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Spring 1985

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From Our Briefcase

NAPA: Advancing Effective Government

Advancing effective government is more than a worthy goal for civil service professionals; it is a central theme of the work of the National Academy of Public Administration (NAPA). NAPA's multifaceted role includes evaluating the structure and performance of federal and other government agencies, examining emerging issues, advising on intergovernmental relationships, and increasing understanding of the requirements and opportunities for sound government and how they can be effectively met. NAPA's purpose is spelled out in its recently granted federal charter, the first to be enacted by the Congress and signed by a President since 1863.

The congressional action acknowledges the special capacity of NAPA, a private, nonpartisan, nonprofit corporation, to serve the public interest. Incorporated in 1967, NAPA consists of three corporate entities—NAPA, the NAPA Foundation, and the National Institute of Public Affairs (NIPA). NAPA is a member organization supported by the NAPA Foundation as an operating and research arm, and by NIPA as an education and training arm. NAPA does not receive federal funding.

Its members include practitioners and scholars from senior levels of public management in government, business, and academe. According to Board Chairman Phillip S. Hughes, members are the resources that help NAPA act as an "experienced source of counsel on sensitive public management concerns... (as well as) a powerful independent supporter and promoter of superior strategies to make government work better."

Members often serve on panels for NAPA's ongoing projects to improve public administration. The projects are reviewed in an attractive document entitled "Advancing Effective Government: The Work Program of the National Academy of Public Administration." The document's table of contents includes topics that could well be a focus of recent GAO reports. For example, NAPA has developed reports, testimony, and recommendations on reforming the civil service, managing radioactive waste, and improving productivity in state and local govern-

ment. It also has addressed the social and health services in Florida, the civil service system in Philadelphia, and the future of the Environmental Protection Agency. Each essay within the text includes key quotations, describes major issues, and outlines NAPA's recommendations or response.

To conclude the series of project essays, Hale Champion, executive dean of the John F. Kennedy School of Government at Harvard University and former Under Secretary of the Department of Health, Education, and Welfare, shares some personal reflections. He notes that NAPA's agenda for research and action on problems of public management represents "an effort to stress the urgency for dealing with those problems." The agenda, which draws upon NAPA's own report, "Revitalizing Public Management," (see spring 1984 *Review*, p. 2) and the recommendations of the President's Private Sector Survey on Cost Control—The Grace Commission—(see fall 1984 *Review*, p. 25) "looks at public management as a whole, and, domestically, it deals with all levels of our intergovernmental system."

NAPA's inclusive document also contains a membership directory, and descriptions of awards, lectures, and organizations served. A copy may be requested by calling (202) 347-3190.

New Source of Criteria for Mental Health-Criminal Justice Issues

Auditors, evaluators, and researchers now have a source of criteria to assist them in their work on a range of mental health and criminal justice issues. The American Bar Association (ABA) has published a ten-part section of its *Standards for Criminal Justice* (2nd ed., Little Brown: Boston) that deals with mental health, mental retardation and criminal justice obligations, police and custodial roles, pretrial evaluations and expert testimony, and competence of mentally ill people to stand trial. According to an article in the November 1984 issue of the American Psychological Association's *Monitor*, "the main contribution the standards will make is to the administration of the criminal process in cases involving mental health issues." While the standards will probably have the

greatest effect on the preparation of court cases, they also refine the qualifications for expert evaluators and witnesses. In general, they provide a useful resource to auditors who must review legal documents and judge the adequacy of evidence and procedures in mental health-criminal justice work.

According to the ABA standards project director, the 96 published standards are the combined product of six task forces (working since February 1981) comprised of some 80 psychiatrists, psychologists, prosecutors, judges, and clinical and legal professionals. Numerous meetings, public hearings, and ABA executive sessions were held to assure the input and concurrence of key mental health groups.

ABA hopes to publish a separate summary version of the standards, with legal and mental health commentary for interested professionals, during 1985. In the interim, the full 3-pound hard cover document is available, but readers may wish to review it first at ABA headquarters before obtaining a copy. Inquiries should be directed to ABA's Standing Committee on Association Standards for Criminal Justice, 1800 M Street, NW, Washington, D.C. 20036; (202) 331-2288.

Ed Note: Issues discussed in the *Review* occasionally get media attention. The following item reflects developments on two topics since former *Reviews* went to press.

Grace Commission Spin-Offs

According to the *Washington Post* of November 8, 1984, J. Peter Grace has written about his experiences with the panel appointed to recommend improvements in efficiency and budget savings in the federal government. The book is entitled *Burning Money: The Waste of Your Tax Dollars* (Macmillan, New York: 1984) and is available in the GAO Technical Library.

As reported in the January 1985 issue of *Capital Auditalk*, the newsletter of the Institute of Internal Auditor's (IIA) Washington Chapter, another outcome of the Grace Commission was the creation of a foundation, Citizens Against Waste, co-chaired by Peter Grace and columnist Jack Anderson. This organization will

work principally for implementation of the Grace Commission recommendations, supplemented by recommendations by others. The organization's first effort is to obtain signatures on petitions for support.

The December 1984 *Newsletter* of the Association of Government Accountants (AGA) also reports on another Grace Commission spin-off: the creation of the Private Sector Council. Founded in 1984 under the leadership of business executive David Packard, the council includes a Research Center for Government Financial Management. Both the council and center work at the request of various departments and agencies, such as the Treasury, Agriculture, and Labor, telling them how to apply private-sector expertise to realize dollar savings. At an October 1984 meeting, William G. Onsted, the council's president and chief executive officer, said he believes the average American thinks most bureaucrats are ineffective. Most of this bad image is the result of lack of proper financial information and controls, prior policy analyses, and the resultant media hype.

The council uses *pro bono* expertise from over 40 of the *Fortune* 500 companies on its Chief Financial Officer's Task Force to help improve the federal government's management of cash, credit, grants, and contracts. This non-partisan group is working hand-in-hand with federal agency personnel. Most of the council recommendations are systems-oriented and, therefore, do not require legislation. For more information, contact Mr. Onsted at (202) 822-3910.

Megatrends Reinvented

Another book that predicts positive employment projections, *Reinventing the Corporation*, is due out in 1985. This is the next book by John Naisbit, whose *Megatrends: Ten New Directions Transforming Our Lives*, was discussed in the summer 1983 *Review*, pp. 1-2. According to *Newsweek* magazine of November 12, 1984, Naisbit describes a future of "full employment and terrific competition for personnel" as adults born in the late 1940's and early 1950's are absorbed into the job market and the next smaller generation comes of age. To attract workers, corporations will need to offer such benefits as health and fitness options, flextime, and cyclical jobs. Traditional corporate hierarchies will be replaced

with much more flexible management structures. These are alluded to in the next "Briefcase" item.

Career Concepts: Effective Management

Very different publications often contain related career perspectives. The following quotations from a national newspaper, a university report, and an association newsletter suggest some concepts to consider about effective management.

The Work Place: What makes certain companies superlative employers? Among the traits surveyed by three journalists, the "100 best" firms

- "make workers feel that they are part of a team or a family and communicate with them on all matters that affect the enterprise, especially layoffs;

- stress quality over quantity, engendering pride in product and performance;

- compensate employees with profit sharing, matching-fund savings plans and stock ownership in addition to base pay; and

- underplay hierarchical distinctions by doing away with such things as executive dining rooms, parking places and other executive perks."

—from "Employee's Dream: 100 Best Companies to Work for in America," by Warren Brown (*Washington Post* business section, Apr. 1984).

Creativity: "Creativity is perceiving new relationships among data, recognizing an anomaly when data don't fit, and knowing which questions to ask. The creative breakthrough may occur in a flash or simmer on the back burner indefinitely. It sometimes is an idea generated years ago but not put to use until the time is ripe.

* * *

"To be creative, the organization needs management that is strong but open to new ideas, able to give feedback (negative as well as positive), and willing to take risks. The environment should permit various disciplines to interact, synthesize ideas, and produce recombinations of knowledge. Managers should provide enough time and money to accomplish goals.

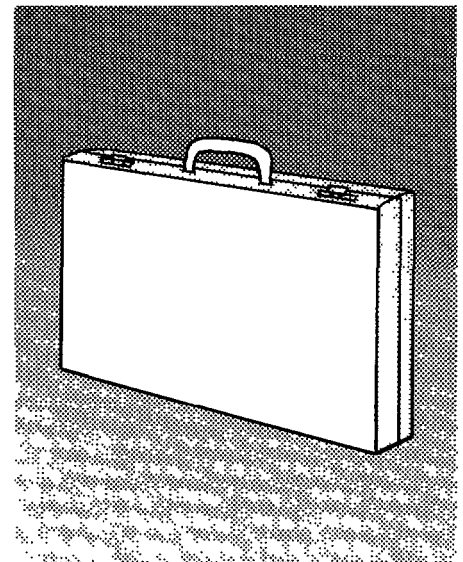
"How structured is the most creative research environment?

"Enough but not too much—was the rule the associates applied to both time and money. Reasonable deadlines stimulate creative activity. Too much time allows activity to lag—and too much money wastes resources."

—from a report on an industry seminar at the Stanford University School of Earth Sciences, by Carol King. (*The Stanford Observer*, Oct. 1984, p. 7)

Management Involvement: "...if you're really going to get the problem solved, if you're going to get things handled, get them in good shape, it's going to have to be done through line management. There is no such thing as handing it off to the auditor or to staff people if you're going to get meaningful results. All the initiatives in which we have been asked to participate wind up with that as final driver. . . . If it is going to get done, it must be done through the political leadership appointed by the President and driven down through the management systems and the management structure of the departments and agencies. This is commonly mentioned as pervasive in all the work in which we are engaged. . . . if it's all going to work, it's got to have management attention from the top. Line management has to make the commitment to see these things through and lead the way to a better government."

—from a speech by Ray Kline, acting administrator, General Services Administration, at a workshop sponsored by the Association of Government Accountants (AGA) and the Institute of Internal Auditors. (AGA Washington Chapter *Newsletter*, Nov. 1984)



The Review welcomes readers' contributions about new developments, procedures, manuals, reports, concepts, etc., from diverse public management fields

Accounting Update

Ed. note. "Accounting Update" reviews topics of interest to the professional accounting and auditing community. Readers should contact Bruce Michelson on (202) 275-9423 for more information unless otherwise noted. The Review thanks Dan Kenyon and Elaine Petway, both of the Accounting and Financial Management Division (AFMD), for their work on this section.

Revised Accounting Principles and Standards Issued

On November 14, 1984 GAO issued the revised *Accounting Principles and Standards, Title 2 of the GAO Policy and Procedures Manual for Guidance of Federal Agencies*. The changes in title 2, last revised in 1978, update the federal government's accounting principles and standards to reflect the many recent advances in accounting theory and practice and to bring the federal financial accounting and reporting requirements into line with those used by the state and local government and private sector. The requirements contained in title 2 may be cited as "generally accepted accounting principles for the federal government."

Title 2 standards will be the criteria federal officials use to make their Financial Integrity Act determinations of whether their agencies' accounting systems comply with federal accounting principles and standards. Also, starting in FY 1985, federal agencies will be required to prepare annual financial statements reflecting their overall position and operations. The statements are to be prepared from an accounting and budgeting system that is an integral part of the entity's total financial management system, and one that contains sufficient discipline, effective internal control, and reliable data.

Title 2 consists of three major sections: accounting principles and standards, internal control standards (based on the standard issued in June 1983), and financial management systems standards (now being developed).

Many of the title 2 revisions were intended to make the standards easier to use. The presentation of accounting principles and standards differentiates between accounting concepts and standards and is organized alphabetically by subject, rather than by financial statement line item, as it was in

the previous edition. A complete index is provided for further ease of reference.

Copies of the title 2 revisions are being distributed throughout the federal government. Contact Amanda Flo (202) 275-9414 for more information.

Integrated Financial Management Systems Group

When the Comptroller General reorganized AFMD (see summer 1984 Review, p. 5), he charged the division with "spearheading GAO's efforts to improve financial management throughout the federal government." This goal was initially addressed by a task force headed by Assistant Comptroller General Harry Havens. The work of the task force resulted in a two-volume draft report entitled "Managing the Cost of Government—Building an Effective Financial Management Structure." The report describes a conceptual framework that GAO believes is needed to institute overall financial management improvements for the federal government. Such a framework could serve as a guide in fostering consensus among the government financial management community and in facilitating the rebuilding efforts. The Comptroller General has used the report as a vehicle to initiate discussions with a large segment of the Congress and the executive branch on the need for financial management improvements.

The work of the task force clearly demonstrated a need for GAO to actively participate in efforts to improve federal financial systems. As a result, AFMD Director Fred Wolf established the Integrated Financial Management Systems Group to assume the responsibilities of the task force and to concentrate on opportunities to institute lasting financial management improvements. This group is directed by John Cherbini, the task force project manager. The group focuses its activities on the entire financial management cycle of planning/programming, budget preparation, budget execution, and audit/evaluation. The staff is primarily concerned with integrating the four phases of the financial management cycle and encouraging implementation of the improved information, reporting, and systems concepts resulting from their work. They also support the Comptroller General's efforts to foster a general consensus within the government financial management community on how to proceed with necessary improvements.

The Integrated Financial Management

Systems Group's work demonstrates GAO's commitment to improving financial management in the federal government. The group continued to meet with members of the Congress and key government officials to explain the conceptual framework described in "Managing the Cost of Government," obtain reactions to the proposed financial management structure, and develop clear examples of where the proposed concepts will benefit government financial management. Within GAO, the group is developing a seminar to communicate the results of the task force work and to foster a common understanding of what constitutes an appropriate conceptual framework for federal financial management. It is also working closely with other GAO units to assure consistency in reports involving integrated financial management issues.

For more information, contact Jerry Skelly on (202) 275-9525.

CARE Methodology

For several years, GAO has been developing methodology for auditing federal agency accounting and financial management systems. In 1984, GAO published an exposure draft manual entitled *Control and Risk Evaluation (CARE)-Based Methodology For Reviewing and Evaluating the Operations of Agency Accounting and Financial Management Systems*. The methodology was developed for use by GAO evaluators, but GAO also believes it is readily adaptable to agencies' own internal control and accounting system reviews.

GAO audits the internal control and accounting systems of agencies to determine whether (1) the systems comply with the law and conform to GAO, Treasury, and OMB requirements and (2) accounting systems effectively and efficiently provide useful, timely, reliable, comparable, and complete financial information needed for good management of public financial resources and public programs. The methodology is geared to meeting these audit objectives.

A key feature of the methodology is its emphasis on risk assessment, with a view to optimizing the effectiveness of scarce audit resources. It is adaptable to the review of an entire department or agency, a major component thereof, an operational unit, or an individual system. The methodology's four segments are: (1) general risk analysis, (2) transaction flow review, (3) compliance testing, and (4) substantive testing. The work performed in suc-

ceeding segments is based on the results of the preceding one.

For more information, contact Virginia Robinson on (202) 275-9513.

Implementation of the Financial Integrity Act

On May 22, 1984, the Comptroller General testified before the House Government Operations Committee on agencies' first-year efforts to implement the Federal Managers' Financial Integrity Act of 1982. (GAO's work on the government-wide report, issued on August 24 (OCG-84-3), is described in this issue.)

GAO found that agencies made a good start to begin assessing the vulnerability of their internal control and accounting systems and have demonstrated a management commitment to implementing the act. Agencies are establishing a systematic process to evaluate, improve, and report on their systems. Federal managers now have an increased awareness of the need for good internal controls and good accounting systems. The first-year effort was a learning ex-

perience.

To comply with the act and correct identified problems, agencies must continue making improvements. Agencies' first-year reports under the act did disclose material internal control and accounting systems problems that need prompt attention. Many of these areas were previously identified in GAO and Inspector General reports.

While there was progress in the first year, GAO identified a number of problems with agencies' implementation of the act, problems that one would expect in a new program. These were reported to individual agencies through a series of reports to agency and department heads. Generally, agencies have agreed to correct the problems as part of their second-year implementation efforts.

GAO's review of agencies' second-year efforts began in fiscal year 1984. While the first-year review concentrated on agency efforts to establish a process to implement the act, the second-year review focuses more on agency actions to address the weaknesses identified and the accuracy and completeness of reporting to the Congress.

For more information, contact Jef-

frey Steinhoff on (202) 275-9491.

Staats Named as Member of GASB

Since the *Review* reported on the establishment of the Government Accounting Standards Board (GASB) in the summer 1984 issue (p. 4), former Comptroller General Elmer B. Staats was named one of its five members. Missouri State Auditor James Antonio was named GASB chairman and Martin Ives, former first deputy comptroller for New York City, was named vice-chairman and research director. Both of these posts are full-time positions. Joining Staats as part-time board members are Philip L. Defliese, accounting professor at the Columbia University Graduate School of Business and W. Gary Harmer, chief financial officer of the Salt Lake City, Utah, school district.

GASB establishes accounting principles and standards for state and local governments. It is the public sector counterpart of the Financial Accounting Standards Board, which provides accounting and financial reporting guidance for the private sector.



Former Comptroller General Elmer Staats.

Open for Business: GAO's Training and Career Development Center

Seven years of collaborative planning by many GAO staff members and organizational units came to fruition on September 25, 1984 as Comptroller General Bowsher presided over the official dedication of the Office of Organization and Human Development's (OOHD) Training and Career Development Center. Mr. Bowsher urged all GAO staff members to visit the new center to take advantage of its many educational and counseling services.

The new facility, located in room 7536 at GAO headquarters, has been designed and equipped with the latest learning technologies to create an optimum environment for training. The eight classrooms are available for small group discussions and large group lectures. They contain closed-circuit televisions, which permit simultaneous program transmission of lectures to several classrooms. In addition to the standard classrooms, there is a Learning Center where staff have the opportunity to use self-paced materials to learn, improve, or refine skills.

Learning Center Resources

The Learning Center offers a self-instructional focus and uses individualized learning: a method by which individuals direct their own learning. This center provides staff with the flexibility to select and individually schedule job-related training or self-enrichment activities. Visitors choose from a variety of learning tools, including programmed texts, audio cassette tapes, videotapes, films, slide-tapes, computer-assisted instruction, and computer-based training. Courses and packages are offered in six general areas: ADP/computers, audit/technical, individual development, management/executive development, secretarial/clerical, and writing.

Activities at the Learning Center and the Training and Career Development Center are designed to provide all staff with opportunities to enhance careers and to achieve organizational and personal goals. OOHD has prepared several information brochures and

welcomes visitors to the centers. Sande Lehrer, Learning Center director, can be reached at (202) 275-4252.



Comptroller General Bowsher gets a lesson in computer operation from Charleane Jackson of OOHD during the opening day activities at GAO's Training and Career Development Center.

Conference Highlights GAO's Human Resources

GAO's first annual Human Resources Conference, held in Washington in October 1984, brought together key division, office, and regional officials to emphasize the important role of human resource development activities in GAO's overall operations.

Speaking to about 80 managers with responsibilities for operations, staff development, or training, Frank Fee, Assistant Comptroller General for Operations, said that GAO must strengthen its people management. "GAO is now operating within a very different world than most of us are used to. . . Staff expects a different kind of interaction with management than we have experienced in the past. They want more open communication, more collaborative decisionmaking, more participatory management. . ."



Assistant Comptroller General for Human Resources, Greg Ahart, elaborated on a related theme: the need to better integrate human resource activities into GAO's daily operations. He said that, in the past, many individuals from line offices as well as training coordinators and subject matter experts, have been involved in developing GAO's human resource programs. Although much progress has been made, this approach did not provide a stable organizational focus for human resource development in the line offices. "We must equip our people to do quality work, we must provide the resources and environment they need to do this work well, and we must build support for our people into our management systems," Mr. Ahart said.

