**

The Department of Health and Human Services has rules for the involvement of humans as subjects in research activities. Many universities that accept federal funds for research have extended these rules to all projects involving human subjects, regardless of the source of funds. The rules specify the permissible exceptions to the general requirement of reviewing all research projects in which humans are used as subjects, and they include special requirements for dealing with children, prisoners, fetuses, or pregnant women. The regulations extend to the use of human organs, tissues, and body fluids, as well as graphic, written, or recorded information from individually identifiable human subjects. Details about requirements for expedited review of projects, documentation of research activities, criteria for approval of research, and informed consent are included in the regulations, published in the *Federal Register* on June 18, 1991. The regulations are government-wide.

To implement the regulations, an institutional review board must be appointed to review protocols for the use of humans as subjects. This board reviews activities involving human subjects to ensure that the methods and techniques used are adequate to protect the rights of subjects; that the risks to subjects are outweighed by the potential benefits; and that legally effective, informed consent of subjects is obtained. Because the legal and ethical liabilities involved are substantial, the IRB must be well-organized with clear lines of authority and responsibility.

Institutions are required to obtain IRB review and approval of projects before submitting a proposal or within 60 days after its submission. In 1991, NIH revised its regulations to require IRB review on noncompeting applications prior to or concurrent with submission of the proposal. Most large institutions have found that securing a general assurance can facilitate the submission of proposals.

As in the case of animal protection, an institution can receive a general assurance number from the Office of Protection from Research Risks on submission of its policies and procedures relating to the use of humans in research, a list of the members of its IRB, and a certification that it will review all human use protocols prior to the initiation of any research involving those humans. Records of all activities of the IRB must be maintained by the institution, along with copies of all informed-consent documents. Annual reporting is required to OPRR. This information is usually maintained by the chief academic officer, although some large institutions have separate officers for IRB activities; in such institutions, records are maintained in those offices.

### **Biohazards and Recombinant DNA**

In 1976, NIH issued guidelines for research involving recombinant DNA molecules. These guidelines have been revised and now require, in general, that every institution in which research involving recombinant DNA technology is being or will be conducted establish a standing biosafety committee. The names, addresses, and qualifications of the committee members must be provided to NIH. The committee is required to review each proposed recombinant DNA experiment and to certify that the activities, personnel, and facilities are in compliance with the regulations.

### **Drug-Free Workplace**

To meet the requirements of federally funded financial aid programs, institutional officials must certify the existence of policies related to drug and alcohol abuse on campus. The Drug-Free Workplace Act of 1988, which applies to all programs funded by the federal government, is an expansion of those requirements. Under the act, an institution must certify that it will provide a drug-free workplace by:

- publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violating such prohibitions;
- establishing a drug-awareness program;
- requiring that employees engaged in a federal grant or contract agree, as a condition of employment, to abide by the policy and report any drug statute conviction occurring in the workplace; and

- imposing sanctions on, or requiring the participation in a drug abuse assistance program by, employees convicted of a drug statute violation occurring in the workplace.

In 1989, the Drug-Free Schools and Communities Act Amendments became law, and ED was charged with oversight responsibilities. Under these regulations an institution must adopt and implement a drug-prevention program to prevent the unlawful possession, use, or distribution of illicit drugs and alcohol by all students and employees on institutional premises or as part of any of its activities. Institutions are required to submit certifications of compliance to receive federal funds; to distribute the institutional policy and procedure statement annually to all students and employees; and to carry out a biennial review to determine the effectiveness of and implement changes in the program and to ensure that disciplinary sanctions are consistently enforced.

If an institution receives a contract that involves access to classified information or where the contracting officer has determined that, for reasons of national security or health and safety, more stringent regulations with regard to controlled substances are justified, the contracting officer may impose additional requirements for maintaining a drug-free workforce, as required in the Department of Defense Federal Acquisition Regulation Supplement (DFARS). These regulations are similar to those cited above except that they also require random drug testing and formal supervisory training programs. Many institutions, because of the drug testing requirement, will not accept contracts that include this drug-free workforce regulation.

## Debarment and Suspension

Under Executive Order 12549 (with implementing regulations published in the *Federal Register* on May 26, 1994, and June 26, 1995, and in the FAR at 52.209), applicants for federal funds are asked to certify to their best knowledge and belief that neither they, their principals, nor their researchers are debarred, suspended, or in the process of being debarred or suspended by any federal agency. In addition, the certification indicates that none of the applicants have been convicted or have had a civil judgment rendered against them for a variety of offenses identified in the regulations; are presently indicted or charged with one or a number of offenses so identified; or have had a public transaction at any governmental level terminated for cause or default.

