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The GAO Review



WINTER 1969

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Uniform Cost Accounting Standards in Negotiated Defense Contracts 721406

By Elmer B. Staats
Comptroller General of the United States

The following address was made by Mr. Staats on October 29, 1968, before the Stuart Cameron McLeod Society of the National Association of Accountants, Miami Beach, Fla.

Early in the spring of this year, the General Accounting Office was extremely busy from one end of the United States to the other conducting a comprehensive series of reviews in connection with various "antipoverty programs" of the Office of Economic Opportunity and the Department of Labor. We had received this assignment under amendments to the Economic Opportunity Act in December 1967. By spring, therefore, we were heavily engaged on this project, one of the most comprehensive that the GAO has undertaken. At the same time, of course, we were carrying on dozens of other audits and reviews of activities of the executive branch of the Government as we regularly do as an arm of the legislative branch.

Under the circumstances, we were not perhaps quite prepared for action taken unexpectedly in May by the House Banking and Currency Committee. Following hearings by the committee on a relatively routine bill to extend the Defense Production Act of 1950, which comes up biennially, the House committee reported the bill with an unusual amendment.

The amendment directed the Comptroller General to develop uniform accounting standards to be applied to all negotiated prime contract and sub-contract procurements by the Department of Defense in excess of \$100,000—including standards by which an accurate showing of production costs and profits by individual orders could be determined.

Little information concerning this proposal had been available prior to the time the Banking and Currency Committee reported the bill. There had been no invitation to Government agencies or representatives of industry and the accounting profession to make known their views. The bill was passed by the House on June 4, 1968, in the form recommended by the committee.

As I mentioned, the General Accounting Office at that time was concentrating much of its energies in the direction of the comprehensive OEO review. GAO has a February 1, 1969, deadline on completion of this assignment. We were not expecting a new assignment of such large proportions and unforeseeable demands. Of course, to all of us here the challenge of applying uniform

cost accounting standards in negotiated defense contracts is as clear as a bolt of lightning. However, after the thunder rolled away, we recovered our auditor's aplomb without unreasonable loss of time and prepared to make our views known on the proposed legislation when the time came for the Senate to consider the bill.

The committee amendment to the Defense Production Act extension had its origins in testimony by two witnesses before the House Banking and Currency Committee: Mr. Price Daniel, Director, Office of Emergency Planning, and Vice Adm. H. G. Rickover.

The Admiral's testimony was frequently critical of the manner in which Government procurement was being accomplished, as well as of groups involved. These included elements in the Department of Defense, industry, and the accounting profession.

It is not necessary here to review in detail the Admiral's testimony. It is perhaps best summed up with regard to accounting practices by his statements

- That "the lack of uniform accounting standards is the most serious deficiency in Government procurement today";
- That "industry will not establish such standards because it is not to their advantage to do so";
- That the accounting profession "has had ample time and opportunity to establish effective standards" but pays "only lip-service to the concept"; and
- That "if uniform accounting standards are ever to be established the initiative will have to come from Congress."

Admiral Rickover then recommended an amendment to the Defense Production Act "to require contractors to account for costs under Government contracts in accordance with a uniform

accounting standard." He also recommended that the legislation "require that defense contractors provide a report of costs and profit for each contract over \$100,000."

When the Senate Banking and Currency Committee conducted its hearings in June about a dozen witnesses testified, including the General Accounting Office, and the committee received almost 100 statements and letters. While a few favored the legislation, at least in part, the overwhelming weight of views expressed by witnesses opposed the legislation. It should be recognized that the opposition may have been predicated upon the belief or understanding that the bill was directed to uniform accounting systems rather than cost standards.

The Proxmire Amendment

Following the hearings, the Senate committee reported the House bill but deleted all language having anything to do with "uniform accounting standards." However, when the bill was debated on the Senate floor, Senator William Proxmire of Wisconsin offered a modified amendment designed to accommodate some of the objections raised and recommendations offered during the testimony. Senator Proxmire's amendment was adopted by the Senate, agreed to by the House, and became law July 1, 1968, as a part of Public Law 90-370.

The Proxmire amendment provides that the Comptroller General, in cooperation with the Secretary of Defense and the Director of the Bureau of the Budget, shall—and here I shall quote the language of the statute:

* * * undertake a study to determine the feasibility of applying uniform cost accounting standards to be used in all negotiated prime contract and subcontract defense procurements of \$100,000 or more. In carrying out such study the Comptroller General shall consult with representatives of the accounting profession and with representatives of that segment of American industry which is actively engaged in defense contracting. The results of such study shall be reported to the Committees on Banking and Currency and the Committees on Armed Services of the Senate and House of Representatives at the earliest practicable date, but in no event later than eighteen months after the date of enactment of this section.

This is CAO's charter for the feasibility study we have now undertaken. We must make our report to the Congress by December 31, 1969.

The major compromise, of course, is found in the elimination of any requirement for establishment of uniform accounting standards and the substitution of a "study to determine the feasibility of applying uniform cost accounting standards * * *." Also, this was the first time the word "cost" appeared in the proposed legislation in conjunction with accounting standards.

The problem of attaining comparability of accounting results has been one which accountants have been attempting to solve for many years. As long ago as 1932 a committee of the American Institute of Certified Public Accountants and representatives of the stock exchanges met jointly to consider ways to improve corporate accounting and financial reporting and achieve better comparability of financial statements. The conclusion reached at that time was that the arguments against attempting to establish a detailed set of accounting rules to become binding on

all corporations of a given class were overwhelming.

Since that time, accountants have continued to be concerned with the problem of uniformity and comparability of financial reports and today the same conclusion, stated in different terms, still prevails for the reason that diversity in accounting among independent business entities is a basic fact.

The concept of uniformity, particularly as it relates to the costs and profits of Government contracts, is an attractive concept. There are potential benefits and advantages to be attained. These will have to be weighed, however, against possible increased costs, loss of supply sources, and burdensome duties of assuring compliance and reviewing results.

Over the years, the General Accounting Office has not been unmindful of the need for firm and well-developed guidelines for contractors to follow in determining costs under Government contracts. We have worked closely with the Department of Defense toward that end. We long have believed that before any requirement is established by law that uniform cost accounting standards be developed for imposition on Government contractors, considerable research and study would be necessary. The practicability of developing uniform cost accounting standards, the variations and methodology involved in the various production processes and managerial techniques, and possibly the detail in which such standards should or could be prescribed—all would have to be determined.

I need hardly remind this sophisti-

cated audience of the extremely complicated definitions, questions, and related problems we face in the preparation, execution, and final determination of this study and what it will include. As we all know, defense contracts cover an almost unimaginable range of products and services, ranging from very large single items such as one-of-a-kind warships and space launch vehicles to small items such as hand weapons and special tools produced by the tens of thousands.

Many Types of Industries Affected

The electronics, food, aerospace, steel, aluminum, machinery, and scientific instrument industries, among many others, are involved. The contracts represent a diversity of products such as services, scientific research, development of new products, production of hardware, chemicals, and some not even recognizable by laymen.

Almost as great a diversity is found in the manufacturing processes used by the contractors and as great a variety of management techniques is used in controlling their production.

Contractors' accounting systems are developed to satisfy the contractors' own requirements with respect to production methods, managerial techniques, and other needs imposed by the type of industry, its board of directors, and its stockholders. Each accounting system serves several purposes, not all of which are defined with the same degree of importance or degree of need even in the same industry.

Government contractors range from the Nation's largest business enterprises to the smallest of the small busi-

nessmen. Many single contractors produce a variety of products for Government consumption under as great a variety of manufacturing processes and managerial methods.

Now I would like to say a few words about our approach to the task. First, I appointed a special assistant to devote full time to this project until it is completed. He is Mr. *William A. Newman, Jr.*, for many years the Director of GAO's Defense Division.

Second, in keeping with the provisions of the law, we have formed a coordinating committee composed of representatives of GAO, the Department of Defense, and the Bureau of the Budget.

Third, we have—as the law provides—begun consultations with representatives of nine national accounting and industrial associations. These include:

- The National Association of Accountants.
- The Federal Government Accountants Association.
- The American Institute of Certified Public Accountants,
- The American Accounting Association.
- The National Society of Public Accountants,
- The Financial Executives Institute.
- The Machinery and Allied Products Institute,
- The Associated General Contractors of America, and
- The Council of Defense and Space Industry Associations.

With few exceptions, all of these associations are participating, in some manner, in the feasibility study. Their

cooperation is gratifying, to say the least. We will meet with representatives of other national professional and trade groups as their interest becomes known to us.

With some contractors, Government work represents the totality of the company's business; with others, it is only a fraction of their total business. For those for which Government business represents a large share of their total volume, any burdens imposed by such Federal requirements would be borne along with the present requirement of technical specifications and delivery dates.

However, the argument has been made that for those contractors for whom Federal procurement represents but a small part of their total volume, the addition of another Federal requirement such as we are discussing might result in some of them refusing to accept further Government business and a drying up of valuable sources of supply.

This is an endeavor, therefore, in which we feel the advice and counsel of the professional accounting and trade associations is of paramount importance to its success. We will be leaning heavily upon these consultants and associations.

In addition, special consultants are making conceptual studies on cost accounting standards.

Purposes of GAO Study

What are the objectives of the feasibility study? The coordinating committee has prepared a statement of such objectives.

Study will be directed to the feasibility of applying uniform cost accounting standards as a means of enhancing the comparability, reliability, and consistency of cost data used for negotiated procurement contract purposes. Such purposes include:

- Preparation and evaluation of cost-reimbursement claims under cost-type contracts;
- Preparation of pricing proposals and related cost data support for negotiated contracts and repricing proposals under escalation, incentive, and price redetermination clauses; and
- Preparation of claims under contract terminations and contract financing.

Feasibility will be judged in terms of the capability of the standards to provide valid cost data generally acceptable and fair to all parties in an expeditious and economical manner.

To be feasible the standards must be workable, rather than merely having a quality of being possible without any consideration of the short- and long-range implications, both from the viewpoint of the public and private sectors.

Major differences among various Government agencies in the promulgation of cost accounting standards will be identified and analyses made of the reasons for these differences.

The feasibility study will include consideration of those factors which bear upon the administrative costs of implementing uniform cost accounting standards.

The study will not concern itself with the cost/profit consequences on negotiated contracts. It will not attempt to relate the prescription of uniform cost accounting standards to the various re-

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porting requirements of the Government other than indicated above or stand in judgment on the adequacy of such reporting.

Because some accounting terminology such as the terms "accounting standards" or "accounting principles" are not universally understood, it seemed necessary that the term "cost accounting standards" and the term "uniform" which are included in the basic statement be defined for the purposes of our study.

We have adopted the following definitions for these terms:

Cost accounting standards. As used in this study, "cost accounting standards" will embrace the related principles, standards, and general rules of procedures and the criteria for their usage. "Cost principles" suggest self-evident truths and axioms which have a degree of universality and permanence and which underlie, or are fundamental to, the derivation of cost accounting standards. "Cost accounting standards" relate to assertions which guide or point toward accounting procedures or applicable governing rules. Cost accounting standards are not the same as standardized or uniform cost accounting which suggests prescribed procedures from which there is limited freedom to depart.

Since the legislative history suggested section XV of ASPR as a possible satisfactory starting point and section XV includes many general rules of procedures, the term "cost accounting standards" is considered to include all three concepts: namely, principles, standards, and general rules of procedure.

Uniform. The term "uniform" in the phrase "uniform cost accounting standards" should also be defined in terms of the legislative history. For the purpose of this study, "cost accounting standards" shall be deemed to be uniform when stated with the goal of achieving comparability, reliability, and consistency of significant cost data in similar circumstances and with due regard to the

attainment of reasonable fairness to all parties concerned in such circumstances.

In considering the feasibility of applying uniform standards we are mindful of the trials and tribulations within the accounting profession in reaching agreement upon what constitutes "generally accepted accounting principles." We will look to our consultants and professional organizations to identify the relationship between "generally accepted accounting principles" and "cost accounting principles."

Four-Step Approach

Briefly, here is our four-step plan of approach.

First step. We are conducting research as to the nature of cost accounting standards and their interrelationship to generally accepted accounting principles.

Your own National Association of Accountants plans to make available to us the results of a research project now underway. This involves identification of cost accounting practices applied to Government contracts and is being performed by Dr. James Bullock, University of Michigan. NAA has agreed to formulate a statement of its recommended approach to cost accounting standards. The statement would point out the appropriate role of economic and engineering, as well as accounting, considerations in support of management's decisionmaking requirements.

The American Institute of Certified Public Accountants has undertaken a project to determine the relationship of cost accounting principles to "generally

accepted accounting principles.”¹ The American Institute also is studying depreciation accounting and inventory accounting.

The Defense Contract Audit Agency has agreed to review for us the Armed Services Board of Contract Appeals and court decisions which tend to establish cost accounting principles through their interpretation of “generally accepted accounting principles.”

As a consultant to the Comptroller General, we have obtained the services of Dr. Robert N. Anthony of Harvard University, until recently Assistant Secretary of Defense, Comptroller. He will study the Armed Services Procurement Regulation, section XV, in an effort to seek ways and means of establishing improved criteria and guidelines for the use of various cost accounting principles.

We have engaged the consulting services of Dr. William J. Vatter, University of California, who has made cost accounting a lifelong pursuit, to prepare a paper setting forth certain basic ideas. We hope he will organize and present, from a distillation of what is accepted cost theory and practice, those generalizations that underlie cost analysis—generalizations to serve as standards for cost classification and assignment.

The Federal Government Accountants Association plans to study implications of the development and appli-

cation of uniform cost accounting standards as they relate to the full range of Government activities. The FGAA study will include the areas of procurement, contract estimating and pricing, and financial reporting and program management.

The General Accounting Office will identify differences in the application of contract cost principles represented in the Armed Services Procurement Regulation, the Federal Procurement Regulations, and other implementing regulations by the several Government procurement agencies.

Second step. We will seek attitudes and opinions from industry concerning the entire problem of adopting “uniform cost accounting standards.” We hope to obtain some information concerning corporate attitudes and opinions through the use of a questionnaire. This questionnaire will be designed to indicate from replies provided general attitudes of industry to two aspects of our study: (1) The feasibility of applying “uniform cost accounting standards” to negotiated defense contracts, and (2) what industry thinks of the present cost principles and procedures contained in ASPR, section XV.

We also will try to get a judgment from industry, if possible, on costs involved in adopting “uniform cost accounting standards” and information on individual experiences with the several Government procurement agencies as to differences in the cost principles which they have adopted.

Third step. We will attempt to accumulate reliable information on various cost accounting methods and practices of industry relating to what we

¹ *Editorial note:* Leonard M. Savoie, executive vice president of the Institute, characterizes this study as one of basic concepts and measurement criteria which will attempt to identify and study cost concepts for all broad business purposes. Among these purposes will be contract pricing, income determination, and the relationship of cost accounting to generally accepted accounting principles.

consider the more controversial or more difficult areas to the achieving of uniformity. We will see what light can be shed upon these problems by means of the following two actions, taken or planned.

Through our own GAO regional offices and the regional offices of the Defense Contract Audit Agency, we have made a survey of the problem areas encountered in the application of the Armed Services Procurement Regulation, section XV.

Questionnaire to Industry

We expect also to elicit from industrial firms—several hundred Government contractors and firms performing no Government work—information on cost accounting methods and practices. This will be done through the use of a questionnaire now being developed with the assistance of Dr. Robert K. Mautz, a consultant to the Comptroller General, who is currently at the University of Minnesota.

It is planned that an independent organization, probably a university, will have full control of the receipt, tabulation, and evaluation of the results of this questionnaire. This organization will be charged with the responsibility of holding all responses confidential and making available to the Comptroller General and others, summaries and tabulations only. Thus, individual respondents in no way can be identified. This also will be the case with specific illustrations or particularly cogent comments included in the questionnaire findings.

The Comptroller General will issue the approved questionnaire which will be forwarded to respondent companies

or organizational segments, through their chief executive.

At the present time a first draft of this questionnaire prepared by Dr. Mautz, assisted by members of our staff, is under consideration at our Washington Office.

As soon as completed the revised draft will be submitted to the participating trade associations, professional accounting organizations, and our coordinating committee for comment.

Upon receipt of their replies and revisions completed as may be desirable, a limited test of the practicability of the questionnaire, by submission to a few industrial organizations, will be made. Final approval of the questionnaire will be made by the Comptroller General.

This questionnaire

- Will ask for identifying information to provide bases for classification in tabulating responses.
- Will seek factual information about cost accounting practices followed by respondent contractors which will enable the research staff to discern both patterns of similarity among companies and industries and significant dissimilarities.
- Will request indications of acquaintance with and experience under Armed Services Procurement Regulation, section XV, and evaluations of its effectiveness, both in general and in terms of selected specific provisions.
- Will provide an opportunity for expressions of opinion on such matters as the nature of "uniformity," the meaning of "cost accounting standards," and the overall feasibility of establishing and applying "uniform cost standards."

Throughout the questionnaire, an effort will be made to obtain answers relating to practices followed in accounting for U.S. Government con-

tracts separate from practices followed in accounting for non-Government work. This should help to judge the necessity, if any, for separate standards for U.S. Government contracts.

Individual companies from whom data will be requested will be selected from:

- Lists of large, medium, and small Government contracts prepared by the Council of Defense and Space Industry Associations (CODSIA) and Strategic Industries Association;
- A listing of prime Government contractors for fiscal year 1968 having contracts over \$100,000 prepared by DOD and DCAA; and
- A listing of companies having little or no Government contracts furnished by the Financial Executives Institute.

Fourth step. We will get an evaluation of section XV of the Armed Services Procurement Regulation as to its possible suitability as a starting point for the development of "uniform cost accounting standards."

The legislative history of the act creating the GAO study (Public Law 90-370) indicates the intent of Congress that we explore the possibility that the Armed Services Procurement Regulation, section XV, could be used as a starting point for the development of "uniform cost accounting standards." As I have indicated, we have asked various professional accounting and trade organizations to study section XV to identify its strong points or its weak points, to express opinions as to its suitability as a starting point, and to suggest what would be needed if it were used as a basis for developing uniform cost accounting standards.

While I may not have made the point as directly as I might, or perhaps

forcefully enough, let me say in conclusion that this study is an undertaking of unknown—as yet—possibilities for progress for Government and, I believe, for industry and the accounting profession.

The 20th century is a time when men do things that have not been done before. This dictum applies quite as much to the accounting profession as to any other.

There has been, as we all know, in effect a raising of protesting hands at the prospect of uniform cost accounting standards, a verdict before the evidence is in that such a thing cannot be done because it never has been done. Have we not heard this before?

Doubtless it will take time to find and understand ways to develop more uniform accounting practices in the diverse area of negotiated defense contracts. Through research, review, and application of the facts uncovered and understood to the test of feasibility or practicality, I am hopeful that our study will produce concrete results. For example, I believe a great service could be rendered to the accounting profession if better guidelines for the use of alternate methods could be developed for contractors in reporting the cost of performance under negotiated contracts with improved comparability, reliability, and consistency.

This year's step is to see what we can find out—as the law requires. All of us together must take this step; you in the profession, we in Government, those in hundreds of industries from whom we must receive the basic information. The more support we give each other, the more responsive all parties and individuals are to this undertaking,

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the surer we will be of the facts we uncover and the more satisfactorily we should be able to apply these facts toward improving financial management of the Federal Government's procurements.

I would urge that each and every one of you give the subject of "uniform cost accounting standards" serious thought. Keep in mind that "feasibility" as we view it does not mean merely having the

quality of being possible. Nor does "uniform" mean simply a straitjacket. In my opinion, we should be working toward a goal of lessening those alternative methods just mentioned and prescribing the conditions for the use of those alternatives. If this cannot be done, put yourselves in our shoes and ask: "What can the GAO tell Congress that will not adversely reflect upon the accounting profession?"

Relationship of Internal Audit to the General Accounting Office

721407

By Frank H. Weitzel
*Assistant Comptroller General
of the United States*

This article discusses the GAO interest in strong internal audit systems in the Federal agencies and summarizes some of the GAO findings made in its review of agency systems. The article is based on remarks delivered by the author during the program for Federal career audit managers on Managerial Techniques for Auditors, conducted under the Interagency Audit Training Program, Washington, D.C., November 18, 1968. The author wishes to acknowledge the assistance received from *Edward J. Toland* of the Office of Policy and Special Studies in the preparation of these remarks.

The Growing Importance of Internal Audit

Since the 1940's internal auditing has made great progress within the Government. Twenty-five years ago few Government agencies had any internal audit functions. By contrast, today all or nearly all agencies have an internal audit organization. Agency managers have come to rely upon internal audit, and the Congress has officially endorsed it in the enactment of various laws.