To move toward these goals, conference participants used small group discussions to analyze six human resource development issues at GAO:

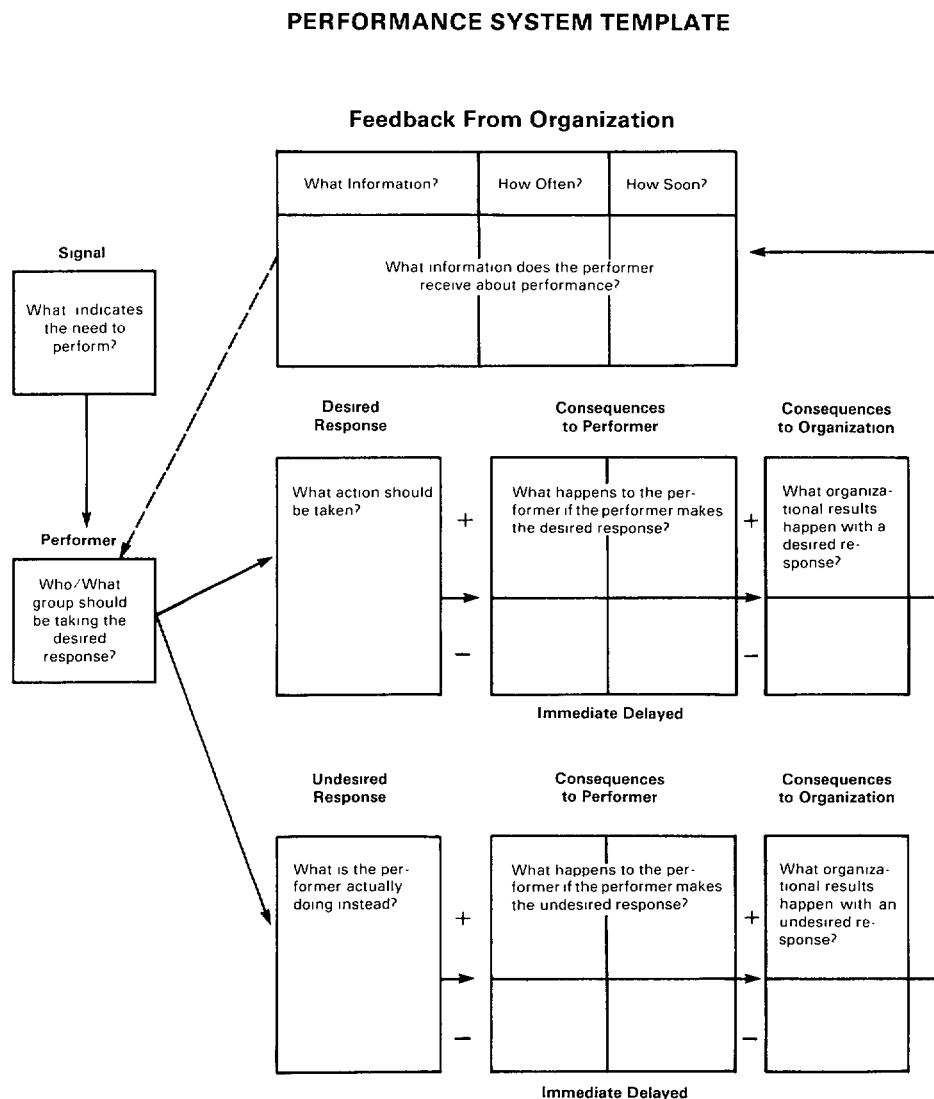
- the need to develop a partnership with line managers,
- the balance between managing work and managing people,
- the importance of attending to training and career development while getting the work done, and
- the need for more on-the-job training by supervisors.

Facilitators from OOHD helped the groups to follow a strategic thinking model. Figure 1 shows examples of the variables and questions within the performance system model that the groups adapted to address the issues. (The performance system template was reproduced with permission from Kepner-Tregoe, Inc., an organization development firm specializing in performance analysis and decision-making technology.) Groups presented their findings and recommendations to Assistant Comptrollers General Ahart and Fee on the conference's last day.

Participants also attended sessions on the various activities and services of OOHD, such as human resource planning, technical training for evaluators and secretaries, microcomputer training, and the Learning Center.

To paraphrase Mr. Ahart's open letter to the conference, the task during the 2½ days was to strengthen, throughout GAO, the perceived and actual value placed on developing human resources. Participants were asked to consider the support managers' and supervisors' need to be stronger in the performance of human resource development and how they could contribute to bringing about the needed changes.

Figure 1



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Susan Taylor, OOHD, a conference coordinator, can be reached on (202) 275-9252 if readers would like more information on the structure or sessions of the conference.

International Conference on Public Debt

The financial crises now facing many developing nations are similar to those that were facing New York City in the mid-1970's, Comptroller General Bowsher told participants at the first International Financial Management Conference in Washington in September 1984, which was cosponsored by the International Consortium on Gov-

ernmental Financial Management and the International Federation of Accountants. His talk, a key part of the program, was entitled "Managing the Public Debt: The Impossible Dream?" Representatives from 50 nations participated, including Auditors General of Canada, the Philippines, Nigeria, Papua New Guinea, and Tonga, as well as the 1984 International Auditor Fellows from GAO's and Canada's Office of Auditor General (OAG) programs.

Crises and Progress

As many developing nations face financial crises, they are discovering that they do not have accurate figures on the actual amounts of their external

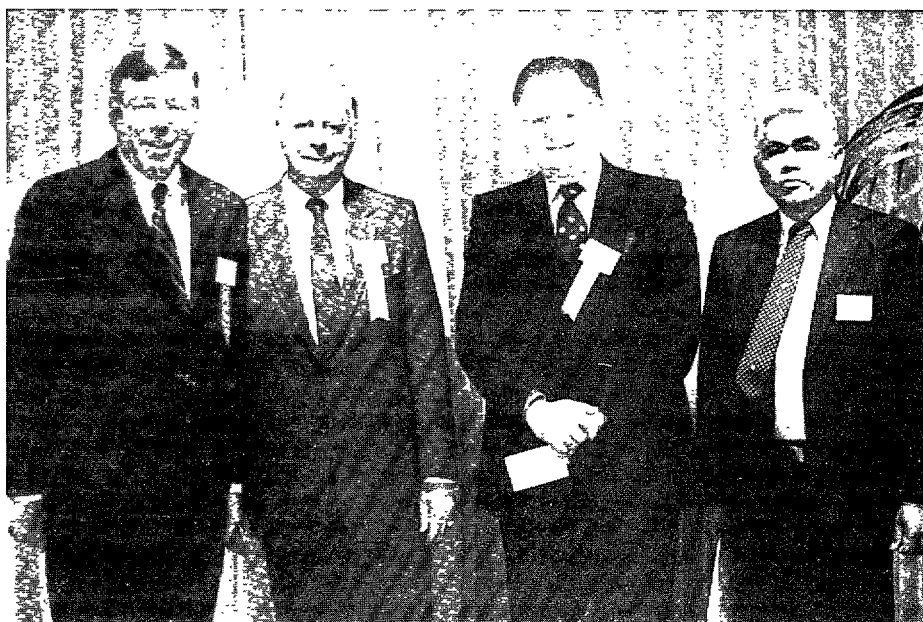
debts. Mr. Bowsher, who participated in the 1975 financial "rescue" of New York City, described the actions that were necessary to put the city back on a sound financial footing. In 1975, virtually no large cities and few states were audited by outside auditors. The reports on those that were audited were very detailed and difficult to understand. The situation was no better at the federal level; the financial statements prepared by the Treasury did not meet accountants' standards.

"A lot of progress has been made in the United States in the last 10 years in the state and local area—progress that wouldn't have been made at all if it weren't for the lessons we learned from the New York City fiscal crisis," Mr. Bowsher said. Among those accomplishments, he cited the enactment of the Single Audit Act of 1984 and the establishment of the Government Accounting Standards Board, which will set accounting rules for state and local governments.

Financial Reporting a Worldwide Concern

Other speakers at the conference buttressed Mr. Bowsher's remarks on the importance of government financial management. Financial management has been virtually ignored in many developing countries, according to Francisco S. Tantuico, Jr., chairman of the Philippine Commission on Audit. While less-developed countries borrowed billions of dollars to build dams and roads, or to study the life cycle of mosquitos and prawns, little thought was given to the accounting systems, internal control procedures, and audit technology which would help ensure accountability and make for good governance, he said. Tantuico added, "The most important challenge for budget officials, state accountants, and internal and external auditors is to act...to convince our respective governments, and our lending institutions, that reforms in fiscal management should go hand in hand with efforts at resolving the debt crisis."

Even nations which are known for their financial management systems have problems, according to Canadian Auditor General Kenneth M. Dye, who in his 1983 annual report to Parliament, expressed several reservations on the government's financial statements. Dye expressed concern that government financial information is not presented in a form that is useful to those who need it, such as legislators: "That concern with the needs of users of financial information is also central



Current U.S. Comptroller General Bowsher (L); former U.S. Comptroller General Elmer Staats (second from L); Canada's Auditor General, Kenneth Dye (second from R); and the Philippines' Auditor General, Francisco Tantuico (R) agree that good international financial information is needed.

to the issues facing the international financial community as it grapples with the debt problems of countries in the industrialized nations and the third world. Any solution of these problems can only be achieved if we have an accurate, complete, and clear picture of the financial health of the nations we seek to help."

Other Authorities Speak

The conference featured several other well-known authorities on international finance, such as Dr. H. Johannes Witteveen, former managing director of the International Monetary Fund; William R. Rhodes, senior vice president, Citicorp; and Maurice C. Mould, financial advisor for the World Bank. They discussed defusing the "debt bomb," restructuring the Latin American debt, and the accountability of public sector financial managers, respectively. Other speakers addressed public financial reporting, auditing the national debt, and training public financial managers.

The Consortium's publication, the *Public Fund Digest*, was featured in the winter 1983 *GAO Review*, p. 3. For more information on the conference or on membership in the International Consortium on Government Financial Management, call Audry Dysland, special assistant to the Consortium President on (301) 681-7439.

Hispanic Heritage Week Program

"People who are given the opportunity by affirmative action to enter the competition and who then compete successfully by their own efforts should have no fear of being stigmatized." With this statement, Dr. Graciela Olivarez, set the stage as the keynote speaker for GAO's Hispanic Heritage Celebration on September 10, 1984. A former director of the Community Services Administration, she stressed that affirmative action depends on mutual understanding. "The success of GAO's affirmative action program depends upon the understanding of the issues on both sides," she said.

Dr. Olivarez urged GAO's Hispanic employees to become familiar with the agency's affirmative action plan and to monitor its progress. "The key word is 'results.' Having established a goal, GAO has pledged to make a 'good faith' effort to achieve it, utilizing a variety of affirmative action techniques. The determining issue in assessing whether or not GAO has performed under its affirmative action plan is to determine if a good faith effort was made," Dr. Olivarez said.

In introductory remarks, Comptroller General Bowsher praised the work of GAO's various special-interest employee groups:

"When staff and management seek solutions to common problems coop-

eratively and professionally, there are few things we can't do together to make GAO a better place to work and to enhance the performance of its mission. That's why I strongly welcome the participation of our many and diverse employee councils and groups in addressing important internal issues and problems."

Mr. Bowsher was speaking specifically of the contributions of the Hispanic Employment Program Liaison Group (headed by Atlanta's Mario Artesiano) that could help GAO meet its



Dr. Graciela Olivarez, former director of the Community Services Administration, was the keynote speaker at GAO's 1984 Hispanic Heritage Week program.

Toastmasters' Meeting Profiled

Ed note When Paul Astrow, a Washington Regional Office staff member, saw the item on speechmaking in "From Our Briefcase" in the winter 1985 issue, he suggested we also profile the twice-monthly meetings of the Generally Able Orators—GAO's Toastmasters Club. We thank Mr. Astrow for the following article

The GAO club, the Generally Able Orators, was chartered in May 1983 as part of Toastmasters International, a worldwide, nonprofit, nonsectarian educational organization of Toastmasters clubs. The 4,500 clubs in 50 countries provide opportunities to develop thinking, listening, speaking, and leadership skills through a series of oral communication projects, con-

goals for hiring Hispanic evaluators and co-op students.

Several individuals responsible for GAO's progress in hiring Hispanics were honored during the auditorium program. The Comptroller General noted the work of outgoing Hispanic employment program manager Jose Estella, and Mario Artesiano presented awards to Robert Hanlon to recognize the Denver Regional Office's leadership in recruiting and referring Hispanic candidates, and to California Congressman Edward Roybal, as the

catalyst for GAO's enhanced Hispanic hiring efforts. Aletha Brown, president of the GAO chapter of Blacks in Government, credited the Hispanic Liaison Group for initiating moves to bring all of GAO's special-interest employee groups together to work for equal employment opportunity and affirmative action in GAO.

The Hispanic Heritage Celebration featured entertainment by Colombian classical pianist Diego Cortes Escobar, who played selections by Chopin, Albeniz, and Schubert, as well as one of his own compositions.



Pianist Diego Cortes Escobar performs at GAO's Hispanic Heritage Week Program.

structive evaluations, and leadership experiences.

The organization's philosophy is based on the principles of learning by doing and improving through practice and evaluation. The headquarters, in Santa Ana, California, provides educational services, supplies, and guidance through its district and area representatives. Clubs retain their identity and flexibility by conducting programs suited to members' needs.

Meeting Format

Each Toastmasters' meeting contains four parts: club business, table topics, prepared speeches, and evaluations. The business session begins with a discussion of club activities, when members practice skills for managing meetings. Next, members discuss table topics. These are usually organized around a theme stated by one of the meeting leaders. Only then

do participants know who has 60 seconds to talk extemporaneously on the topic. Normally, there will be 6-10 topics per meeting. These informal discussions help develop the ability to organize thoughts and speak clearly.

The third segment of the meeting is devoted to prepared speeches. Each speaker talks for 5 to 7 minutes. Each speech focuses on specific communications skills, e.g., organization, vocal variety, and body language, applying them to a subject the speaker chooses. Speeches range from serious rehearsals for Capitol Hill briefings to exercises of one's imagination. By giving talks that focus on skills outlined in the Toastmasters' communications manual, members learn or sharpen speaking skills and build self-confidence.

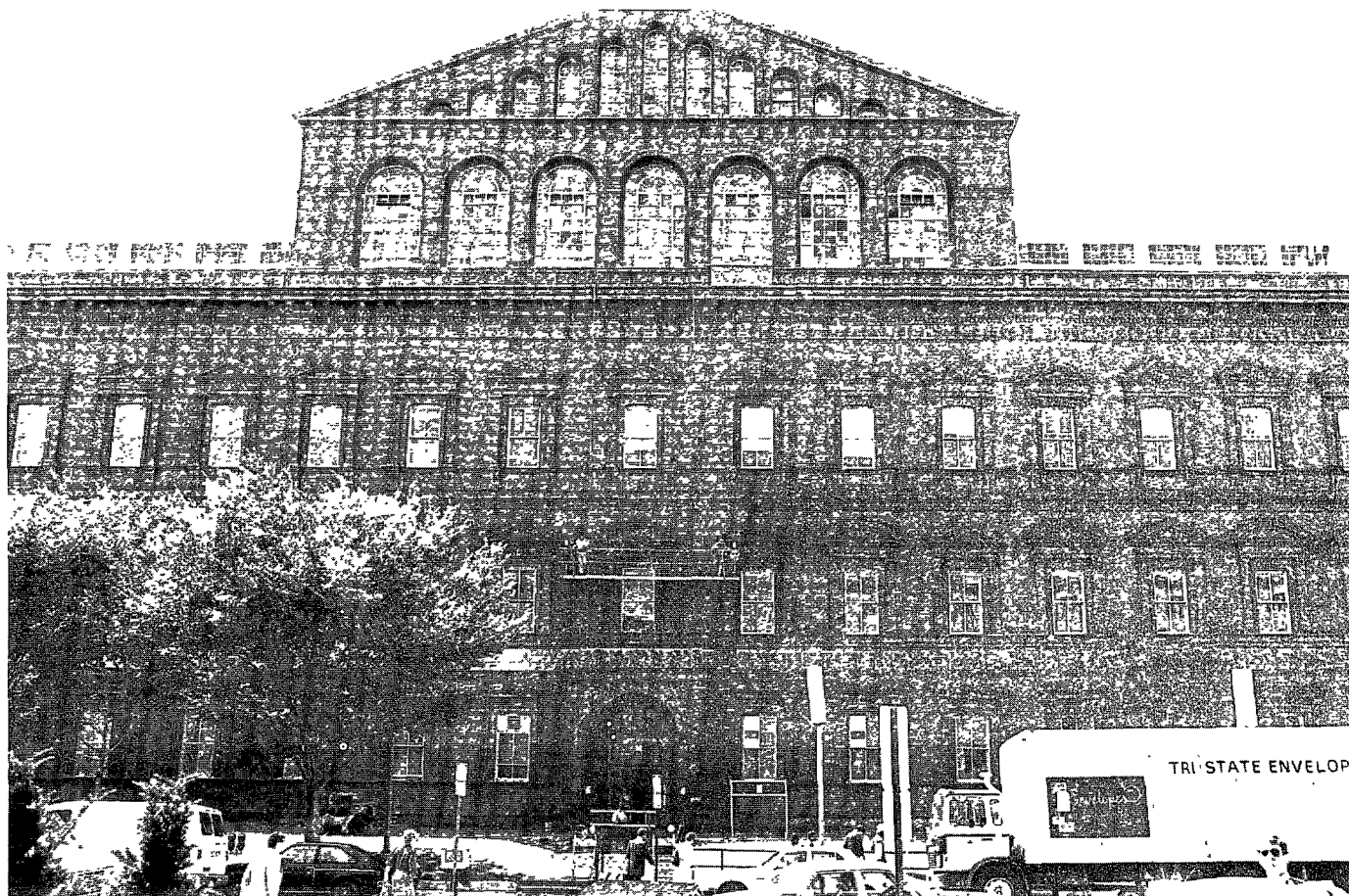
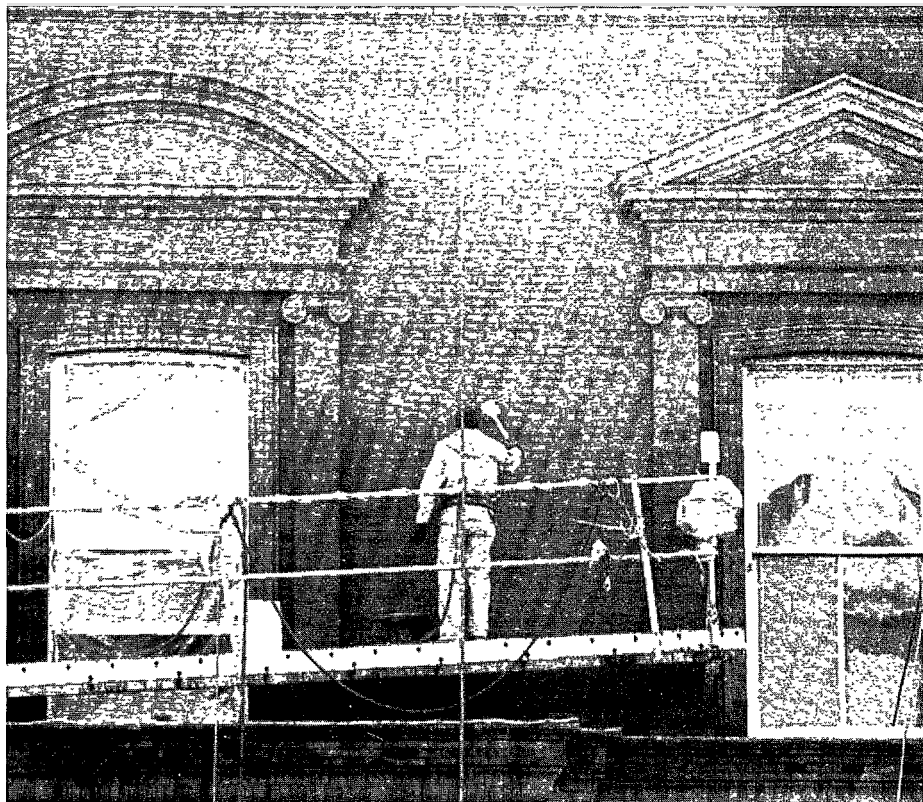
During the fourth part of the meeting, speakers receive constructive feedback. Peers evaluate how well they met

the speech objectives and suggest ways to improve.