An applicant's signature on a proposal signifies compliance with these regu-

lations. Institutions should develop appropriate internal procedures to ensure that such certifications are appropriate.

### **Nondelinquency on Federal Debt**

In accordance with OMB Circular A-129, *Managing Federal Credit Programs*, recipients of federal awards must provide information on any delinquency of the institution with regard to repayment of any federal debt, excluding personal income tax payments. Institutions, and in some cases individual principal investigators, are required to certify their nondelinquency on federal debt. When such a certification (called an assurance by some agencies) cannot be made, a proposal may be suspended from review or award until the debt is paid or satisfactory arrangements are made for the payment thereof.

### **Lobbying**

P.L. 101-121 amended Title 31, USC, by adding a new Section 1352 (known as the Byrd Amendment) which requires institutions to certify that they have not used federal funds to lobby or otherwise influence certain federal officials and, if using nonfederal funds for such purposes, will advise the government thereof. The regulation is applicable to proposals or awards over \$100,000. It prohibits recipients of federal funds from using such funds for lobbying the executive or legislative branches of the U.S. government in connection with a specific award. In addition, the regulation requires potential recipients of federal funds to disclose any lobbying activities undertaken with nonfederal funds.

### **Procurement Integrity**

The Procurement Integrity Act of 1988 precluded institutional and governmental officials from engaging in certain types of conduct judged detrimental to impartial review and award of federal contract funds. The regulations require that no competing contractor or any officer, employee, representative, agency, or consultant of such contractor knowingly make, directly or indirectly, any offer or promise of future employment to any procurement officer of the agency; offer or give, directly or indirectly, any money, gratuity, or other thing of value to any procurement officer of the agency; or solicit or obtain, directly or indirectly, any proprietary or source selection information regarding the procurement. Although the regulations apply to all contract actions, certification is required prior to an award only if the award or modification exceeds \$100,000 per year.

## REPORTING REQUIREMENTS

All sponsors generally require some type of reporting with respect to scientific or technical, administrative, and fiscal activities on their awards. The extent of such reporting varies: federal agencies usually require technical, fiscal, property and intellectual property (invention) reporting while corporate sponsors generally limit reporting to technical and fiscal reports.

In the case of federal grants and cooperative agreements, the maximum frequency of reports is specified (by the requirements of OMB Circular A-110) to be limited to quarterly. However, A-110 gives agencies flexibility to require reports on a less frequent basis and many federal agencies have adopted annual reporting (often done electronically), especially for technical reports. In the case of contracts, the reporting requirements are specified in the contract document itself and are found in the appropriate sections of FAR or its agency supplement. This discussion describes general requirements for reporting; specific agency regulations should be consulted for details.

It should be noted that timely reporting is becoming more critical. OMB Circular A-110 (for grants and cooperative agreements) and the FAR (for contracts) specify when reports need to be submitted to sponsoring agencies. Not only is timely submission required as a condition of the award and audited in the annual A-133 audits, but failure to submit required reports (especially technical reports) may result in nonrenewal of the award, discrediting the reputation of the institution and the investigators, and in withholding of *all* awards from a federal agency to the institution.

### Technical Reporting

Technical reporting is required on a periodic basis, although the timing of reports varies with the sponsoring agency. Technical reporting is legal and binding as a deliverable of the institution and often specifically of the principal investigator. Some agencies allow a principal investigator to submit a progress report when requesting additional funds, which then serves as the prior year's technical report. Other agencies require a technical report only on completion of the project and may allow an investigator to submit preprints and reprints of articles submitted for journal publication to fulfill the reporting requirements. At least one agency, the Office of Naval Research (ONR), has recently given its program officers the option of not requiring final technical reports, relying on periodic progress reports to provide an adequate summary of the technical progress on the project.

There are instances on contracts where monthly reporting is required; in these instances, the principal investigator should agree to the requirement before the institution accepts the award. One recent innovation of some federal agencies is the implementation of systems providing for electronic progress reports, and this trend is expected to continue.

Periodic technical reports give an agency an idea of how the sponsored activities are progressing and if there are any identifiable problems in carrying out the research. These reports allow for a comparison between actual accomplishments and the goals established in the proposal; they also summarize favorable developments or events that positively or negatively affect the conduct of the research.

### **Fiscal Reports and Payments**

Fiscal reports are generally required by both governmental and nongovernmental sponsors on termination of a grant or contract. In addition, federal sponsors normally require more frequent financial reporting (such as the quarterly requirement of OMB Circular A-110 for assistance awards). Often recipients are required to summarize expenditures, provide data on unexpended federal funds and the status of federal cash advances, and, when the letter of credit system is not used, to request advances and/or reimbursements of expenses incurred to date. Institutional systems need to be capable of meeting the level of detail required.