As pointed out in the 1962 research study by the Federal Government Accountants Association on internal auditing in the Federal Government, the first legislative reference to a type of agency audit resembling internal audit was included in the Air Corps Act passed in 1926. This act gave the Secretary of War the responsibility for auditing costs related to certain nego-

tiated contracts in order to purify cost data to be used in the negotiation of future contracts.

It was during the late 1930's and early 1940's that a new concept of audit called internal audit became generally known. But it was not until 1949 that the term "internal audit" appeared in any legislation. This was under the 1949 amendment to the National Security Act of 1947. This act provided the legislative basis for the three internal audit organizations that exist today in the military services.

In 1950 the Post Office Department Financial Control Act was passed giving a fourth agency a legislative mandate for an internal audit function.

Finally the Budget and Accounting Procedures Act of 1950 defined the responsibilities and duties of the Comptroller General and the executive agencies, giving recognition to the need

for internal audit within all agencies of the Federal Government.

Related activities during the past 25 years, although not legislative activities, include:

—Creation of the Joint Financial Management Improvement Program, a Government-wide program endorsed by the Congress, having as one of its objectives the establishment of suitable internal control practices including internal audit.

—Issuance in 1957, and the reissuance in 1968, of guidelines for internal auditing by the General Accounting Office, under its responsibilities assigned by the Budget and Accounting Procedures Act of 1950. The purposes of these guidelines are to outline concepts on internal auditing, stimulate the development of high standards, and encourage the continuing effective carrying out of this function in Federal agencies. Effective attainment of these objectives requires a close working relationship between the General Accounting Office, the Bureau of the Budget, the Treasury Department, the Civil Service Commission, and the operating agencies.

GAO Places High Value on Internal Audit

We in GAO consider a strong internal audit system to be an essential part of a good management control system. We have pushed for a strengthening of this function in the Federal agencies over the years and we believe that ex-

pansion in recent years of internal auditing in the agencies has been attributable, in part, to our strong endorsement of this function, growing out of the basic precept—one recognized by the Congress itself—that agency management itself is responsible for good control systems and good control systems should include internal audit.

As a highly important part of a management control system, the total function of internal audit and control can serve as the eyes and ears of top management in such important ways as:

- Locating opportunities for eliminating waste and inefficiency.
- Recommending improvements in policies, procedures, and organization structure.
- Providing checks on performance by individuals and by organizational units.
- Reviewing compliance with applicable statutory and other legal requirements.
- Testing for existence of unauthorized, fraudulent, or otherwise irregular acts.
- Identifying potential trouble spots in future operations.
- Providing an additional channel of communication between operating levels and top management.

Further, we in the General Accounting Office do not think there should be any significant restrictions on the work of the internal auditor if he is to be fully effective as an important part of a management system. To be effective, the internal auditor must probe into areas sometimes considered sacrosanct, or “technical” if you wish, by other elements of his organization, but he must

do this in such a way as to develop in the people responsible for managing those areas a real appreciation for his ability to make a contribution.

Congressional Interest in Internal Audit

As I have already indicated, not only has our Office encouraged internal auditing but so has the Congress. The Government Activities Subcommittee of the House Government Operations Committee has taken a strong and active interest in this function in the Federal Government, urging all agencies to adopt effective internal audit systems.

The House Committee on Government Operations issued a report in June 1963, in which it concluded, in part:

Every organization must have an effective system of internal management control. The so-called internal auditing system, as recommended by the Comptroller General in August 1957, constitutes an effective means for the average Federal agency to obtain this essential management function.

In 1966, the Government Activities Subcommittee of the House Committee on Government Operations informed us that it had a continuing interest in the development of effective internal audit systems in the executive departments and agencies of the Federal Government. The subcommittee solicited our further cooperation in obtaining a more current picture of the adequacy of these systems.

As a result of the request, we have made, and are currently making, reviews of the internal audit activities in

a dozen or more civil agencies and in the Department of Defense. We have issued a number of reports to the Congress or to the agencies on these reviews and have made recommendations for improvement where we believed improvement was needed.

Issuance of Revised GAO Statement of Basic Internal Auditing Principles and Concepts

Because of new and evolving concepts of internal auditing over the past 11 years and because of new information obtained during recent GAO reviews of agency internal auditing, we decided that new guidelines were needed to reflect the state of the art and to further assist the Federal agencies in developing effective and efficient internal audit activities. Accordingly, GAO issued, on October 1, 1968, a revised statement of basic internal auditing principles and concepts entitled "Internal Auditing in Federal Agencies."

In preparing the revised statement, we have had the benefit of extensive discussions with representatives of 17 agencies, staff members of congressional committees, and individuals outside of Government with experience in private industry and other public and private organizations.

We have also profited greatly from the followup hearings of congressional committees interested in this subject, particularly the Government Activities Subcommittee of the House Government Operations Committee. A copy of the pertinent excerpts from the committee's June 1963 report is included in this booklet as an attachment.

**Main Points Stressed by
GAO in Its New Booklet
on Internal Audit**

In addition to emphasizing more strongly the "management audit" or "operational audit" concept rather than the limited audit of financial and accounting records, the revised statement contains several significant improvements.

The high points of these improvements are the following:

1. *Independence and location of the internal audit function.* The head of the internal auditing function should be responsible to the highest practical organizational level, preferably to the agency head. Where this is not practicable, the function should be placed under the direction of a principal official who does report directly to the agency head to assure that the head of the internal auditing function will have direct access to the agency head whenever the Chief Internal Auditor deems this necessary.
2. *Structure of the internal audit organization.* A single organizational pattern, applicable to all agencies or bureaus within agencies, should not be prescribed. In large Government departments or agencies it may sometimes be desirable to establish internal audit organizations by major bureaus, divisions or offices, or other components. Where an agency establishes several internal audit organizations, i.e., elements below the departmental or agency

level, there should be a department or agency level internal audit group to furnish guidance and coordination.

3. *Scope of work.* We cannot over-emphasize our belief that restrictions should not be placed on the scope of internal audit by other than the agency head and only then to the extent and for such period of time that he determines such auditing would interfere unduly with agency mission accomplishment.

We point out in our new booklet that with respect to maintaining the internal auditor's independence and objectivity we believe it highly essential that he not be assigned operational responsibility for the development of agency systems, organizational structure, methods, or procedures.

However, we also point out that, to be of maximum assistance to an agency's management, the internal auditor must keep abreast of proposed changes in accounting procedures, system design, and computer application, and he should be given an opportunity to comment on them before implementation. Such an opportunity will facilitate the provision of adequate controls and audit trails. During the system design stage, an enlightened and alert internal auditor can make many worthwhile suggestions which may help management avoid costly changes once the system is in operation.

Further, with the advent of computers and management science, sophisticated management techniques are being widely accepted and adopted.

For the internal auditor to be fully effective, he must be knowledgeable and up-to-date on technological developments which affect management. No longer is the knowledge of accounting plus a modicum of perception sufficient. He must be adequately informed about statistical sampling, computer operations, management information systems, operations research, economic theories, and many other techniques and disciplines.

It is highly unlikely that an individual trained in accounting can become expert in each of the disciplines noted. Therefore, we take the position that although the audit staff should consist predominantly of accountants and auditors, it should also include individuals who are specialists in mathematics, computer science, engineering, and other needed disciplines.

One additional point I would like to make regarding the new booklet is that it points out that the auditor's report does not always have to be critical of the operation being reported upon. We do say that the auditor's report should be accurate and complete, as well as being objective and in language readily understood by the users. However, we go on to say the primary emphasis should be on improvement of operations, rather than on criticism of the past. We also believe the report should give credit for good management where such credit is deserved. We say in our booklet that the auditor's report should recognize noteworthy accomplishments—particularly where management improvements in one place may have applicability elsewhere in the agency.

GAO Responsibilities as an Audit Agency

The General Accounting Office was created in 1921 as an agent of the Congress to assist the Congress in carrying out its general oversight responsibility with respect to the receipt and expenditure of public funds. The Office is headed by the Comptroller General, Mr. Elmer B. Staats, who serves for a term of 15 years. Although appointed by the President, the Comptroller General can be removed only by impeachment or by a joint resolution of the Congress and he cannot be reappointed.

Thus the law has freed the Comptroller General from political and related considerations to make independent decisions with respect to the expenditures of Government funds and to make recommendations to the Congress and the executive agencies which he considers correct and appropriate.

With only limited exceptions, GAO is responsible for auditing all programs, activities, operations, and financial transactions of the Federal Government. The scope of our audit work extends to the 12 major executive departments and to some 60 independent agencies, Government corporations, and commissions.

The Budget and Accounting Act of 1921 requires that the Comptroller General investigate at the seat of Government or elsewhere *all* matters relating to the receipt, disbursement, and *application* of public funds. The legislative history of our basic legislation makes it clear that the objectives of our audits include not only auditing the accounting for the receipt and expenditure of funds, but also inquiring

into whether the funds and other resources are used effectively and economically.

**GAO Review of Agency
Internal Audit Activity**

Normally there is little duplication of the work of the GAO and the work of the internal auditor. The internal auditor performs his work as part of management's pattern of operation and control. The General Accounting Office review is part of the independent appraisal it makes for the Congress of the manner in which Federal agencies discharge their responsibilities and of the effectiveness of their control systems, including internal audit. GAO makes every effort to keep abreast of the planned work programs of the agency's internal auditors, to consider them in planning its own work, and to avoid, wherever possible, conflicts in audit schedules.

During the year ended June 30, 1968, we reviewed the activities of a number of the audit organizations in the civil departments and agencies and the Department of Defense and made recommendations for changes and improvements in several instances. We submitted six reports to the Congress on these reviews in the Departments of Agriculture, Commerce, Defense, Justice, Labor, and Post Office. In addition, we reported to the Congress shortly after the close of the fiscal year on our review of internal audit activities in the Federal Aviation Administration. We also issued reports on this subject to responsible officials of the Army Corps of Engineers, the Atomic Energy Commission, the District of Columbia Government, the Federal Housing Adminis-

tration, the National Aeronautics and Space Administration, the Panama Canal Company, and the Peace Corps.

I would like to mention briefly some of the findings and recommendations that resulted from these reviews. Not all of our findings were of adverse nature. In a number of cases, our reports to the Congress and to the head of the agency highlighted the fact that we had found that the internal audit organization complied substantially with the requirements for an effective internal audit system.

Department of Agriculture

In a report to the Congress in May 1968 on our review of the internal auditing and investigative activities of the Department of Agriculture, we concluded that the Office of the Inspector General was well organized and generally effective in providing management with reliable information for improving controls over the Department's operations. Our report contained certain recommendations concerning the operations of the Inspector General which we believed would result in better service to management. The Secretary advised us of his general agreement with our recommendations.

Post Office Department

We expressed our opinion in a report to the Congress in April 1968 that the policies, directives, and responsibilities for the Post Office Department's internal audit program were adequate to provide management with independent, objective, and constructive appraisals of the effectiveness and efficiency with which the financial and op-

erating responsibilities of the Department were being performed. We found, however, that the Department's procedures for followup action on recommendations contained in internal audit reports needed improvement. In line with our proposal for corrective action, the Department issued, in September 1967, a revised headquarters circular to establish the necessary controls over the followup action to be taken on internal audit reports.

Atomic Energy Commission

Based on our review of the organization and operation of the Atomic Energy Commission's internal audit function, we expressed the opinion to the AEC Chairman in March 1968 that within the resources available for the activity the internal audit function was being carried out in a generally effective manner.

Department of Defense

In March 1968 we reported to the Congress on our review of internal audit activity in the Department of Defense. We sought to obtain current information on the adequacy of auditing activities of the Department's five internal audit organizations:

- The U.S. Army Audit Agency.
- The Naval Audit Service.
- The Auditor General, U.S. Air Force.
- The Auditor General, Defense Supply Agency.
- The Deputy Comptroller for Internal Audit, Office of the Assistant Secretary of Defense (Comptroller).

We found that the organization, audit policies, directives, plans, and operations of the Department's inter-

nal audit organizations complied substantially with requirements for an effective internal audit system. We found also that the internal audit policies, directives, and plans were being implemented in a generally satisfactory manner.

However, because of our lack of knowledge of the management review activities of the Inspectors General of the military departments, which stems from restrictions on our access to their records, we indicated that we were unable to ascertain whether the activities of the designated audit organizations and the Inspectors General are effectively coordinated so as to avoid duplication and obtain the best results from the total review effort.

We made a number of proposals for consideration in the performance of future internal audit activities. The Department of Defense concurred except with respect to our proposal that a study be made of the work of the numerous organizations and activities conducting management reviews, with a view to strengthening overall control, direction, and coordination of such efforts. The Department doubted whether such a study would be productive but proposed to consider the matter further.

Department of Justice

Our report to the Congress on our review of the internal audit activities of the Department of Justice was issued in December 1967. We concluded that there was a need to improve the internal audit function of the Department and its constituent organizations, with the exception of the Federal Bureau of

Investigation. We expressed the opinion that a central internal audit organization, excluding the Federal Bureau of Investigation, responsible solely to top management, would provide a better means for more effectively carrying out the internal audit function and would serve more effectively as an integral part of the Department's overall system of management control.

The Assistant Attorney General for Administration informed us that a central audit organization reporting directly to him had been established and that other changes in line with our proposals were being made. However, we recommended that, as soon as practicable, the central internal audit organization be made responsible to the highest practicable organizational level, preferably the Attorney General or to a principal subordinate official. If it is not to report directly to the Attorney General, we stated that the Attorney General should take action to assure himself that the degree of independence and effectiveness of the internal auditing activity will provide him with objective and impartial appraisals of the Department's programs and activities.

We also recommended that the Federal Bureau of Investigation internal audit reports be available to the Attorney General and that the Attorney General issue policy guidance and cause such reviews of the Bureau's internal audit function to be made as he may deem necessary.

Department of Commerce

Our report on our review of the various audit organizations of the Department of Commerce was issued to

the Congress in July 1967. We concluded that, with the exception of the external audit activities of the Maritime Administration, nine separate audit staffs of the Department should be consolidated into a single audit organization at the departmental level and made responsible, preferably, to the Secretary or Under Secretary.

The Department concurred, in general, with our proposal for consolidation but advised us that the organization would be responsible to the Assistant Secretary for Administration. In September 1967, the Department consolidated audit activities, except for those relating to the Maritime Administration, in the Office of Audits reporting to the Assistant Secretary for Administration. In December 1967, Maritime internal audit activities also were transferred to the Department's Office of Audits.

Department of Labor

In a report to the Congress in June 1968, we pointed out that the Department of Labor had made limited use of its internal audit staff as a management tool even though the Department's programs have been expanding. The Secretary of Labor agreed with our proposal to substantially increase the Department's internal audit activity commensurate with its needs but did not agree with our proposal to relocate the internal audit function at a higher level. Therefore, we recommended that, if the organization does not report directly to the Secretary, the Secretary establish adequate controls to ensure that the internal audit activity would be sufficiently independent to provide

him with independent and impartial appraisals of all the Department's programs and activities.

Subsequently, the Secretary informed us that a new office would be established, the head of which would report to the Assistant Secretary for Administration, and that he was satisfied that this change would further assure the objectivity and impartiality of the internal auditing.

Federal Aviation Administration

We reviewed selected aspects of the internal audit functions in the Federal Aviation Administration, Department of Transportation, and submitted a report to the Congress in July 1968. We reported that we had found three weaknesses in the internal audit function: (1) The audit staffs did not possess the desired degree of independence from officials responsible for many of the operations reviewed, (2) the independence of the audit staffs was impaired by their performance of advisory services for operating officials concurrent with their internal audit duties, and (3) the audit staffs had not achieved adequate audit coverage in certain areas of agency operations.

The Administrator generally agreed to adopt our proposals for corrective action. Regarding our proposal that the director of the internal audit organization report to the highest practicable level in the agency, we were informed that the Associate Administrator for Administration would provide executive direction to the group. We expressed our opinion that internal audit activity should be responsible to the highest practicable organizational level,

preferably the agency head or a principal subordinate official, with authority to review systematically all of the agency's programs and activities. Whenever the head of an agency delegates this responsibility to a principal subordinate official, there should be assurance that the degree of independence and effectiveness of internal audit will provide the head of the agency with objective and impartial appraisals of its programs and activities.

In this regard, FAA, before indicating its concurrence in our proposals, issued a directive which requires that internal audit reports prepared as a result of agencywide reviews be sent directly to the Administrator without prior review by the Associate Administrator for Administration and that the Director of Audit have free and direct access to the Administrator at all times. In our opinion, this directive, if effectively implemented, should result in strengthening the internal audit group's independence.

Other Reviews

Currently, the GAO has reviews underway or is preparing reports on the internal audit activities in the Department of the Interior, the Treasury Department, the National Science Foundation, the Veterans Administration, the Department of State, the Agency for International Development, and the U.S. Information Agency.

GAO Tries To Coordinate Its Work With the Work of Agency Internal Auditors

While internal audit cannot substitute for the GAO audit completely,

GAO's job is made easier where internal audit is strong and effective. Before we initiate our audits we inquire into whether and to what extent the agency internal audit organization has given audit coverage to the particular activity to be reviewed by us. For example, earlier this year the Director of GAO's Far East Branch in Honolulu had planned an assignment in South Korea. Before starting the work, he learned that a similar review had been conducted by the Army Audit Agency. He obtained information on the work performance and was well pleased with the scope and depth of this review and the audit findings. GAO then canceled that assignment, recognizing that its time would be spent more usefully in other areas.

At the Department of Agriculture we were looking into the possibility of reviewing certain aspects of the Section 32 program, a program which has as one of its objectives the widening of the marketing outlets for surplus farm commodities. We found that the staff of the Office of the Inspector General, the "OIG," was about to make a review in this area and we decided to await the results of their review before scheduling our audit. By following this procedure, we avoided possible duplication of audit effort and we minimized the demand made on the program operators for answering audit inquiries and providing space for audit personnel.

Another example of how we give appropriate consideration to the work done by the staff of the OIG involves our annual examinations of the financial statements of the Commodity Credit Corporation and the Federal

Crop Insurance Corporation. These audits are made by us pursuant to the Government Corporation Control Act and in reporting to the Congress we have noted that appropriate recognition was given to work done by OIG in our selection of transactions for review.

Ways That Internal Audit Can Help Management

I referred earlier to the fact that the GAO review of five internal audit organizations in the Department of Defense and the internal audit organization in the Department of Agriculture, the Post Office Department, and the Atomic Energy Commission led us to the conclusion that these organizations were making a real contribution to the management control systems in their respective agencies. I would like to cite some additional examples to illustrate specific ways internal auditing can contribute to improvement of management control and economy in Government operations.

Veterans Administration

Two examples of how internal audit helped management in the cost reduction program were described by a Veterans Administration official in the Spring 1968 edition of *Defense Management Journal*.

In the first case, the VA's Internal Audit Service, a department level organizational element, examined a segment of one of the Administration's large medical programs—a segment represented in each of the veterans' hospitals. As a result of action taken by management on recommendations by the auditors pertaining to poor per-

sonnel use, overstaffing, organizational fragmentation, and unnecessary layers of supervision, the Administration has realized recurring annual savings of about a quarter million dollars with more to come.

In the second case, the internal auditors conducted a 3-week management-type audit of one of the VA's outpatient clinics. In addition to persuading line management to improve operating procedures, the audit has resulted in the agency obtaining immediate and recurring annual savings of \$160,000 through improved manpower use and personnel practices.

Federal Housing Administration

Let's take an example in which such a simple thing as a telephone is involved. The internal auditors of the Federal Housing Administration made a special survey of telephone equipment and facilities in the Washington headquarters and 69 field offices. Growing out of the recommendations of the internal auditors was the elimination of telephones and changes in telephone equipment which produced a yearly savings of about \$84,000. This internal audit staff certainly contributed to improved management control over operating costs.

Department of Commerce

In the Department of Commerce, the internal auditors reviewed not only the procedures designed to prevent duplication of activities within the Department, but they went even further and took a look to find out if the Department was duplicating the work of other agencies.

The auditors found that in collecting and disseminating Government research reports, the Department's efforts paralleled and duplicated, to a considerable extent, the efforts of other Federal agencies which supplied most of the data. The internal auditors recommended that the Department reevaluate its role in the collection and dissemination of research reports and consult with other Government agencies with the view toward eliminating duplication of effort and program inefficiencies. As a result of the questions raised by the internal auditors, arrangements were made for the Department of Commerce to take over some document distribution functions previously handled by the Department of Defense.