Other Benefits

Toastmasters offers additional opportunities for skill development. Its "Success/Leadership" program contains four educational modules: (1) overcoming public speaking fears, (2) building listening skills, (3) using Parliamentary procedures, and (4) conducting productive meetings. The modules are conducted as seminars, but the skills apply to such activities as GAO planning sessions or job reviews.

Toastmasters meets on the second and fourth Wednesday of every month, noon to 1 p.m. in room 6119 at GAO headquarters. Members at audit sites, regional offices, or on travel can attend meetings at other agencies' clubs. In addition, many communities have clubs. The Toastmasters *Directory* lists clubs in the Washington, D.C., metropolitan area and those in other parts of the country. For more information about the Generally Able Orators at GAO, contact club president Paul Astrow on (202) 275-8904.



Workmen were brick-cleaning at the Pension Building in August 1984. The Pension Building, which opened for business in 1887, is across the street from GAO headquarters.

A Commentary on 'Measuring the Government's Borrowing Costs'

Ed note In the winter 1985 issue, the authors of "Measuring the Government's Borrowing Costs," Tom Storm and Pat Doerning, requested readers' comments. Associate Director Craig Simmons of the General Government Division replied as follows

The winter 1985 GAO Review article by Thomas Storm and Patrick Doerning proposes using a variable interest-rate methodology to more accurately account for the costs of federal credit programs. Under these programs, funds are currently loaned for lengthy periods at fixed rates determined under what is known as the prevailing-rate approach, while borrowing by the Treasury to fund these programs occurs more frequently. As a result of this mismatch of maturities, changes in interest rates on borrowed funds can produce gains and losses in the net interest revenue of the loan programs. These potential gains or losses are not separately identified as program costs or revenues in the budget.

The authors strongly imply that the variable-rate methodology should replace use of prevailing rates in making cost comparisons and weighing investment decisions. This indicates a misunderstanding of the difference between budgetary costs and opportunity costs. Use of the proposed variable rate methodology would better identify the annual costs of interest rate risk in federal credit programs. But this improvement does not invalidate the superiority of the prevailing-rate approach in estimating the opportunity cost of federal credit programs or other programs of an investment nature.

Decisions about whether to proceed with a project or choices among alternative projects must be made based on today's best estimate of the costs of diverting resources from other endeavors. In the case of government programs, this cost is measured as the interest on the increased borrowing needed to fund the project, or alternatively, as the interest savings that would have accrued had the project not been funded and the same amount of funds were used to retire federal

debt. These opportunity cost estimates are forward looking, based on the best information available at the time the decision is made.

The prevailing-rate approach provides the best estimate of these costs because the rate on borrowed money to fund a loan of the same maturity is nothing more than an average of rates expected to prevail in the future on a series of shorter-term borrowings. For this same reason, over the life of the loan, there is no reason to expect that when the loan is made, the maturity mismatch between the loan and the borrowings to fund the loan will, on balance, yield net gains or losses to the federal government. Retrospectively, it may turn out that net gains or losses do result from the maturity mismatch but, before the fact, we cannot know what the result will be. Thus, the guidance provided in chapter 17 of GAO's *Project Manual* remains valid even if loans were to be priced using a variable-rate approach.

Several other points are worth mentioning with regard to the variable-rate approach in the context of measuring specific program budgetary costs.

- Given the merits of the approach for measuring the budgetary costs of maturity mismatches, why confine ourselves to lending programs? Why not allocate these costs to all programs? For expenditure programs, the Treasury's borrowing costs could (somehow) be allocated to them with the costs viewed as the interest expense associated with a loan made in perpetuity.

- If the variable-rate approach is to be used as a means of pricing loans (as opposed to simply using it as a means of showing budgetary costs under the prevailing-rate approach to pricing loans), there are some practical problems that would have to be overcome. For example, many of the government's direct-loan programs are designed to convey an interest subsidy. It is unclear how the proposed approach could be

reconciled with this. The article's Farm Credit Administration example provides a good analogy for unsubsidized lending programs, but not for subsidized programs.

- The analogy to private-sector variable-rate lending practices creates the misimpression that the government needs to be as concerned as a savings and loan association about its "unmatched book" of borrowing and lending maturities. Interest-rate risk resulting from mismatched maturities is a very serious problem for the thrift industry. If lending rates are below borrowing rates or not sufficiently above borrowing rates to cover operating costs for an extended period of time, a thrift institution can fail. This cannot happen to the federal government in the short, intermediate, or long run. Again, over the long run, defined as the term to maturity on long-term loans, there is no reason to expect a net gain or loss from the unmatched book.

Manager's Corner

The topic of this spring's "Manager's Corner" is artificial intelligence and the challenge of fifth-generation computers. This is an area that is more research than application-oriented. Nevertheless, the concept has implications for the future, and staff members in the Information Management and Technology Division (IMTEC) are keeping current with the status of research and development.

For this issue, Ken Hunter, senior associate director of the Accounting and Financial Management Division (AFMD), has contributed a review of a book entitled *The Fifth Generation: Artificial Intelligence and Japan's Computer Challenge to the World* (Addison-Wesley, 1983). Written by Edward Feigenbaum and Pamela McCorduck, this book describes the Japanese Fifth Generation Computer Systems Project, which was launched in 1981. This project of the Institute of New Generation Computer Technology (ICOT) in Tokyo is directed toward creating computers and programs that make extensive use of artificial intelligence. The book discusses the objectives of the Japanese project and possible U.S. responses.

Mr. Hunter is a member of the World Future Society and chaired the Society's 1984 Fifth General Assembly and Exposition.

Rona Stillman, chief scientist for Computers and Communications, IMTEC division, contributed the bibliography.

The Fifth Generation: Artificial Intelligence and Japan's Computer Challenge to the World
By Edward Feigenbaum and Pamela McCorduck.
Reviewed by Kenneth Hunter.

Computer technology is a major factor in our society and economy, and the next major leap to a fifth generation of computers will be critical. Public policy needs to support, accommodate, and respond to this technology and the major changes it will allow and create.

The Fifth Generation

This book contributes to the general understanding of the technological

and institutional factors involved in computer science research and development. One aspect of this is artificial intelligence or "smart" systems that are able to perform such reasoning functions as speech understanding. Breakthroughs in such areas would significantly contribute to society and the economy and, no doubt, reward its creators.

The Japanese Challenge

Japan's challenge to itself and the world is to make these breakthroughs, and it is mobilizing the resources to try. The book describes the Japanese undertaking as a combined government-industry-university venture, to be funded at an amount from \$450 million to \$1 billion and staffed by top people from companies and research, who will rotate back in 3 or 4 years to apply the research results.

Japan's focus in this undertaking is on knowledge processing. It recognizes that knowledge workers comprise a majority of the workforce in developed nations and that a significant increase in productivity would have profound economic effects. It also is striving for an information-rich society, with a better quality of life.

"Because we have only limited resources, we need a Japanese technological lead to earn money for food, oil, and coal. Until recently we chased foreign technology, but this time we'll pioneer a second computer revolution. If we don't, we won't survive."

A second computer revolution is a very large project, with all the associated management difficulties and risks. The Japanese have relatively little experience with software and applications. Furthermore, they have a 10-year planning horizon, which means "scheduled breakthroughs."

Responses to the Challenge

The authors condemn the shortsightedness and the failures of the U.S. government and IBM for not initiating large-scale research and development in artificial intelligence long before the Japanese. They also criticize England, France, and Russia. Implicit in their argument is that the Fifth Generation, based on artificial intelligence as Japan and the authors define it, should be the top national priority of any

developed country; any other approach or priority is wrong.

The authors may be right. Or they may be overreacting because of their long association with artificial intelligence research and the emotion and excitement of the Japanese project. "Personal profit is not an ignoble motive, but it doesn't really compare to the exhilaration the young researchers at ICOT feel in pursuit of something more transcendent, a goal for the good (and perhaps the salvation) of their nation," the authors say.

I can identify with this feeling and reaction. In the late 1960's, I was among a small group of people involved in public policy for computers who assembled at the National Academy of Sciences for a briefing and talk with Yoneji Masuda, whose institute was completing its first report on the future information society. We were overwhelmed with the magnitude and implications of the vision and the short 20-year timeframe. Mr. Masuda was very disappointed that the United States had no similar vision or plans nor even a center where such research and thinking is done. We represented different parts of the federal government and government-sponsored research, but we had no leader and no clearinghouse. This circumstance is still the same, by our choice. Mr. Masuda put the results of his institute's early work into English. The book, entitled *Information Society*, is available from the World Future Society.

The authors were significantly influenced by the Japanese briefing and subsequent discussions they had in Japan. I believe if I had done the field work and written a book immediately after my earlier briefing, I would have been similarly influenced. (Maybe I should have.)

Public Policy Questions

Computer technology does matter. It is a major tool for much human endeavor. Therefore, it is important to public policy. A decision by Japan to concentrate much of its research should make us reexamine our decentralized, needs-driven research and our priorities.

The authors offer their list of alternatives:

- We can maintain the status quo.
- We can form industrial consortiums to meet the Japanese challenge.

See *Manager's*, pg. 30

Topics in Evaluation



Carl E. Wisler

Mr. Wisler is an associate director in GAO's Program Evaluation and Methodology Division

This issue's topic is the sample survey.

It is reported that between 1950 and 1981, annual per capita health care expenditures increased, in current dollars, from \$70 to \$1,090. Such a large increase has prompted policymakers to seek relief from the high cost of medical care. This is just one instance among many in which presumably factual information is used to guide policy. But how do we "know" how much is spent on health care, and in what sense do we know it? Consideration of these questions gives us an opportunity to look at some of the main features of the sample survey, a widely used methodology in such fields as public-opinion polling and program evaluation.

As empirical data-gathering techniques go, the sample survey has deep roots. According to one historian of survey research (Babbie, 1973), a mail-out questionnaire—to determine the extent of worker exploitation—was sent to 25,000 addressees in 1880 by a German political sociologist, Karl Marx. Many researchers have since used variations on the method, with really widespread application of the sample survey, in the modern sense of the term, taking place in the last 50 years. Use by organizations, such as the Bureau of the Census, the Bureau of Labor Statistics, and national opinion polling organizations, has honed the survey strategy into a well-accepted technique for acquiring certain kinds of information.

Evaluation Information Needs Met by the Sample Survey

We begin with the idea that there are three basic kinds of evaluation questions: descriptive, normative, and cause-and-effect ("Topics in Evaluation," summer 1984). Sample surveys are good for addressing descriptive or normative questions, but usually are not of much help in determining causality. For illustrative purposes, descriptive questions are somewhat easier to deal with, so we will restrict the discussion to that category.

Descriptive questions ask about the condition of people, things, and events in the world. The answers are facts or opinions: for example, physical, mental or social characteristics, counts of events, attitudes and beliefs. In the health care example, the question is how much did people in the United States spend for health goods and services at two points in time.

Frequently, we want to know something about the condition of a large number of entities: What is the average age of the U.S. population? How much soil eroded last year in states west of the Mississippi? A problem with such questions is that it is usually impractical and too costly to answer them with certainty. Fortunately, an exact answer is seldom necessary for policy-making purposes, and this opens the way for methods like the sample survey.

A sample survey is usually the preferred evaluation strategy when we need to describe the condition of a large universe, but do not want to take the time, or make the effort, or spend the money to examine every element of the universe. The idea is to examine a sample of elements, which is in some sense representative of the universe, and to draw conclusions about the universe by generalizing from the sample. (The notion that the sample survey is a strategy for describing a universe based upon information acquired about a sample from the universe is a common, though not universal, convention. Some researchers prefer to think of a survey as simply a data collection method without regard to matters of sampling.)

Representativeness is the first fundamental feature that we strive for with the sample survey strategy. The se-

cond fundamental feature is uniformity of information about the elements sampled from the universe. Because we are interested in answering a question about the universe as a collective rather than about individual elements, we have to aggregate information across the elements. For this to make sense, we must try to obtain uniform information about all elements in the sample. Otherwise, we will be adding apples and oranges.

These two desired characteristics, representativeness and uniformity, play a large role in dictating how surveys should be designed.

Designing a Survey

A design is a plan for answering an evaluation question. Consider the question: How much did residents of the United States spend, on the average, for health care in 1970? The design for answering this question must address two preeminent issues: Who shall we collect information from, and how shall we collect the information?

To answer a question about a universe, in this case the residents of the United States, based upon a sample, we need a plan for choosing the sample so that it is representative. Unfortunately, representativeness is one of those terms that conveys an intuitive idea to us, but which does not have a universally agreed-upon technical meaning. For present purposes, we shall leave the definition ambiguous and say simply that by a representative sample, we mean one that resembles the universe on specified variables important to us, such as age and place of residence of persons in the universe.

In choosing a sample, we have two main options: probability sampling and nonprobability sampling. Although the particulars of each approach are beyond the scope of this article, we shall adopt the view that the sample survey strategy uses only probability sampling (PEMD, 1984). Technically, this means that the sample is drawn from the population in such a way that all possible samples have a known and specified probability of being drawn. Less formally, it means that we let the laws of chance determine who gets into the sample rather than applying human judgment. Probability sampling

offers considerable advantage because, with it, statisticians have ways of estimating sampling error—how much random error we incur by using a sample to answer our question rather than using the universe. With nonprobability sampling, the amount of sampling error must remain a mystery. Kruskal and Mosteller (1979-80) suggest that the term “representative sampling” be reserved for occasions when some form of probability sampling is employed. For more discussion of sampling in the GAO setting, see the forthcoming methodology transfer paper entitled “Sampling” (Program Evaluation and Methodology Division, forthcoming).

Returning now to the question of how much we spent on health care in 1970, consider the survey conducted by the Center for Health Administration Studies and the National Opinion Research Center (CHAS/NORC) of the University of Chicago (Andersen, et al., 1976) to find the answer. A probability sample of 11,619 persons was chosen from the universe of noninstitutionalized persons in the United States. Figuring out how to draw this particular sample was rather complex because the researchers also wanted to answer questions about several subcategories of persons, including those with low income living in central cities, those living in rural areas, and those persons over 66. Ordinarily the proportion of these persons in a simple random sample would be too small to warrant strong conclusions, but by oversampling these categories it was possible to obtain reasonably precise estimates of health care expenditures for the subcategories as well as the overall universe.

Assuming that we can draw a sample that is suitably representative, the second important ingredient of a sample survey is the collection of uniform information about the elements in the sample. This means that the design must include precise definitions of concepts and a uniform method of data collection. For example, in the CHAS/NORC survey, the term “health care expenditure” had to be defined in detail so that each respondent to the survey was prompted to report the same types of expenditures. If some respondents were to include only out-of-pocket costs, for example, but others would also report expenditures paid by insurance plans, an estimate of the mean expenditure for all persons in the universe would not be interpretable.

The need for uniform information also drives the plans for data collection. With sample surveys there is an

emphasis on structured interviews, either face-to-face or by telephone, and mail-out questionnaires because these techniques are more apt to produce consistent information than are unstructured approaches. Considerable effort is devoted to pretesting data collection instruments to eliminate flaws in the sequence and the wording of questions that might cloud the message or bias the response. Where interviewers are used, plans must be made to train them to conduct interviews in a uniform way. Often the design includes provision to verify the accuracy of portions of the data by collecting data from certain respondents a second time or cross-checking by acquiring the same bits of information from other sources.

In the CHAS/NORC health care survey, information was collected by face-to-face interviews using long and detailed questionnaires filled out by the interviewers based on responses to their questions. If important information could not be obtained during the interview, staff were instructed to phone the respondents at a later time or make a return visit. Other data quality checks were made by field supervisors and later a critical-item checklist was used by the data-editing staff to determine when callbacks were necessary. An effort was made to verify certain pieces of information, such as hospital admissions and insurance coverage, by contacting hospitals, doctors, and insurers.

Representativeness and uniformity are two important features we seek in a sample survey, but they are not the only factors that should affect a design. For example, another desired technical factor is freedom from bias. This means that we want to use sampling, data collection, and data analysis procedures that produce an answer that is not systematically different from the “true” answer. The representativeness feature of sampling is a step in the right direction, but the design must attend to many other factors if bias is to be contained within tolerable limits.

What We Know

So what does it mean to say that we “know” that health care expenditures increased from \$70 to \$1,090 between 1950 and 1981? There was some unknown but “true” value of health care expenditures in 1950, and there was a “true” value for 1981. Researchers, using sample survey methods similar to those outlined above, have estimated the expenditures to be \$70 and \$1,090. But the true figure for 1950 might be

\$57 or it might be \$76. Likewise, the figure for 1981 might really be \$1,068. The numbers reported are simply the best estimates, and they are almost certainly inaccurate to some degree.

The extent to which we know what per capita health care expenditures really are depends upon the quality of the sample surveys. That quality is expressed by the amount of error in the estimates and is determined by such factors as the representativeness of the sample and unbiased nature of the data collection procedures. Taking one step further back, the extent to which representativeness and unbiasedness have been achieved depends, in large part, upon how the sample survey was designed and how the data were collected.

To say that we know the per-capita expenditure for health care means, then, that we know something about how the researchers designed and conducted the study that produced the estimates and that we are confident that the results are accurate enough for our purposes.

Where To Look for More Information

Andersen, R., J. Lion and O. W. Anderson. *Two Decades of Health Services: Social Survey Trends in Use and Expenditure*. Ballinger, 1976.

Presents the methodology and results for a series of health care surveys.

Andersen, R., J. Kasper, M. R. Frankel and associates. *Total Survey Error*.

An intermediate-level treatment of sample survey methodology with particular reference to health surveys; develops the idea of the total amount of error in survey.

Babbie, E. R. *Survey Research Methods*. Wadsworth, 1973.

A good introductory text that assumes no prior study of research methods.

Backstrom, C. H. and G. Hursh-Cesar. *Survey Research*, 2nd ed. John Wiley, 1981.

Another good text in a cookbook style.

Katzer, J., K. H. Cook and W. W. Crouch. *Evaluating Information: A Guide for Users of Social Science Research*, 2nd ed. Addison-Wesley, 1982.

An easy introduction to how we know facts and how to spot errors in findings.

Kruskal, W. and F. Mosteller. “Representative Sampling, I-IV.” *International Statistical Review*. pp. 13-24,

See Topics, pg. 30

Implementing the Federal Managers' Financial Integrity Act



Geoffrey B. Frank

Mr. Frank is an accountant in AFMD's Accounting Systems Audit Group. He is primarily involved in reviewing implementation of the Financial Integrity Act and serves as AFMD's representative on GAO's Interdivisional Financial Integrity Act Task Force. He is a graduate of Pennsylvania State University and a candidate for a master's degree in public administration at George Washington University. Mr. Frank is a member of the Association of Government Accountants and the American Society of Public Administration.

Do you like challenges? Would you like a position with exciting growth potential and an opportunity to work with new state-of-the-art methods and procedures? How about an opportunity to have your planning, managerial, and interpersonal skills tested to their fullest extent by a large, complex, dynamic assignment involving hundreds of people all over the world?

Sound like a personnel ad placed by a Silicon Valley computer firm or AT&T? Actually, it is what the ad would have looked like, had one been posted, for a position as manager of GAO's first-year review of the Federal Managers' Financial Integrity Act of 1982.

GAO's first review of the act's implementation has been characterized as a "learning experience." Many new, innovative approaches were required



Jeffrey C. Steinhoff

Mr. Steinhoff is the deputy associate director in the Accounting and Financial Management Division's (AFMD) Accounting Systems Audit Group, which is responsible for directing GAO's Financial Integrity Act work, reviewing federal agency accounting systems, and auditing such financial management issues as debt collections and cash management. He is a graduate of the College of William and Mary in Virginia, where he earned an A.B. degree in accounting. In addition, Mr. Steinhoff completed the information systems program at the Wharton School of the University of Pennsylvania and is a graduate of the Federal Executive Institute. He is a CPA (Virginia) and a member of the Association of Government Accountants. He has received numerous professional awards, including the GAO Distinguished Service Award in 1984.

not only in conducting the required work but also in managing GAO's review. This article seeks to summarize that experience and identify the lessons learned, along with their impact on ongoing and future work in this important area.