Expenditures represent charges to a specific project or program and may be reported on a cash or accrual basis depending on the business processes of the institution. In the case of cash-based reporting, expenditures are the sum of the actual cash disbursements for direct charges, the amount of F&A (indirect) expense charged, the value of in-kind contributions provided, and the amount of cash advances or reimbursements made to subrecipients. In the case of accrual reporting, expenditures are the sum of actual cash disbursements for direct charges, the amount of F&A expense incurred, the value of in-kind contributions provided, and the net increase (or decrease) in the amounts owed by the recipient for goods or other property received and for services performed by employees, contractors, subrecipients, and other payees as well as other amounts coming due under programs for which previous services or performance were required.

In the case of contracts, the terms and conditions of the contract specify the content and frequency of fiscal reports. OMB Circular A-110 prescribes specific financial reports required of recipients of grants and cooperative agreements. The reports generally included follow.

***Financial status report.*** The financial status report details the status of funds for all nonconstruction projects or programs. This submission may be waived if an agency determines that the request for advance reimbursement or report of federal cash transactions includes sufficient information.

***Report of federal cash transactions.*** The report of federal cash transactions is used when funds are advanced to recipients through letters of credit or with Treasury Department checks. This report is used by federal agencies to monitor cash advanced to recipients and to obtain disbursement information for each agreement.

***Request for advance or reimbursement.*** The request for advance or reimbursement is used for all nonconstruction projects when letters of credit or predetermined advance payment methods are not used. Such requests may be submitted at least monthly.

***Outlay report and request for reimbursement on construction projects.*** This report is used to request reimbursement for construction programs when letters of credit are not used.

Although the sponsoring federal agency may specify the submission schedule for these reports on grants, they cannot be required more often than quarterly or less often than annually. Institutions may submit invoices and receive payments on a monthly basis if they so desire. The government cannot require monthly submissions. In most cases, continued funding of the project depends on timely submission of fiscal reports.

## **Equipment Reports**

Most universities place management of equipment matters in a property management office, although the reporting responsibilities may be shared with a sponsored-programs office. Regardless of where the function is located, individuals charged with responsibility in this area must become familiar with the regulations on equipment title in both OMB Circular A-110 and the FAR, as well as the specific requirements included in any given award. Title to equipment purchased on contracts and grants may, at the time of acquisition, reside with the recipient organization or with the sponsor, depending on the specific terms and conditions of the award. Some agencies permit institutions to request title to a piece of equipment purchased on the project at the end of a project and specify the period of time in which an institution must do so. In some instances, an institution can request title from a sponsoring agency at the time it seeks approval to purchase the equip-

ment. A-110 allows agencies to declare equipment as exempt, thus allowing recipients with a primary purpose of research to (by default) secure title at the time of purchase with no additional reporting requirements to the government.

To prepare and submit timely equipment reports (normally required by federal agencies on at least an annual basis), an institution should have a property management system that meets governmental requirements (generally those specified in OMB Circular A-110) for acquisition, identification, inventorying, managing, and disposing of equipment. In the case of federal awards, the equipment requirements are clear and precise; in the case of awards from nonfederal (particularly industrial) sponsors, this is often not the case. Institutional procedures should ensure that title to equipment acquired on contracts and grants from nonfederal sponsors is delineated clearly in the award document.

## **Inventions**

If required by the award document, institutions must promptly report to the sponsor all inventions made in the course of any sponsored project. As in many other areas, government agencies are utilizing electronic reporting (such as NIH's EDISON system) to meet these requirements. Annual reporting (including negative reporting where an institution indicates that no inventions have been made) is generally required in the case of federal support. During the closeout of grants and contracts, agencies normally require a certification that all inventions conceived or reduced to practice during the course of work under the project (from its origination date through completion) have been reported to the agency. Such reports generally require the signature of both the principal investigator and the appropriate institutional official.

## **RECORD KEEPING**

Federal sponsoring agencies generally require the maintenance of intact records relating to receipt and expenditure of funds. Other records, such as those relating to equipment acquisitions and maintenance, are also frequently required. These records and other pertinent books, documents, or papers are usually subject to audit by sponsoring agencies or their authorized representatives.

The determination as to when the retention time begins and ends varies with the type of record but, in general, the requirement on federal awards is five years from submission of the final report. Institutions should develop processes to iden-

tify the varying retention times and to ensure that all documents are kept for audit and other purposes for the full retention time required under the award.

One of the most difficult areas is that of retention of technical records. Recently, the government has indicated that technical records include research notebooks, machine outputs, and so forth. This is a general problem since most faculty retain their research notebooks and use them on an ongoing basis and, if switching institutions, expect to carry their research notebooks with them. For some institutions the answer in this case is to make the faculty member the custodian of the records and not allow him/her to dispose of those records without written permission from the employing institution at the time the record was generated.