Internal Revenue Service

The internal auditors of the Internal Revenue Service have a monumental task to perform in checking on the adequacy of management controls and recommending improvements in that agency. Among other things, they check on the controls over the receipt and deposit of the billions of tax dollars collected by the Internal Revenue Service each year.

One audit of the ADP activities in this agency resulted in the avoidance of a potential revenue loss of approximately \$4.5 million in unemployment compensation funds because the auditors discovered, and management had corrected, erroneous source data which had been introduced into the machines.

Department of Agriculture

In the Department of Agriculture where the internal audit function is cen-

tralized in the Office of the Inspector General, the auditors found weaknesses in management controls over the measurement of acreage allotments. They found inadequate training and supervision of the "compliance reporters" who are responsible for measuring the acreage planted on a given farm to determine whether the plantings are within the acreage allotments. They also found that the management's regulations did not require checks to be made of the entire farms.

As a demonstration of the result of this breakdown in management controls, a new look in one county alone resulted in the assessment of penalties of more than \$330,000 because producers had overplanted their rice and cotton allotments. The Department changed its regulations and took steps to improve the training and supervision of the reporters.

Audits of Government Contracts

In the revised statement on internal auditing dated October 1, 1968, GAO makes the point that auditing of the performance and records of third parties such as contractors, grantees, or borrowers is an essential aid to the administration of contracts and of grant and loan programs. The degree of interrelationship between such auditing and internal auditing will vary depending upon the nature, size, and scope of agency programs.

Relationship of the Defense Contract Audit Agency and the GAO

An agency of interest and importance to the General Accounting Office, to Government contractors, and to the

Congress is the relatively new Defense Contract Audit Agency (DCAA). Beginning its operations at the start of fiscal year 1966, DCAA already has come to play an important role in the administration of procurement systems of DOD.

It has already attracted the interest of the Congress through the attention of the Military Operations Subcommittee of the House Committee on Government Operations—chaired by Congressman Chet Holifield.

One of the recommendations the Holifield Subcommittee made in its report of March 23, 1966, was that the GAO study and define its relationships with the Defense Contract Audit Agency in the interest of effective liaison, minimizing duplication, and progressive improvements in Government accounting and auditing. We complied with this request, reporting to the subcommittee and the Congress, and testified to the subcommittee on our findings in July 1967. The subcommittee also heard from the Director of the Defense Contract Audit Agency. In a thorough and constructive report issued February 29, 1968, the subcommittee noted the adoption by the Defense Department of numerous GAO recommendations.

I might sum up my remarks on DCAA by stating that there is, basically, no duplication of effort in the audit of contracts by GAO and DCAA; the efforts of our organizations complement each other. To a limited extent, we must perform work in the same areas as those of DCAA in order to evaluate the effectiveness of their contract audits. Beyond that, we are

called upon from time to time for examinations of areas of special interest to the Congress.

To prevent unwarranted duplication of audit coverage, we maintain a close liaison with DCAA both at the Washington level and at regional office levels. Also, DCAA receives copies of our reports relating to contract matters and it reviews proposed Department of Defense responses thereto. In this way the DCAA is kept well informed of our findings and of proposed actions to be taken with respect to our reports.

Audits of Federal Grant-in-Aid Programs

The responsibilities of agency audit staffs have increased in recent years with the expansion of Federal grant-in-aid programs to States and local governments.

Federal grants-in-aid, which amounted to about \$4 billion a year a decade ago—mostly for highways—will, in fiscal year 1969, total nearly \$20 billion, with all the increase going for programs other than highway programs. The total amount of this aid is expected to rise to about \$60 billion a year by 1975.

This involvement means that there is a need for greater interchange of information and ideas, particularly as to how the Federal Government can achieve greater uniformity and consistency in the auditing and accounting requirements it prescribes for assistance programs.

There is also a need for cooperation in developing the principles and standards that the public accounting profes-

sion will apply in making audits of governmental programs where Federal assistance plays a part. With respect to auditing of Federal grants to State and local governments, certain Federal agencies have made progress toward placing considerable reliance on audits performed by others—within State or local units of government or private auditors—with tests as to the adequacy of such audits.

Also, to reduce the total manpower necessary to perform the audit function and to lessen the impact of Federal auditing on non-Federal organizations, many Federal agencies have entered into cross-servicing arrangements. Under these agreements, the agency having a predominant financial interest in Federal programs at a particular non-Federal entity performs the audit with respect to its own programs and the programs administered by other agencies. We believe that the expanded use of such cross-servicing arrangements could serve to further reduce the audit problem, and would enhance the feasibility of determining the degree to which reliance might be placed on the grantee's system of internal control, including accounting and auditing, viewed as to a total system and not only as it relates to individual programs.

Conclusion

Let me close with a statement about the future made by the Comptroller General at a meeting of the Washington Chapter of the Institute of Internal Auditors:

There is no question that a rapid advance in technology is taking place in both com-

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mercial and Government activities. To survive, the internal audit activity must keep pace with this growth. Let's not fall short by failing to exploit new ideas for acquiring and updating staff capability for this challenging job. The General Accounting Office

is vitally interested in the growth and effectiveness of internal audit organizations both within and outside the Federal Government. We stand ready to support you and to help you in any way we can with your specific problems.

721408

Career Development and Rotational Assignments

By Joseph D. Comtois and William D. Martin, Jr.

This article is a synopsis of a group research project in which the authors participated. The project was undertaken in an attempt to determine whether rotational job assignments are favorably regarded by trainees for their career development.

Introduction

As a result of a requirement for a graduate course—entitled “Human Behavior in Organizations” in the College of General Studies, The George Washington University—we joined with three other class members for the purpose of completing a group research project. The three other group members were employed by the Department of Labor, the Civil Service Commission, and the Maritime Administration. The hypothesis chosen by the group for its research project was: “The rotation of trainees among jobs within Federal agencies is favorable toward career development as opposed to non-rotational-type assignments.”

To gather the information necessary to prove or disprove our hypothesis, we developed a questionnaire requesting that recipients provide us with certain general biographic information, as well

as specific information, such as the degree to which their job assignments were of a rotational nature; their preference for this type of assignment; the number of times rotated; the average duration of each assignment; supervisors’ efforts to provide meaningful training; the diversification of work; and whether or not the training programs helped them to more clearly define their career objectives.

These questionnaires were distributed to 166 trainees who had approximately 1½ years’ Government service in one of the four agencies represented by the group. We received 110 completed questionnaires for a 66 percent overall response. The average age of those returning the questionnaires was 27, and their average grade level was GS-9.

Following is a synopsis of the major findings of the study.

Mr. Comtois is a supervisory auditor in the Civil Division. He is currently enrolled at the Massachusetts Institute of Technology where he is participating in the mid-career educational program for systematic analysis. He is a graduate of the University of Connecticut, a CPA (Virginia), and has been with GAO since 1958.

Mr. Martin is a supervisory auditor in the Civil Division currently assigned to the GAO staff at the Department of Agriculture. He holds a B.B.A. degree from Wake Forest College. He is a CPA (Virginia) and has been with GAO since 1959.

Rotation Policy Is Favored

Approximately 85 percent of the 110 trainees included in the overall sample were on rotational assignments, and about the same percentage, including some who were not on rotational assignments, expressed preference for rotational assignments. These trainees indicated that rotation broadened their background or provided a diversity of experience which was beneficial to their career development. Typical comments were: "Get better overall view"; "Diversity of work is more meaningful and enjoyable"; "Helps to improve my understanding of how Government operations are carried out."

By contrast, it was found that between 10 and 15 percent of all trainees did not prefer rotational assignments. For example, in GAO, where rotation applies to all trainees in the division sampled, approximately 14 percent preferred assignments to one audit assignment and expressed a desire to obtain more thorough training in one particular job. In another agency, it was found that, although rotation applied to 70 percent of all trainees, approximately 90 percent expressed preference for a rotation policy. The remaining 10 percent expressed preference for assignments in one office.

In GAO the period of assignment extends, depending upon grade level, from 2 months to 4 years. This rotation policy continues throughout the employee's career. In the other three agencies, rotation is evidently limited to 1 year or less. It was interesting to note that almost 25 percent of the trainees in two of these agencies suggested that rotation programs be extended. Al-

though no such recommendations were made by the trainees in the remaining agency, it was observed that the vast majority in that agency suggested the need for (1) improved training by means of better coordination of rotational assignments from the director of training, (2) improved on-the-job supervision, or (3) additional formal classroom training.

Rotation and Job Satisfaction

A great majority of the trainees in the GAO sample suggested that a 2-month assignment was too brief and that they would obtain a greater degree of job satisfaction if the duration of assignments were longer. The typical duration of assignments for trainees in the other three agencies was found to be 3 months; however, the length of rotations varied. In one of these agencies, where several trainees were rotated on a 2-month cycle, complaints were also made regarding the lack of job satisfaction. In contrast, complaints regarding the lack of job satisfaction were not related to length of assignments in the remaining two agencies where the most frequent length of assignment was 3 months. Thus, it appears that rotations of 2 months' duration are not favored by trainees, because this span of time does not generally afford them sufficient exposure to obtain a sense of accomplishment.

Effectiveness of Rotational Programs

There appears to exist a definite correlation between the effectiveness of rotational training programs and the fact that (1) trainees are permitted to

participate in selecting assignments, (2) policies are administered uniformly, (3) attitudes of supervisors are favorable toward the training program, (4) supervisors are adequately trained, and (5) work is sufficiently diversified. When responses on these factors were favorable, trainees also responded more positively to the question asking whether the training program helped them to clarify their career objectives.

In the GAO sample, responses were highly favorable toward supervisors and work diversification, but only 60 percent in that sample indicated that the training program assisted them to more clearly define their career objectives.

We believe that the lack of trainee participation in selecting assignments is a major factor for the lower favorable response to the question concerning clarification of career objectives.

GAO trainees indicated that, as a general rule, they did not participate in selecting assignments. In contrast, trainees in the other three agencies stated that they had participated 40, 67, and 95 percent of the time. It should be noted that, since rotation in GAO continues throughout the individual's career, the objectives of initial training, maximizing exposure to different Government operations in a short period of time, may not make trainee participation in selecting assignments feasible.

In another agency, trainees severely criticized the lack of diversity in, and adequate supervision of, assignments. Also 40 percent participated in selecting assignments, and about 55 percent stated that the training program assisted them to more clearly define

career objectives. Almost 60 percent of the trainees suggested a need (1) to improve the training program by means of a better administration of rotation training policies from the director of training, (2) for additional formal classroom training, (3) for improved on-the-job supervision, or (4) for better trained supervisors.

From the responses, it appears that small groups of trainees within different bureaus of an agency were under the direction of different training officers. Each officer appeared to be applying different criteria, particularly with respect to such factors as trainee participation in selection of assignments and duration of assignments. It seems that the application of differing training policies, especially to smaller groups of trainees between bureaus of the same agency, fosters significant dissatisfaction among trainees.

Where the trainee groups are larger, the fact that rotations are made within a department, bureau, or division does not appear to alter the results obtained.

In the remaining two agencies included in the sample, a high percentage of positive responses was given to questions concerning diversity of work, adequacy of supervision, trainee participation, and clarification of career objectives. In both agencies, over 20 percent of the trainees had no criticism of the training policy and about the same percentage suggested the need for more rotation as a method of improving the training program. Over half of the trainees in one of these agencies suggested the need for a more adequate feedback and information system.

Other Factors Warranting Research

Insufficient time, statistics, and narrative data made it difficult to correlate the effectiveness of training policies to the ratio of female to male trainees, recruitment under different types of appointments, distribution of major categories of work performed, number of different college backgrounds, or the relationships of work to college major. Also, since most trainees included in the overall sample were on rotational assignments, we could not objectively evaluate the effectiveness of nonrotational assignments on career development. We recognize that for some types of work nonrotational assignments may be more beneficial. We believe that these areas may be worthwhile to research to provide information concerning the improvement of training policies and procedures and thereby benefit the long-range personnel plans and goals of an agency.

Conclusion

An overwhelming majority of trainees have very favorable attitudes toward a training program which encompasses rotational job assignments. However, about 10 percent of the trainees included in our sample did not prefer a policy of rotation among job assignments.

Although most trainees prefer a rotational training policy, certain criticisms

were directed at the method of implementing the rotational training programs. From the nature of these criticisms, we have concluded that the factors which appear to be directly correlated to the most effective rotational policies are: (1) Uniform administration and coordination of training policies, preferably under one training officer, (2) sufficient diversification and challenge of assigned work, (3) adequate duration of training assignments, preferably of at least 3 months or varying between 3 and 6 months, depending upon the nature of the assignment, (4) favorable attitudes of supervisors to training programs, (5) sufficient training of supervisors to conduct on-the-job training, (6) improved formal training programs, and (7) the participation of trainees in selecting assignments.

A high percentage of positive responses to trainee participation in selecting assignments was correlated with favorable responses in all other categories questioned. This was particularly noticeable with respect to favorable answers in connection with the question that the training program helped trainees to more clearly define their career objectives.

The research performed on this project resulted in the conclusion that our hypothesis was unequivocally proved in that the rotation of trainees among jobs within Federal agencies is favorable toward career development.

721409

The General Accounting Office and Wage Determinations Under the Davis-Bacon Act

By Henry Eschwege and Warren A. Brown

This article discusses the legal and audit responsibilities of the General Accounting Office with respect to an important Federal law relating to wages paid under Government construction contracts.

Statutory Wage-Determining Authority of Secretary of Labor

The Davis-Bacon Act of 1931, as amended in 1935 (42 U.S.C. 276a), provided for the first time legislation requiring the payment of minimum wages to laborers and mechanics employed under federally awarded contracts in excess of \$2,000 for construction of public buildings and public works. The act was amended further in 1941, and in 1964 the definition of the basic wage rate was extended to include fringe benefits.

The act provides that the minimum wages:

* * * shall be based upon the wages that will be determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on pro-

jects of a character similar to the contract work in the city, town, village, or other civil subdivision of the State in which the work is to be performed, or in the District of Columbia if the work is to be performed there. * * *

The principal initial purpose sought to be achieved by the act was a protection of communities affected by such construction from the depressing influence of lower wages at which workmen might be hired elsewhere—outside a community—and brought onto the work.

Legislative proceedings relative to the act indicate that determinations of prevailing wages were expected to be no more than factfinding tasks and that the Government would determine minimum wage rates to be paid by the contractor on the basis of findings pertaining to wage rates paid in the area.

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Mr. Brown, a supervisory investigator of the Civil Division, is at present in charge of GAO reviews of wage rate determinations made by the Department of Labor. He attended Benjamin Franklin University and Burdett College, and joined the General Accounting Office in 1941.

Subsequent legislative extensions of minimum wage coverage to federally assisted contracts have adopted the concept that contracts resulting from federally assisted construction, even though not awarded by the Government, similarly should support locally prevailing wage standards.

There are over 40 such related acts involving construction and containing prevailing wage provisions.

A few of the statutes conferring wage-determining authority upon the Secretary of Labor are as follows:

United States Housing Act of 1937 and the *Housing Act of 1949*, as amended. These acts cover low-rent public housing, slum clearance, and urban renewal.

National Housing Act, as amended. This act covers civilian housing projects, military housing projects, housing for the elderly, and nursing homes.

School Survey and Construction Act, as amended. This act covers construction, alteration, remodeling, or improving of schools in federally affected areas under Federal grant-in-aid programs.

Hospital Survey and Construction Act, as amended. This act covers construction of hospitals and other medical facilities, such as clinics and nurses' homes under Federal grant-in-aid programs.

Federal-Aid Highway Act of 1956, as amended. This act covers initial construction by the States of the Interstate System of highways.

Federal Water Pollution Control Act, as amended. This act covers construction of sewage treatment plants with Federal grants.

Also, about 35 States have prevailing wage laws applicable to projects financed with State or local funds, many of which are referred to as the little Davis-Bacon Acts.

Responsibilities of the Department of Labor

The Secretary of Labor is responsible for wage determinations under the Davis-Bacon Act and under other Federal acts containing prevailing wage provisions. Within the Department of Labor responsibility for operation of the wage-determination program has been delegated to the Solicitor of Labor. The accumulating of wage data and the issuing of wage rate determinations are performed in Washington by the Division of Wage Determinations of the Office of the Solicitor. Recently the enforcement requirements of the Davis-Bacon Act were transferred within the Department from the Solicitor's office to the Wage and Hour and Public Contracts Divisions.

Under Reorganization Plan No. 14 of 1950, the Secretary of Labor is directed to prescribe appropriate standards, regulations, and procedures in order to ensure coordination of administration and consistency of enforcement of the labor standard provisions of various acts. The plan further provides that these appropriate standards, regulations, and procedures shall be observed by the various Federal agencies. To the extent that these standards, regulations, and procedures are consistent with all applicable laws, including the terms of the Davis-Bacon Act, they have the force and effect of law and must be followed and applied in the resolution

of controversies. However, neither the Davis-Bacon Act nor Reorganization Plan No. 14 confers on the Department of Labor the role of the final arbiter.

Regulations have been established by the Secretary of Labor relative to labor standards and procedures including (1) obtaining and compiling wage data, (2) determination of wage rates, (3) field surveys and hearings, (4) definitions of area, prevailing wage rates, public construction, etc., and (5) review and decision functions of the Wage Appeals Board.

The Wage Appeals Board was established by the Secretary of Labor on December 30, 1963. The three members of the Board were selected by the Secretary, and they took the oath of office on April 8, 1964. The first members of the Board were, and still are, Oscar S. Smith, former Director of Labor Relations of the Atomic Energy Commission; Clarence D. Baker, formerly with the Corps of Engineers, retired; and Stuart Rothman, former Solicitor of Labor and General Counsel of the National Labor Relations Board. Mr. Smith was named Chairman.

The Wage Appeals Board decides appeals only. This means that a petitioner must have pursued all his usual remedies and means of relief to a decision in the Office of the Solicitor before the Board will consider it.

The authority of the Board is limited to four classes of appeal cases: (1) Wage determinations issued under the Davis-Bacon Act and related statutes, (2) debarment cases where the Solicitor of Labor has ruled that a contractor or subcontractor is ineligible for a period of 3 years to receive any con-

tracts, (3) special category cases including disputes concerning the payment of prevailing wage rates or proper classification, and (4) cases where the Solicitor's rulings and the agency recommendations differ for adjustment of liquidated damage assessed for violation of workweek and overtime compensation requirements under the Contract Work Hours Standards Act.

Relationship of GAO to the Davis-Bacon Act

Although there have been several instances of disagreements as to functions and authority of the GAO under the Davis-Bacon Act and the authority granted by law to the Department of Labor in regard to the implementation of the act, we believe that the Davis-Bacon Act expressly places the authority and responsibility for making wage adjustments and determinations for debarment in the Comptroller General.

In regard to wage adjustments, the Davis-Bacon Act authorizes and directs the Comptroller General to pay directly to laborers and mechanics from any accrued payments withheld under the terms of the contract any wages found to be due laborers and mechanics. In regard to debarments, the act also authorizes and directs the Comptroller General to distribute a list to all departments of the Government showing the names of persons or firms whom he has found to have disregarded their obligations to employees and subcontractors. No contract shall be awarded to the persons or firms appearing on this list until 3 years have elapsed from the list date.

We make our own evaluation of the evidence submitted to us in debarment cases and take such action as our evaluation warrants, independent of the expressed views of the Department of Labor or the contracting agency.

Our legal responsibilities in procurement matters have also involved us in deciding questions in many instances on the applicability and interpretation of the Davis-Bacon Act. Some of the decisions have been in agreement with the expressed views of the Department of Labor and some have not.

As examples of GAO decisions in the last 12 years relating to the Davis-Bacon Act, we have chosen a couple of the more well-known and most quoted decisions pertaining to wage determinations and wage adjustments under the act. Summaries of these two decisions follow.

B-132044, June 10, 1957

On May 28, 1957, the Assistant Secretary of the Army requested our decision as to whether a wage predetermination by the Secretary of Labor under the Davis-Bacon Act, which established a rate for spray painters with the restriction "subject to the practice prevailing in the area," precluded the use of spray painters if this method of painting was not approved by a majority of painters and painting contractors in the area. The contracting agency believed that such an interpretation would restrict advertising and award of work to brush painters and thus adversely affect the Government's interest.

The problem arose in connection with the wage determinations for extensive painting work to be contracted for at

Fort Belvoir, Va. The invitation for bids provided that all paint after the first coat, on either the exterior or interior surfaces might be applied by brush, spray, or roller. It had been concluded by the Department of the Army that a satisfactory job could be obtained by using the spraying method and that a considerable saving could be expected if such a method were used.