Job Planning and Organization

The Financial Integrity Act (P.L. 97-255) provides, for the first time,

the needed discipline on a government-wide basis to identify and remedy long-standing internal control and accounting system problems that hamper effectiveness and accountability, cost the taxpayer potentially billions of dollars, and erode the public's confidence in its government. The act, whose passage was strongly supported by the Comptroller General, further develops the concept first embodied in the Accounting and Auditing Act of 1950 that primary responsibility for adequate systems of internal control and accounting rests with management.

At the Comptroller General's direction, GAO undertook a comprehensive review of efforts to implement the act at 22 federal departments and agencies, which accounted for 95 percent of all federal expenditures. Specific review objectives were to

- assess agencies' processes for evaluating and improving systems of internal control (section 2 of the act);
- review agencies' progress toward assessing their accounting systems for compliance with the Comptroller General's principles, standards, and related requirements (section 4 of the act); and
- analyze agencies' annual reports required by the act.

The review planning began in October 1982, only a month after the Congress signed the act into law. We made two important decisions at that point: first, each division in GAO would have a role, and second, a multidivisional group would help decide our objectives, approaches, and staffing.

Early in 1983, under Accounting and Financial Management Division (AFMD) direction, GAO formed a Financial Integrity Act Implementation Working Group on which each program and technical division was represented. This group, primarily through the work of several subgroups, produced several position papers outlining short- and long-term strategies for reviewing the act's implementation. We realized the magnitude of the task at hand through this group's deliberations. The group pointed out that

- all GAO staff should be familiar

with, and consider the adequacy of, in the initial stages of our audits and

- all GAO audit work, particularly GAO's agency management reviews, needs to be carefully coordinated with GAO's review of the act's implementation.

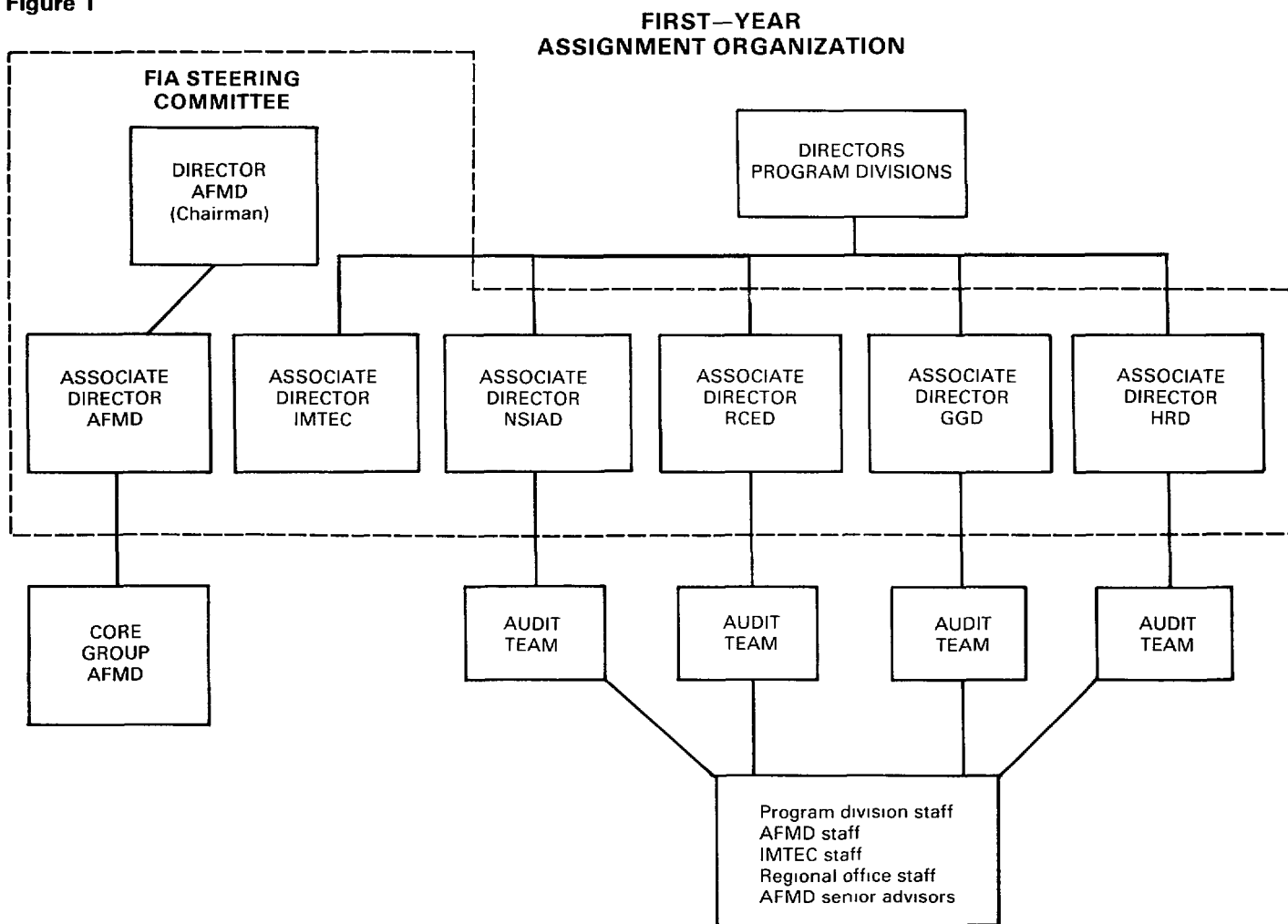
As GAO staff began understanding the subject in depth, we realized that successfully implementing these concepts would be a challenge.

A steering committee, chaired by the AFMD's director and comprised of associate directors from each of the

program divisions, AFMD, and the Information and Management Technology Division (IMTEC), was responsible for policy direction of the job and for preparation of the overall first-year report. A core group of three AFMD staff to assist the steering committee and four AFMD senior advisers consulted with audit teams throughout the review. In addition, AFMD prepared the first-year work program for the 22 audit teams. Because the concepts addressed in the act were new, AFMD also provided a series of necessary training sessions on internal controls and accounting

systems. Held in Washington, D.C., and in six regional offices, these training sessions ensured a uniform knowledge base. While the steering committee had overall responsibility for the assignment, the cognizant program divisions managed the day-to-day jobs and reported to each of the agencies. To assist in the areas of ADP and accounting systems, IMTEC and AFMD technical specialists were assigned to each of the 22 teams. The teams could also call on the core group as well as the four AFMD senior advisers for technical assistance (see figure 1).

Figure 1



Scope and Resource Requirements

In May 1983, the steering committee met with Comptroller General Bowsher, who approved the proposed assignment structure. At that time, the Comptroller General stressed the need to assess independently agencies' reporting on the status of the federal government's internal control and accounting systems. He approved the first-year work program and also set the review

scope as all the cabinet-level agencies as well as the following four major independent agencies: the National Aeronautics and Space Administration (NASA), the General Services Administration (GSA), the Veterans Administration (VA), and the Small Business Administration (SBA).

The Comptroller General made this work a top priority in GAO. In a meeting with all division directors and regional managers, he outlined our plans and reemphasized the act's importance

and our need to take a leadership role to help ensure successful implementation.

It became readily apparent that the first-year review would require a substantial investment of GAO resources. We originally estimated 25,000 staff days, approximately 19,000 in headquarters and about 6,000 in the regions. Actually, our estimate was not far off from the 29,000 staff days GAO ultimately expended.

Many difficult trade-offs had to be

made. The steering committee immediately began to address (1) staff needs (grade levels, abilities, and program knowledge), (2) staffing time frames, and (3) the impact of this work on ongoing assignments.

The Kick-Off Conference

On June 23 and 24, 1983, the kick-off conference for the review was held in the GAO auditorium. During the 2-day period, AFMD provided over 100 key staff with an overview of the act, along with a detailed work program for the review. Representatives from the Office of Management and Budget (OMB) and the Department of Housing and Urban Development also briefed the GAO staff on their efforts to date. Finally, case-study applications of the act's requirements were presented and discussed.

The Comptroller General emphasized the importance of the review. He hoped that GAO's review "might provide the impetus for the executive branch to establish modern, centralized accounting systems." He identified the coordinated, cooperative audit effort as a key to successfully achieving these ambitious objectives with the need to assign highly qualified staff as quickly as possible.

The Comptroller General also initiated a review of GAO's own internal control and accounting systems. Although, as part of the legislative branch, GAO is not legally required to comply with the act's requirements, the Comptroller General stressed the need for GAO's divisions and offices to assess and report to him on the adequacy of our own internal control and accounting systems.

Coordination with OMB and Agency Inspectors General

OMB has taken a leadership role in ensuring implementation of the act, and we have recognized the importance of coordinating with the agency. OMB established a Financial Integrity Act Task Force to provide technical assistance and to oversee agency implementation efforts. In addition, agency inspectors general reviewed the evaluation process at their agencies and provided technical assistance. Close coordination, therefore, was essential to avoid wasteful duplication of effort and to minimize agency disruption.

A high degree of cooperation between GAO, OMB, and the inspectors

general benefited the common goal of strengthening internal control and accounting systems. Sharing our audit program with them, we reviewed the results of OMB's efforts¹ prior to beginning our work. We worked closely with the inspectors general, exchanging audit results and coordinating efforts to broaden the audit scope. For example, at one agency the inspector general staff became members of our review team, and, in another case, GAO and an inspector general conducted a joint review.

To provide the framework for the act's implementation, as prescribed by the law, the Comptroller General issued agency standards for internal control systems. The standards, issued in July 1983, apply to program management as well as traditional financial management areas and encompass all operations and administrative functions. The act also requested that OMB, in consultation with GAO, establish guidelines for agencies to use in evaluating, improving, and reporting on their internal control systems. GAO and OMB worked closely to finalize the standards and guidelines and to explain these requirements to the agencies.

The core group coordinated with OMB, whereas each audit team developed relationships with the agency inspectors general on a case-by-case basis. For the most part, we worked out these relationships informally, and they continued to evolve with changes in staff and status of agency implementation efforts.

Conducting the Review

This review was the first of its kind in terms of its magnitude and the program's newness. The GAO evaluation staff had to learn the required process and the OMB guidelines, while concurrently evaluating the adequacy of implementation efforts. As the 22 audit teams did the review, the Financial Integrity Act Steering Committee faced a series of difficult decisions. Each team faced staffing shortages, which were acute in the ADP area. IMTEC was a new division and, while many slots had been allocated to the Financial Integrity Act effort, few ADP specialists were initially on board. GAO program divisions and AFMD also experienced resource problems. The critical question of which work to reduce, delay, or cancel to accommodate the demands of this large assignment proved to be even more complex than anticipated. However, necessary staffing was made available, and all parties fully sup-

ported the assignment.

An area requiring mid-course reevaluation was the audit work program. Several months into the review, a number of working groups, composed of selected evaluators-in-charge from the 22 audit teams, met to discuss the work program and exchange ideas on how to conduct the review. The steering committee approved a number of adjustments as a result of these meetings.

Ensuring that each of the 22 teams was aware of and understood information and decisions as the job progressed proved to be a greater challenge than anticipated. However, the core group served the steering committee's needs through a difficult period. The core group analyzed draft agency reports to ensure consistency and ensured that the teams received copies of steering committee minutes and other job information. It also prepared policy papers, briefing packages, and speeches and was the focal point for information on the overall status of the job.

Team leaders for the agency segments played a substantial role in managing the assignment and directing teams of up to 20 GAO staff members. Team leaders supported GAO field staff and agency personnel. In many cases, team leaders also consulted agency Financial Integrity Act staffs and became an important source of information to the agencies. In addition, they helped maintain a positive working environment, since some agencies initially expressed concern that GAO staff could impede progress by evaluating the program as it was being implemented.

Throughout the job, the Comptroller General demonstrated his commitment to successfully implementing the act. The steering committee members met periodically with Mr. Bowsher and GAO top management on job progress, issues for resolution, and the thrust of our agency and government-wide reports. The committee also briefed the Comptroller General's consultant panel on the progress of our work. The Comptroller General met with OMB and top agency management to support the assignment and to outline his expectations for implementing the act.

¹For additional background, see the winter 1984 *GAO Review* article, entitled "Assessing Implementation of the Financial Integrity Act: GAO Assists OMB."

Winding Up the Assignment: Congressional Hearings and Reporting

The Comptroller General has emphasized the importance of annual hearings on the state of the government's internal control and accounting systems and believes that such hearings will provide the impetus needed to ensure successful implementation of the act. The first hearing was held on May 22, 1984, before the House Committee on Government Operations. We worked closely with the committee in developing the hearing and consulted in the preparation of the committee's report,² which directed agencies to intensify their efforts to ensure a sustained, long-term commitment to improved internal controls and accounting.

Around the time of the hearings, the teams began issuing their individual agency reports, and work progressed on the government-wide report. The steering committee met often to finalize reporting issues and policies. Meetings were long and, at times, trying. With so many inputs, ensuring consistency and quality for 22 reports and agreeing on the focus of the government-wide report was a difficult but essential task. The committee did not always immediately agree in certain areas.

The Offices of Quality Assurance (OQA) and General Counsel (OGC) greatly assisted the reporting process. Early in the job, representatives of these offices regularly attended steering committee meetings. They participated in our report conferences and received report outlines and preliminary drafts. Both responded to tight review time frames to enable teams to meet report milestones. Making OQA and OGC part of the team enabled us to issue 22 agency reports as well as the government-wide report within 14 months of the kick-off conference. Both offices contributed to the effectiveness and quality of the final products through constructive suggestions during the assignment.

Overall Report Issued

We issued the last of the 22 individual reports on July 20, 1984, and the Comptroller General signed the overall report, prepared by an AFMD working group for the steering committee, on August 24, 1984 (GAO/OCG-84-3). Since this report represented a truly GAO-wide product, the Office of the Com-

troller General issued it, rather than a GAO division.

In the report, GAO concluded that the agencies satisfactorily began their assessments, that they demonstrated a strong management commitment to implementing the act, but that each agency needed to improve the quality of its self-assessments. In their first annual statements, agencies disclosed internal control and accounting system material weaknesses that needed prompt attention. The reported weaknesses covered the spectrum of government functions and programs. GAO called on agencies to begin developing and implementing comprehensive plans to correct these weaknesses and thus realize the potential for saving billions of taxpayer dollars. Correction of the problems is the "bottom line" of the act and will require a sustained high-priority commitment.

First-Year Lessons Learned: Establishment of the Interdivisional Task Force

Ensuring consistency and preparing a government-wide, first-year report were difficult tasks. For the second year, we looked to new ways of gaining the insights and details the teams were developing and wanted to do more to compare and contrast agency progress.

Recognizing the need to capitalize on lessons learned in the first year, the steering committee established the Interdivisional Financial Integrity Act

Task Force to address these problems and to assist the individual teams in the second-year review. The task force, headed by an executive director, and reporting directly to the steering committee, consists of full-time representatives from each program division, AFMD, and IMTEC. All task force members participated in the review (see figure 2).

The task force, which replaces the AFMD core group and the senior advisors, will support the steering committee in providing overall coordination and direction and in writing and processing the government-wide, second-year report. Task force members work with the audit teams in their respective divisions to oversee, collect, analyze, and consolidate findings and to resolve any problems in understanding and completing the work steps in the audit program. Also, they will address issues that affect all teams, requiring each task force member to be familiar with the progress and findings at all agencies.

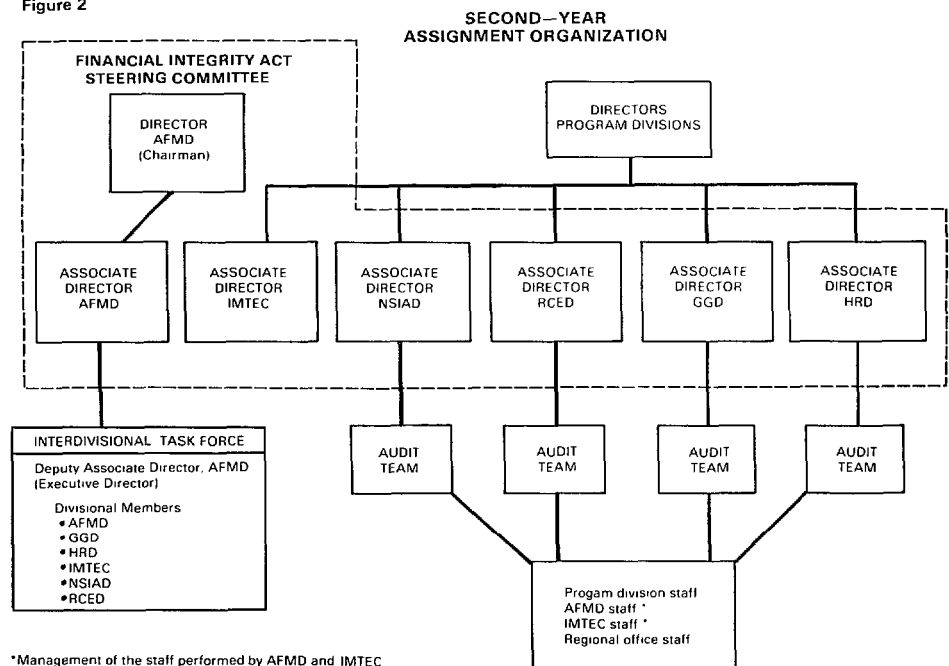
The task force's major duties can be summarized as follows:

- Ensure the consistency, focus, and quality of work performed by the various teams.

²"First-Year Implementation of the Federal Managers' Financial Integrity Act," House Committee on Government Operations, August 2, 1984.

See Integrity, pg. 30

Figure 2



*Management of the staff performed by AFMD and IMTEC



David R. Solenberger

Mr Solenberger, the operations research analyst for the Kansas City Regional Office's technical assistance group, has been with GAO since 1970. He received B.A. and M.A. degrees in economics from Kansas State University in 1968 and 1970, respectively. He received a master of public administration degree from Central Michigan University in 1975. He has received a Certificate of Merit and two Certificates of Appreciation during his GAO career.

Economic analysis requires information on how much federal government employees cost and how many hours they work per year. Such an analysis is needed in justifying large government programs, such as new computer systems, or in deciding whether to do work "in house" with government employees or to contract out. Productive-hours information is also needed for staffing determinations, since staffing levels are based on the total work hours needed, divided by the hours employees are available for work. Identifying and quantifying such costs requires careful analysis.

This article presents, in a simplified manner, the factors that should be considered in calculating how much a federal employee costs. The evaluator who is auditing an agency cost study can identify the major assumptions needed for such a study and compare them with those used in this article. If agency assumptions differ significantly from the ones we used, they should be rigorously justified.

In all too many instances, the agency's computations are not done correctly. This results in faulty economic analysis and potentially bad decisions that can, in turn, lead to incorrect staffing determinations. The agency may either understate or overstate require-

The Cost of a Federal Employee: An Input to Economic Analysis

ments. Understated productive-hour data can result in too many people being hired. Incorrect cost data also can lead to faulty decisions that may result in an agency's going in-house or contracting out under the wrong conditions. Major government automation decisions, such as software development projects or acquisition programs, may be incorrectly justified as a result.

My recent involvement in two such analyses indicates that agencies understated federal employee fringe benefit costs, may not have used proper overhead rates, and overestimated productive-work hours. Previous GAO reports indicate that agency problems in compiling these statistics are not new.¹

Conducting a correct analysis is not easy, since there are differing criteria on how such an analysis should be done. The Office of Management and Budget (OMB) issued extensive guidance in Circular A-76 for making cost comparisons between "in house" or government production or services and industry. This A-76 guidance is used for evaluating government activities that are similar to those provided by commercial firms. However, little guidance is available for other types of economic analysis, such as justifying major automation projects.