## PROPERTY

Property is defined as real property (land, including improvements thereto, and buildings) or personal property (equipment). According to OMB Circular A-110, intellectual property is also defined as property and subject to some of the same requirements as other personal property.

In the case of real property, title generally vests in the recipient, provided that the recipient agrees to use the property, after the project under which it was acquired has terminated, for the authorized purposes of the project or for other federally sponsored projects. When the real property is no longer needed for these purposes, title may be permitted to reside in the recipient, provided that the federal government is compensated for its fair share; it may be transferred to the government or another entity, or the property may be sold and the government properly compensated for its share of the costs.

In OMB Circulars A-110 and A-21, the federal government has set dollar and life-expectancy thresholds for consideration of items as equipment (cost of \$5,000 or more per unit and a useful life of more than one year). Of course, institutions may have their own thresholds for items to qualify as equipment, but institutions may not have thresholds greater than those established by the government.

Regulations require recipients of federal funds to maintain records on all equipment acquired with such funds unless the equipment is defined as exempt according to A-110. These records require, as a minimum, the following:

- description of the property;
- manufacturer's serial number or other identifying mark;

- source of the property, including sponsor identification number;
- identity of the title holder;
- acquisition date;
- percentage of federal participation in the acquisition cost;
- location, use, and condition;
- unit acquisition cost; and
- ultimate disposition data.

Federal grant-acquired equipment must be inventoried at least once every two years, and there should be a control system in place to ensure adequate safeguards to prevent damage, loss, or theft of the property.

The circular also specifies conditions under which an institution may dispose of equipment it has acquired under grants or cooperative agreements and stipulates the conditions under which the institution must reimburse the sponsor for its fair share of the original purchase of the equipment.

## COST ACCOUNTING

Generally accepted accounting procedures for colleges and universities should be followed in the management and administration of sponsored programs. The accounting system should provide for application of cost principles and standards on a consistent basis as provided in OMB Circular A-21 and the specific policies and regulations of sponsoring agencies. The system adopted by the institution should be responsive to billing and reporting requirements, which vary among agencies and are subject to change. Financial or business officers need to monitor these standards and be alert to proposed changes. One of the most important current costing requirements is the requirement for compliance with the Cost Accounting Standards that were incorporated into OMB Circular A-21 in 1996 and earlier in the FAR for contracts.

Four of the nineteen standards that apply to the corporate environment now apply to colleges and universities. These standards are:

- CAS 501—Consistency in Estimating, Accumulating and Reporting;
  - CAS 502—Consistency in Allocating Costs Incurred for the Same Purpose;
  - CAS 505—Accounting for Unallowable Costs—Educational Institutions;
- and

- CAS 506—Cost Accounting Period —Educational Institutions.

Although the requirement to file a CAS disclosure statement (DS-2) does not apply to all institutions, the requirement to be in compliance with these standards is incumbent upon all institutions of higher education. These standards, particularly CAS 501 and 502, are often cited when institutions are revising their organizational affiliations and seeking to combine the preaward, postaward, and accounting offices responsible for stewardship of federal funds.

## Receipt and Deposit of Funds

Separate accounts for each project should be established and monthly expenditure statements provided on a timely basis to the principal investigator and the sponsored-program office. Although separate bank accounts are not required for each project, procedures must be established to relate a payment properly on a specific project to that account. The monitoring of cash flow is a specific responsibility of senior management, since it has a direct impact on the financial health of the institution. In reviewing its cash management program, the institution should ensure that it has adequate procedures in place to receive and deposit all money on a timely basis and to invest it, when permitted, in accordance with institutional policies and, where necessary, applicable federal regulations. Federal funds awarded to public and independent nonprofit higher education institutions must be maintained in interest-bearing accounts, and any interest earned on federal advances deposited in such accounts must be remitted at least quarterly to the federal government; \$250 per year can be retained for the management of these funds. (See Chapter 11, Cash Management.)

Procedures should be developed for follow-up on delinquent accounts. Aging schedules, which provide the dates payments are due and track late payments, should be maintained, and relevant information should be communicated to responsible institutional officials. A difficult issue institutions face is whether to accept a new award from a sponsor delinquent in its payment on a prior award. If the reason for nonpayment is a cash flow or financial sufficiency problem, taking another award may not be in the best interests of the institution. However, if the reason for nonpayment on one project is the result of missing or late progress reports, or issues surrounding the quality and/or quantity of research, more difficult problems are posed. Decisions should be made only after consultation with senior financial and academic officers.