The inclusion in the wage determination, by the Secretary of Labor, of the phrase "subject to the practice prevailing in the area" was apparently interpreted by some of the prospective bidders and the painters' union to mean that the contracting officer must have the painting done in accordance with the labor practice prevailing in the area. It appeared, at that time, that the area practice, as established by collective bargaining agreements between painters' unions and painting contractors, precluded the use of spray painting and that the insertion of this phrase by the Secretary of Labor restricted competition on the project.

We did not agree with the interpretation that the painting would have to be done in accordance with the prevailing labor practice in the area. In our decision of June 10, 1967, we stated that it would not be proper to eliminate the possible use of the spray method on the project. We stated further that the Secretary of Labor was not granted discretion under the Davis-Bacon Act to stipulate a contract condition, whether or not based upon prevailing local practice, which has no relevance to the wage requirements.

The Comptroller General ruled therefore that, if the inclusion in the wage

determination of the phrase "subject to the practice prevailing in the area" should be interpreted as a directive for the performance of the work in accordance with a locally prevailing practice which would preclude the use of equipment determined to be necessary or desirable by the contracting agency in obtaining satisfactory work at a minimum cost to the Government, the inclusion of such a phrase in the wage determination and in the contract specifications would not be authorized.

This decision, which was informally agreed to by the Department of Labor, has been cited many times by contracting agencies, as well as by our Office, as the basic ruling specifying that the Government is not restricted to the use of construction methods dictated by local practices which might preclude it from using equipment or categories of workers considered necessary or desirable by a contracting agency in carrying out its responsibilities (36 Comp. Gen. 806).

B-147602, January 23, 1963

A later interpretation was based on a request for an opinion by our Office on the Department of Labor's ruling and policy in a case concerning compliance by contractors with the minimum wage requirements of the Davis-Bacon Act in connection with construction of a runway, taxiways, and aprons on an airbase in Texas.

A controversy arose in connection with the rate of wages paid by the contractors to workmen participating in the installation of fiber duct conduit to be used for electrical wiring under another contract. The contractors were

advised by the contracting agency, the Corps of Engineers, that, pursuant to area practice rulings by the Department of Labor, they were required to pay workmen who made the installation and performed associated work no less than the minimum wages prescribed for electricians. These workmen had been classified and paid by the contractor at a much lower rate as laborers, pipelayers, or carpenters.

We found that a substantial, although not preponderant, practice of installing similar ducts with the use of laborers and pipelayers existed in the locality. We concluded therefore that, since a substantial practice of using laborer and pipelayer classification existed, the classifications used by the contractors should not be questioned for wage adjustment purposes.

GAO Audit Work

In addition to our having legal responsibilities, we have audit responsibilities relating to wage determinations under the Davis-Bacon Act. In this connection we may question actions taken by the Secretary which we believe are outside the proper scope of the authority given to him under the Davis-Bacon Act. We have no authority, however, to amend wage rate determinations and may only report to the Congress instances in which we believe that the authority has been erroneously exercised and recommend corrective action.

Our detailed reviews of wage determinations issued by the Department are initiated in various ways. In our regular audits of the activities of the Department of Labor, we make periodic re-

views of its general operations and methods and of the procedures used in administering the wage determinations program under the Davis-Bacon Act. In these reviews, we examine specific wage determinations issued or to be issued for a specific area or project. Other limited and detailed reviews are made primarily as a result of congressional inquiries or, as it fits into our work program, on protests of erroneous wage rates from construction organizations, contractors, or other interested parties.

We have been making detailed reviews since 1962 of wage determinations issued by the Department of Labor for various federally supported projects in certain areas of the country.

On the basis of these reviews, we have issued six reports to the Congress which are available to the public and several other reports which were addressed to individual Members of the Congress. The reports issued to the Congress pertained to the minimum wage rates established for the following projects or areas:

- Capehart housing project, Quantico, Va., issued June 1962.
- Federally financed housing construction, southeastern area of the United States, issued August 1964.
- Federally financed building construction, New England area, issued January 1965.
- Federally financed housing construction, Dallas-Fort Worth area, Tex., issued March 1965.
- Dam construction, Carters Dam, Ga., issued December 1966.
- Federally financed housing in the Washington, D.C., metropolitan area, issued September 1968.

Capehart Housing Project, Quantico, Va.

The first report covered the results of our review of the circumstances pertaining to the Secretary of Labor's determination of prevailing wage rates for use in contracting for construction of the 450-unit Capehart housing project at the Marine Corps Schools in the vicinity of Quantico, Va.

In our report to the Congress in 1962, we stated that the wage rates determined by the Secretary for the Quantico project were equal to those negotiated between certain contractor organizations and labor organizations in the Metropolitan Washington area. We informed the Congress that these determined rates did not, in our opinion, fairly represent the wages prevailing in the locality of the base for the type of construction provided for by the National Housing Act—the law which authorized the construction of the project. We pointed out further that, as a result of the upward revisions of the minimum wage rates for construction of this project, additional labor costs amounting to about \$1.1 million had necessitated deletions of facilities that had been planned and substitution of materials on the project.

This report was used and was referred to many times in the hearings held in 1962 by the General Subcommittee on Labor of the House Committee on Education and Labor on the Davis-Bacon Act and its administration. Also, on the basis of this report, the Department revised its procedures and, in making subsequent wage determinations, restricted the

area to be considered to the Quantico Military Reservation itself and, if sufficient construction were not found in Quantico, to the surrounding counties. Lower wage rates were determined as the minimum rates for some of the subsequent work on the base.

Later reviews in other areas of the country showed that the negotiated wage rates for commercial building construction were also being established as minimum rates for other military and low-rent housing projects resulting, in our opinion, in considerable additional labor costs to the Government on construction contracts.

Federally Financed Housing Construction, Dallas-Fort Worth Area

This report covered our review of the determinations by the Department of the minimum wage rates to be paid to mechanics and laborers employed on certain federally financed housing construction in the Dallas-Fort Worth area. We stated in this report that the minimum hourly wage rates were improperly established at the higher union-negotiated rates paid principally on commercial/industrial-type building construction, rather than at the lower wage rates prevailing in the project area on private housing construction similar in character to the federally financed housing projects. On the basis of our review of projects having a contract value of about \$15 million, we estimated that the difference between the wage rates determined by the Department and the rates that we found to be prevailing amounted to about \$1.5 million.

We recommended in this report that the Department of Labor make more realistic determinations of prevailing wage rates on the basis of proper identification of the type of construction similar to the federally financed construction and on the basis of proper identification of the locality involved. We also recommended that the Department institute on-the-site surveys of both union-negotiated and other wage rates being paid on similar construction in the area.

We understand that the Department recently requested the homebuilders association in the Dallas-Fort Worth area to make a survey of housing construction and that these rates may be used in determining prevailing rates on federally supported housing in the area.

Federally Financed Housing Construction, Washington, D.C., Area

This is our most recent report and covered the results of our review of determinations of the minimum wage rates required to be paid to construction workers in certain federally financed military family housing and low-rent public housing projects in the Washington, D.C., metropolitan area.

We stated in the report that the Department prescribed minimum wage rates payable to construction workers on four federally financed housing projects in the Washington metropolitan area, which were significantly higher than the wage rates being paid in the area on comparable private residential construction. The Department had, for the most part, prescribed the negotiated wage rates applicable to commercial-

type building construction in the Washington metropolitan area as the minimum wage rates payable on federally financed military family housing and low-rent public housing construction in the area.

We believe that the higher minimum wage rates prescribed by the Department for the construction of four federally financed projects during the fiscal years 1965, 1966, and 1967 resulted, or will result, in extra construction costs estimated at \$1.4 million.

We recommended that the Department (1) prescribe the prevailing wage rates for residential construction in the Washington metropolitan area as the minimum wage rates applicable for similar military family housing and low-rent public housing construction in the area, (2) make greater use of onsite surveys to supplement and verify data obtained from interested parties to serve as a basis for making minimum wage determinations applicable to federally financed housing construction in the area, (3) undertake a general reexamination of its policies and practices for making wage determinations for military family housing and other federally financed and subsidized housing throughout the country, and (4) state, in its area wage determinations, the residential construction wage rates found to be prevailing in the area of the housing construction.

The Department has informed us that it will determine the residential rate for military housing construction wherever a separate and different residential rate exists. We will continue to review such determinations to see how this new policy is implemented, since it could

result in significant savings to the Government. We believe, however, that the policy should be extended to other federally constructed and assisted projects, such as low-rent public housing.

Construction of Carters Dam, Georgia

We are also reviewing wage determinations for other types of construction, such as heavy construction and highway construction. In our report to the Congress in December 1966 on our review of the determinations of wage rates for construction of Carters Dam in Georgia, we pointed out that the wage rates determined by the Department as prevailing, and which thus became the minimum rates payable for construction of the Carters Dam project, increased an average of about 63 percent during a 22-month period. We estimated that, as a result of the wage rate increases, the contract value of the second phase of the work included about \$1.7 million in extra direct labor costs which we believe were considered by the contractors in their bids and accordingly increased the project cost to the Government.

We concluded that lower minimum wage rates would have been determined had appropriate consideration been given to (1) the wage rates prevailing on similar heavy and highway construction work in the area, instead of using as a basis the wage rates determined and paid for prior work of a specialized and hazardous nature at the dam, (2) the wage rates paid during the representative peak payroll periods on similar work in the area, instead of using the rates paid only during the last few

weeks of just prior work on the dam, and (3) the wage practices of other contractors in the area, instead of using the higher rates negotiated by an outside contractor for a small part of his work on the dam.

In commenting on our report, the Department stated that, principally, it did not consider highway and road projects in its determination of prevailing wages for the Carters Dam construction because to do so would have necessitated the use of the Carters Dam rates to arrive at the prevailing rates for subsequent highway construction throughout the area, which would be in contravention of applicable law and regulations. The Department therefore believed that it was justified in rejecting initially the highway and heavy construction rates for the Carters Dam project.

We did not agree with this interpretation, and we stated that, in our opinion, the expectation of having to use Carters Dam rates in determining future highway construction in the area, without consideration of the rates paid on other highway construction, did not appear to be a reasonable basis for rejecting the recommendations of the contracting agency as to construction similar to that at the dam and as to wages prevailing in the area.

How Contractors Can Help

We believe that the most important part that contractors can play to assure that the prevailing rate is determined is to furnish the Department adequate and representative wage data. In supplying this wage data, accurate information should be presented to the De-

partment showing the type and location of the project of work, the workers' classifications used on the various types of construction included in the project, the wage rates paid to these workers, the number of workers in each classification receiving the rates reported, and the dates that the work started and was completed. The wage information supplied should generally be taken from a recent peak payroll period of the project. To assist contractors in collecting and submitting such data, the Department will provide them with wage data forms, or they could use a wage rate data form composed and printed by contractor organizations.

We have seen instances where contractors did not reply to an invitation by the Government to submit wage data because they were not interested at a specific time in bidding on Government construction. Some of these contractors subsequently decided to submit bids and therefore protested the high rates which by then had been established without the data that had been solicited from such contractors.

There are protest procedures which are available to contractors who believe that certain wage rates determined by the Department of Labor are not the prevailing rates. Such protests, to be effective, must be properly supported by wage data. If, after making protests to the Department, the contractor is still not satisfied with the Department's decision as to the wage rates, he may appeal the case to the Wage Appeals Board in accordance with procedures established for such appeals.

Contractors and their organizations will most likely be interested in all wage

determinations issued for their county or area. They will therefore want to receive information of all such determinations because they may establish a pattern of rates not only for the project for which they are set, but also for similar projects in the future. Needless to say, as responsible citizens, contractors have a legal obligation, after wage rates have been finally set, to pay their employees while working on Government construction no less than the minimum rates established for the work even if they do not agree with the rates as determined.

We would not want to leave the im-

pression that there is a systematic tendency to set a significant proportion of wage rates higher for Government construction than those actually prevailing for similar private construction. We do not know this to be a fact, but we have found in our reviews that some determinations have resulted in rates higher than those actually prevailing for similar construction in specific localities. We believe that the basic difficulty, however, is that of obtaining adequate wage data for the determination of rates from contractor organizations, individual contractors, and, where applicable, from labor organizations.

721410

The Collection of Unreasonable Motor Carrier Freight Charges

By Charles J. Goguen, Jr.

This article discusses GAO legal and audit responsibilities relating to the reasonableness of charges by motor carriers for transporting Government property.

Many people may be surprised to learn that the U.S. Government's direct procurement of commercial transportation services amounts to about \$3.5 billion annually. Over one-half of that amount represents services procured on standard transportation forms from all types of for-hire transportation companies whose paid bills for those services are sent by Government agencies to GAO for audit. Other expenditures for direct procurement consist primarily of contract services and payments by Government corporations that are audited on site.

A small part of this audit, the collection of unreasonable motor carrier freight charges, provides one illustration of the audit and legal adjustments required in our continuing efforts to ensure that the Government pays no more than reasonable prices for commercial transportation services.

The principal statutory authorities for the GAO audit of the paid bills or vouchers of all types of for-hire transportation companies are section 236 of

the Revised Statutes, as amended by section 305 of the Budget and Accounting Act, 1921 (31 U.S.C. 71), and the Accounting and Auditing Act of 1950 (31 U.S.C. 65). Correlative to these authorities is section 322 of the Transportation Act of 1940, as amended (49 U.S.C. 66), which generally requires the bills of for-hire transportation companies to be paid upon presentation and prior to audit by the General Accounting Office. Until amended in 1958, section 322 also reserved to the United States the right to deduct (setoff) any overpayment to any common carrier (a form of for-hire transportation company) from any amount subsequently found to be due that carrier.

One type of for-hire transportation company whose paid freight bills are audited is the common carrier by motor vehicle. The Congress in 1935 included provisions for its economic regulation in part II of the Interstate Commerce Act. Entry into the industry, i.e., the granting of certificates of public convenience and necessity, is regulated by

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the act, but of more interest here is the fact that transportation pricing in the industry also is regulated.

A fundamental aspect of regulated transportation pricing is its twofold nature: the law provides that the prices or freight rates and charges must be legal or applicable as well as lawful or reasonable. A legal charge is one which conforms to the carriers' tariffs, required by section 217 of the act to be filed with the Interstate Commerce Commission; a lawful charge is one which is legal—because it is made in accordance with tariffs filed under section 217—but which also withstands a challenge that it does not conform to section 216 of the act, which requires the charges in tariffs filed under section 217 to be just and reasonable and which declares unlawful every unjust and unreasonable charge.

The Interstate Commerce Commission (ICC) has exclusive jurisdiction to determine the reasonableness of the tariff charges of regulated for-hire surface transportation companies. And as to common carriers by motor vehicle, part II of the act was assumed by the transportation industry to give the ICC the power to declare unreasonable a rate assessed by a carrier from a tariff filed under section 217 of the act as well as the power to prescribe a reasonable rate for the future.

Prior to August 26, 1958, GAO made no distinction in the audit between freight charges which were in excess of those in the tariffs and freight charges which were not in excess of those in tariffs, but which nevertheless were considered to be unreasonable; both types were called overpayments. We had clear authority under section 322 to col-

lect overpayments consisting of charges in excess of those in tariffs and we had held that we also had the authority to collect, by setoff, those overpayments thought to be unreasonable. Since the ICC has exclusive jurisdiction, we could not make determinations of reasonableness or unreasonableness of tariff rates and our collection action was based on our determination of whether the facts and circumstances of the overpaid transaction were comparable to those involved in cases in which charges based on similar tariff provisions had been declared unreasonable by the ICC (37 Comp. Gen. 571 (1958)).

In 1958 section 322 was amended. The amendment, contained in Public Law 85-762 (72 Stat. 859, approved Aug. 26, 1958), among other things, changed the words "overpayment to" to "overcharges by" and defined the term "overcharges" to mean freight charges in excess of those prescribed by tariff or section 22 quotations. While preserving our right to collect, by setoff, freight charges in excess of those prescribed by tariff, now defined as overcharges, the amendment effectively foreclosed us from collecting, by setoff, excessive freight charges thought to be unreasonable based on ICC precedents. However, a judicial remedy for the collection of those charges still was thought to be available to shippers.

After the passage of part II of the Interstate Commerce Act, a procedure to collect allegedly unreasonable charges was developed. Under the procedure an aggrieved shipper could file in a court a common law action for damages or reparations. Because determination of the reasonableness of tariff

rates rests exclusively with the ICC, the court, while retaining jurisdiction of the action, referred the question of reasonableness to that agency—*Bell Potato Chip Co. v. Aberdeen Truck Line* (43 M.C.C. 377 (1944)). Taking advantage of this judicial remedy, the GAO Transportation Division adopted procedures under which the involved department or agency was notified of the allegedly unreasonable charges and of the availability of the appropriate judicial remedy.

In May 1959, part of the judicial remedy was abrogated; the Supreme Court in *T.I.M.E. v. United States* (359 U.S. 464) held that a shipper of goods by a certificated motor carrier could not challenge in postshipment litigation the reasonableness of the carrier's charges which were made in accordance with the tariff governing the shipment. In support of this conclusion, the Court found that a common law action for past unreasonableness did not survive the passage of part II of the Interstate Commerce Act and was inconsistent with the statutory scheme.

This ruling only affected part of the judicial remedy: shippers still had available procedures by which the ICC could be asked to proscribe for the future an allegedly unreasonable tariff rate or charge. Thus, and with the approval of the Department of Defense and of the General Services Administration, in 1960 we changed our procedures and began reporting allegedly unreasonable tariff rate or charge situations to the responsible procuring department or agency with our recommendations for relief for the future.

As a result of the decision in the *T.I.M.E.* case, we recommended favorable consideration of legislation giving shippers a right to sue for reparations of charges based on unreasonable rates on past motor carrier shipments. These efforts culminated in the enactment of Public Law 89-170 (79 Stat. 648, approved Sept. 6, 1965). The effect of part of this law—which to date is unchallenged—is to reinstate the motor carrier reparation procedure which was in effect prior to the decision in the *T.I.M.E.* case.

To implement this law, GAO adopted in 1966 a program to collect unlawful motor carrier freight charges. The Transportation Division selects motor carrier overpayments involving allegedly unreasonable rate situations and reports them to the transportation groups in the Office of the General Counsel for consideration of collection action.

The overpayments are carefully checked in the transportation groups and in each case the billing motor carrier is apprised by letter of the overpayment and of the ICC precedents supporting it; to obviate the expense of a protracted law suit, the carrier is asked to refund the overpayment.

Our refund record in some unreasonable rate situations is improving (as of October 1968 motor carriers had refunded about \$85,000); however, in most of the cases the carriers have refused to refund and we have started the necessary reparation proceedings.

After working closely with the Department of Justice in developing the

MOTOR CARRIER FREIGHT CHARGES

necessary court papers for use in reparation suits, the Department, at our request, has filed 38 suits against common carriers by motor vehicle asking recovery of over \$160,000 in repara- tions. In most of these suits, court ac- tion has been held in abeyance to allow the parties to file complaints with the ICC. There have been no final ICC decisions in any of the cases so filed.

721411

An Approach to the Audit of Research and Development Activities

By Harold H. Rubin

This article is based on addresses made by the author on September 18, 1968, before the Cleveland Chapter, Federal Government Accountants Association, and on October 10, 1968, before the Northern Virginia Chapter, Federal Government Accountants Association.

A very significant amount of money is being spent by the Government for research and development. During recent years, about \$16 billion a year has been spent for research and development, of which about half involves the Department of Defense. Although such amounts themselves are staggering, the actual impact of these expenditures on the economy of the Nation is much greater. In effect, the amount appropriated for research and development is somewhat like the peak of an iceberg; only a small part is directly visible.

Research and development expenditures have a sort of mushrooming effect. A relatively nominal research and development effort may lead to a major weapon system development and production program involving billions of dollars, hundreds of contractors and subcontractors, new industries and facilities, migration of personnel, etc. The geographical shifts in concentration of industry and scientific personnel be-

cause of research and development programs have been of major concern to the Government, and some steps have been taken to develop new areas of technical competence to stop further shifts.

The sudden growth of research and development industrial parks in such areas as Boston, Huntsville, Los Angeles, San Francisco, and Washington, D.C., is a good illustration of this mushrooming effect. In fact, there are now 377 scientific firms in the Washington area alone, employing almost 35,000 scientists and engineers and 100,000 supporting personnel.