Since 1979, the executive branch has placed greater emphasis on implementing OMB Circular A-76 because of the potential savings. A 1981 OMB survey found that approximately 226,000 positions were devoted to government-oriented commercial activities requiring A-76 studies.² GAO is active in evaluating these studies, since eliminating government jobs is obviously a controversial subject.³ Consideration is now being given to revising the A-76 guidance to increase the employee fringe benefit rates. Further complicating the analysis is the need to use individual agency data that may not be readily available for regular updates. Computing the cost of federal personnel required identifying the basic salary level, adjusting for fringe benefits and overhead, and then add-

ing such other factors as overtime and differential pay. We must also determine the productive staff days/hours available. Some of this information is available in OMB's A-76 guidance, while other data must be calculated by the responsible agency. GAO evaluators must obtain this information and incorporate it into the economic analysis in complying with the established GAO procedures discussed in chapter 17 of GAO's *Project Manual*. These procedures differ from OMB-mandated agency analysis in that GAO uses inflation forecasts and a variable discount rate, which depends on the current cost (to the government) of borrowing money. OMB requires use of a 10-percent discount rate for its cost of capital and assumes constant dollars (i.e., no inflation) in Circular A-94. OMB Circular A-76 does require that inflationary increases be considered. It calls for using the President's budgetary assumption for civil service personnel costs and non-pay inflation guidance for other costs when comparing against the contracting-out option.

Calculating the Basic Personnel Cost

Basic pay information is readily available once the average grade level is known.⁴ Since the pay varies greatly by step for most grade levels, that in-

¹"Estimates of Federal Employees Available Time for Work Distort Work Force Requirements" (FPCD-78-21, Mar 6, 1978). This report contains a bibliography of other GAO reports for those interested in this subject.

²"Enhancing Government Productivity Through Competition. Targeting for Annual Savings of One Billion Dollars by 1988." Office of Management and Budget, March 1984.

³"Contracting Out Under OMB Circular A-76 at Selected Army and Navy Activities in Virginia" (GAO/NSIAD-84-122, Aug. 3, 1984)

⁴Most federal civilian employees are paid under the general schedule. This pay system provides 18 pay levels, with all but the three top levels having 10 steps per level. Other blue collar federal civilian workers are paid under the wage-scale system.

formation is also useful. Specific publications containing information useful for calculating personnel costs include the OMB Circular A-76 and a Department of Defense (DOD) military compensation publication, which can be obtained from the Comptroller, Office of Secretary of Defense.

The basic salary costs (either wage scale, general schedule, or military) are then increased for fringe benefits. The fringe benefit adjustments are established in OMB Circular A-76 or specific DOD studies for military pay. The A-76 guidance is currently being reviewed. Some rates may increase. Figure 1 shows what the rates are now and what rates are being considered.

Fringe benefit rate information is entirely different for military personnel. Studies at military agencies will require far more information on the numbers and grades of military personnel to properly complete the study.

It is probably best to use the existing A-76 rates, since executive branch agencies are still required to use the lower rates. We can then note that they are being updated, then conduct an additional analysis to identify the impact of the proposed rates. In a January 1984 letter to OMB, GAO suggested that the full cost of the federal retirement system be established annually. Such economic assumptions as inflation, interest, and real wage growth have a big impact on pension costs. A recent Congressional Budget Office study demonstrated that slight changes in inflation, interest, and real wage growth affect pension costs by over 20 percent.⁵

OMB Circular A-76 calls for including all significant costs for government and contract performance. A management overhead factor may be applied against the personnel costs to reflect those costs associated with supervising the workers, providing administrative support, and maintaining the needed working environment. These rates vary by agency and reflect supervision and support costs attributable to the specific employee or group of employees being considered. Generally, such overhead factors are small unless large numbers (i.e., hundreds) of employees are involved.

No specific overhead estimates guidance is provided. Other specifically attributable costs can include depreciation, rent, maintenance and repair, insurance, utilities, and travel.

Figure 2 demonstrates what it cost the government to maintain an employee full time as an air traffic controller. The computation assumes the employee is a GS-11, step 7, a common

Figure 1

Comparison of Current and Proposed OMB Fringe Benefit Rates for Civilian Federal Government Employees

<u>Benefit factor</u>	Current benefit rates	Proposed benefit rates (a)
	----- percent -----	
Civil service pension	20.4	29.5
Insurance	3.7	4.3
Workman's compensation	1.9	1.7
Medicare	1.3	1.3
	<u>27.3</u>	<u>36.8</u>

(a) OMB correspondence to GAO dated December 20, 1983.
 (b) FCIC taxes are collected for new employees only. For the sake of simplicity, we do not discuss them in this article.

Figure 2

\$30,589	Base pay
x 1.345	Fringe benefit factor
<u>\$41,142</u>	Total pay and fringes
x 1.33	Management overhead factor
<u>\$54,719</u>	Total cost for one employee

grade level for a controller at a small airport. (If step information is not available, OMB suggests using step 5.)

Estimating Productive Work Hours

The total available time per employee is adjusted to consider the fact that an employee's productive work time for which he/she is paid. This is done by deducting from total time such "unproductive" time as vacation, illness, holidays, and administrative leave. Other activities performed at work, such as training and EEO meetings, are called "personal indirect time." These may require a substantial portion of an employee's time but are not part of an employee's primary duties. They must be deducted to arrive at productive hours.

For example, suppose several people work in a Federal Aviation Administration (FAA) air traffic control tower for an 8-hour tour of duty. As many as three tours of duty may be required to staff the control tower 24 hours per day. To determine the number of personnel needed to staff the tower, the total available time spent on air traffic control functions must be adjusted for their unproductive time. Again, note the problem that recent statistics differ from OMB's guidance.

Figure 3 compares established and recent unproductive time rates for federal government civilian personnel.

The OMB *Cost Comparison Handbook* contains suggestions on the categories of unproductive time formally used in the calculations. These figures, however, may not reflect recent experience. More recent agency experience may deviate significantly from the government-wide average. Such activities as training must be calculated by the individual agency. Handbook regulations allow agencies to adjust for more recent actual experience.

The OPM study, published annually, contains information on most major agencies. The annual studies indicate that agency unproductive time rates may differ significantly from those suggested in the A-76 Handbook, meaning agencies should periodically prepare an analysis for their own operations.

Many factors must be considered in any such agency study. New or retiring employees might not work the entire

⁵"Curtailling Indirect Federal Subsidies to the U.S. Postal Service," Congressional Budget Office, August 1984, p. 20.

See *Cost*, pg. 31

Can You Audit Without Pencils and Paper? Auditing With the New Technology



Brian A. Estes

Mr Estes, a Seattle Regional Office evaluator, joined in GAO's San Francisco Regional Office in 1978. He served as a Presidential Management Intern from 1978 to 1980. He received a B.A. degree in political science from UCLA and a master's degree in public administration from the University of Washington. Mr Estes is a council member in the Evergreen Chapter of the American Society for Public Administration and a member of the Washington State Hospital Association. In 1981, he received a Certificate of Merit from the San Francisco Regional Office.



Stephen J. Jue

Mr Jue, the technical assistance group (TAG) manager in the Seattle Regional Office, has been with GAO since 1972. He manages and integrates computer technology into the regional office environment. He has a B.S. degree in statistics from San Francisco State College and an M.B.A. degree in operations research from California State University at Hayward. Mr Jue is past president and founder of the Puget Sound Chapter of the EDP Auditors' Association and has served on the organization's board of directors since 1978. He is also a past contributor to the *GAO Review*.



Susan Lee Pazina

Ms Pazina, an evaluator in the Seattle Regional Office, has also worked in GAO's European Branch. She received a B.A. degree in political science from Willamette University in Oregon and a master's degree in education administration from the University of Puget Sound in Washington. She served as a loaned executive for the 1983 Combined Federal Campaign in King County, Washington, and is a member of the board of directors for Youth Advocates, an organization that assists troubled teenagers.

With the increasing challenges and competition facing the auditing profession and the proliferation of personal computers increasing daily, GAO auditors are getting new tools of the trade. In the eighties we are going to hear that

Auditors don't need pencils and paper anymore!

The microcomputer revolution is causing a new breed of auditor to emerge. These auditors know that their computer phobias are not terminal. They know that the wrong command will not blow up the computer. They have conquered the machines!

Who are these new auditors of the 1980's? Here are some clues:

- They don't use pencils because they've traded them in for keyboards.
- They remember where their computers are and their computers remember the rest.
- They take their "K" (keyboard) on the road and can communicate from any site.

* * * * *

In the past several years, GAO has gradually begun using computer technology for writing and scheduling tasks that formerly were done only by hand. Within the last year, the Seattle Regional Office (SRO) has been using a mix of small, medium, and large com-

puters to support a variety of audit tasks. These computers give the auditors of the 80's many more options for "taming" the vast amount of information needed to develop and support issues. Increasing familiarity with the equipment has helped the staff become more efficient, effective, and creative.

The following article contains some examples that represent a composite illustration of the SRO audit staff's experience with different kinds of equipment. The advances in microcomputer technology in the past couple of years prompted the SRO to experiment with how the equipment could be used and

what types of equipment are best suited for us.

What Have We Learned in SRO? Computers Can Sort It

Seattle auditors are beginning to let the computers do the remembering for them. This capability was demonstrated on a recent survey of operational support for the Trident submarine. Micro- and lap-size computers were used to monitor and develop potential issues on over 30 topics. All essential data from interviews and agency documents were entered into the computer with codes that identified the topic, workpaper citation, and element of a finding.

Using the MICOM's (a word processor) "sort command," the auditors produced several workpaper summaries that would have been unobtainable by manual methods. During the data-gathering phase, student comments on over 300 Trident training course evaluations were coded and computer-sorted by potential finding. This yielded more evidence for our conclusions.

Writing the planning paper and workpaper summary was easier, too. We did an extensive computer-sort of information from over 50 interviews and key agency documents. The final printed product of 150 pages grouped comments by potential issue and by audit guideline question.

Computers Can 'Crunch' Numbers in the Field

On another assignment involving intensive care units, the audit team used a computer program developed on a time-sharing mainframe. The program, developed by the Boston Regional Office's technical advisory group (TAG), was transmitted by phone to the Seattle team and stored in a lap-size computer. The team used the lap-size micro at each of 11 hospital sites to generate a risk factor. This risk factor was used to assess whether or not patients were sufficiently at risk to warrant placement in an intensive care unit. Developing risk factors involved a series of calculations for each of 1,060 patient cases reviewed. This calculation was easy by computer but time-consuming and more error-prone when done with a hand calculator.

Computers Can Help You Write Better and Faster

Computers have helped us save time in writing. At the planning conference for a recent survey of the Urban Mass Transportation Administration's transit contract procedures, the team dictated audit guidelines and recorded them on a lap-size computer. These were transferred to a MICOM disk and were printed and edited before the headquarters team returned to

Washington, D.C.

Another Seattle assignment used a lap-size computer to record a series of interviews with Medicaid program officials in Oregon. On-site interviews were recorded on the computer, transferred by telephone to the MICOM, and printed so they were ready for review when the auditors returned. Because all the interviews were on a disk, writing the summary meant simply copying parts of interviews and inserting them into the summary.

Traveling with the lap-size computer is easy since it weighs only 4 pounds and is about the size of a notebook. It fits easily inside a briefcase, leaving plenty of room for other supplies. It also can be used in an airplane.

Lessons Learned

Through the use of a wide variety of computers on a number of audit assignments, we in Seattle have learned the following lessons:

- **Computers are very powerful analytic tools.** They can consolidate and analyze a tremendous amount of information in ways that simply aren't possible manually.
- **Computers are great number crunchers.** By letting computers take care of the math and the footing and cross-footing, auditors can concentrate on what the numbers mean.
- **Computers vary in size and capability.** It's important to get the right fit between what a particular computer can do and your particular audit application.
- **Computers can greatly speed writing and editing.** Whether you're on the road or in the office, word processing and editing by keyboard instead of by pencil allows you to do more, do it better, and do it faster.
- **Computers talk to other computers.** It doesn't matter so much what your machine can do as long as it can communicate with other machines to facilitate sharing of information.

The Region's Approach: Studying Needs

We began with a user-needs study focusing on the activities performed by the audit staff, but quickly realized that looking at what we do is only part of the issue of satisfying user needs because where we do our work is as important an issue as what we do. In the region, we have three types of audit environments: the fixed site (regional office or suboffice), the floating site (temporary audit site), and the moving site (no permanent location—auditor



The concepts and illustrations in this article were discussed with the GAO management team during a briefing held in Seattle on June 27, 1984. Brent Hutchinson is shown demonstrating a lap-sized microcomputer.

travels from site to site). Each location has a different set of user needs.

The fixed site requires the full capability of equipment and technical support resources to support text processing, mainframe interfaces, and the complete range of data- and text-processing needs. The floating site needs flexibility to meet a range of needs, from on-the-spot analysis to report drafting and workpaper preparation. The moving site requires transportability for capturing data and interview information.

Linking each of the sites with each other and with other sites (headquarters and other office locations, e.g.) is key. Figure 1 illustrates this concept.

Our study of available equipment showed that there were microcomputers that could easily and affordably meet each of the sets of requirements

identified: desk top (includes multi-user stations, hard disk, and personal computers), transportable, and lap-size computers.

Towards the Information Resource Center Concept

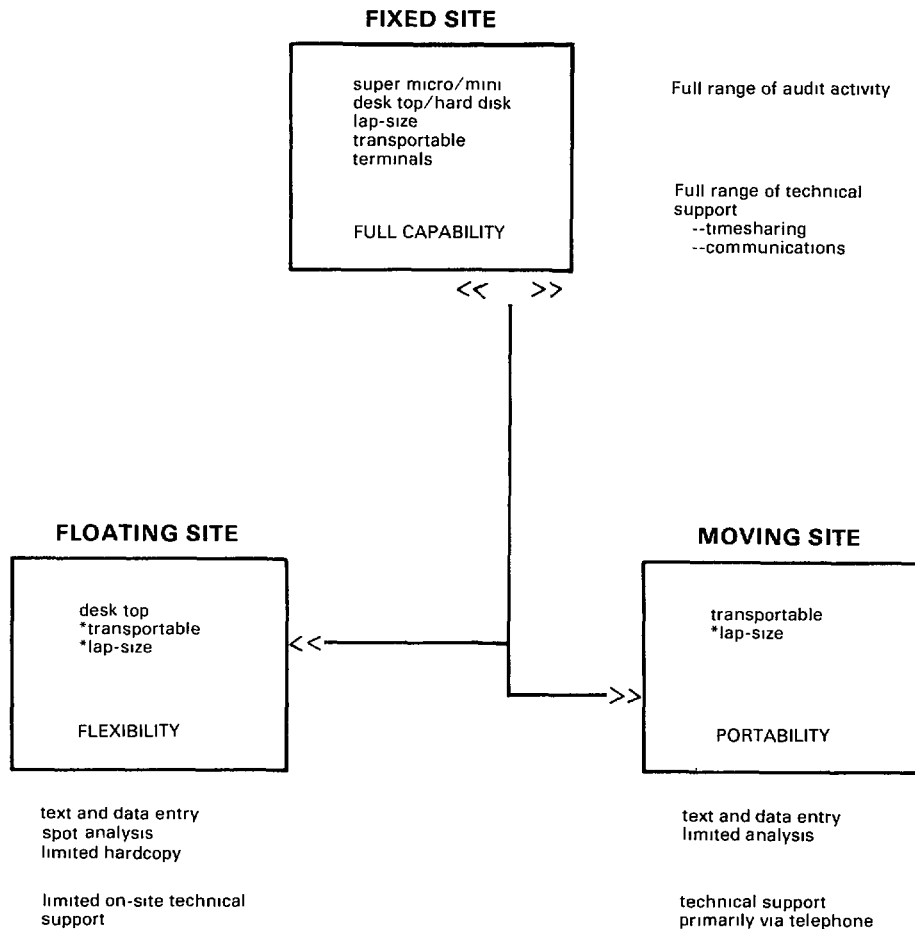
The equipment study also resulted in support for the information resource center concept for managing and providing for automated resources. As our examples showed, the need for equipment resources changes during an assignment. As a result, there needs to be a place in the region to go to for equipment and technical assistance. With the use of the full range of equipment resources becoming more prevalent, the traditional place for acquiring that assistance and support in the

region—the TAG unit—seems to be evolving into the broader and more aptly titled “information resource center.” There, the equipment mix can be stored, managed, and controlled beside the pool of technical expertise to research, select, maintain, and interrelate the equipment among the varied systems and services available to GAO staff.

The Seattle Regional Office has used a mix of computers to do a variety of audit tasks. With these computers, we’ve been able to sort and analyze information as well as write interviews and summaries in ways not possible by hand. For us and many others in GAO, auditors of the 80’s are saying goodbye to their pencils and 14-column schedule paper and saying hello to keyboards and electronic spreadsheets.

Figure 1

EQUIPMENT MIX FOR AUDIT SUPPORT



*Preferable-type units

Automated Support for the Assessment Panel Process



Lynda Kyte

Ms. Kyte is a member of the Los Angeles Regional Office's management science group. She trains and assists auditors in the use of electronic work stations and micro-computer resources. Ms. Kyte has a B.A. in economics from the University of California, Santa Barbara, and an M.B.A. from California State University, Dominguez Hills.



Edward Nash

Mr. Nash is the Micro/EWS project leader for the Los Angeles Regional Office. He joined GAO in 1967 after graduating from Montana State University with a B.S. degree in accounting. During his career, Mr. Nash has had varied auditing experiences, covering such areas as Medicare, defense, labor, energy, and law enforcement. He has been in the Los Angeles management science group since August 1983.



Joanne Parker

Ms. Parker is a member of the management science group at the Los Angeles Regional Office, where she is working primarily in the area of microcomputer training and audit support. Before joining the Los Angeles Regional Office in January 1984, she received a B.A. in economics and an M.B.A. from the University of California, Los Angeles.

At a January 1984 meeting in the Los Angeles Regional Office (LARO), Mr. Gregory Ahart, Assistant Comptroller General for Human Resources, described proposed changes to the Annual Assessment Process, the GAO-wide evaluation of employees' performance. The changes included additional analyses and computations, not only to support panel decisions but also to provide feedback to employees concerning their performance ratings. Due to LARO's prior work with computer-based systems, Mr. Ahart asked LARO management if some of the support analysis required by the Annual Assessment Process could be automated. LARO management responded that it would assess the problem and answer him by April. Thus began the project of an automated support system for the panel assessment process.

Because administrative tasks are

frequently the first to warrant consideration for automation, managers often receive their computer orientations when administrative systems they oversee are automated. Therefore, although this assessment process project differs from GAO audit projects that have automation potential, it illustrates how managers can discover the advantages of automation in similar administrative functions. This article describes the stages of that project, from design to development and testing.

Designing Systems: Users vs. Production

Designing automated systems is very much like auditing. In the survey stage, we examine the issues and processes to determine if further sub-

stantive work is required. If a decision is made to continue, we then examine the process more fully and finally generate a product (report, briefing, etc.) for the intended audience.

Just as in auditing, requirements and needs must be conceptualized, determined, researched, and evaluated. The results of these efforts are melded into what is often called a prototype. Once the prototype has been approved, we work toward a product that meets the full-scale needs of the user population. This process is more intensive and requires knowledge of the working environment as well as a technical knowledge. The product, much like the results of an audit, must meet the needs of the user.

In designing an automated support system for the Annual Assessment Process, the project team, composed of Personnel Systems Development

Project (PSDP) and LARO staff, spent considerable time understanding the requirements and determining how to accomplish the prototype for the target users—the GAO assessment panelists.

To conceptualize the mechanics of the process, the team (1) identified the computations and analyses that the assessment panel needed, (2) determined the order of the steps of the process, and (3) emphasized ease-of-use as a priority since panelists may have little computer experience.

Development of the Micro-Based Support System

While the design stage entailed conceptualizing what the system had to accomplish and how best to accomplish that objective, the development stage entailed such activities as selecting hardware and software, keying in the computer language, and telling the computer what to do (coding).

The project team had to make two important decisions in the development phase. First, it had to select the hardware on which to run the system. After considering mainframes and several types of microcomputers, the team agreed on the IBM-PC microcomputer because its relative portability would allow panelists to use it in private and because most offices would have this hardware in the near future.