## **Allowability and Allocability of Costs**

OMB Circular A-21, which is applicable to both assistance and procurement awards, specifies the factors affecting the allowability, allocability, and reasonableness of costs on sponsored programs.

### *Allowability of Costs*

Under the cost principles of OMB Circular A-21, costs are allowed if they are reasonable, if they can be allocated to sponsored agreements, if they can be consistently applied, and if they conform to limitations or exclusions in the specific sponsored agreement or the cost principles of A-21.

Circular A-21 provides guidance on the allowability of certain types of costs for sponsored agreements. Unless there are special provisions in a specific grant or contract, in specific program regulations applicable to an award, or in general agency regulations, the provisions of Circular A-21 govern.

### *Allocability of Costs*

Costs are allocable to specific cost objectives (a specific department, project, or function) if the goods and services involved are chargeable to the cost objective in accordance with the relative benefits each receives. Within this guideline, a cost is allocable to a sponsored agreement when it is incurred to advance the work of the sponsored agreement to which it is charged; it benefits both the sponsored project and other work of the institution in proportions that can be reasonably identified; and it is necessary to the overall activities of the institution.

Although costs may be allocable to two or more sponsored projects, care should be taken to ensure that transfers of costs between projects are made only under guidelines provided by the federal agency and within the time frame specified. Costs cannot be transferred from one sponsored agreement to another solely to cover deficits caused by overruns in one account. However, there was a change to OMB Circular A-21 in the early 1990s, which under certain circumstances (the interrelationship of the work involved) allows the allocation or transferring of expenses to benefited projects on any reasonable basis.

## **DIRECT AND F&A (INDIRECT) COSTS**

For administrative and accounting purposes, the costs that pertain to a specific sponsored project are grouped into two categories: direct costs and F&A (indirect costs).<sup>1</sup> Some costs are easily determined to be direct costs; some are as easily iden-

tified as F&A costs; but some costs may be defined, according to institutional policy, as either direct or indirect costs. However, costs incurred in like circumstances must be classified as either direct or indirect; they cannot be both.

## Direct Costs

Direct costs are costs that can be identified with a specific sponsored project or that can be assigned to more than one sponsored project relatively easily with a high degree of accuracy. Direct costs usually include:

- salaries and wages of persons employed on specific sponsored project accounts;
- benefits for persons employed on specific sponsored projects (benefits normally include FICA, unemployment insurance, and medical insurance);
- equipment acquired for use on the award(s) to which the acquisition costs are allocated;
- supplies and materials needed to carry out the project;
- travel expenses for domestic and international travel connected with the sponsored project; and
- communication, data processing, and miscellaneous costs.

## F&A Costs

F&A costs are perhaps the most contentious area of costs within an institution of higher education. F&A costs are costs that cannot be easily identified with a specific project but that are expended to meet the requirements of the project. They include a share of expenses for items such as operation and maintenance, library, depreciation or use allowance, sponsored-projects administration, and departmental administration. Often faculty exert pressure to reduce F&A-cost rates to increase the funds available for direct costs and to make projects more competitive through lower costs. Governmental agencies exert pressure to reduce F&A costs because they see the growth of F&A costs as a diversion of funds from the direct-cost objectives of the sponsored project.

Most institutions have HHS as their cognizant audit agency, although some large institutions have cognizance vested in the Defense Contract Audit Agency (DCAA) and Office of Naval Research (ONR). The decision as to whether HHS or DCAA is cognizant depends on the amount of funding to the institution from defense agencies (DOD, DARPA, etc.) compared to funding from civilian agen-

cies (HHS, NSF, etc.). Among colleges and universities, fewer than 30 are DCAA/ONR cognizant and the balance are HHS cognizant.

F&A cost rates are normally expressed as a percentage of either modified total direct costs or salaries and wages, although a few institutions have an F&A cost rate based on salaries, wages, and benefits. Each institution with total direct expenditures subject to OMB Circular A-21 of over \$10 million per year is required to submit an indirect-cost proposal to its cognizant agency within six months of the close of the institution's fiscal year. The preparation of this "long-form" indirect-cost proposal is complex and time-consuming and should be started before the year's financial statement is completed. If expenditures are less than \$10 million per year, an institution may use the simplified method for small institutions, unless this procedure would produce results that would be inequitable to either the institution or the government. Although the rate may differ dramatically between long- and short-form institutions, the actual recovery in either case theoretically reimburses an institution for its F&A costs.