Research and development expenditures involve not only tremendous costs, but they are particularly difficult to control. As stated by the House Committee on Appropriations in its report of July 18, 1968, on the Department of Defense Appropriation Bill for 1969 (H. Rept. 1735):

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AUDIT OF RESEARCH AND DEVELOPMENT

Research and development efforts are probably the most difficult of program areas to manage since they, by definition, deal largely with the unknown. Projects which appear to offer great potential while on paper sometimes turn out to be impossible of accomplishment or of limited effectiveness.

On October 3, 1968, the Senate amended the Department of Defense Appropriation Bill for fiscal year 1969 to limit the amount of indirect expense allowable under grants or contracts for research projects to 25 percent of direct costs. The record indicates that this amendment was adopted because of concern over the apparent waste in research activities.

After consideration by the Conference Committee, the Senate amendment was deleted. However, the Conference Committee's report, which was concurred in by the Senate and the House of Representatives, directed that "new and comprehensive studies should be made by the General Accounting Office, appropriate legislative committees, and the Appropriations Committees * * * directed towards achieving a uniform formula for the ascertaining of indirect costs on research grants throughout the entire government." Thus, it is clear that there is considerable concern over the effectiveness and efficiency of research activities.

Our basic approach to the audit of research and development in the Department of Defense has been to become acquainted with the management levels of the Office of the Secretary of Defense and the military services that are responsible for directing these activities. One objective is to identify the basic management organizations involved and to gain a working knowledge of

how they operate, what they do, what their major problems are, and what changes are in process.

It must be recognized that scientists and engineers are not accustomed to having their activities reviewed by outsiders. For example, there has been practically no internal audit coverage of research and development activities in the Department of Defense. Consequently, it has been extremely important that we establish mutual understandings with key officials so that our work could be useful. To do this, we have met with the Director of Defense Research and Engineering in the Office of the Secretary of Defense, and with the Assistant Secretaries (Research and Development) of each of the military services. In addition, we meet every 6 months with these officials or their alternates to discuss our work and our plans. These meetings have been extremely helpful in providing the atmosphere needed to enable our work to be constructive.

In addition to meeting with officials responsible for direction of the technical programs and activities, we have established a close liaison with the internal audit agency officials. As you know, one of our cardinal principles is to give due regard to the effectiveness of internal controls, including internal audit, and this liaison is particularly important when there has been little internal audit coverage. I might add that we have already seen signs that the research and development area will receive internal audit attention in the Department of Defense.

We also meet periodically with the staffs of the numerous congressional

committees that are concerned with research and development to discuss our work and obtain insight into matters of congressional concern. As an agency of the Congress, we naturally aim to conduct work in areas of major congressional interest.

We have organized our staff into four groups, each assigned to an identifiable area of research and development in the Department of Defense. We felt that this should permit each of these groups to obtain a more intimate knowledge of the organizations involved and the problems that warrant attention.

One of these areas is concerned primarily with basic research and exploratory development, generally conducted at Government laboratories or through contracts or grants awarded to universities, "think factories," or private contractors.

Another group is concentrating on the management techniques and the decisionmaking processes involved in the development of categories of items such as ammunition and tactical vehicles.

A third group is concerned mainly with the development of major weapons systems. A primary effort for this group at this time is the review of the Army's SENTINEL program. This program at present is priced at some \$5 billion, and it may eventually cost many times that amount. We have been requested by the Joint Committee on Atomic Energy to maintain a continuing review of this program. As stated by the Chairman:

By raising questions where it appears appropriate, the General Accounting Office can aid the Systems Manager, the Atomic Energy

Commission, and the Joint Committee and provide the opportunity for taking timely corrective action to avoid or minimize large overruns, delays or other management problems.

The fourth group is concerned with a variety of broad management areas, many of which also apply to other agencies of the Government, such as the National Aeronautics and Space Administration and the Atomic Energy Commission. For example, this group is concerned with such diverse matters as the rights to inventions arising from Government-financed research and development programs, the use of non-profit organizations organized at the request of the Government to help conduct research and development activities, the dissemination of scientific and technical information to avoid unnecessary duplication of effort, contractors' independent research and development, and test and evaluation activities.

The kinds of work assigned to these various groups differ substantially. However, our concern in all of these areas is basically the same: how well are they being managed—are the desired products of these efforts being obtained and, if so, are they being obtained efficiently and economically?

Our approach can best be illustrated by some recent examples.

Acceptability of Study Reports

One technique we have used with some success is to review a Government agency's own evaluations of research products as a basis for ascertaining the adequacy of management controls.

For example, a selective review was made of research study contracts

awarded by the Army to a nonprofit corporation—a “think tank.” In reviewing the agency’s files, our staff found that a majority of the study reports submitted by the nonprofit corporation, in satisfaction of contractual terms, were considered by agency officials to be less useful than had been expected or to require major revision. One study report was described by the reviewer as “a rehash of old, if not tired, ideas.” Another study report was criticized as not adding any new thoughts and failing to provide any information not previously known.

We inquired into the reasons for such unacceptable reports and found that there had been ineffective administration by the agency. The Army had not provided the contractor with sufficiently specific statements of work to be performed, had not required timely and complete progress reports from the contractor, and had not adequately reduced requests and understandings to writing.

As a result of our review, the Army instituted new procedures which, if properly implemented, should help to cope with the deficiencies we reported and bring about more useful research studies. Our review was reported to the Congress in March 1968 (B-133209, Observations on the Administration by the Office of Civil Defense of Research Contracts Awarded to Hudson Institute, Inc.).

We expect to use this approach, where appropriate, in future reviews.

Ammunition Development

A somewhat different approach was used in reviewing the development of

ammunition. We made a study of the management controls established by the Army over the development and production of new types of ammunition. We selected this commodity for review because of previous findings that unsatisfactory ammunition had been produced.

The prescribed management system seemed quite satisfactory; at specified intervals during the development process, key representatives of the various affected organizations are supposed to meet and review the status of the development project in order to determine whether additional effort and funding are warranted.

We selected a few development projects for study in order to test this system in actual practice. We found that in most cases the required reviews, known as in-process reviews, had not been conducted and that top management was not even aware that these reviews were not being made.

We had deliberately selected for review items that were still in the development stage. Our purpose in doing so was to ensure that our findings would be current. Although we had identified a weakness in management, we were still faced with the question of whether these projects, still in development, would be unsuccessful or unnecessarily expensive because of the failure to conduct required in-process reviews.

In this connection, we referred to previous reviews where we found that certain types of ammunition had been produced even though recognized development problems had not been resolved and that, as a result, much of this ammunition was not acceptable. We

found that, as in the current cases we were reviewing, no in-process reviews had been conducted during the development of these items. We used these cases to illustrate the potential risk in not exercising appropriate management control. Our recommendations to tighten control in this area have been accepted by the Army, and the Army Audit Agency has already conducted a broad review of this area, using our approach as a model. Our report on this case was issued to the Congress in September 1968 (B-157535, Need to Improve Management Controls Over Ammunition Development).

Space Facilities

Our concern with the effectiveness of management controls is also illustrated by a report issued in July 1968 entitled "Opportunity for Savings in Space Programs by Reevaluating Needs Before Buying Facilities" (B-164027).

In this case, as in the case of ammunition development, our selection of this matter for review was prompted by indications that substantial expenditures were being made without appropriate results.

We had noted that certain facilities for satellite and booster programs of the Air Force, involving over \$20 million in construction costs, were inactive or on a standby basis. We decided to look into these instances to see whether such construction was unavoidable because of the rapidly changing state of the art, or whether improved management controls could have precluded such unnecessary costs. Obviously, the money spent for these facilities was in effect

"down the drain," and our objective was not to indulge in Monday morning quarterbacking. Instead, we were concerned as to whether the repetition of such situations could be avoided in the future.

Under Air Force procedures, construction of facilities is scheduled to begin early enough in the system development for required facilities to be ready concurrently with the mission hardware. We found that the program plans had changed materially before construction was actually begun, which resulted in substantially reduced needs for facilities. However, there was no provision for reevaluation or updating of the development plan, and construction proceeded as originally conceived.

We proposed in our draft report that procedures be amended to provide for taking another look at systems development programs before starting construction of costly facilities, in order to be sure that the facilities would fit the current program. Our recommendations were accepted and are being implemented.

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In both the previous cases, our interest was aroused by signs of *deficient* practices. In some cases, our work is aimed at comparing activities of similar organizations in the hope of identifying *proficient* practices that could be applied advantageously at other organizations. This approach proved very successful in a study we made in 1967 for the Research and Technical Programs Subcommittee of the House Committee on Government Operations.

Management of Laboratory Equipment

The subcommittee was concerned with the tremendous cost of laboratory equipment obtained by Government laboratories. We were requested to make a survey of selected laboratories to ascertain the controls used in managing such equipment.

We selected five major Government laboratories for this study—two operated by the military services and three operated by civil agencies. We also met with officials of six non-Government laboratories to obtain comparative information. We found that neither the Government nor private laboratories had effective controls over the usage of laboratory equipment because of the difficulty in measuring output in the research area. However, we did note that certain Government laboratories had devised special techniques to cope with specific situations.

For example, one laboratory was using a tiny inexpensive meter, known as an elapsed-time meter, to determine whether the scientists were actually using equipment assigned to them. In another case, special "walk-thru" techniques had been developed to identify unneeded equipment. A third laboratory had developed a special procurement technique to enable it to get equipment and supplies at lower cost.

Officials of these laboratories participated in congressional hearings, together with our staff, at which time these worthwhile approaches were publicized.¹ As a result, substantial savings have been reported. General Services Administration, for example, has adopted the special procurement technique and has already reported savings of over \$1 million.

The technique of comparing research organizations and activities is, I believe, a very useful one.

We also make Government-wide studies in specific situations, such as the one just described, and these can be very illuminating. We have recently completed two studies on a Government-wide basis, and reports to the Congress are being prepared. These studies cover (1) fees to nonprofit organizations and (2) contractors' independent research and development.

We have made significant progress in our approach to the audit of research and development activities, but we have only scratched the surface to date. We recognize that our approach is not the only one and we hope to find additional ways to reach the objective of more effective research and development at less cost.

¹ The hearings are summarized in the Fifteenth Report by the House Committee on Government Operations, issued October 30, 1967, *Better Management of Research Equipment Procurement and Utilization in Federal Laboratories*.

The Case Against the Ambiguous Objective

By D. L. Scantlebury

General Accounting Office audit policy guidance on the preparation of work programs cautions that the inclusion of broad, vague, and unrealistic statements of objectives is useless since they are usually unattainable. In this article the author discusses the pitfalls of stating ambiguous audit objectives and the benefits to be obtained by making them clear and easily understandable.

Most auditors who perform management reviews and surveys will agree that the statement of objectives contained in the review or survey program is the basic communication device by which the planner of the review or survey conveys his ideas and thoughts to the review staffs that are to perform the work. Although it is true that review and survey programs usually also contain procedures, background material, and miscellaneous instructions, as well as objectives, the objectives are the most important part of the program. It is the objectives which the audit staff must strive to fulfill, and their job may be said to have been effectively performed if they do fulfill them.

I do not mean to deemphasize the procedures in review or survey programs for they too are an important communication device. However, experienced auditors quickly learn that, in advance of performing the work,

it is almost impossible to devise procedures that can be performed without change. Either the information specified in the procedures is not obtainable in the form envisioned by the planner, or the required agency files cannot be located, or the information that is available is too unreliable to be useful. Moreover, procedures for reviews or surveys involving multiple locations often have to be applied differently at the various locations because of differences in operating conditions, operating practices, data processing techniques, etc. It therefore is a common practice—and an unavoidable one—for the audit staffs to revise the procedures as necessary to fulfill the review or survey objectives.

Thus the objectives are the controlling feature of any review or survey program, and, when a procedure must be modified, the auditor must rely on the objectives for guidance in revising his approach to obtain what is

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wanted. Because much of what will be disclosed by the review or survey work is unknown at the program formulation stage, the writer of the objectives must use all of his ingenuity—and a crystal ball if he has one handy—if he is going to formulate specific objectives that will survive changes in facts and circumstances and guide the performers of the work into providing him with the type of review or survey work he has envisioned during his planning process.

Since the objectives are the principal communication device by which the planners transmit their views on what needs to be done by the staffs that must perform the work, it is important that the objectives not only be well thought out but also be clearly stated. Unless the specific objectives are clear, the participating audit staffs may not do the work which the preparer of the program intended or, worse yet, may pursue entirely different end results than he intended. Consequently, ambiguity in the wording of the objectives can result in indecision, frustration, and either the unnecessary expenditure of time or the performance of less work than is wanted.

Ambiguity Defined

What do I mean by ambiguity in objectives? Principally, I mean the use of terms which require the audit staffs to make value judgments that they, not being the planners of the work, should not be asked to make. Such ambiguity often involves the use of words like adequate, sufficient, thorough, and similar inexact terms.

Following are illustrations of some objectives which I consider ambiguous:

1. To obtain a *thorough* knowledge of the *significant* aspects of the system.
2. To develop *essential* information to permit us to *thoroughly* understand the method of computing requirements.
3. To determine whether *adequate* competition was obtained.

In the above cases, the planner, by using ambiguous words, is leaving it up to the audit staffs to decide what “thorough knowledge” is, what “significant aspects” are, what “essential information” is, what “thoroughly understand” means, and what “adequate competition” consists of. Although the audit staffs can make such judgments, there is no reason to believe that their decisions will coincide with what the planner has in mind. Consequently, they may do more (or less) work than is desired and, in addition, considerable time may be spent by several audit staffs in reaching decisions on the interpretation of these words, which could be saved if the planner’s objectives were more explicit.

Dangers of Ambiguity

To illustrate, let us take a hypothetical situation in which a uniform payroll system operating at a number of field installations is to be reviewed. Suppose the planner writes an objective as follows:

“Determine whether the installation has an adequate payroll system.”

If this objective were received by 14 site review staffs, there are apt to be 14 views on what is wanted. Some staffs will conclude that the planner wants a detailed review of the system and will start a detailed review of every facet

of the system to appraise its adequacy. They will use either the GAO Policy and Procedures Manual for Guidance of Federal Agencies as a review standard or substitute their own experience, or their own judgment, or other standards such as those obtained from accounting texts. In almost every case, those who set off on such a course will quite probably do far more work than the planner contemplated. Furthermore, the planner will be baffled because the staffs are using so much time and they will be baffled because he fails to understand the difficulty of the task he has given them.

Other site review staffs might decide that the planner wants to know whether people are paid properly. They will make tests of selected payrolls to see that employees were paid the right amounts and will stop there.

Still other review staffs might make some tests of payroll records hoping to get a vision regarding what should be done. They might notice that leave records contain a high percentage of errors or that travel is not effectively administered. They next decide—not unreasonably—that, broadly interpreted, payroll includes leave and travel and proceed to direct their efforts into exploring the problems in these areas and discontinue work on the payroll system.

Regardless of which course they pursue, all the site staffs will probably spend considerable time in reaching a conclusion on what it is they should do and in arguing among themselves over whether their decision is a proper interpretation of the objective.

When the planner receives the results of these reviews, he is apt to find that

the review staffs not only did not cover the same subject matter but also did not even answer the questions he had in mind when he wrote the objectives. Moreover, it will take the wisdom of Solomon and the patience of Job—and time, lots and lots of time—to consolidate the results of the various audit staffs into a single report.

Admittedly, my example is somewhat oversimplified in the interest of brevity, but it illustrates what can happen in far more sophisticated situations. The use of the ambiguous word “adequate” takes control of the review out of the planner’s hands and lets each audit staff decide what work it will do to fulfill its interpretation of the objectives.

Avoiding Ambiguity

I think these problems can be overcome if the planner phrases his objectives so that they contain no ambiguous words for the audit staff to interpret. To illustrate, let us suppose that in the preceding example what the planner needed to know about the payroll system was whether the employees were being paid on time and in the correct amounts and whether charges to direct and indirect labor were correlated with payroll records. He might, therefore, formulate three objectives as follows:

1. To determine whether the payroll system results in payment of employees in accordance with prescribed time schedules.
2. To determine whether, under the payroll system, employees are paid the correct amounts.
3. To determine whether the payroll system provides for reconciling total salaries and wages with the

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direct and indirect labor charged to the various projects on which labor is expended.

I think most site supervisors would get answers to these objectives which could be easily consolidated to permit an assessment of these aspects of the payroll system as a whole. Moreover, they would get the answers quickly and efficiently and the arguments over what should be done would be either minimal or nonexistent.

To conclude, I believe that a great deal can be accomplished in attaining better communication between the planners who write the review or survey programs and the audit staffs by

carefully wording the statements of objectives to eliminate ambiguity. Although ambiguity can sometimes be successfully overcome by other information in the program or by visits of planners to the sites where the work is being performed, this, in my view, is not as effective as formulating clear, specific objectives in the first place. Other information in the program, such as procedures, often must be changed, and site visits are often short, but the audit staffs have the objectives constantly before them and, if they are clearly understood by the audit staff, the likelihood that successful work will result is greatly enhanced.

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The Accounting System of the General Accounting Office

By Herschel J. Simmons

Stimulating the development and maintenance of good accounting systems in all Federal agencies is a continuing responsibility of the General Accounting Office. The question is sometimes raised as to what kind of an accounting system the GAO itself has. The author, who is responsible for its operation, describes briefly the principal features of the GAO system.

The accounting system described in this paper was developed through a joint effort of the Office of Administrative Services and the former Accounting Systems Division and was approved by the Comptroller General in November 1955. The objectives were to provide a simple, integrated system of accrual accounting for a Federal agency operating under a single appropriation, where the largest expense item was salaries, and to provide timely financial reports.

This system, necessarily, has been revised since its initial approval to comply with the current requirements of the Comptroller General for agency accounting systems.

The Director, Office of Administrative Services, is responsible for the overall administration of the accounting system. Immediate responsibility rests with the Chief, Budget and Finance Branch. The accounts supporting the

system are maintained in the Administrative Finance Section. Staffing, by major functions, in the Budget and Finance Branch is as follows:

Office, Chief of Branch.....	5
Administrative Finance Section.....	22
Payroll Section.....	22
Tabulating Services Section.....	7
<hr/>	
Total	56

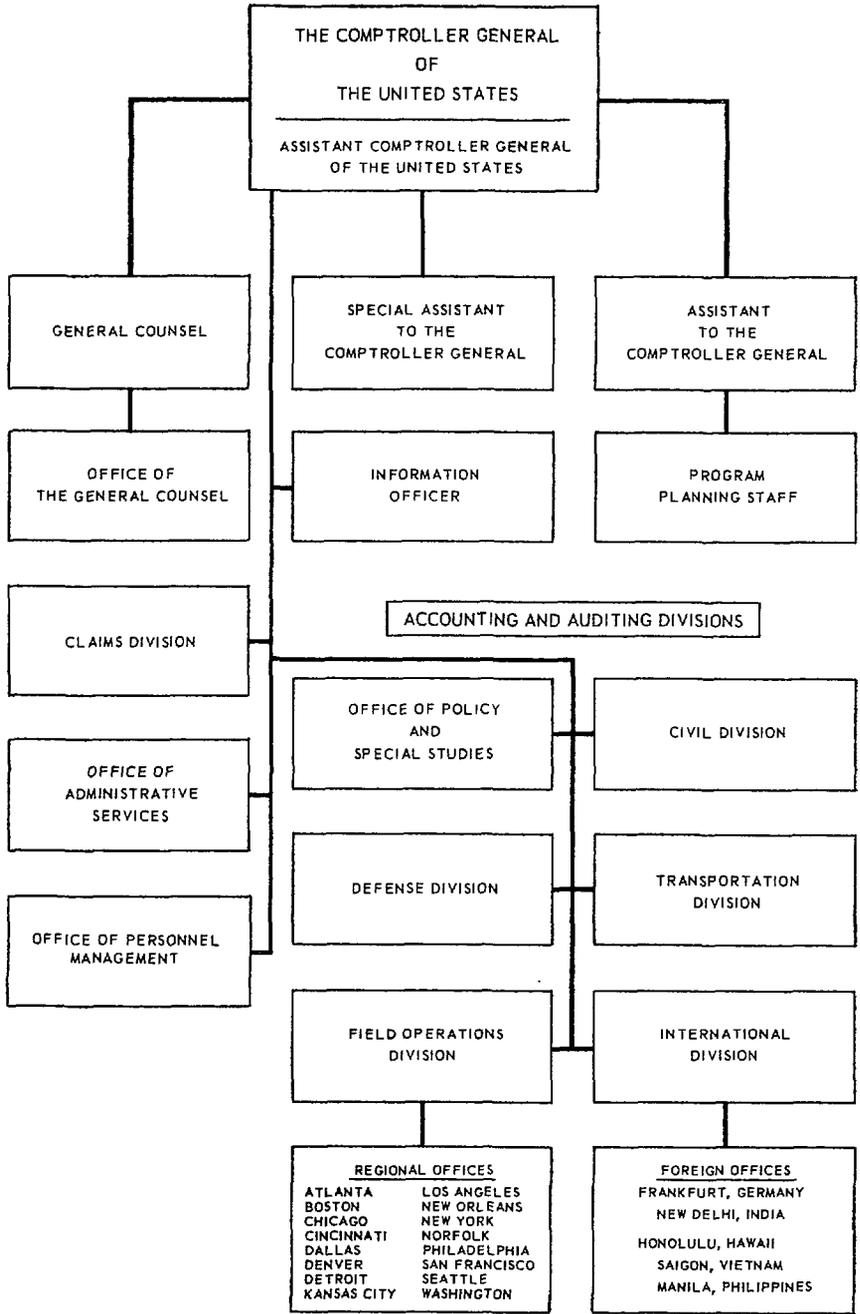
Sources of Funds

The operations of the General Accounting Office are financed by a single annual appropriation from the Congress. For fiscal year 1969, this appropriation amounted to \$57,500,000.