Second, the team had to select a programming language that would (1) allow us to trace and document the process as we were developing the system (document either internally as part of the computer instructions or externally with flow charts), (2) allow assessment panelists to easily input and analyze data, and (3) allow the computer's file to be transferred into another software language as more sophisticated software becomes available. The team chose dBase II as the initial microcomputer software package because it met most of the requirements identified in the design stage and can be used on the IBM-PC. We realized that the dBase II program was designed to operate on an 8-bit machine and therefore did not utilize the full 16-bit processing capability of the IBM-PC. However, we thought that it was the best available at the time and that, in the future, we could transfer the data files to whatever upgraded programming language might evolve.

In the actual development of the prototype, which took approximately 40 staff days, the project team experienced several major problems, some of which

were anticipated and others unanticipated. Some of the problems were: (1) running out of available dBase II memory variables, (2) experiencing excessive time to perform computations and print results, (3) establishing a security coding to lock out unauthorized users, (4) encountering logic errors in the way the computer makes decisions, and (5) educating technical staff to dBase II's functions and limitations. Because of these problems, we had to redesign portions of the system.

In late April 1984, we demonstrated the prototype application for Mr. Ahart and selected staff from PSDP and the Office of the Assistant Comptroller General-Operations. They assessed the application for its usability and ability to meet general requirements, as outlined by PSDP staff, and suggested several improvements. For example, one of the assessment forms, the Form 85B, was redesigned so that panelists could more easily read employee job dimensions. This improvement created more demanding programming than was the case with the original form's design. The prototype also allowed for a maximum of six panel members; the size was more a programming limitation than anything else. Mr. Ahart and the PSDP staff concluded that the program would have to accommodate as many as 24 panelists since some regional offices and divisions could have panels reaching that size in the future. Without question, this was our most challenging modification because of the numerous program functions needed to handle the computations for that many panel members.

After this careful management review of the prototype Annual Assessment Support System, we received the go-ahead to test the applications on a limited scale for the upcoming annual assessment period. The project team and Mr. Ahart decided that the prototype system should be tested in the regions and in headquarters to evaluate the system's effectiveness in varied environments.

Testing a Prototype – With Caution

In late June 1984, we met with the staffs who were to participate in testing the system: the Human Resources Division (HRD), LARO, and the Atlanta, Dallas, Denver, and San Francisco Regional Offices. This kick-off meeting not only served as an orientation for the participants but also provided new ideas for those of us on the project team. It also resulted in further

programming modification and testing.

The patience and support we received from those participating in the testing was phenomenal and, in large measure, contributed to the project moving ahead as well as it did. Their positive attitudes and willingness to test different approaches produced a creative and productive environment for improving the program. Those involved were Pat Patterson, Glenda Wright, and Ray Looney (Atlanta); Frank Bizzell and Betty Muncy (Dallas); Monte Commons and Ralph Hovda (Denver); Dale Vigus and Kane Wong (San Francisco); and Bob Farabaugh (HRD). Of course, Mr. Ahart had the foresight not to terminate the whole project during his visit on the opening day, when computers were "down" and printouts in disarray.

The actual testing of the system in a division and regional office occurred primarily during July 1984. LARO acted as a focal point to assist other offices and their technical support staffs with operational problems that occurred in using the automated Annual Assessment Support System. The technical problems that arose had to be identified and corrected quickly so that panels that were in session could continue to operate. Another problem was that program modifications to the final version of the system had to be transmitted over phone lines to several participating locations and, in transmission, parts of the computer's instructions were deleted or distorted. But, through joint effort, all problems were solved without undue interruption to the assessment process.

Post Evaluation: Getting Feedback from Panel Members

To get the views of panelists who used the automated system, we obtained feedback from panel members and then held a post-testing meeting in Dallas.

Using a short questionnaire prepared by the LARO staff, each of the participating organizations in the pilot test interviewed as many annual assessment panel members as possible before the Dallas meeting. In addition, two regions that were not originally part of the pilot test but who requested to use the microcomputer-based support system for their annual assessments—Chicago and Kansas City—also submitted questionnaires. In total, 68 panel members were interviewed to obtain their perspectives on the Annual Assessment Support System's performance and utility. The

results were very encouraging. Of the 68 panel members interviewed

- 72 percent felt the system was fairly easy to use,
- 89 percent believed the support provided by the system was substantially better than manual processing, and
- 96 percent thought the system aided the assessment process itself.

Results from the Dallas Meeting

At the post-testing meeting in late August, representatives from regional management, the panels, and the technical staffs provided excellent suggestions for fine-tuning the Annual Assessment Support System and for improving some of the system's outputs. They also had some relevant thoughts for PSDP and Personnel staff on policy issues that could help the Annual Assessment Process, using this microcomputer-based support system. Everyone agreed that the modifications suggested for the system could be accomplished without great difficulty and that improved software (e.g., dBase III) could enhance the system's performance.

In total, 34 individual improvements were suggested for the system. They dealt primarily with computer-generated screens for inputting data (called menus), input techniques, output procedures, and internal instructions and messages. Most were relatively easy to incorporate.

In line with improving the system's performance, the participants also thought that their observations on the annual assessment process and governing policies could be beneficial for future deliberations. The subjects discussed included:

- Size of panels. The discussions centered on limiting the size of the panels to facilitate assessment decisions and to speed computer processing time. Some panels in the pilot test had up to 16 members, and some of those panelists thought that having so many participants encumbered the assessment process. While the consensus was to allow each unit to set its panel size, many thought GAO should set some limit on panel sizes.
- Confidentiality of the panel process. Several offices used data-entry clerks to input panel assessments on each employee. Some participants thought using data-entry clerks compromised the confidentiality of the panel process, but those offices that used the clerks did not have any problems with panel decisions being leaked. Most of the participants thought that the

Assistant Comptroller General for Human Resources should make a policy decision on the use of data-entry clerks.

- Weighting job dimensions. Recognizing that some job dimensions are more critical than others for promotion to the next higher grade, some participants suggested weighting job dimensions for the Annual Assessment Process. Although this would require writing new sections for the existing prototype system, it would not present a major programming problem.

- Standardizing operational environments. This subject covered whether using the computers should be mandatory and what the optimal environment for using the computer should be. The latter point dealt with location of the computer—that is, whether it should be placed physically with the panel or elsewhere.

In summary, this microcomputer-based support system received enthusiastic support and participants voiced approval for continuing its use next year.

What Did We Learn About Using the Microcomputers?

The concept of using microcomputers for the Annual Assessment Process was not universally accepted in the beginning of the project, nor was it during pilot testing. However, most skeptics became advocates for this technology after they were allowed to interact with the micros and had seen the results. In many respects, the annual assessment project turned out to be a good way of introducing microcomputers to many of GAO's line managers. First hand, they saw the time savings and benefits of microcomputers over manual processing. Some of the tasks they must perform during the Annual Assessment Process, such as numerous mathematical computations and verifications, are repetitive. Users were pleased the automated system helps overcome this.

A couple of examples highlight this. During the June test-run in Los Angeles, one of our friendly skeptics decided to compete manually with the microcomputer. While other members of the test group used the program to input scores and obtain assessment output, our skeptic manually computed the assessment results. Even though program bugs frequently interrupted the microcomputer's work, our skeptic soon found that manual processing

was not going to replace the microcomputer. Although he verified the microcomputer output with his data, we did not request equal time to verify his manual computations against the microcomputer data. He finally conceded that the automated program was superior to the manually computed assessment results.

Along the same line, one of the other test participants had participated in a manual panel assessment and a microcomputer-assisted panel assessment. He reported that mathematical errors were often found during the verification portion of the manual assessment panel's work. No mathematical errors were discovered during the microcomputer-assisted panel process.

What the microcomputers did for the panels was free them from the mundane, time-consuming chores of calculating totals, computing averages, sorting data, filling out forms, and recomputing reentered data. Relieved of these manual tasks, the panel members were able to more fully concentrate on the important matters of assessing staff, which only they can do. The microcomputer is a wonderfully willing servant who never balks at doing laborious computations, repetitive activities, and time-consuming exercises.

Concluding Thoughts

The Automated Annual Assessment Support System, which is on its way to becoming a standardized support tool, is a successful example of integrating technology into the decision-making process. Technology is a tool intended to aid decisionmaking, not supplant it. And, as in this project, technology requires a community effort, with people from across the agency who have diverse jobs and varied expertise all working to meet a complex challenge. Only through this kind of cooperation and innovation can a project grow from an idea to a model to a fully successful system.



Karl Deibel

Mr. Deibel is manager for Navy audits in the Los Angeles Regional Office and has also worked in the St. Louis Regional Office and European Branch. A certified public accountant, certified professional contract manager, and certified cost analyst, he is a member of the Association of Government Accountants and the American Institute of CPAs. Mr. Deibel has a bachelor of science in business administration degree from Washington University in St. Louis and received a certificate from Harvard University's Graduate School of Business Administration in 1964. Mr. Deibel has received seven awards from GAO since joining the agency in 1954 and, in 1983, received the Distinguished Public Service Award from the Los Angeles Federal Executive Board. From 1970 through 1977, he was a member of the Los Angeles County-Torrance Civic Center Commission. He has authored two prior articles in the *GAO Review*.

The 1984 Olympics will long be remembered for the many gold medals won by U.S. athletes and for the excitement and thrills produced by many of the athletic competitions. But many observers will remember the Olympics for another reason: it did not leave a bill for the taxpayers.

That the Olympics did not result in a debt for the host country significantly differs from the past record of the games. Canadian taxpayers, for example, are still paying off the debt of the 1976 Montreal Olympics. When the accounts of the 1984 Olympics are settled, however, there will probably be a considerable profit. The favorable financial condition of the '84 Olympics is due, in part, to more than 10,000 people who gave freely of their time and talent. The army of volunteers included about 60 auditors, with two of them from GAO—Joe Dewechter (a Los

An Auditor's Role During the 1984 Olympics

Angeles Regional Office evaluator) and myself.

About a year before the games started, I had sent a letter to the Olympic organizing committee offering to help as a volunteer during the games. I was sent an application and then interviewed by the Director of Internal Audit, who was on loan for 18 months from a public accounting firm. He said that the committee was looking for two or three auditors who could start in March and work through September. Although I declined that opportunity, he seemed enthusiastic with my commitment to give 2 or 3 weeks of my vacation to the committee. He explained the plans for the organization of the internal audit staff and mentioned that each volunteer would be given a security check. He also warned me not to expect to see the events because our work during the games would be quite heavy.

Scope and Organization of the Olympic Audit

By the opening ceremonies on July 28, I was part of the 60-volunteer audit work force. The internal audit staff was organized into five teams, each covering a geographic area. My team had 16 auditors and was headed by a manager and his assistant (both on loan from private companies) with responsibility for two of the three Olympic Villages and for six of the competitions (basketball, gymnastics, weightlifting, water polo, rowing, and tennis). Part of the security arrangements required all people working in the games to wear an identification badge which, through a coding system, permitted them access only to certain zones; some volunteers had jobs outside the stadium arena and never got inside to see any of the competition.

The audit staff, however, had badges permitting us access to most of the zones, which included:

Zone 1. The field of play, such as court-side for the men's basketball finals.

Zone 3. The operating areas of the site, such as the storeroom for the novelties that were sold at the weightlifting competition.

Zone 4. The areas where the volunteers

compiled statistics and other data for the members of the press and where interviews with athletes were held.

Zone 6. The administrative areas, such as the finance office in the Olympic Village at UCLA.

The weekend before the games started, we were encouraged to visit the sites where we would be doing audit work. My years of GAO experience told me that such orientation would be valuable; I visited four of the five locations where I had been assigned to work. One visit had a serendipitous payoff for the committee. While walking through the site for the basketball games, I saw a familiar face from TV. It was that of Gail Goodrich, a former basketball star at UCLA and in the National Basketball Association, and the Sports Commissioner at the Olympic site. Upon learning of my responsibilities, Gail expressed concern that the contracts for employee services at the site needed attention. I passed that concern on to my area manager and, during the games, I was asked to handle it as a special project. The job resulted in a number of meetings with Gail and with other top management officials of that site. By placing added emphasis on the timekeeping function, I was able to satisfy his concern that the contractor stay close to budget.

Beginning the Work

When the games started on Sunday, July 29, I was ready, carrying my audit manual and clipboard and outfitted in my Olympic uniform. Full of anticipation, I reported to my first site at 12:30 p.m.—Loyola Marymount University—the site of the weightlifting competition.

On the first day, I again applied my GAO training: I "observed." For about 2 hours, I walked to each of the operating areas of the weightlifting site and watched the operations. During that first day, I was particularly interested in the location of cash registers and in the clarity of pricing signs to visitors from foreign countries.

One of my more interesting audits of the security work force occurred one evening in the Olympic Village at UCLA. The auditor on duty during the

day had started tracking the guard force that reported for duty at 1 p.m. She had observed the roll call and made a copy of the payroll log sheets for the 52 guards. My job, when I arrived at 4 p.m., was to verify that the guards were on duty and to carry out the end-of-shift audit procedures. I spent 4 hours that evening walking hills of the UCLA campus to verify that the guards were on duty and found no significant problems.

At about 9 o'clock, I was stationed at the exit used by the security guard force, watching them sign the log. By 10, all the guards had left; the last guard had not been relieved until 9:50, and she was asking about being paid for overtime. I then returned to the office of the security guards to watch the summarizing of the time worked by the guards on that shift and the other necessary administrative work. I was on the shuttle bus from the village to the off-site parking lot about 12:30 a.m. and home at 1:30 a.m.

Keeping Track of Many Activities

Because of the compressed nature of the games (13 days) and because of the many different types of operations in which the auditor was to be involved, two or three of the operations would be audited each day. We prepared work papers and filed these in the Master Work Paper binder at each site. As the bills are paid and the accounts settled for the Olympics, these work papers will be very valuable in the final settlements.

We had a vast array of operations subject to audit. Each site had a petty cash fund that was often \$5,000 or more. We would test the payouts from that fund, reconcile the balance of the fund, and observe the security of the cash. Most sites paid per diems to officials who came from many foreign countries, as well as from other parts of the United States, and tests were made of these expenditures. The Olympic Committee paid \$75 per day, the amount GAO employees are paid to cover expenses in Los Angeles. At some sites, the Olympic Committee operated the parking lot, with \$5,000 to \$10,000 a day in cash revenue. At a few locations, tickets were sold. Thus, more cash and more audit work.

One of my fellow auditors will never forget the day when the Olympic Committee refunded \$186,000 on the spot to disgruntled basketball ticket-holders. The fans had ordered tickets by mail. After the orders had been placed, the Committee changed the

schedule of the games. The fans became furious when they showed up and found that their tickets were for one game, not two, and not for the U.S. game. The auditor had to handle \$200,000 cash from a bank security truck and had to control the payments (returns) and receipt of tickets being exchanged for cash. Added to his task was the furor raised by thousands of ticket holders standing in line.



Olympic Village Communications

As supervisor of a team of 16 auditors working two to three shifts a day at eight locations, my boss could be anywhere. (The same was true for many of the other supervisors.) Similarly, my supervisor, as well as the Internal Audit Director, needed to modify the audit programs as the game progressed: When the audit only lasts 13 days, time is of the essence. Thus, one system the auditors used quite extensively was the Electronic Mail System (EMS). Most sites had 20 to 30 electronic mail stations.

Having access to the press area proved very useful when I wanted to communicate on EMS, or when I wanted information on the game results. Whereas most of the electronic mail stations were busy, those in the press area tended to have peaks and valleys. That is, when the competition was in progress, EMS was in use, but between games, the stations were available. Because our auditing badge gave us access to the press area (probably less than 5% of the volunteers could enter press areas), I seldom had to wait to send, or receive, a message.

EMS also had a personal benefit: The results of each event of each site throughout Southern California were available on EMS, usually within minutes. Thus, even though I was not one of the hundreds of millions of TV viewers, I knew the results of such events as track and field and swimming as quickly as TV viewers.

Adding It All Up

The total cost of the 1984 Olympic games is still to be determined. The full-time internal audit staff will be using the results of our daily tests as the financial results are settled. Figure 1 summarizes the estimated costs for one of the sites—an arena seating about 16,000 spectators.

I worked at five sites and enjoyed the variety of auditing tasks. And it was not all work. I have great memories of many of the highlights of the games, since I often found a few minutes to be on the floor for an event. For example, I watched some of the gymnastics competition, including (U.S. gymnast) Mitch Gaylord's perfect score of 10 on the parallel bars, and saw the U.S. men's basketball team win the gold medal. And I was pleased to receive an unexpected monetary bonus for performing effectively within the top 10 percent of Olympic volunteers.

Our day-to-day monitoring for the financial part of the 1984 Olympic games helped the many paid and volunteer staff to be a little more cautious in their decisions concerning the spending of money, the receipt of revenues, and the control of cash. Our many tests of internal controls and procedures showed that our advance planning theories did work well in actual practice. The tests we made in contractor operations will help the Olympic Committee assess the credibility of invoices it will submit pur-

See Olympics, pg. 32



Derry McNeil

Mr. McNeil works as a visual information specialist in the Visual Communications Branch at GAO. He joined GAO's Office of Publishing and Administrative Services in 1974. Mr. McNeil attended the Maryland Drafting Institute, is attending Northern Virginia Community College, and will receive an associate of arts and science degree in advertising design in 1985.

Ed note: The *Review* staff wishes to thank Mr. McNeil for his many contributions. His work on the covers of the the winter 1983-fall 1984 *Reviews* and his interesting graphic designs and layouts have earned compliments from many readers.

"They call it stormy Monday, but Tuesday's just as bad, Wednesday is even worse, and Thursday is also sad." These are the words to a old, but popular song that describe how some hectic days may go for me in the Visual Communications Branch (VCB). It seems that, for some reason, many people have reached the hasty conclusion that artists and designers can whip out creations with just a stroke of a pen or brush! I wish we could, but good work takes time.

Monday

Today, I arrived at work wondering how I made it. Coming to work from Fairfax, Virginia, with the bumper-to-bumper, rush-hour traffic on Route 395 was not a "piece of cake." After settling down at my drawing board with coffee in hand and the sound of screeching brakes and honking horns still fresh in my mind, I continued to work on an exhibit for "The National Recruitment Program." I had dis-

A Week's Worth

cussed the project with a staff member from the Recruiting Branch—a client, in our terminology—and was briefed with all the necessary information, such as the title, subtitle, text, and photo montage. Because this exhibit needs to be portable, it would have to be silk-screened onto an in-stand 100 series nomadic structure (a metal frame structure in which 12 designed panels are attached). In this form, the exhibit can be assembled easily onto a 9½ foot x 7½ foot display and stored in a cylindrical, 3-foot-long, 11-inch diameter case, when not in use and can be carried easily.

The display will be used as a recruiting aid for upcoming job fairs as well as career and college recruiting visits by GAO recruiters. The remainder of the day was spent preparing three comprehensives (mockups of original design) for the client so that she could have a choice of designs.

Tuesday

The first item on my agenda this morning is to get my "comps" (short for comprehensives) over to Madelyn Moore (in Personnel), so she could look them over with her supervisor and fellow employees to decide on a choice of the three designs. The comps, being a scaled-down version of what the original would look like, were accurate except for the photos that would be used. Even though "dummy" photos were used on the comps, I searched through the Visual Communication Branch's library to come up with appropriate slides for the design so that Madelyn could see what the real photos would look like.

After the slides and comps were delivered to Madelyn, I started a series of phone calls to different contractors. I wanted to see which one could do the job, how much it would cost, and how much time it would take.

This design has a background color of blue, except for the 3½-inch white strips that are located 31 inches, 62 inches, and 84 inches from the top of the design. The main heading will be 3 inches from the left side and 5 inches from the top with 1 inch between a ¾-inch orange rule that is also 1 inch below the main heading with 3-inch Helvetica type in gold color with a white drop shadow.