Issues surrounding F&A cost rates and recovery of indirect costs by an institution have become more significant as pressures on budgets, at both the federal and institutional levels, increase. With the issuance of recent revisions to OMB Circular A-21, it is clear that federal officials and institutional officers will continue to face this contentious issue. Institutions can expect more detailed reviews of F&A cost proposals and an increasing number of audits from federal offices. There will be increasing pressure on institutions from faculty to reduce or waive F&A cost recovery in favor of direct cost reimbursement. Business and sponsored-programs officers should educate their campuses as to the structure and purpose of indirect costs and help eliminate the myth that indirect costs are profits to an institution.

## AUDITS

Expenditures incurred under grants and contracts, as well as the management systems used to administer the institution, are subject to audit by the cognizant federal agency. In addition, an institution's F&A cost proposal itself is subject to audit, as are the budgetary aspects of proposals when a contract is contemplated and the award or modification thereto is expected to exceed \$100,000. (See also chapter 22, Auditing.)

Audit requirements have become more stringent in several areas and should

be addressed carefully by recipient institutions. The following areas should be managed by the sponsored-programs office.

### **Pass-through Awards**

Pass-through awards are those that are received by an institution from a source other than that which made an original award. In the case of the federal government, pass-through funds may be awarded to a state agency and then re-awarded to a higher education institution. Another routine source of pass-through funding is from another higher education institution, when the subrecipient (i.e., the recipient of the pass-through funds) is expected to help perform the research for which the original funding was made.

Identification of direct federal awards and “pass-through” awards must be provided so that the auditor will know which of the pass-through awards to test for compliance with federal requirements. In applicable cases, the institution should identify the Code of Federal Domestic Assistance (CFDA) number assigned to each project so that major programs can be grouped together.

### ***Subrecipient Relationships***

Under OMB Circular A-133, a recipient of federal funds has the same requirements as the federal government for assurance that subrecipient activity is in compliance with the requirements of the federal award. Institutions must therefore carefully define subrecipients (as compared to vendors) and develop appropriate institutional procedures for monitoring them. The issue of whether a relationship is a subrecipient one or a vendor relationship for goods and services, and therefore how much of the agreement is subject to overhead charges, is not always clear. If one university involves another in the program of research, it is normally a subrecipient relationship (and overhead to the prime recipient is limited to its negotiated overhead rate on the first \$25,000 of the subrecipient agreement); this is fairly easy to ascertain. However, when the subrecipient is a commercial firm and is involved, for example, both in substantively participating in the research program and constructing a prototype piece of equipment, the situation becomes murky. It is certainly advisable to develop institutional procedures for determining how to handle such relationships by, perhaps, constructing a decision tree in which certain questions (such as whether the subrecipient will own intellectual property it develops or whether individuals at the subrecipient organization will be coauthors of research papers) are answered.

## **Compliance Auditing**

Audit compliance under OMB Circular A-133 will go beyond testing of financial systems and will include compliance with regulatory mandates such as the Drug-Free Workplace Act and the various civil rights requirements imposed on recipients of federal funds.

The sponsoring federal agency and the U.S. General Accounting Office retain the right to perform their own audits after the completion of the audit performed under Circular A-133.

## **INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER**

### **Institutional Policies**

In the area of sponsored programs, institutions are generally concerned about patents, copyrights, and software. With respect to inventions conceived or reduced to practice with any support from federal or federal flow-through sources, the applicable federal regulations are those expressed in the Patent and Trademark Law Amendments Act (Bayh-Dole Act—P.L. 96-517). Subject to these regulations when federal funds are involved, institutional policies generally indicate the extent to which an institution can exert ownership rights to intellectual property developed by its employees. Most institutions exercise ownership over patentable inventions resulting from the work of their employees; most assert ownership of copyrightable material only when such ownership is dictated by special grant or contract terms or when the copyrightable material has been developed under a contract with an employee for a commissioned work. More and more frequently, institutions are claiming ownership of a separate class of copyrightable material—software.

It is crucial that institutions have an established policy for the administration of inventions, because that policy affects the extent to which an institutional official may negotiate patent clauses in grants or contracts. Generally, such clauses are necessary only when dealing with nongovernmental sponsors and can be the most difficult part of contract negotiation if the sponsor wishes to claim title and institutional policy requires that title remain with the institution. Institutional policies should address, at a minimum, the process by which an invention is disclosed; the right to publish research results; the procedures for review of that invention; the requirements for notification to sponsors; the sharing of any income between

the institution and the inventor(s) that derives from the technology; the requirement for employees to formally assign right and title to any patentable technology to the employing institution; and the reporting obligations mandated under Bayh-Dole.