Other funds to be accounted for include (1) deposit funds such as for wages of employees of contractors; Federal, State, city, and territorial taxes withheld; employees' savings bond deductions; funds retained in suspense accounts awaiting final deposit determination; proceeds of estates of Americans

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who die abroad, and unclaimed moneys of individuals whose whereabouts may or may not be known, (2) general fund collections made by the General Accounting Office and required to be deposited into the Treasury of the United States as miscellaneous receipts, and (3) collections made by the General Accounting Office for other Government agencies.

Organization

Expenditures of the General Accounting Office are classified as to the individual organizational entities through which the duties and functions of the Office are carried out.

The organization of the General Accounting Office is outlined in the chart on the opposite page.

Accounting Plan

The plan of accounting for the General Accounting Office has been designed to produce current financial information which will be useful to management, in addition to providing for accountability and internal control, with due regard to the requirements of existing statutes and overall regulations.

The accounting system is designed to provide the following principal features:

- Financial control over procuring, storing, issuing, and accounting for storeroom commodities and fixed assets and physical inventories of such property on a periodic basis.
 - Control over unliquidated obligations by providing documentary support of obligations, as provided in section 1311, Public Law 663, approved August 26, 1954.
- Mechanical bookkeeping procedures are used whereby postings to fund control and cost ledgers are simultaneously accomplished—with machine proof-of-postings on each batch of documents. Such procedures are also used for the storeroom perpetual inventory records.

Purpose and Objectives of the Accounting System

The accrual-based accounting system, comprising integrated financial and budgetary accounts, is designed to provide the Comptroller General and his division and office heads responsible for major functional areas with current data on accrued costs. It is also designed to provide ready analysis of such costs by category and to provide controls over all available funds, receipts, and property. Also furnished monthly is a statement showing the relationship of the going rate of expenditure to the yearly budget for personnel compensation.

Costs of operation are accumulated by object of expenditure on a current basis and distributed to expense categories for monthly statements prepared for and issued to the Comptroller General and to the directors of major functions using the personal services,

materials, and other operating cost elements. In the interest of simplification and economy, the costs are simultaneously recorded by object class in the applicable budgetary accounts used to (1) control and observe patterns of expenditure within available funds, (2) collect the necessary cost details to provide support for preparation of the annual budget estimates in the format and in the categories required for inclusion in the President's budget, and (3) provide detailed information concerning disbursements and collections necessary for accounting and reporting to the Congress and the Treasury Department.

Accounting and Control

Needed information on accrued costs and performance under yearly budgeted goals is produced readily for management and operating purposes. Adequate financial control is exercised through centrally maintained accounts. This simplifies the accounting system and results in savings in clerical salaries and other related costs, both where the central accounts are maintained and in the operating divisions.

Under the system of financial control followed, direct allotments of funds are made by the Director, Office of Administrative Services, to the directors of the major GAO functions for the expenses of salaries and travel only. Salaries, benefits, and travel are the principal expense categories of the General Accounting Office and represent about 96 percent of the total appropriation.

Allotments for all of the other items of expense—such as employee benefits, supplies, equipment, communications, and contractual services—are made to

the Director, Office of Administrative Services, under whose jurisdiction has been placed the responsibility for fund control and approval of all requests for expenditures in these categories. We are restudying our fund control structure at this time seeking to further reduce the number of accounts consistent with providing necessary control over the obligation of funds. As are expenditures for salaries and travel, all other types of expenditure are accumulated by object and by organization.

Accounting for the Control of Obligations

Before obligations are recorded, all requests from the major organizations for expenditures in the categories controlled under the supervision of the Director, Office of Administrative Services, are reviewed. The Director or his designee analyzes the requests for materials or services and indicates his approval or disapproval of all or part of the requested expenditures on a procurement authority document designed for this purpose. No obligation is recorded in the accounts without this approval.

This central review at a high official level provides a check on the completeness of justifications for expenditures, on the validity of obligations as prescribed in section 1311 of the Supplemental Appropriation Act, 1955, 31 U.S.C. 200, and on the effect of proposed obligations on approved fund availability. This procedure, which calls for the initial review of expenditure requests and the subsequent processing after approval of these requests at a central point, provides the Office

with maximum obligation, quality, delivery, and inventory control at a point where the personnel are (1) familiar with competitive pricing of the commodities or services requested, and (2) up-to-date on all regulations, decisions, and internal directives of the Comptroller General governing procurement of supplies and services and the maintenance of necessary property accounting records. Furthermore, the system is designed to assure management that it receives the quality and quantity contracted for at the agreed price.

Measurement and Communication of Financial Data

As mentioned above, allotments of funds are made to the directors of the major functions for salary and travel expenses because of the relatively large outlays and the need for certain controls in measuring performance goals within the budgetary limitations set by the Comptroller General for these major areas of activity. Although salary allotments are distributed to the activities, the central accounting and budgeting system under the Director, Office of Administrative Services, provides the current financial position of each allotment station by means of sufficiently detailed reports prepared from the expenditure ledgers and budgetary staffing records.

Each division is furnished a statement at the end of each month showing (1) number of approved staff, (2) annual budget estimate, (3) accrued costs to date, (4) balance available to the end of the fiscal year, (5) a projection of the experience to date, and (6) the estimated balance or deficit at yearend. The accrued expenditure position on

available travel funds is shown in a similar report.

Development of such management information from the central accounting system and integrated budgetary controls provides not only timely reporting but an accurate and consistent product because of the uniformity of procedures applied in its development. Clerical time and salary savings are also realized by elimination of the necessity for detailed recordkeeping and report preparation in the various major activities receiving allotments.

A listing of the principal operating reports appears on pages 62 and 63.

In addition to the current operating reports, overall financial statements are prepared annually and published in the annual report of the Comptroller General. For the fiscal year 1968, the financial statements in the annual report included:

- Statement of Assets and Liabilities.
- Summary of Changes in Investment of U.S. Government.
- Summary of Operating Expenses.
- Summary of Sources and Application of Funds.

Annual Cost Report on Accounting and Auditing Activities

As a supplementary report to assist management officials, a detailed annual statement is prepared showing the cost of all accounting and auditing performed. The statement classifies total costs incurred for the departments and agencies in which accounting and auditing work was performed, including cost allocations from other GAO divisions and offices.

The details required for this statement are developed from four prin-

cipal reports: (1) Financial reports regularly prepared from accounts during the year, (2) accounting and auditing staff time reports, (3) personnel compensation budget reports, and (4) travel statistics reports.

The accounting and auditing time reporting system is maintained primarily as a punched card system utilizing an IBM 1401 or compatible computer to print out the reports and to update the summary card files. This system is based on mark-sensed punch-cards submitted biweekly by the accounting and auditing staff, grades GS-14 and below. These cards show grade and the hours charged to the various assignments and include indirect charges to leave, training, etc. Assignments are initiated into the system by receipt in the Administrative Finance Section of a copy of an approved Assignment Authorization.

The direct salary costs for the various assignment categories are shown in the annual cost statement for accounting and auditing work and are obtained by applying the average professional staff salaries for each grade (based on the personnel compensation reports) to the hours ascribed to each assignment or group of assignments (derived from the accounting and auditing time reports). Added to the direct salary cost are the travel expenses charged against the assignments. The timecards form the basis for internal reports which are issued every 4 weeks showing the cumulative hours charged for the period and for the year to date and the total hours charged by assignment, by organization, and by the grades of the employees involved.

The personnel compensation budget reporting system is also maintained as a punched card system. The system is updated upon receipt of all personnel and payroll actions affecting an employee such as name, organization, position, or pay changes. Biweekly reports are issued for use in the Budget and Finance Branch in connection with the review of budget execution. Annual reports showing actual man-years used by organization are furnished all divisions and offices for use in the preparation of their budget requests and justifications. Shown on these reports are the biweekly normal and cumulative hours and salaries for the fiscal year by position and organization as well as the cost of personnel changes and the going annual rate. The system must reconcile with the payroll control totals for salaries paid.

Travel statistics reports are developed from travel vouchers submitted by employees for reimbursement of their travel expenses. From these vouchers, the traveler's name, the assignment to be charged with the travel cost, and data covering per diem, mileage, transportation, and other costs are punched into cards. Summary reports are prepared from the punched cards.

Administrative and clerical salary costs and other overhead expenses are obtained from the financial and personnel compensation reports and are distributed to the assignment categories on the basis of the percentage of direct time applied. Also included in the overhead cost allocations are such unfunded items as the change in accrued annual leave liability. The Payroll Section compiles the accrued annual leave

hours for each division or office as of the start of each leave year. To these hours are applied the average hourly pay rates for each division or office to obtain the dollar amount of the accrued annual leave liability. This information is then furnished the Administrative Finance Section for removing the existing accrued liability and recording the current liability.

The *nonreimbursed cost* to the General Services Administration and the Post Office Department for lease and/or maintenance of space used by our accounting and auditing activities is included. Also included is an appropriate part of the operating cost of other GAO organizations—Office of the General Counsel, Office of Administrative Services, and Office of Personnel Management—which contribute to the performance of accounting and auditing work.

The Accrual Basis of Accounting

To produce all current financial and budgetary information necessary and show the changes in financial position as they occur requires that the accounts be maintained on an accrual basis. We have found that it is just as simple to accumulate accrued cost data on major activities on a current basis as it is to use methods which require many conversions of cash or obligation data to an accrual basis. Another feature of maximum usage of accrual accounting which is sometimes overlooked is its value in providing management with current detail in subsidiary records for detailed expense studies by categories of expense, as necessary. Details of all expenditures and outstanding obliga-

tions for all classes of expense are readily available for review and for providing management with any needed information.

Audit of GAO Expenditures

All expenditures, except those relating to payrolls, receive an administrative preaudit in the Administrative Finance Section prior to payment. This is to ensure that all purchases are made from GSA schedules to the fullest extent possible, all transactions are fully documented, all available discounts are taken, and all bills are paid promptly. Travel vouchers are audited for compliance with the Standardized Government Travel Regulations, Office policies, and the Comptroller General's decisions.

We are under the comprehensive audit program of the Civil Division of GAO, including annual payroll audits by the staff of the Washington Regional Office, Field Operations Division.

Commentary

In discharging its financial responsibilities, management must provide for the installation and maintenance of an accounting system which will ensure that necessary financial information is produced on a timely basis at a minimum cost. From the standpoint of administrative costs, we have found that, when detailed financial and budgetary records are maintained in all areas where funds are allotted, there is a tendency to gradually increase the number of records which for the most part will duplicate records maintained in a centralized accounting system. This duplication results, of course, in a cor-

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responding and unnecessary increase in clerical, fiscal, and budgetary staff and in related costs throughout the organization.

We have also found that accuracy and consistency of financial reporting and more expeditious preparation of budget data is realized at less overall cost when the internal accounting and budgetary control system is centralized and when the staff engaged in operating the system is responsible to management for the accuracy of the information produced.¹

Addendum

Principal Operating Reports

The following reports are prepared in the Budget and Finance Branch each month or biweekly:

Appropriation Balance Sheet showing at the end of each month for the current and for each of the 2 prior fiscal years the related assets, liabilities, and appropriation balances from the general ledger accounts.

Status of Appropriated Funds (Allotments) showing at the end of each month the current status of allotments from the allotment ledger accounts.

Status of Deposit and Trust Funds showing at the end of each month the current balances in our deposit and trust fund account.

Status of General Fund Receipts, Collections, and Invested and Donated Capital showing at the end of each month the collections and deposits for general fund accounts and the present balance in our property and inventory control accounts.

Statement of Operating Costs showing in summary and for each division and office, by object class and subclass, accrued costs for the month and for the year to date.

Going Rate—Personnel Compensation comparing monthly, in summary and by division or office, the number of employees on the rolls and the accrued salary expense, plus an extension of the salary rate of those on the rolls to the end of the year, with the revised budget estimates for personnel compensation.

Relationship of Going Rate to Yearly Budget comparing monthly for each division or office the same data shown in the above report but giving details of the computation.

GAO Staffing showing monthly the number of employees on the rolls by division or office at the close of each month for the fiscal year.

Statement of Travel Costs and Status of Travel Funds showing for each allotment and suballotment the funds made available, expended, unexpended, reserved by travel orders issued, and unreserved.

Status of Assignments to Congressional Committees showing by committee or subcommittee of the Congress a list of the employees assigned and the date of assignment and expected release.

Payroll Normal Report showing biweekly for each division or office the number of regular employees on the payrolls and the total biweekly rate of pay to which they would be entitled if in a pay status for the scheduled time during the next pay period.

Travel Statistics showing monthly by division or office and summary totals for the average per diem paid, the number of per diem days paid, and the percentage of per diem, transportation, mileage, and other costs to total cost.

Personal Services Statistical Reports showing biweekly the number of regular and overtime hours and the amount of salary paid by organization, grade, and position for the year to date.

Analysis of Personnel Statistics showing biweekly the changes to the gross annual

¹ As part of the current internal study of a computer-based, integrated management information system for the General Accounting Office, the GAO accounting system is being studied from the standpoint of changes which need to be made to integrate it with other parts of the information system and increase its capacity to provide timely financial information related to operational information for planning, control, and evaluation purposes.

hours and salary and the actual hours and salary resulting from various personnel actions—promotions, separations, periodic step increases, appointments, pay raises, etc.—by organization.

Accounting and Auditing Staff Time by Organization showing monthly for each job assignment active during the year the hours for the current period, for the quarter, for the fiscal year, and since inception of the assignment.

Accounting and Auditing Staff Time by Assignments showing the same information as in the above report, except the

arrangement is by job assignment and, generally, only active assignments are shown.

In addition to the above internal operating reports, there are several reports prepared for external distribution as required by the Treasury Department, the Bureau of the Budget, and the House of Representatives, Committee on Appropriations. Of these reports two are prepared annually, one quarterly, and four monthly.

International Approaches to Auditing

By Robert J. Tice

The Comptroller General of the United States, *Elmer B. Staats*, attended the 6th International Congress of Supreme Audit Institutions in Tokyo, Japan, from May 22-30, 1968, and returned with a great deal of material on international auditing procedures which he felt may be of interest to the GAO staff. This article highlights some of the approaches to common auditing problems discussed by representatives of the 72 nations participating in the 6th International Congress.

A representative of the country of Senegal observed at the Tokyo meeting that, although differences exist in the operations of governments, there is a pure evolution whereby systems of audit are beginning to be aligned along common principles. The reports and recommendations of the 6th International Congress indicate that auditors throughout the world can indeed communicate on a common ground.

The International Congress

The International Congress of Supreme Audit Institutions evolved from an International Congress of top government accounting offices called by the Republic of Cuba in 1953 at a time coinciding with the dedication of a new government building and the centennial anniversary of a national hero.

Since 1953 the Congress has held meetings every 3 years, and the ranks of the participating member countries have steadily increased. The 6th International Congress was the first meeting attended by the GAO, and while no formal reports were submitted to the Congress, the Comptroller General related to the participating countries

information on GAO operations and experiences in dealing with common auditing problems.

The purpose of the International Congress is to strengthen the relations between the "supreme audit institutions" of all countries by promoting the exchange of ideas and experience in the sphere of public financial control. A supreme audit institution is any public body of a state which, however it may be designated, constituted, or organized, exercises by virtue of law the highest public auditing function of that state.

Participating countries are invited to submit reports concerning their ideas and experiences on selected auditing

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problems. The reports are openly discussed at the International Congress, and from these contributions a series of auditing recommendations are drawn. The exchange of ideas and the recommendations are meant for utilization by the participating supreme audit institutions to the extent that they deem them useful in their work. In this regard the President of the Board of Audits of Japan reported that many participating countries had adopted the recommendations of past International Congresses and incorporated them into their systems of public financial control and, thus, great contributions had been made in developing and strengthening their systems.

Studies of the 6th International Congress

The 6th International Congress considered four subjects of international auditing concern:

- Methods and procedures of the audit.
- Method of reporting.
- Technical knowledge.
- Price of public contracts.

Methods and Procedures of the Audit

A basic principal recognized at the Tokyo meeting was that the audit of public finance, in the last (supreme) instance, must be entrusted to an independent and supreme organ. In almost every country the organization, objectives, and procedures of the Supreme Auditor are strictly defined by law or by provisions of a regulatory nature, so that the audit institution is left very little choice of auditing methods.

Audits of Economy and Efficiency

Legal impositions by some countries restrict their audit institutions from examining into efficiency and economy of operations. This is true, for example, of Belgium and Spain where the audit institutions are limited to examining only the budgetary and judicial regularity of expenditures. In the main, however, the countries reporting to the 6th International Congress have at least some type of procedure for reviewing efficiency and economy of operations.

The general auditing court of the Netherlands has two "Efficiency" sections devoted to studies bearing on problems of efficiency and organization, to the departmental comparison of means of action, and to the introduction of modern methods into the administration.

The Republic of China directs its ministry of audit to lay special emphasis on the economy and effectiveness of expenditures. Article 21 of the Law of Annual Report directs the ministry of audit to pay attention to the following points in making its examination of the accounts of a Government agency: improper acts or dereliction of duty; over or under budgetary amounts; implementation of administrative programs, especially the extent of achievement and the economy; and extent of effectiveness of administration and comparison with other government organizations under the same category.

Recommendations

The 6th International Congress received reports from 33 countries who contributed their views and current practices on the methods and proced-

ures of audit. The reports were openly discussed at the Tokyo meeting and from them were drawn the following recommendations which were accepted by a majority vote of the participating nations.

1. Audits should be performed at a central location when the audit pertains exclusively to the control of the regularity (accuracy) of revenues and expenditures, especially of their being in conformity with laws and regulations.
2. Audits should be performed at the site of the audited agency when the audit is aimed at evaluating the economic aspects of management, or its efficiency. This method requires a frequent recourse to sampling techniques to ensure that the more important activities or those more liable to contain errors are selected.
3. The audit institution must ascertain that internal control has been correctly and effectively exercised.
4. When public enterprises perform special functions, the audit must, without losing sight of the questions of regularity and sincerity, put special stress on the effectiveness of their management.
5. When centralized and field audits are performed simultaneously, the audit institution must reflect very carefully on the advantages and shortcomings inherent to each system so that an ideal combination of the two systems can be achieved.
6. When it is deemed necessary, in order to increase the effectiveness

of the audit, to hire public or private experts, the audit institution should remain in full control of the work given out and be the sole authority for final decisions on the conclusions drawn from the work of the experts.

Method of Reporting

A total of 36 countries contributed reports to the 6th International Congress on their views and experiences in reporting the results of an audit. Some of the major topics presented in these reports and discussed by the participants of the Tokyo meeting follow.

Audit Report Content

The content of audit reports prepared for submission to the highest legislative bodies in the land in some countries is governed strictly by legal requirements: in other countries report content is governed by the judgment and practice of the audit institution concerned. Bolivia, for example, includes in its annual report all the points found in the course of an audit. Sudan defines by law all items to be reported. The annual report in China must be as brief as possible so that the attention of the legislators will be focused on crucial points.

Distribution of Audit Reports

In many countries annual audit reports are sent directly to the legislative body for debate, whereas, in some countries the reports are sent to the agencies audited before being sent to the legislative body. In no instance, in any participating country, did government agencies have the authority to alter the report in any way.

There is a fairly widespread practice of publicly distributing the report, either by means of the news media or by means of selling the report once it has been published. Several countries exclude budgetary information from the public distribution on the premise that this material is of a technical nature.