Trying to describe my design over the phone was like a person in a round house trying to sit in a corner. So I decided I'd better visit these companies so that they could see the design as I explained it to them. By the end of the day, I had visited three contractors who were very helpful.

Wednesday

This morning, before I could start setting up a bid conference for Monday, Julio Luna, VCB's office manager, came to me with a priority job—a small correction on a chart. I hurriedly typeset the correction on the Comp/Edit AM Varityper (a phototypesetting machine), ran it through the developer, dried and waxed it, pasted it down on the original mechanical (the original pasteup material sent to the printer; this is used to make the printing plate from which copies will be made), then made a stat (photostatic copy) of the corrected chart with the small argyle camera.

After the priority job, I said to myself, "Now I'll set up the bid conference." Wrong again! Gerard Burke, a Writing Resources Branch writer-editor, came over with the final pasteup corrections for the *GAO Review*. After going over the corrections with Gerard, I could see that it would take awhile to finish the flats. Correcting the flats (rectangular boards upon which typeset copy is pasted for printing) requires that a lot of words and letters be cut out and replaced with other words or letters. Many times, whole paragraphs might need repasting. Before the day is over, I would call three contractors and schedule a bid conference.

Thursday

Today began with a call from James Lee, a friend of mine from GAO's National Security and International Affairs Division who had just returned from an assignment in Paris. We talked briefly and planned a luncheon date for 12:30. All morning, I hoped that nothing would interfere with our plans because I am eager to hear about Paris.

There are still corrections to be made

See *Weeks*, pg. 32



Judith Hatter

DOD Dependent Schools

The Military Construction Authorization Act, 1985 (P.L. 98-407, Aug. 28, 1984), requires the Comptroller General to conduct a study to determine the most suitable means to pay for the construction and operation of Department of Defense (DOD) dependent schools established under section 6 of Public Law 874 of the Eighty-first Congress. The study is to consider the effect that transferring responsibility for funding and operating those schools from DOD to local school districts would have on funding for the impact aid program of the Department of Education and the effect that such transfer would have on local school districts.

Uniform Single Audit Act of 1983

On October 4, the House cleared for the President, S. 1510, to establish uniform single audit requirements for state and local governments that receive federal assistance and for recipients of federal assistance from such governments (P.L. 98-502, Oct. 19, 1984).

The Comptroller General is to review those provisions, in bills or resolutions reported by congressional committees, that require financial or financial and compliance audits of recipients of federal assistance. After such review, he is to report to the Congress inconsistencies with the requirements of the law.

Legislative Developments

Customs Service

The conferees on the Treasury, Postal Service, Executive Office of the President and Independent Agencies Appropriation, 1985, direct that GAO conduct a study of the Customs Service operations. The report should include, but not be limited to, the adequacy of the number of personnel requested to be funded by the Customs Service and the adequacy of the number of Customs personnel currently "on board" to effectively perform their mission. GAO is to review geographic distribution of Customs personnel, effectiveness of the Service in stopping drug smuggling into the country and in stopping fraudulent imports in excess of quotas, and effectiveness of coordination and cooperation between Customs and other law enforcement agencies.

Payment of Travel, Transportation, and Relocation Costs

Senator Charles E. Grassley of Iowa introduced S. 2889, "... which would provide a more equitable and expeditious procedure to remedy situations where the government has erroneously made a payment or denied a payment to a federal employee for travel, transportation, and relocation costs....The administrative waiver procedure is immediately subject to the oversight responsibility of the Comptroller General. Under this bill, agency performance would continue to be evaluated by GAO during onsite reviews of agency operations, and doubtful cases and appeals would continue to be submitted to the Comptroller General for review.

"Significantly, the GAO has advised that performance under the existing waiver authority has proven that this type of legislation is practical and fair both to the individual and the government...."

Federal Employees' Day Care Benefits Study Act of 1984

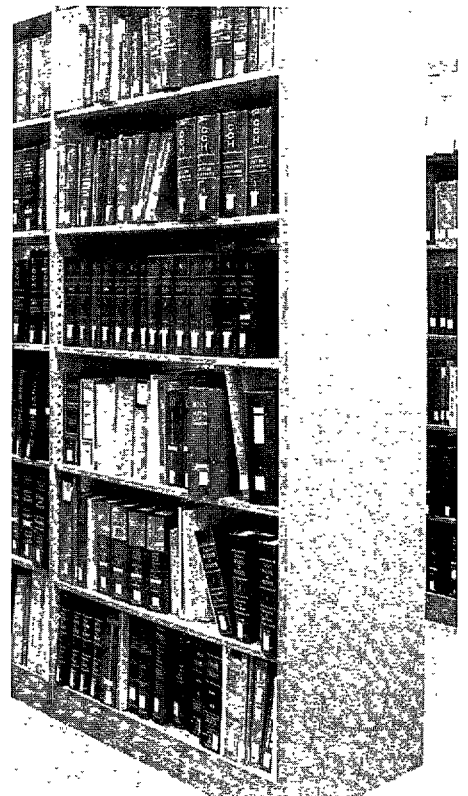
On September 18, Senator Paul S. Trible and Congressman Frank R. Wolf

of Virginia introduced companion bills, S. 3007 and H.R. 6269, the Federal Employees' Day Care Benefits Study Act of 1984.

Under the provisions of the legislation, GAO is to conduct a cost-benefit analysis on offering child care benefits to government workers.

Plan for Management of Technical Data and Computer Capability Improvements

The Department of Defense Authorization Act, 1985, includes a requirement that the Secretary of Defense develop a plan for an improved system for the management of technical data relating to any major system of the Department of Defense. The Comptroller General is to evaluate this plan and report to the Congress not later than 18 months after the enactment date of the law.



¹Cong. Rec., Vol. 130 (July 31, 1984), p. S 9528

Manager's, Cont'd from pg. 11

- We could enter a major joint venture with the Japanese...[becoming] specialists in great software ideas.
- We can form a national laboratory for the promotion of knowledge technology.
- We can become the first great agrarian postindustrial society.

Most likely we will do a little bit of each of these and in a decentralized and loosely coordinated manner that best fits our way of doing these things. We and the Japanese will make contributions and continue to be strong competitors and, maybe, great cooperators in using our knowledge technology for improving the quality of life in less-developed countries.

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Topics, Cont'd from pg. 13

1979; pp. 111-127, 1979; pp. 245-265, 1979; pp. 169-195, 1980.

Four fascinating and mostly non-technical articles that trace the history

and review the use of the representative sampling concept.

Program Evaluation and Methodology Division. *Designing Evaluation*. U.S. General Accounting Office, 1984.

A broad review of evaluation strategies, including the sample survey.

Program Evaluation and Methodology Division. *Sampling*. U.S. General Accounting Office, July 1985.

Practical advice on sampling; assumes very little training in statistics.

Integrity, Cont'd from pg. 17

- Facilitate effective communication between the steering committee and the audit teams, and among the audit teams themselves. Share lessons learned and most effective practices used throughout the job. Identify and resolve problems as early as possible.
- Provide technical assistance. For example, address areas and develop criteria where additional guidance would be helpful, such as the case of what constitutes a good internal control review.
- Inform the steering committee of progress and problems, and develop alternatives for needed changes in direction.
- Maintain liaison with the Congress and prepare for hearings on the second-year effort.
- Draft and process the government-wide, second-year report.

In addition to supporting the second-year effort, the task force will assist in preparing divisional and overall program plans for the third-year review, and in developing the third-year work program.

Other changes from the first-year review have occurred. For the second year, an interdivisional working group prepared the work program. All the steering committee members participated in an interdivisional, second-year kick-off conference, and staff from every division helped provide training on the act and the second-year work program.

GAO Expectations for the Second Year

Implementation of the Financial Integrity Act must be an ongoing process. Continued, long-term management support is needed to make the act work. GAO and OMB must sustain their leadership if the federal government is to realize the act's potential for saving billions of taxpayer dollars and restoring the public's confidence in its government.

For the second year, GAO expects considerably more progress, and the steering committee has established a set of reasonable expectations for each federal agency's accomplishments. These second-year expectations, which we have shared with the agencies and OMB, are based on GAO's prior experience with internal control and accounting systems in the federal government, the evaluation of the first-year's implementation of the act, and baseline information developed during the first-year review.

These expectations are "benchmarks" to measure agency progress at the end of the second year and provide our teams, as well as the agencies, with a common denominator. The audit teams are using these benchmarks, along with the first-year experience, to judge the "reasonableness" of agency progress. We hope that defining expectations will help our teams to more effectively analyze agency progress in implementing the act.

The second-year review is concentrating on the government's benefits from the act in terms of strengthened systems of internal control and accounting. At the second-year kick-off conference, the Comptroller General emphasized that GAO's evaluations would begin focusing on major program areas and the internal controls that affect programs. Without viable, demonstrated results, objectives of the Congress in passing this important legislation will not be met, and the taxpayer will continue to read reports of government fraud, waste, abuse, and mismanagement. An opportunity now exists for government managers to reverse these common public perceptions, but this will take substantial work, dedication, and commitment.

Future Reviews

The Comptroller General has recognized that the internal control and accounting system problems that gave rise to the passage of the Financial Integrity Act will not be resolved immediately. Continued, committed efforts by agency managers and GAO will be necessary. GAO must continue to move federal managers toward full integration of effective internal control and accounting systems through annual audits using increasingly ambitious sets of expectations as criteria. The work will not be easy, since federal managers and GAO will likely be asked to do more with the same, or even fewer, resources.

Consequently, GAO must continue to assess its "on-line" annual audits of

agency implementation of the act to ensure that they are being managed in a

way that will best achieve our audit objectives. We must continually seek

creative and innovative managerial approaches to meet this challenge.

Cost, Cont'd from pg. 19

Figure 3

Established and Recent Unproductive Time Rates for Federal Civilian Personnel

<u>Item</u>	OMB Cost Comparison Handbook (a)	Actual 1981 leave- year rates (b)
	----- days -----	
Annual leave	(specific information unavailable)	20.0
Sick leave		8.7
Holidays		8.3
Administrative leave		1.4
	<u>46.8</u>	<u>38.4</u>

- (a) The OMB publication, "Supplement, OMB Circular A-76 (Revised), Performance of Commercial Activities," August 1983, contains a *Cost Comparison Handbook*. This publication provides figures of 1,744 productive hours out of the total hours (2,087) available for use, unless more reliable information can be justified. OMB guidance calls for using 343 hours, which translates into 42.9 days, or 16.4 percent of total available hours.
- (b) "Federal Civilian Workforce Statistics; Workyears and Personnel Costs," Office of Personnel Management, FY 1982.

year and thereby do not receive the full leave or holidays entitled to on-board, existing employees. On the average, government employees only take 93 percent of their allowable annual leave.⁶ Hence, the actual leave taken should be used to avoid overstating requirements. Adjustments may be necessary for higher annual leave if the employees have relatively long tenure. When federal employees have 15 years employment, they receive 26 days of annual leave per year rather than the 20 days for employees who have fewer than 15 years' employment or the 13 days for those with less than 3 years' service. On the other hand, earned sick leave for all employees, regardless of tenure, is 13 days yearly. Some agencies' sick leave levels indicate their employees use more than the average amount for a given time period.

One extra holiday (Martin Luther King's birthday) will be added, starting in 1986. Administrative leave includes such items as jury duty and reserve training, which will vary from one agency to another. One Air Force study estimates such administrative leave averages 1.5 days a year per employee. The fiscal year 1982 OPM annual report estimates that an average of 1.3 days are spent on administrative leave.

Agencies may adjust for other time that employees charge for activities not directly related to primary responsibilities. Such activities could include training and various conferences designed to improve the working environment. Such time charges vary

according to the agency involved, but may be as much as 7 percent. Paid breaks may, or may not, be included. A recent Bureau of Labor Statistics (BLS)

study estimates that 76 percent of all private sector employers now provide paid breaks, such as for coffee.⁷

Figure 4

2,080	Total available hours (52 weeks times 40 hours per week)
	Less:
- 374	18 percent for leave
- 146	7 percent for other personal indirect time
<u>1,560</u>	Total productive hours working on assignment

Putting It All Together

Once cost-per-employee and productive hour information is compiled, we can develop aggregate cost information. Using the simplified example of a control tower, we can demonstrate how the computation is made. Assume that this small control tower is staffed by one air traffic controller for two 8-hour shifts every day, or 5,840 hours per year. Divide the total hours needed by one controller's yearly productive hours to arrive at the staff needed, in this case 3.65 people. We will assume that staff can be hired "part time" or shifted from other duties so the needed staff-year fraction is available. The total cost will be 3.65 staff years at \$47,119 per person, or \$171,984 annually.

Ample information exists on how to conduct Circular A-76 contracting-out

studies and economic analyses. The references provided in this article should provide much of the recent information. Because these studies are complex, some knowledge and experience is needed to conduct them. But, understanding their proper operation is well worth the effort. Improperly executed computations on the costs of federal employees not only could jeopardize such major government decisions as software development projects but also could have social, political, and economic implications for the government as a whole.

Ed note: The author wishes to acknowledge Mr. Arnett Burrow's special assistance in writing this article

⁶FPCD-78-21, p. 4.

⁷"Employee Benefits in Medium and Large Firms, 1982," Bureau of Labor Statistics Bulletin 2176, August 1983

Olympics, Cont'd from pg. 27

suant to the contracts. In summary, Internal Audit met the challenge; I was proud to be part of that effort and to represent GAO.

Figure 1

<u>Item</u>	<u>Estimated costs</u>
Rent	\$ 945,000
Ushers	130,000
Cleaners	121,000
Ticket takers and cashiers	48,000
Technicians	23,000
Miscellaneous payroll	55,000
Utilities	31,000
Parking	27,000
Total	\$1,380,000

Weeks, Cont'd from pg. 28

on the *GAO Review*, so I "buckled down" to it. After working awhile on the corrections, I am given a flip chart job in which there are six charts. Flip charts are fun to do, but if there is a misspelled word or if there is a revised text, you can't erase the error, so the chart would have to be redone.

By now, it's getting to be lunch time and I can hardly wait for our discussion about Paris. But, before I get a chance to call James, he calls me.

"Hello, Derry, I am sorry but we'll have to cancel our luncheon date." Boy! Just my luck that it had to be cancelled, but sometimes it's just that way.

At certain times during the course of a day, it seems like a million things may go wrong, but I have a remedy for those kind of days. I just say, "Though things have been horrible, terrible, upsetting, and just down-right disastrous, the rest of the day is going to be just great!" With that attitude, things seem to go much better.

The day ends with my looking forward to the evening when I can relax in the cozy atmosphere of the Market Inn, a seafood restaurant where I'll be joined by a close friend.

Friday

As the day begins, I notice smiles, cheeriness, and playfulness, and then it hits me! Ah hah! It's Friday. Most people eagerly await the weekend, so naturally it shows in the way they act.

The morning begins with the staff meeting. Everyone is briefed on things that affect GAO and our office. We discuss what concerns we may have

and ways of improving ourselves as a group.

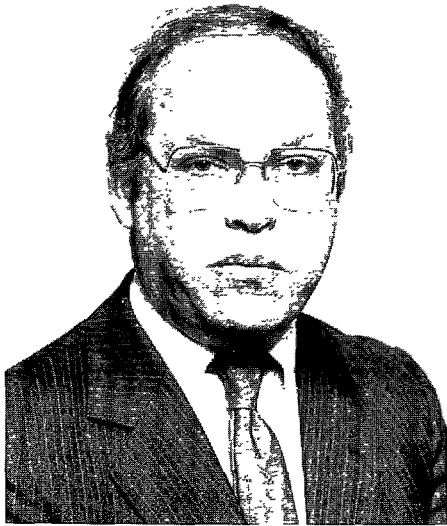
One of the major topics discussed in the meeting was the evolution of computer graphics in the design field. Everyone was very interested in this subject and had many comments and questions concerning computer graphics. One thing that fascinates me about this booming technology is the durability of these machines. Despite hours and hours of daily usage, computers will operate maintenance-free for years.

After the staff meeting, I started a series of medium-size signs for the Office of Security and Safety. I hand-lettered the signs using art markers. Next, I designed two charts for publication in the *GAO Review's* upcoming issue. By this time, I was ready for lunch.

After lunch, I began working on a three-fold flyer for the Office of Organization and Human Development. First, I did the cover design, then the inside design. After developing the design of the flyer, I typeset the text and titles on the AM Varytper and prepared the mechanical. This took the latter part of the day, and before I realized it, my week was over.

GAO Staff Changes

Senior Staff Changes



Arthur J. Corazzini

Arthur J. Corazzini, deputy director, Office of the Chief Economist, left GAO on August 4, 1984, to direct work in housing finance sponsored by major mortgage bankers and builders in the private sector. Mr. Corazzini graduated from Boston College in 1962 and received his M.A. degree from Princeton University in 1964 and his Ph.D. from Princeton University in 1966.

Mr. Corazzini was chairman of the Department of Economics at Tufts University from 1974-79 and senior staff economist at the Council on Wage and Price Stability from 1979-81, before joining the staff of GAO as associate director in economics. He was later deputy director of the Program Analysis Division.



Edward W. Gray, Jr.

Edward W. Gray, Jr., has joined GAO for a 1-year assignment through the President's Commission on Executive Exchange. He will serve as special assistant to the director, General Government Division.

Mr. Gray is a general attorney in the Corporate Legal Department of R. R. Donnelly & Sons Company. In this position, he has proposed patent, confidentiality, and trade secret policy for R.R. Donnelley and has negotiated printing agreements with Her Majesty's Stationery Office for the production of classified and alphabetical telephone directories for most of Great Britain.

Prior to joining R. R. Donnelley, Mr. Gray was an associate attorney with the Chicago law firm of Kirkland & Ellis. He joined the company in 1973 as an attorney and subsequently served as a senior attorney from 1976 to 1981.

He has a B.A. degree in sociology from the University of Chicago and a J.D. degree from the Columbia University Law School. He belongs to the American, Chicago, Cook County, California State, and National Bar Associations and was a vice president and director of the Chicago Council of Lawyers.



Peter J. McGough

Peter J. McGough, director of the Office of Program Planning (OPP), has accepted a position with the Integrated Asset Management Corporation. Mr. McGough's geographic responsibility will be the northeast United States; he will work in Integrated's New York Office.

Mr. McGough has been with GAO for 20 years. He became director of OPP after serving as an associate director in the Human Resources Division.

After joining GAO in 1964, Mr. McGough was appointed by the Comptroller General as legislative advisor, Office of Congressional Relations (OCR), in July 1975. In this position, he was responsible for liaison with 10 congressional committees, including those dealing with Agriculture, Armed Services, and Intelligence.

Prior to joining OCR, Mr. McGough spent 4 years in GAO's Office of Policy, several years at various executive agency audit sites in Washington, and 3 years in the New York Regional Office.

Mr. McGough received his B.S. degree in accounting from King's College in Wilkes Barre, Pa., and completed postgraduate work at George Washington University in Washington, D.C.



Harry Van Cleve

Harry Van Cleve was appointed general counsel, effective October 1. Mr. Van Cleve graduated from the University of Southern California, magna cum laude, in 1947 and from the Harvard Law School in 1949. He is a member of Phi Beta Kappa.

Beginning his career as a government lawyer in 1950, he has served with a number of federal agencies, including the Office of General Counsel of the Office of the Secretary of Defense from 1954 to 1960; the General Service Administration, where he was assistant general counsel for procurement from 1963 to 1965 and general counsel from 1965 to 1969; the Peace Corps, in which he served as associate general counsel; the Cost Accounting Standards Board, where he served as its first general counsel from 1971 to 1977; and as a member of the Renegotiation Board from 1977 to 1979.

In 1979, Mr. Van Cleve joined GAO as deputy general counsel. He has continued to serve in that capacity and as acting general counsel since March 1981.

He is a member of the State Bar of California and of several professional and civic organizations.