The Bayh-Dole Act was signed into law in 1980 and substantially changed the relationship between the government and colleges and universities in the handling of patentable technology arising under grants and contracts. The act allows nonprofit organizations and small businesses (including, by definition, colleges and universities) to elect to retain, with limited exceptions under “special circumstances,” title to inventions made in the course of federally sponsored research and prohibits the assignment of patents to other than a patent management firm. Federal awards are subject to the Patent Rights (Small Business Firms and Nonprofit Organizations) clause. Institutions that engage in significant amounts of patent work generally employ a technology transfer officer, with legal and business support, to manage the patent and licensing program and to ensure compliance with federal requirements. Failure to move expeditiously to commercialize disclosed technology or to notify the government at appropriate times can allow the federal government “march-in” rights to the technology, precluding an institution’s handling of the technology for any commercial purposes.

## Licensing

An institution usually applies for patent protection on an invention (generally referred to as “technology”) after the technology has been reviewed for novelty and its potential for commercialization. Applying for a patent is only the first step in commercialization. Many institutions with significant patent and copyright activity want to actively commercialize that technology to make it available to the public. To do this, institutions often create a technology transfer office or, in smaller institutions, identify someone in the institution as the technology transfer officer. This person should be charged with the responsibility to seek commercial avenues to market the technology and should have the authority to negotiate licensing agreements. By law, all commercialization agreements provide the government with a royalty free nonexclusive license for the use of the technology.

Support from the inventor is often critical to marketing technology; the inventor should work closely with the technology transfer office in seeking a market. Sponsored-programs officers normally are involved in this activity as well, since in many cases the license arrangements can result in the award of grants or contracts to develop the technology further.

Although institutions often believe that income from licensing technology is a potentially lucrative source of income, that is more often not the case. The patenting and licensing of technology can be quite expensive (recent estimates are that it costs approximately \$15,000 to \$20,000 to apply for and receive a domestic patent; international protection, often quite necessary, is more expensive than that). Nonetheless, a strong technology licensing program can be an asset to an institution and senior officers should carefully consider the extent and nature of such activities on their campuses.

### **Rights in Technical Data**

Most federal agencies define data as recorded information, regardless of the form or media on which it is recorded. The term includes computer software and data generated under an award of a scientific or technical nature.

Unless there are specific contract and grant provisions to the contrary, the institution is assumed to have the right, and may grant others the right, to copyright, publish, and/or disclose any data first produced in performance of work under a federal award. At the same time, however, the federal government has a royalty-free, nonexclusive, irrevocable license to use, reproduce, perform, display, and make available to the public any data first produced in performance of work under a federal award.

## **NEW DEVELOPMENTS**

One notable trend in sponsored programs over the last decade has been the marked increase in regulatory and compliance requirements and the resulting pressure on F&A rates. In addition, perhaps the most creative and innovative development has been the advent of electronic research administration, which will undoubtedly be one of the key activities throughout the federal government in the 21st century. Each of these trends is discussed in some detail below as well as some other items that are currently a focus of the federal government.

### **Compliance Auditing**

The federal government has audited colleges and universities for years, conducting both audits of systems and audits of specific contracts. The government continues its review of financial systems and processes with compliance auditing and goes beyond the examination of financial systems to test, or require independent state auditors to test, compliance with administrative regulations such as the

Drug-Free Workplace requirements. This is most clearly seen in the compliance supplement to OMB Circular A-133, which defines several specific areas where formal written compliance procedures are required. The areas are:

- allowable/unallowable activities;
- allowable/unallowable cost principles;
- cash management;
- equipment and real property management;
- matching, level of effort, earmarking;
- period of availability of federal funds;
- procurement and suspension/debarment;
- program income;
- reporting;
- subrecipient monitoring; and
- special tests and provisions.

### **Pressures on the F&A Rate**

The portion of a research agreement that is allocated to direct costs and to indirect costs continues to be an issue that both universities and the federal government struggle with on an on-going basis. Of course, it is also a subject of vital interest to researchers, who often believe that the F&A rate can be a determinant in whether a specific award will or will not be made. F&A costs are reimbursements by the government for expenses already incurred in support of grants and contracts and, theoretically, should reimburse the institution for the share of those costs related to sponsored activities. In practice, however, in recent years there has been pressure from certain segments of the federal government (including at various times both OMB and Congress) to hold or reduce rates at colleges and universities. This has been expressed in actions such as the 3.6 percent allowance for faculty administrative effort, the removal of student services from the pool costs, the calculation of a utility allowance, and the pressures to move from the instructional to the research base the cost of donated faculty effort in support of research grants and contracts. There has been a perception by some federal officials that the F&A portion of an award was increasing faster than the direct cost portion. Statistics collected by organizations such as the Council on Governmental Relations and the American Association of Universities, have shown that the overall F&A rate has

not increased and, in fact, the administrative components are in many cases decreasing. One of the reasons for renaming of indirect cost to facilities and administrative costs was to segregate the cost pools and the calculation of the rates to allow individuals to more readily do analyses of the various indirect cost components.