Date of Presentation of the Audit Report

The consensus of the audit institutions attending the Tokyo meeting was that their reports should be submitted and considered at the earliest date possible, particularly where such action could have a bearing on decisions to be reached with respect to the next year's budget. The participating countries recognized that the opportunity and incentive for taking corrective measures diminish with the passage of time. Further, there is always the risk of additional errors or losses occurring during the intervening period.

Most countries have a statutory time requirement for the submission of an annual report. In most cases, this requirement is between 6 months and 1 year after the close of the fiscal year.

Responses from Audited Agencies

There was generally unanimity of opinion among the participating audit institutions that the comments and explanations of the audited agencies should be obtained prior to the finalization of the content of the report in order that such content be just as accurate, objective, and fair as possible.

The practices followed with respect to publication in whole or in part of such comments, however, had differed

among the audit institutions. Some countries—e.g., Korea and Japan—had leaned toward complete publication. Other countries—e.g., Cyprus, Tanzania, and Jamaica—had published agency comments to the extent that the audit institutions deemed necessary in the circumstances.

Identification of Individuals

The majority of the participating audit institutions reported that they either refrained completely from publicly disclosing names of individuals involved or disclosed individual names only when such action was consistent with public interest.

Recommendations

The recommendations on the method of reporting arrived at by the International Congress follow:

1. The material contained in the audit report of a country should always be in accordance with the legal requirements of that country.
2. The facts in the audit report must be set forth clearly and objectively.
3. The language of the report should be clear, concise, direct, and designed to present the subject matter so that it can be readily recognized and understood.
4. The audit institution should refrain from disclosing the names of responsible individuals unless, in the opinion of the audit institution concerned, such disclosure is consistent with the public interest of the country.
5. The report should reflect the action taken during the year with respect to the implementation of

the recommendations of previous years made by the supreme audit institution or the legislative authority of the country.

Technical Knowledge

The 6th International Congress received from 28 countries reports on technical knowledge required in auditing. The 28 countries unanimously concluded that, although the traditional knowledge of administration and the various principles of law, economy, public finance, and auditing were necessary to conduct a competent audit, higher level specialized knowledge must be available to the audit institution. However, the opinions on the breadth and depth of this required knowledge varied greatly.

ADP Knowledge

The countries participating in the 6th International Congress recognized the need to acquire the knowledge of automation as soon as offices subject to their audit introduced automatic data processing systems. Although there was not unanimity on requiring the extent of ADP knowledge that auditors should actually possess, there was a consistent tendency to require auditors to have at least a basic knowledge relating to the input, processing, memorization, and output of the data. That there be a number of specialists in systems programming, and in the operation of machines, was felt to be desirable by the audit institutions.

Many participating audit institutions expressed the belief that attendance by younger auditors at basic ADP training courses arranged by the audit in-

stitutions themselves, the governments, or the manufacturers is indispensable.

Australia has a specialized group of five experienced ADP audit officers responsible for the development of audit approaches to ADP systems and for introducing ADP training to field auditors. Australia has provided ADP training to 100 members of a qualified 350-member staff. Venezuela has at its disposal an automatic data processing audit department.

Extent of Technical Knowledge

In some countries audits are conducted for the sole purpose of determining whether administrative actions are in accordance with the laws. These countries—e.g., El Salvador, Italy, and Greece—take the view that extensive technical knowledge is not necessary.

El Salvador feels that an audit based on legitimacy is an advantage because it enables the audit institution to maintain a completely neutral attitude. El Salvador feels that the inclusion of technical aspects is superfluous because the executive power already has a sufficient number of technical advisors.

The auditors of Ireland, Japan, and the Republic of Korea are required to possess a basic technical knowledge, just enough to understand the explanations of the officials in charge and to detect underlying problems.

Audit institutions whose activities are extended to judge economy and efficiency of administration encounter technical problems in a wide range of activities. These audit institutions, although agreeing that it would be ideal if any thinkable problem could be dealt with by their own experts, realize that to achieve this ideal would create prob-

lems of economic personnel utilization.

The majority of audit institutions enlist the aid of experts from both government services and the private sector. Some of them, for example, the Audit Department of Jamaica, must do with only government officials. Israel, on the other hand, has three types of arrangements with private specialists; namely, permanent contracts for advisers, creation of a board of advisers on an ad hoc basis, and occasional employment of an outstanding expert.

Technical Training

To ensure that the auditors' level of theoretical knowledge does not deteriorate, some countries—i.e., the Republic of China, Colombia, Japan, Korea, and Venezuela—conduct periodical training programs and a systematically encouraged exchange of information on experience and results gained in auditing.

Recommendations

The 6th International Congress made the following recommendations concerning technical knowledge:

1. The traditional knowledge of laws, public finance, and accounting remain the basic needed skills for the audit institution.
2. Auditors dealing with computer information must possess a basic knowledge of input, processing, memorization, and output of data.
3. An audit directed only to the examination of legality and regularity obviates the necessity of specialized technical knowledge.
4. Audits of economy and efficiency require highly specialized knowl-

edge concerning all the technicalities involved in the operation.

5. In order to safeguard independence, the audit institution should endeavor to employ technical specialists.
6. The audit institutions should set up clear and precise standards for the selection of technical experts. These experts should conduct training programs in order to improve the basic knowledge of the all-around auditors.
7. From an economical point of view, the audit institutions should not maintain technical specialists in those fields rarely examined.
8. Audit institutions are encouraged to exchange nonconfidential reports and administrative and financial literature of importance.

Price of Public Contracts

A total of 26 countries contributed reports on their views on and experiences in auditing the public contract. Some of the major topics presented in these reports and discussed by the participants of the Tokyo meeting follow.

Procedures for the Selection of the Contractor

All the countries reporting had two basic procedures for selecting the contractor; one procedure was competitive bidding, the other was direct contracting without bid. Although the use of the two procedures varies according to legal requirements set by each country, competitive, advertised bidding is the most predominant contracting method, direct contracting being used only in exceptional cases.

In some countries—i.e., Switzerland and Venezuela—the administration has the option of using either procedure for selecting the contractor. In Israel, the administration can contract directly only when the contract is for a product which is new on the market, when a high degree of technical capacity is required, when there is only one bidder suitable to fulfill the contractual obligations, or when the administration intentionally desires to encourage a specific area of the economy.

Audit of the Price of the Contract

The extent of audit of the price of public contracts depends largely on the procedures used to select the contractor. When the predominant procedure for awarding the contract is competitive, advertised bidding, the awarded contract price is normally equal to, or in some cases lower than, the prevailing market price.

Some countries—i.e., Belgium, Germany, Cyprus, and Madagascar—believe that if there is sufficient competition, a normal price is achieved and, as a result, audit is superfluous.

Legal requirements in some countries—i.e., the Republic of China, Korea, El Salvador, Greece, and Senegal—oblige the contract to be granted to the bidder who quotes the lowest price and fulfills the requirements of the specifications. In other countries—i.e., Colombia, Belgium, and Venezuela—the administration takes into consideration not only the price but also the quality of the supply, the period of performance, the economic solvency, technical competency, experience, and the guarantees offered by the bidder.

Determination of the Contract Price

The reports submitted to the 6th International Congress dealt in detail with the methods used to determine the price of public contracts. The use of fixed-price contracts was the general rule for most of the participating countries while provisional-price contracts, such as cost-plus-fixed fee, were exceptions to the rule. The reports stated that care must be taken concerning provisional-price contracts in order to avoid public finances being thrown into disorder. It was recognized that, for purposes of adequate budgeting, the administration must be aware of the exact amount of obligations of the national treasury at all times.

To exercise control over the contract cost, some audit institutions conduct the audit prior to execution of the contract, others audit only after the work has been performed. The audit institutions in some countries—i.e., Korea, Jamaica, and the Netherlands—are empowered to examine the ledgers of contractors. On the other hand, contractors' ledgers in the Republic of China are examined only when fraud has been discovered. In Switzerland and Somalia, contractors' records can be examined only when examination has been provided for in the contract.

Recommendations

The 6th International Congress made the following recommendations concerning the audit of the price of a public contract:

1. Competitive, advertised bidding is the most advisable type of contract for the maximum degree of guarantee and security.

2. When competitive, advertised bidding is used, the audit institution must ascertain that legal provisions and bid provisions are strictly complied with. The audit institution must also verify that the specifications are clearly and exactly written.
3. In cases where the administration decides not to use competitive, advertised bidding, the audit institution must examine the reasons why the administration made such decisions.
4. The audit institution must ascertain whether the administration selected the lowest or the most suitable bid.
5. When the administration enters into a contract without competitive, advertised bidding, the audit institution should exercise a direct audit on the price of the contract through whatever means may be considered suitable. For this purpose it may use information supplied by the administration, compare prices with similar cases, conduct market price studies, or examine production costs.
6. When, for reasons of a technical sort or of economic convenience, the administration makes a contract whose exact price cannot be determined except during the execution of the contract or after its performance, the basis for, as well as the procedures used to determine, the final price should be clearly specified in the clauses of the contract. Moreover, when the audit institution is not legally empowered to examine the books of the contractor, the power to examine should be established in the text of the contract.
7. If modifications involving an increase in the stipulated price should be made during the execution of a contract, supreme audit institutions must examine into not only whether such modifications are due to circumstances which are unforeseen and independent of the will of the parties, but also whether the increase is reasonable. It is considered advisable, if the increase in the amount of the contract exceeds a determined percentage, to formulate a new contract.
8. Finally, since the papers presented by various countries show that audits by the audit institutions are less effective when carried out after instead of before conclusion of contracts, the 6th International Congress of Supreme Audit Institutions considers it advisable that audits take place before contracts have been concluded.

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Principles and Practices of Auditing in the ADP Systems Environment

By Earl M. Wysong, Jr.

This article describes the evolution, nature, and conduct of the Civil Service Commission-sponsored training course on auditing ADP systems. The author was a member of the original instructional team that developed and presented the course.

The headline of an article by Alan Adelson which appeared in *The Wall Street Journal* of April 5, 1968, proclaimed: "CROOKED OPERATORS USE COMPUTERS TO EMBEZZLE MONEY FROM COMPANIES—AUDITORS HAMPERED BY LACK OF WRITTEN RECORDS: SOME FIRMS UNAWARE OF LOSSES."

How can we as auditors cope with electronic manipulations when we apparently have not the means for tracing transactions to verify the reliability of information produced by computers? The answer lies in the upgrading of technical knowledge and skills which will provide us with a comprehension of the methods and procedures for processing data in the electronic environment.

Advanced automatic data processing systems have increased exponentially

the complexity and difficulty of the auditor's job. Imaginative concepts of automating and integrating both accounting and management information systems require corresponding innovations in audit approaches, examination techniques, and systems evaluation procedures. The advent of ADP systems has presented auditors with a tremendous challenge: one that can be met only through knowledge. With this knowledge, vast opportunities for performing improved and increased services to management are presented. Every auditor therefore must avail himself of whatever training and experience he is able to obtain. We cannot afford to remain apathetic toward computers and automation.

In the Federal Government, the ADP explosion already has had its impact. In fiscal year 1968, it was estimated that

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ADP activities accounted for the expenditure of over \$1.7 billion of Federal funds and approximately 124,000 man-years. Over 3,900 computers were installed in Government installations as of June 30, 1968.¹

Before undertaking an audit of an ADP system, the auditor must first acquire a general understanding of ADP systems. This understanding should encompass the effect ADP has on internal controls, audit trails, survey techniques, and workpapers. He will thus be able to relate to the audit function the knowledge obtained regarding equipment and systems. In this connection, he must be able to read intelligently the system documentation and to competently follow or prepare flow charts of system operations. This ability not only will enhance his communications with ADP personnel but also will provide him with the degree of perception necessary to develop the new approaches demanded by the rapid technological developments in ADP equipment configuration.

The auditor should understand the basic operations of equipment components in the system including the capabilities of peripheral equipment. It is not necessary that he become familiar with the internal circuitry of computer systems. He should know, however, what the console operator is doing, especially during the running of special audit programs. In addition, the auditor needs to understand the organization of the files, the problems of file protection, and the methods available for safeguarding files.

Knowledge of the common types of

errors that may occur in ADP equipment is required for the auditor to be able to evaluate the effectiveness of the controls installed in the system. Since he is interested also in programmed controls for the detection and correction of errors, he should have a conceptual understanding of how computer instruction programs are developed. In all probability an auditor will not prepare computer programs; but he will need to work with programmers in designing special audit routines and in developing test transactions. Generally, it is not recommended that auditors become *proficient* in a specific computer programming language, although a few auditors may require this knowledge.

It is interesting to note, however, that the report of the Commission on the Study of Common Knowledge for CPAs was somewhat more specific on this point. In the study made to delineate the common body of knowledge to be possessed by beginning CPAs, the following recommendations were prescribed with respect to computers:

1. The beginning CPAs be required to have basic knowledge of at least one computer system.
2. That they have knowledge of at least one computer language (e.g., COBOL).
3. That they possess the ability to chart or diagram an information system of modest complexity.
4. That they have the ability to design an information system, prepare a program for it and carry their work through the stages of debugging and testing.²

Nevertheless, because of the number of variables influencing each individual situation, it is not possible to define

¹ Statistics provided by the Office of Automated Data Management Services of the Federal Supply Service, General Services Administration.

² Robert H. Roy and James H. MacNeill, "Horizons for a Profession: The Common Body of Knowledge for CPAs," *Journal of Accountancy*, 122, No. 3 (September 1966), p. 45.

precisely the ADP knowledge required for an auditor to effectively audit a computer system. There are, however, certain basic principles and practices which should be included in the body of knowledge of all auditors. This fact was recognized by officials of the Federal Government's auditing community when, in early 1966, the idea of a course in ADP for Government auditors was first conceived.

Interagency Auditor Training in ADP Systems

At the invitation of *William A. Newman, Jr.*, then Director of the Defense Division of the General Accounting Office, representatives of the General Accounting Office, Civil Service Commission, and the audit agencies of the Department of Defense met in April and June 1966 to discuss the need for ADP training for Federal auditors. These meetings resulted in the appointment of an interagency task force to develop, as a part of the Joint Financial Management Improvement Program, a plan for a course that would help meet the common, fundamental needs of Federal auditors to understand, use, and assess ADP systems. GAO's representative on this task force was *Harry J. Mason, Jr.*, of the Office of Policy and Special Studies.

The task force report was presented on October 10, 1966, to the participating agencies. In addition to specifying the basic premise that the students would be Federal auditors, the report specified certain minimum criteria pertaining to student qualifications and preparation, as follows:

1. Students should have at least 1 year of Government auditing experience.

2. No prior knowledge of computers would be required other than a preparatory study assignment to be distributed to students in advance of course beginning date.

The task force estimated the potential input at approximately 8,000 students. It recommended, however, that class enrollment be limited to 25 students per class because of the complexity of the subject material, the relative effectiveness of teaching methods, and the number and quality of instructors and facilities needed. The task force further recommended that the bulk of the instructor force be provided by the participating agencies to the ADP Management Training Center of the Civil Service Commission, on a loan basis, with specified duty tours of 18 months. In this manner it was anticipated that tuition costs would be minimized and thus would enable small agencies to benefit from the course.³

The report of the task force, along with its provisions and recommendations, was accepted by the participating agencies, and the wheels of organization for the course began to turn. On December 1, 1966, three persons reported to the Civil Service Commission to begin the task of developing the course:

- Major James H. Coonrod, Air Force Auditor General Staff.
- Moses A. Michel, Army Audit Agency.
- Earl M. Wysong, Jr.*, General Accounting Office.

Later the development team was augmented by the addition of Frederick G.

³ The ADP Management Training Center operates on a cost-reimbursable basis.

Harold, Civil Service Commission, and Richard K. Greenlee, Jr., Naval Audit Service.

The course, entitled "Principles and Practices of Auditing in the ADP Systems Environment," was designed as a 3-week (87 classroom hours) course with the following specific objectives.

- To provide understanding of the impact of ADP on auditing.
- To alleviate the apprehension of auditors concerning ADP systems and equipment.
- To enable auditors to communicate meaningfully and confidently with ADP specialists.
- To familiarize auditors with internal controls, audit trails, tools, techniques, and methods which generally are applicable to the audit of ADP systems.
- To serve as a departure point for practical auditing experience and as preparation for additional specialized training in ADP where applicable.

Conduct of the Course

The methodology of the course presentation involves primarily lecture and class discussion, augmented by individual student exercises and case problems utilizing the team-effort approach. The course is presented in sections using the "building block" technique which provides continuity and integration of subject matter. The major sections of the course are as follows:

- Systems Analysis and Design.
- ADP Equipment and Principles.
- Computer Programming.
- Internal Controls and Audit Trails.
- Audit Appraisals and Surveys.
- Audit Techniques and Their Application.
- Case Problems.

Emphasis is placed throughout the course on the systems approach to auditing. The systems analysis and de-

sign section is intended essentially to familiarize the students with the procedures and techniques used by systems personnel in the development of an ADP system. The section on ADP equipment introduces the students to the elements of an ADP system, the capabilities and applications of computers, and the representation of data within the system. Computer programming is presented from a conceptual viewpoint which highlights the steps involved in developing computer programs. The section dealing with internal controls and audit trails emphasizes the need for controls in ADP systems and the specific problems related thereto, and demonstrates how to recognize and to determine the existence of audit trails. The audit appraisals and surveys section covers the auditor's role in systems development and conversion functions and the principles, objectives, and practices involved in various types of surveys. The section on audit techniques and their application covers subjects pertaining to audit concepts and approaches and various computer-assisted audit techniques.

The concluding section of the course provides the students with an opportunity to apply their newly acquired knowledge in a simulated audit situation. Functioning as separate audit teams consisting of five or six members, the students first perform an auditability survey of an automated inventory control and distribution system and then they prepare an audit program. This case problem requires the preparation of flow charts which are used in conjunction with other documentation provided to determine the internal con-

trols and audit trails in the system. Additional requirements for development by the teams include (1) the preparation of logic diagrams for computer routines which are to be used as computer-assisted audit techniques, (2) the preparation of a general system flow chart and an accompanying narrative as recommended corrective action for procedural deficiencies, and (3) a sampling plan.

No tests are given to the students during the course and no grades are rendered at completion. Motivation for student participation and note taking is provided, however, through the use of two unique techniques which also serve as excellent tools for feedback to the instructors. These techniques are daily written abstracts and oral presentations. Students are required to prepare an abstract summarizing the material presented in each day's lecture and to comment on the applicability of the material to his assigned duties. In addition, the first activity each morning is the random selection of a student to present from his notes a brief résumé of the previous day's lecture. By reading the abstracts and listening to the students' oral presentations, instructors are able to clarify any points of confusion and to correct any misconceptions before proceeding with additional material.

Results of the Course

The first session of the course began on May 8, 1967, with opening remarks by *Elmer B. Staats*, Comptroller General of the United States. Mr. Staats enthusiastically endorsed the objectives of the course as an opportunity for the Federal audit community to enhance

its audit capability. He stated that the Government-wide approach in training was suggested in lieu of each agency devising its own program because it was felt that not only would a more effective training program result but also a less costly one. Mr. Staats said:

Since most of the auditors in the Federal Government are employed by 20 agencies, it is possible that we might have had 20 training programs concerned with auditing ADP systems. I am told that it costs about \$100,000 to design and develop a training program similar to the one we are starting today. Thus, it is clear that a centrally developed and administered training program in this area is not only likely to be better because of the pooling of talent but it can save a substantial amount of training cost.

Following the second session in June 1967, representatives of the original participating agencies augmented by representatives from other interested agencies convened to discuss the results of the first two offerings on the basis of students' critiques and comments and instructors' experience. Several revisions (dealing principally with reorganization of the sections of the course) were made before the next presentation. Following each subsequent session, the instructors evaluated the course in the light of students' critiques and technological developments and modified the course material and methodology where warranted.

As of December 31, 1968, the course had been offered 17 times and 460 students attended. Three of the sessions were conducted in Palo Alto, Calif., to accommodate auditors located on the west coast; the other 14 sessions were conducted in Washington, D.C. Attendance included auditors from all defense agencies and 24 civil agencies as well

as representatives from three Government corporations, a State government (California) and a foreign government (Philippine Islands). (GAO provided 89 students during this period.) Listed below is a summary of the number of students who attended the 17 sessions:

U.S. Government civil agencies.....	272
U.S. Government defense agencies.....	173
U.S. Government corporations.....	11
State of California.....	3
Philippine Islands.....	1
<hr/>	
Total students.....	460

Grades of the students ranged from GS-5 to GS-16, the average being GS-12.