Additional Staff Changes

Group Director, Fraud Referral and Investigations Group

Accounting and Financial Management Division

Gary W. Carbone

Philadelphia Regional Office

Assistant Regional Manager, Planning and Reporting

Joseph F. Daly

Assistant Regional Manager, Operations

Louis J. Rodrigues

SES Reassignments

Name	From	To	Title / Area of Responsibility
Bowlin, Samuel W.	NSIAD	European Branch	Director
Finley, Harry R.	NSIAD	NSIAD	Associate Director-in-Charge (Air Force)
Gilroy, Robert M.	NSIAD	Far East Branch	Director
Layton, Fred D.	European Branch	Philadelphia Regional Office	Regional Manager
McCabe, Joan M.	NSIAD	NSIAD	Associate Director-in-Charge (Security and International Relations)

New Staff Members

The following new staff members joined GAO during the approximate period July-September 1984.

Division / Office	Name	From
Office of the General Counsel	Arnold, Thomas K.	Dept. of the Navy
	Harrington, Christina C.	Hastings College of Law
	Spangenberg, James A.	Dept. of Energy
General Services and Controller	Brown, Tuesday	Not specified
	Dudley, Cathy	Dept. of Labor
	Hobbs, Emmalisa	Converted from temporary
	Hudson, Jeanne	Dept. of the Air Force
	Smith, James	Temporary employment
Human Resources Division	Wilson, Jacqueline	Dept. of Agriculture
	Burke, Pamela L.	Not specified
	Caison, Frederick A.	Not specified
	Korn, Marie L.	Not specified
Office of Information Resources Management	Lee, Deborah A.	Dept. of Transportation
	Brent, Brenda	IBM
	Cormier, Lisa	Mount Wachusett Community College
	Cusick, William	Civil Aeronautics Board
	Dickerson, Nina R.	U.S. Commission on Civil Rights
	Hemsley, Delores	H&E Management Associates, Ltd.
	Kool, Kaja M.	Joint Baltic American National Committee
	Liao, George	Navy Data Automation Command
Shafer, Charles A.	Veterans Administration	
National Security and International Affairs Division	Stefan, Mark	University of Maryland
	Talven, Geneva	Calvin Coolidge High School
	Carr, Timothy	Mathematica Policy Research, Inc.
	Duncan, Eugenie M.	Not specified
	Keefer, David	Co-op conversion
	Kingsbury, Nancy R.	Office of Personnel Management
	Kutnick, Bruce L.	Northeastern University
Li, Jane-Yu H.	Data Resources Incorporated	

New Staff (cont.)

	Name	From
National Security and International Affairs Division	McNeil, Sheila A. Pitts, Anita D. Scott, Veronica Spears, Debra Tempalski, Jerry	Riverside Research Institute Not specified Retail clothing business Co-op conversion International Trade Commission
Personnel	Ashton, Tony Bridge, Dan Davis, Arlene V. Hoyle, Katherine Jackson, Jr., Otis Jefferson, Lisa Lingafelter, Gregory Moore, Madelyn Tudor, Linda	Dept. of Agriculture St. Anselm's College Dept. of the Treasury Smithsonian Institution Temporary employment Not specified Dept. of Agriculture American University Lane Secretarial School
Regional Offices		
Atlanta	Barez, Stacie Crayton, Sondra Gordon, Clara King, Regina Long, Rhoda Lootens, Linda Lucas, Ann Moye, Deborah Pounds, Jeffrey Ratliff, Lisa Starck, Cherie	Co-op conversion West Virginia University University of Puerto Rico Dept. of Health and Human Services Tennessee Valley Authority University of Maryland Miami University Dept. of Defense University of Alabama University of Alabama Georgia State University
Kansas City	Neace, Karen Taylor, Denice	Southern Illinois University Southern Illinois University
Philadelphia	Cosella, Carolann	Private industry
Seattle	Edgar, Dolores Huffman, Gay Perkins, Kevin Stenerson, Stan Siew, Magdalene	St. Vincent Charity Hospital University of Washington University of Washington Kansas Legislative Auditor's Office Seattle University

Retirements

Division/Office	Name	Title
General Services and Controller	Cox, William Dunlap, Josie	Computer specialist Offset press operator
Human Resources	Mikus, Frank	Supervisory evaluator
National Security and International Affairs	Glazer, Ida	Secretary
Personnel	Mavritte, Eugene	Personnel management specialist

Deceased

Office of the General Counsel

Ronald A. Schneider, an attorney in the Office of the General Counsel, passed away September 1, 1984.

Boston

Philip C. Carroll, a supervisory auditor who retired from the Boston Regional Office in 1971, passed away August 26, 1984.

Denver

Tom Straub, an evaluator who retired from the Denver Regional Office in 1963, passed away October 27, 1984.

Philadelphia

Fred Harzer, an evaluator who retired from the Philadelphia Regional Office in 1977, passed away August 17, 1984.

Attritions

The following staff members left the agency during the approximate period July-September 1984.

Division / Office	Name
Office of the General Counsel	Archibald, Margaret E. Fitzmaurice, Edward L. Knox, Vincent B. Kratzer, Charles S. McConnell, Margaret E.
General Services and Controller	Agnor, Mary Beth Anderson, William Connolly, Sharon Hansberry, Canisius Hedgepeth, Emma Henderson, Patricia Rome, Emily Stokes, Harry Webster, Dora Worcester, Mary Jo Wynn, Eric
Human Resources Division	Edmondson, Susan H.
Office of Information Resources Management	Brenkus, John Hendrie, Carolyn
National Security and International Affairs Division	Bright, Donald J. Culkin, Phillip B. Hobbs, Joseph H. Kopff, Judy G. Salmanson, Roxanne M. Simmons, Carol M. Soroko, Alexander P. Warman, Bonnie M.

Attritions (cont.)

	Name
Personnel	Archbold, Kay Arroyo, Bonnie Brown, Vicki Eldridge, Craig Exton, Renee Lopez, Arthur
Regional Offices	
Boston	Tears, Ann Marie Veiga, Joseph F. III
Denver	Cook, Joanne Grandinetti, Robert J.
Kansas City	Farkas, Lauretta Mikkelson, Janet Mincher, Jeffrey
Seattle	Chya, Nova

Professional Activities

Office of the Comptroller General

Charles A. Bowsher, Comptroller General, addressed the following groups:

Association of Government Accountants Professional Development Conference, Washington, July 9.

Annual Meeting, Beta Alpha Psi, Toronto, Canada, Aug. 13.

New England Intergovernmental Audit Forum, Boston, Sept. 14.

National Coal Association Government Relations Committee, Washington, Sept. 20.

D.C. Institute of CPAs, Washington, Sept. 20.

International Financial Management Conference, Washington, Sept. 28.

Harry S. Havens, Assistant Comptroller General, was the John Stennis Distinguished Visiting Professor at Mississippi State University. He gave two presentations for the course on program evaluation. The topic of his lecture was "The Politics of Program Evaluation." Mississippi State University, Starkville, Sept. 7.

Accounting and Financial Management Division

Frederick D. Wolf, director, addressed the following groups:

National Conference of State Human Services Finance Officers, Denver, July 30.

Joint D.C. Chapters of the Association of Government Accountants and the Institute of Internal Auditors title 2 seminar, Washington, Aug. 22.

Kenneth W. Hunter, senior associate director, was elected Secretary of the Issues Management Association, a professional group involved in public policy issues.

Virginia Robinson, associate director:

Was elected president of the Washington Chapter of the Association of

Government Accountants (AGA).

Participated as a workshop leader on operational accounting at the AGA Development Conference, Washington, July 9 and 10.

Discussed "Current Emphasis in Government Financial Management" with business majors at American University, Washington, Sept. 28.

John F. Simonette, associate director, spoke on implementation of the Federal Managers' Financial Integrity Act before the AGA Professional Development Conference in Washington, July 11.

W. A. Broadus, group director:

Presented sessions on governmental auditing matters before the following groups:

AGA Professional Development Conference, Washington, July 9 and 10.

Pennsylvania Society of CPAs, Hershey, July 17.

National Association of State Human Services, Denver, July 30.

Kentucky Society of CPAs, Louisville, Aug. 3.

American Accounting Association, Public Sector Section, Toronto, Aug. 15.

Arizona State Auditor's Staff, Phoenix, Aug. 27.

Small Business Administration Inspector General Staff, Leesburg, VA, Sept. 13.

He was also:

Appointed to serve on the Patron Accounting Center Advisory Board at the University of Michigan for 1984-86.

Named chairman of the Virginia Society of CPAs Industry and Government Committee for 1984-85.

Named the outstanding member for 1983-84 by the Northern Chapter of the Virginia Society of CPAs.

Bruce Michelson, group director, participated as a panel member during a joint AGA/Institute of Internal Auditors seminar on the revised title 2, Aug. 22.

Amanda Flo, accountant, spoke at a National Property Managers' Association Seminar, Crystal City, VA, Sept. 12.

Office of the General Counsel

Harry R. Van Cleve, general counsel, discussed GAO's current concerns with DOD acquisition practices and implications of the Competition in Contracting Act of 1984, before students and faculty of the Naval Postgraduate School, Monterey, CA, Aug. 28-29.

Seymour Efros, associate general counsel:

Spoke before the Federal Bar Association Convention, Government Contracts Program on "Current Legislative Proposals and Reports Concerning Federal Procurement," Baltimore, Sept. 20.

Spoke before the General Services Administration Office of General Counsel's Attorneys Annual Conference on GAO Protest Rules, Washington, Sept. 20.

General Services and Controller

Glenn Spiegel, acting manager, Writing Resources Branch, presented a writing seminar to the Food and Drug Administration's Shellfish Sanitation Branch in Orlando, FL, Aug. 9-10.

Jean Knowles, writer-editor, Writing Resources Branch, presented a writing seminar at the Southeastern Intergovernmental Audit Forum Conference, Nashville, Sept. 12-14.

Human Resources Division

Carl Fenstermaker, group director, discussed GAO's review of medical malpractice issues, before the "No-Fault" Health Care Group, in Washington, Sept. 26.

Janet Shikles, group director, discussed "Long-Term Care: Policy and Legislative Implications," at the Veterans Administration/American Health Planning Association Confer-

ence on Long-Term Care, Washington, Sept. 23.

Bruce Layton, evaluator, co-authored "Overjustification: A Self-Perception Perspective," published in the September issue of the *Personality and Social Psychology Bulletin*.

Sigurd Nilson, economist:

Presented a paper, "The Off-Farm Labor Supply of Farm Operators," at the annual meeting of the American Agricultural Economics Association, Ithaca, NY, Aug. 6.

Authored the article, "Recessionary Impacts on the Unemployment of Men and Women," in the May issue of the *Monthly Labor Review*.

Office of International Audit Organization Liaison

Elaine L. Orr, director, was appointed membership chair of the National Capital Area Chapter of the American Society for Public Administration, effective July 1984.

Carol Codori, International Auditor Fellowship Program director:

Served for 1 year as a member of the psychological services referral committee of the District of Columbia Psychological Association. The committee sets policy for the appropriate referral of citizens who wish to use the services of area mental health professionals. Her term expired in September 1984.

With **Michael Speer**, OQA, taught a seminar on ensuring quality in communications at the Executive Seminar Center, Oak Ridge, TN, Aug. 14.

James P. Wesberry, senior advisor on International Audit Offices:

Spoke at the AGA Professional Development Conference on "The International Debt Crisis: A Time for Decision Between Chaos and Accountability," Washington, July 11.

Spoke at the Interamerican Accounting Conference V Regional Seminar on "Independent Auditors and Government Financial Statements," Quito, Ecuador, Aug. 23 and 24.

Spoke twice, at conferences commemorating the 25th anniversary of Peruvian accountancy law, on "The Independent Auditor Examiner and Government Financial Statements" and "The International Debt Crisis," Lima, Peru, Aug. 28 and 29.

Served as program chairman of the International Financial Management Conference cosponsored by the International Consortium on Governmental Financial Management and the International Federation of Accountants, Sept. 27 and 28.

Was elected president of the International Consortium on Governmental Financial Management at its triennial meeting, Sept. 28.

Wrote "The Heavy Load of External Debt," published in the *Interamerican Accounting Journal*, Jan.-Mar. 1984 issue.

Joint Financial Management Improvement Program

Kenneth M. Winne, senior project manager, spoke on the "Role of Central Financial Agencies in Governmental Accounting" before the AGA Professional Development Conference, Washington, July 10.

National Security and International Affairs Division

Donald E. Day, senior associate:

Participated in a panel discussion on "Challenges and Changes in Cost Analysis," at DOD's Annual Cost Analysis Symposium, Arlington, VA, June 26.

Discussed GAO's role in systems acquisition, at the Defense Systems Management College, Fort Belvoir, VA, July 18.

Spoke on "GAO's role in system acquisition," before the Defense Systems Management College, Fort Belvoir, VA, Sept. 17, and addressed the topic, "Cost Estimating for Engineers," at the Army Logistics Management Systems College, Fort Lee, VA, Sept. 19.

Paul Math, associate director:

Participated in a panel discussion on "Update of Current Procurement Issues," at the National Security Industrial Association's Annual Spring Procurement Committee Program, June 4-5, 1984.

Participated in a panel on "The Impact of Contract/Pricing Initiative on the Acquisition Process," at the eighth annual Air Force Aeronautical System Division's Pricing Symposium, Sept. 12.

Bill McNaught, economist, participated in a panel discussion on "Reforming the Procurement Process," at the Women's Leadership Conference on the Economics of National Security, Washington, June 13, 1984.

Bill Newman, group director, **Rosa Johnson**, evaluator, and **Linda Dymek**, evaluator, discussed militarily critical technologies before the Industry Coalition on Technology Transfer, Washington, Sept. 12.

Bill Beusse, group director, spoke on "Recruitment and Motivation of Public Employees," before the Academy of Management, Boston, Aug. 12-15.

John Yakaitis, evaluator, discussed cost accounting standards at the Army Logistics Management Center, Fort Lee, VA, Sept. 21.

Irv Boker, evaluator, discussed the special access program and special requirement contract issues at a workshop on "Reducing the Cost of Doing Business in Security," sponsored by the American Society of Industry Security, San Diego, July 26.

Personnel

Felix R. Brandon, II, director:

Participated in the fall meeting of the American Assembly of Collegiate Schools of Business' Governmental Relations Committee, Chicago, Sept. 11-12.

Attended a 1-day executive briefing on Legal Strategies in Human Resources/1984, sponsored by Temple University, Washington, Sept. 25.

Participated as a panelist in the session, "The Changing Environment, the Workforce in the Year 2000," at the 1984 International Conference on Public Personnel Administration, Miami Beach, Oct. 22-23.

Patricia A. Moore, deputy director, was appointed to the Personnel Committee of the Metropolitan Washington YMCA Board, which reviews operations and makes policy for all of the YMCAs in Northern Virginia, the District of Columbia, and Montgomery and Prince George's counties in Maryland.

Stephen J. Kenealy, national recruitment program manager:

Was appointed to the Program Planning Committee of the Mid-Atlantic Placement Association.

Was appointed book reviewer for *The Journal of College Placement*, the official publication of the College Placement Council.

Mark Colville, personnel management specialist, was elected president of the D.C. Chapter of the International Personnel Management Association.

Program Evaluation and Methodology Division

Laurie Ekstrand, group director, was a presenter of a workshop entitled "Evaluating Program Performance," at the annual meeting of the National Youth Work Alliance, in Washington, June 22, 1984.

Linda Morra, group director, chaired a session on "Methodologies for Evaluating Probable Impacts" and presented a paper on "Prospective Evaluation" at the joint conference of the Evaluation Society and the Evaluation Network, San Francisco, Oct. 10-13.

Terry Hedrick, group director; **Stephanie Shipman**, **Eric Peterson**, **Sharon Ward**, evaluators; presented the results of GAO's evaluation of the 1981 Aid to Families with Dependent Children changes to the Employment and Income Maintenance Committee of the National Council of State Public Welfare Administrators, Washington, May 10, 1984.

Harry Weintrob, operations research analyst, participated in a panel discussion on "Implementation of Socio-Economic Planning Models in Federal Agencies." The panel was part of the Institute of Management Science/Operations Research Society National Meeting in San Francisco, May 14-16, 1984.

Christine A. Fossett, program analyst, spoke on the recent GAO analysis of WIC (the special, supplemental food program for women, infants, and children) evaluations at the summer institute on child development and social policy sponsored by the Society for Research in Child Development at Cornell University, Ithaca, NY, June 18-19.

Frederick Mulhauser, social science analyst, served as critic for several papers on federal funding of education and as a member of a panel on future directions for federal research funding at the annual meeting of the American Educational Research Association in

New Orleans, and chaired the nominating committee in one of the association's divisions, Apr. 24-27, 1984.

Scott Crosse, evaluator, delivered a paper entitled "When the Sum of the Parts is Greater than the Whole," at the joint conference of the Evaluation Network and Evaluation Research Society, San Francisco, Oct. 10-13.

Office of Quality Assurance

Ronell B. Raam, group director:

Taught a course on "Operational Auditing" at the AGA Professional Development Conference, July 9 and 10.

Had an article, "A Professional Sports—Type Personnel System for Auditors," published in *The Government Accountants Journal*, summer 1984.

Was selected as an advisory board member for the Northern Virginia Chapter, AGA.

Is a member of the AGA National Education Committee for FY 1985.

Eric A. Marts, evaluator:

Participated in the annual public policy council workshop of the American Association of Engineering Societies, Washington, Oct. 11.

Was elected director of the National Capital chapter of the American Institute of Industrial Engineers and serves on the chapter's seminar and awards committees.

Michael Speer, management analyst, has been selected to serve on the Smoking or Health Committee of the D.C. Lung Association for 1984-85.

Regional Offices

Atlanta

Marvin Colbs, regional manager, spoke on "Carrying Out Oversight Functions—How GAO Interfaces with DOD," before the Comptroller's Course at the Air University, Maxwell Air Force Base, AL, Aug. 22.

Felicia Turner, computer programmer analyst, spoke on "Implementing Microcomputers in the Workplace," at a meeting of the Intergovernmental Audit Forum in Nashville, Sept. 14.

Cincinnati

Arthur D. Foreman, acting manager of the technical advisory groups, spoke on "The Need to Qualify the Effectiveness of Internal Controls" before the Institute of Internal Auditors, Sept. 18.

Denver

In their respective roles as chairman and executive director, **Robert W. Hanlon**, regional manager, and **James A. Reardon**, senior evaluator, planned and conducted the fall 1984 meeting of the Mountain and Plains Intergovernmental Audit Forum, Vail, CO, Oct. 4-5.

Kansas City

David A. Hanna, regional manager, spoke on the "Federal Managers' Financial Integrity Act of 1982" before the State/Federal Highway Financial Management Conference, Kansas City, Aug. 30.

Susanne Valdez, executive director of the Mid-America Intergovernmental Audit Forum, addressed the following groups:

Nebraska Society of CPAs, Lincoln, July 24.

American Accountancy Association annual meeting, Toronto, Canada, Aug. 15.

New York

Numerous staff hosted and instructed the 1984 International Auditor Fellows during the week of September 17. Among them, **Nick Zacchea**, staff resources manager, coordinated the entire program of technical workshops, site visits to the New York City Board of Education, and a reception at the New School for Social Research. **Barbara Sternad**, technical information specialist, taught a seminar on automated technology to support audit research, and **Bernard Rashes**, senior evaluator, arranged for meetings with key United Nations audit officials.

Statement of Editorial Policy

This publication is prepared primarily for use by the staff of the General Accounting Office (GAO) and outside readers interested in GAO's work. Except where otherwise indicated, the articles and other submissions generally express the views of the authors and not an official position of the General Accounting Office.

The GAO Review's mission is threefold. First, it highlights GAO's work from the perspectives of subject area and methodology. (The *Review* usually publishes articles on subjects generated from GAO audit work which are inherently interesting or controversial. It also may select articles related to innovative audit techniques.) Second, and equally important, the *Review* provides GAO staff with a creative outlet for professional enhancement. Third, it acts as historian for significant audit trends, GAO events, and staff activities.

Potential authors and interested readers should refer to GAO Order 1551.1 for details on *Review* policies, procedures, and formats.

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Editor

Harry S. Havens

Assistant Editor

Carol A. Codori

Features Coordinator

Alberta E. Tropf

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