At the present time the area of focus tends to be the impact on the research base of the effect of donated effort of faculty. Government auditors maintain that the regulations require institutions to compute the value of the donated effort of faculty in support of research projects (i.e., that effort toward projects which is not promised in a proposal or reimbursed by the government) and move the dollar value of that effort from the instructional to the research base. This, of course, has the effect of reducing the F&A rate. The Office of Science and Technology Policy's Presidential Review Directive report, which was released in late 1999 and for which implementation strategies are being developed, recognizes this issue in combination with related issues concerning cost sharing requirements being imposed, sometimes *ad hoc*, on grantees. This latter issue (cost sharing) was recently addressed by the National Science Foundation when it issued a policy document stating that cost sharing was to be a condition of eligibility but not a criterion of evaluation.

### **Electronic Research Administration**

Electronic research administration (ERA) is probably best defined as a process for using electronic processes to conduct the research enterprise, from preparing and submitting research proposals to receiving and managing awards to submitting technical and fiscal reports. The concept of using electronics to help support the research administration system has been in existence for many years and, in fact, in the early 1990s NIH was working on an electronic proposal system. In 1994 when the National Science Foundation introduced its electronic proposal development and award management system, FastLane, electronic research administration became a reality for the creation and submission of proposals. Equally exciting is the development of automated sponsored project management systems, which are becoming more and more prevalent at large research universities. These systems allow institutions to provide data electronically to principal investigators, departmental administrative personnel, and central administrative personnel to manage externally funded projects in a more time efficient and effective manner. An example of such a system is the Massachusetts Institute of Technology's

COEUS system, and other systems, created both by universities and for-profit firms, are currently under development.

The Federal Demonstration Partnership (FDP), formerly known as the Federal Demonstration Project, is the institutional focal point for the development of cooperative university-government systems for electronic research administration. The FDP is the focal point for developing and testing electronic processes and for working with the Federal Commons to create user friendly and supportable systems in research administration. Currently there are two parallel initiatives—one utilizing electronic data interchange (EDI) transaction sets to interact with the government in submitting electronic proposals and receiving electronic awards and the other utilizing hypertext markup language (HTML) or other Web-based technologies for the same purpose. Both systems are in their infancy but, now that the government has decided that systems must be electronic by 2002, significant progress should be made. Already electronic, of course, are the payment systems of many federal agencies and, again, every federal agency is mandated to have a computerized payment system functioning before 2003.

One of the most promising areas of future development is the creation of electronic compliance systems. Already institutions have computerized budget creation and checking systems and some institutions are building electronic databases to handle human subjects and animal compliance activities, do reporting for invention reports (EDISON), and allow submission of technical and financial reports electronically. These activities will dramatically increase over the next five to 10 years and this creates a specific challenge for universities in the hiring and retention of research administration personnel with the background and skills to effectively work in this new environment.

### **The Federal Demonstration Partnership**

In March 1986, five federal agencies and 10 higher education institutions in Florida began the Florida Demonstration Project in an attempt to reduce unnecessary administrative burdens on sponsored research and to increase research productivity. After two years and a positive review, these agencies and institutions, joined by six more agencies and 40 institutions, embarked on the Federal Demonstration Project. In its expanded version, this initiative was designed to increase research productivity and to reduce administrative costs within the federal government and at academic institutions by standardizing and simplifying federal arrangements for the support of academic research. The project's primary goal was to demonstrate that the most appropriate decision-making level is as close to the principal

investigator as possible, while maintaining, at institutional and governmental levels, adequate controls to assure that federal funds have been spent for the purposes for which they were awarded. One of the real successes of this phase of the FDP was the incorporation of the so-called “expanded authorities” into OMB Circular A-110, which allows institutions of higher education and their faculty members to manage most federal research grants at the institutional level. For example, institutions may initiate preaward spending (at their own risk) up to 90 days in advance of an award, give themselves no-cost extensions for up to one year, carry over funds from one grant year to another, and have most governmental prior approval requirements waived.

The Federal Demonstration Partnership, while continuing to emphasize streamlining activities, is now heavily focused on electronic research administration initiatives, the area that has significant promise for the future.

## NOTES

1. The 1996 revisions to Circular A-21 changed the name of “indirect costs” to “facilities and administrative costs” to distinguish between the administrative components of the rate and the facilities portion of the rate. The change responded, in part, to concerns about a perceived growth in the overhead rate due to administrative increases. Separating the rate components provides better data on the growth of the rate components that make up the administrative portion of the rate (which is capped at 26 points in the rate) and the facilities portion (which is not capped).

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