A tuition cost of \$160 per student is assessed for the sessions conducted in Washington. For those conducted at other locations, the cost per student is slightly higher so that the added costs of instructor travel can be borne by those agencies which realize savings in student travel expenses.

At the conclusion of the course, the students are requested to complete a "Participant Evaluation" form which provides space for comments and constructive suggestions for improvements to the course. Specific items which are requested to be completed include:

1. The most significant weaknesses and strengths in the current session of the course.
2. Subject-matter areas that should be emphasized or deemphasized in subsequent sessions of the course.
3. Other comments of a general or specific nature.
4. An overall evaluation of the course as excellent, very good, satisfactory, or unsatisfactory.

The overall evaluations for the 17 sessions manifest that the students gen-

erally have been highly satisfied with the material presented, the methodology of presentation, and the instruction provided. Over 51 percent of the students rated the course "very good" and over 42 percent rated it "excellent." Less than 7 percent of the students rated it "satisfactory" and none rated it "unsatisfactory."

Demand for participation in the course remains high among the various Government agencies. For the rest of fiscal year 1969, sessions are scheduled in Washington, D.C., Palo Alto, Calif., Dallas, Tex., and Chicago, Ill. The instructor staff currently assigned consists of:

- James H. Coonrod, Civil Service Commission.
- Gerald F. Smith, General Accounting Office.
- Ludovico R. Giordano, General Accounting Office.
- Frank A. Chenette, Naval Audit Service.

There has been some interest generated to develop an advanced course for auditing ADP systems. In view of the varied policies, objectives, types and sizes of systems, and equipment of Government agencies, this approach does not appear to be practical on an interagency basis. Any additional specialized training which may be desired for certain auditors of a specific agency can be provided through a number of available sources of training.

Other Sources of Training

The ADP Management Training Center of the Civil Service Commission offers several courses dealing with other aspects of ADP management. These courses cover a wide range of complex-

ity and applicability from very basic orientations to advanced specializations.

Computer manufacturers are excellent sources of training for specific equipment. Most large manufacturers have regularly scheduled courses in programming, operations, systems design and configurations, and equipment systems orientation.

Similar courses are offered also by various technical schools in most metropolitan areas. Home-study and correspondence courses are available from numerous sources, including computer manufacturers, colleges and universities, correspondence schools, and the Data Processing Management Association. These courses utilize both the conventional methodology of instruction and the programmed-instruction method.

Additionally, courses in data processing are available from most colleges and universities at both the undergraduate and the graduate levels. Many schools offer a degree in computer sciences, and others provide for a major area in ADP. Finally, special courses, seminars, and conferences dealing with ADP activities frequently are provided by professional societies.

Although most of the courses mentioned above are not oriented to the specific needs of the auditor, the material covered should provide him with the technical detail he requires. Advanced training for auditors generally can be obtained best by applying in practice the principles obtained in the basic course.

An excellent means by which the auditor can gain additional technical knowledge in the area of ADP systems

is to participate in a project involving the design and development of a system. In addition to increasing his proficiency in auditing in the ADP systems environment, this method has the advantage of increasing the value of the auditor's service to management. Auditors are in an excellent position to determine whether management and audit requirements are incorporated into the system.

Where an auditor does become involved in a proposed system development, he should do so very early in the project and remain closely in touch with developments throughout the change-over period. The auditor, thus consulted, has the opportunity to discuss the accounting objectives and the audit implications while he is gaining a comprehension of the internal accounting procedures. The result of this cooperation will be the auditor's satisfaction that the system will produce sufficient information for audit purposes and that adequate internal controls will be incorporated, both within and without the computer.

Conclusions

An auditor need not to be an expert programmer or operator to audit the computer intelligently. Nor must he become a specialist in systems analysis and design to be able to render valuable service to management in a design project. He must, however, be sufficiently familiar with ADP equipment to be able to make recommendations where advisable, to assist with the planning for installation and related programming for internal control, and to perform an effective audit of ADP systems.

As business systems become larger

and more automated, they become increasingly more complex and sophisticated. Audit techniques of only a few years ago are not adequate to perform efficient audits of advanced systems and to evaluate properly their internal control features. We must, therefore, re-supply our stock of audit methods to

fit in with the changed environment. If we are to continue to conform to the high standards of performance demanded of the auditing profession, it is imperative that we obtain whatever ADP training and experience we can to upgrade our technical skill and proficiency.

The Joint Financial Management Improvement Program Is 20 Years Old

On January 6, 1949, a small group of men assembled in the Office of the Secretary of the Treasury to perform an important ceremony. In addition to the Secretary, John W. Snyder, there were present the Director of the Bureau of the Budget, James E. Webb, and the Comptroller General of the United States, Lindsay C. Warren, with members of their staffs. This meeting was the culmination of discussions and deliberations which had been going on for nearly 2 years. The three officials, one by one, affixed their signatures on a document which established officially the cooperative effort then designated as the "Joint Program for Improving Accounting in the Federal Government," but since 1959 designated as "The Joint Financial Management Improvement Program."

The program had its beginning in the mutual interests of the three central agencies and the Senate Committee on Government Operations (then called the Committee on Expenditures in Executive Departments) in simplifying and improving the fiscal and accounting operations of the Federal Government. Joint discussions were held by representatives of the three central agencies and the committee beginning early in 1947. The principal GAO representatives were Frank L. Yates, Assistant Comptroller General, and Frank H. Weitzel, Assistant to the Comptroller General. The Treasury Department was

represented by Edward F. Bartelt, Fiscal Assistant Secretary, and the Bureau of the Budget by Fred Lawton, Assistant Director.

The discussions advanced to the point that on December 16, 1947, the Comptroller General addressed letters to the Director of the Bureau of the Budget and the Secretary of the Treasury outlining a cooperative venture under which the three would participate in studies and efforts to improve Federal accounting. The responses were favorable and discussions were continued on means of implementing the agreement. The Comptroller General set a high priority on this program and in January 1948 established within his own office a new office, the Accounting Systems Division. As chief of that division, he brought in a longtime Government employee of great prestige, Walter F. Frese, who was then with the Treasury Department. From that time on until he left Federal service in June 1966, Walt Frese provided strong leadership for this program.

On October 20, 1948, the Comptroller General, speaking for himself and the Director of the Bureau of the Budget and the Secretary of the Treasury, addressed a letter to the heads of all Federal agencies to enlist their cooperation in a joint effort to improve accounting in the Federal Government—the program formalized by the signatures of the three principals on January 6, 1949.

JOINT PROGRAM FOR IMPROVING ACCOUNTING
IN THE FEDERAL GOVERNMENT

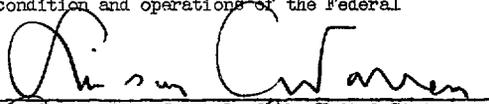
During the past year the General Accounting Office, the Treasury Department, and the Bureau of the Budget have been devoting special effort jointly to the improvement of accounting and financial reporting in the Federal Government. Much of the work done to date has necessarily been with individual agencies in revising their accounting systems and procedures to help in solving urgent major operating problems and producing better information for agency management and for executive and legislative purposes generally. This work has been approached not only from the standpoint of solution of immediate problems, but also to develop basic factors in the present accounting structure of the Government which lead to sometimes supportable charges of inadequate accounting, unnecessary work, and unreliable information, so that such matters can be appropriately handled as part of the broad program which is under way.

The program has now reached a point where it is desirable to crystallize policies, objectives, and work areas to guide and direct further action. In line with this there are attached (1) a general statement of policies and objectives, and (2) a summary of work areas in which work is either being done or scheduled.

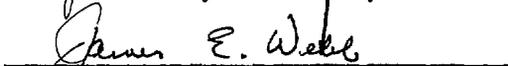
In approving these documents, we wish to emphasize that they incorporate the philosophy and express our complete agreement that--

- (1) The maintenance of accounting systems and the producing of financial reports are and must continue to be functions of the executive branch.
- (2) There must be an audit independent of the executive branch which will give appropriate recognition to necessary features of internal audit and control. Properly designed accounting systems are a vital factor to the effectiveness of such independent audit.
- (3) Full opportunity is to be afforded to the executive branch for participation in the development of accounting systems as an essential to meeting the needs and responsibilities of both the legislative and executive branches in the establishment of accounting and reporting requirements.

The successful prosecution of this joint program will give the President better management in the executive branch, the Congress better information and bases for acting upon appropriations and other legislation, and the public a clearer picture of the financial condition and operations of the Federal Government.


Comptroller General of the United States


Secretary of the Treasury


Director of the Bureau of the Budget

JAN 6 1949
Date

Charter of the Joint Program for Improving Accounting in the Federal Government—January 6, 1949.



The signing of the charter of the Joint Program for Improving Accounting in the Federal Government. Left to right are: Secretary of the Treasury, John W. Snyder; Comptroller General; Lindsay C. Warren; Director of the Budget, James E. Webb—
January 6, 1949.

The responses were almost universally favorable and encouraging.

In the beginning, the functioning of the program was on a somewhat informal basis carried on vigorously through the sincere interest and dedication of the representatives of the three agencies. Mr. Frese continued to be the strong right arm of the Comptroller General. The Treasury Department was similarly supported by Gilbert Cake, Associate Commissioner of Accounts, and the Bureau of the Budget by William J. Armstrong, who has continued to represent the Bureau throughout the years in his position as Director of the Financial Management Staff. Frank Weitzel took a leading part in the development of the program and its presentation to congressional committees.

During the first few years of the program, surprisingly great advances were made in the Government's financial practices and the legislation relating thereto. Among the legislation enacted in the early years of the program were (1) title 4 of the National Security Act Amendments of 1949 for the promotion of economy and efficiency through establishment of uniform budgetary and fiscal procedures and organization in the Department of Defense, (2) the Federal Property and Administrative Services Act of 1949 to simplify the procurement, utilization, and disposal of Government property and reorganize certain agencies of the Government, (3) the Post Office Department Financial Control Act of 1950 to provide improved procedures with respect to the financial control of the Post Office Department, and (4) chapter XI of the General Appropriation Act

of 1951 which amended the Anti-Deficiency Act to strengthen the control over obligations and expenditures incurred under the appropriations.

By far, the most significant legislation during this time was the enactment of the Budget and Accounting Procedures Act of 1950, approved on September 12, 1950. President Truman, when he signed the bill, stated: "This is the most important legislation enacted by the Congress in the budget and accounting field since the Budget and Accounting Act, 1921, was passed almost 30 years ago."

This act provided for changes in the submission of budget information and enlarged the responsibility of the Bureau of the Budget, defined the respective responsibilities of the General Accounting Office, Treasury Department, and the executive agencies in the accounting and reporting functions of the Government, and, most importantly to us, restated and modernized the responsibility of the General Accounting Office for auditing the activities of Government agencies, prescribed additional accounting responsibilities for the General Accounting Office, and gave legislative indorsement of the joint program by stating as the policy of the Congress that the Comptroller General, the Secretary of the Treasury, and the Director of the Bureau of the Budget conduct a continuous program for the improvement of accounting and financial reporting in the Government.

Under the authority of these laws, important improvements were brought about very quickly. Following a survey led by Ted B. Westfall, then an assistant director in the former GAO Cor-



PRESIDENT TRUMAN SIGNS THE BUDGET AND ACCOUNTING PROCEDURES ACT OF 1950

WALTER F. FRESE
*Chief, Accounting
Systems Div., GAO*

FRANK H. WEITZEL
*Assistant to the
Comptroller General*

FRANK L. YATES
*Asst. Comptroller
General of the U.S.*

CHARLES B. STAUFFACHER
*Executive Asst. Director
Bureau of the Budget*

ROBERT F. RICH
*Member of House
Expenditures Comm.*

KARI E. MUNDT
*Member of Senate
Expenditures Comm.*

FRANK M. KARSTEN
*Chairman
Public Accounts Subcommittee,
House Expenditures Committee*

THOMAS A. KENNEDY
*General Counsel
House Expenditures Comm.*

WALTER L. REYNOLDS
*Chief Clerk and
Staff Director,
Senate Expenditures Comm*

FREDERICK J. LAWTON
*Director
Bureau of the Budget*

JOHN W. SNYDER
*Secretary of the
Treasury*

LINDSAY C. WARREN
*Comptroller General
of the United States*

WILLIAM L. DAWSON
*Chairman, House
Expenditures Comm.*

EDWARD F. BARTELT
*Fiscal Assistant
Secretary*

JOHN L. MCCLELLAN
*Chairman, Senate
Expenditures Comm*

HARRY S. TRUMAN
President of the United States

poration Audits Division, the General Accounting Office abolished its Accounting and Bookkeeping Division on December 31, 1950. By this action the GAO discontinued the maintenance of appropriation, expenditure, limitation, receipt, and personal ledger accounts which paralleled certain accounts kept in the Treasury Department and in the agencies. This action resulted in the direct annual saving of nearly \$1 million.

The Postal Accounts Division of the General Accounting Office was abolished on November 15, 1950. Its functions of maintaining the administrative accounts for the Post Office Department were transferred to that Department and an independent audit of postal activities was set up in the General Accounting Office.

Many other changes were made in the direction of simplifying paperwork by discontinuing copies of schedules of collections and reports of disbursements, and simplifying procedures involving the issuance and countersignature of appropriation warrants.

In 1956, the operations of the Joint Program were put on a more formal basis by the establishment of two steering committees. One committee was composed of representatives of the three central agencies for the planning and guidance of projects involving Government-wide and civil agency improvements. The other committee, composed of representatives of the three central agencies and the Department of Defense, handled joint matters relating to financial management improvement in the Department of Defense. This latter

committee was discontinued in February 1962.

The first steering committee was composed of William J. Armstrong, Bureau of the Budget; George F. Stickney, Treasury Department; and Joseph M. Sullivan, General Accounting Office.

At the same time an informal group was created to represent the principals of the program for policy guidance. This group consisted of Percy Rappaport, Assistant Director of the Bureau of the Budget; William Hefflefinger, Fiscal Assistant Secretary of the Treasury; and Ellsworth H. Morse, Jr., Director of the Accounting and Auditing Policy Staff, General Accounting Office (now Office of Policy and Special Studies).

The steering committee for Defense consisted of members of the civilian agency committee with the addition of Lawrence J. Powers, Director, and William A. Newman, Jr., Deputy Director, Defense Accounting and Auditing Division, GAO, and Howard Bordner, Deputy Comptroller for Accounting, Department of Defense. This committee met periodically with Defense officials on matters of joint interest.

Over the years the steering committee has had several changes in membership. Mr. Stickney of Treasury was succeeded by Sidney S. Sokol, Assistant Commissioner of Accounts, in 1962, who in turn was succeeded by Ray T. Bath, Comptroller of the Bureau of Accounts, in April 1965. Mr. Bath's successor in December 1966 was L. David Mosso, presently Assistant Commissioner of Accounts.

Joseph Sullivan of the General Accounting Office was succeeded by Frederic H. Smith, Deputy Director, Accounting and Auditing Policy Staff, in February 1962, who was succeeded by Lloyd A. Nelson, Associate Director, Civil Accounting and Auditing Division, in February 1965, and in turn succeeded again by Frederic Smith in November 1965.

William J. Armstrong has been the continuing representative for the Bureau of the Budget.

The original concept of the program being a Government-wide cooperative effort has continued to be emphasized. Each Federal agency has been requested to designate an official as its representative in the program. From time to time groups of these representatives have met to discuss matters of joint interest. Most importantly, however, they provide a focal point within agencies where attention can be given to specific subjects, either of particular interest to the agency or of Government-wide concern.

The principals of the program meet from time to time to review the progress of the program and to consider areas that need closer attention.

At a meeting held in May 1966, shortly after the appointment of Elmer B. Staats as Comptroller General, the agenda included a summary of recent progress and an analysis of some of the more aggravating problems facing the agencies in their improvement efforts. Concern was expressed for the need to quicken the pace of improvements and for the need of more and better qualified personnel to direct and carry out improvement efforts. To

assist in coping with the personnel problem, the Chairman of the Civil Service Commission was invited to join the program as a principal. The participation of the Commission since then has been both vigorous and productive. A representative of the Commission has been added to the steering committee; the present incumbent is Clarence A. Melvin, Assistant Director, Financial Management and PPBS Training Center.

Immediately following the meeting of the principals, President Johnson, on May 24, 1966, addressed a memorandum to the heads of all Government agencies in which he expressed his strong and continuing interest in the development of businesslike financial systems which will assist administrators throughout the Federal Government to get "a dollar's value for a dollar spent."

Over the years the Joint Program has stimulated and initiated innumerable advances and improvements in the Government's financial management practices. The annual progress reports of the program contain the details of these accomplishments. The 15th annual report contains a very good summary of the accomplishments to that time.

These changes did not just happen—they came about because of the initiative, the imagination, and the hard work of many devoted and extremely capable individuals. The program has had outstanding leaders—too many to identify all, but among them, and ones whose influence is still felt or present, are these:

In the Bureau of the Budget—

Fred Lawton, Percy Rappaport, John Beckett, Elmer Staats, Sam Hughes, Carl Tiller, and Bill Armstrong; in the Treasury Department—Edward Bartelt, Gil Cake, George Stickney, Bill Hefflefinger, Sid Sokol, Ray Bath, John Carlock, and Dave Mosso; in the GAO—Frank Yates, Frank Weitzel, Walt Frese, Karney Brasfield, Ted Westfall, Steve Brown, Ellsworth Morse, Larry Powers, and Joe Sullivan.

The program has been fortunate in having as its principals men who were and are concerned with its efforts and

dedicated to its purposes. The recent leadership of Elmer Staats, Comptroller General; Henry Fowler, Secretary of the Treasury; Charles Zwick and his predecessor, Charles Schultze, Directors of the Bureau of the Budget; and John Macy, Chairman of the Civil Service Commission, has provided new inspiration and guidance that will continue to be felt long into the next 20 years of the Joint Program.

Frederic H. Smith,
DEPUTY DIRECTOR,
OFFICE OF POLICY AND
SPECIAL STUDIES.

American Accounting Association Annual Meeting Notes

The 52d annual meeting of this association was held on the San Diego State University campus on August 26-28, 1968.

The Comptroller General, *Elmer B. Staats*, addressed the luncheon meeting on August 27. His address appears in the Fall 1968 issue of the *Review*.

Others attending from the General Accounting Office:

Leo Herbert, deputy director for staff development, OPSS.

Harley Climpson, assistant director for staff development, OPSS.

From Los Angeles Regional Office:

Hyman L. Krieger, regional manager.

A. L. Bussey.

W. J. McCormick, Jr.

Virginia Leach.

William T. Stevens, University of Florida (on leave from San Francisco Regional Office).

George Gustafson, University of Southern California (on leave from San Francisco Regional Office).

Notes of interest on some of the sessions attended by the above follow.

Communications, Forecasting, and Historical Costs

Marvin L. Stone, president of the American Institute of CPAs, observed that accounting is often called the lan-

guage of business but only by accountants; English is the language of business according to him. He said that very few people place reliance on accounting reports and there is a need to convert our present accounting reports to English. To do this our product needs better packaging. And, since our product is knowledge, we must convert the knowledge from one medium to another. He also commented that because portrayal is complex we need to use every means available to do this, such as visual aids and obtaining expert advice in packaging our product.

On forecasting, Mr. Stone stated that accountants are basically historians. But accountants are the best qualified individuals to make our knowledge available to extend the past into the future. He said that investors, bankers, and managers all need knowledge of the future and accountants can provide this by reliable forecasts. He also said that ethics does not allow vouching for accuracy of forecasts but we can do so if we show a basis for the forecasts.

Mr. Stone commented that conservatism is rooted in another era. Conservatism is a synonym for underevaluation. He pointed out that underevaluation can do as much damage as overevaluation and that we need to substitute fairness for conservatism. He also stated that there was a problem in the usage of the words "general acceptance." What is meant by general acceptance?

He noted that popularity is the criterion rather than general acceptance and we need to get out of our literature the term "general acceptance" and put in something on soundness.

In commenting on Mr. Stone's paper, Dr. Howard W. Wright, University of Maryland, observed that since practicing CPAs are increasingly faced with the necessity to participate in forecasting rather than limit their work in reports to historical data, there was need to develop a set of generally acceptable forecasting principles to parallel generally accepted accounting principles. He also noted that reports need stating in market value consumption terms rather than being limited to historical cost bases. Dr. Wright concluded that the present balance sheet presentation modes are virtually worthless and that the concept of "fairness" should be substituted for conservatism as an initial step to adding utility to these statements.

Impact of Computers and Information Sciences on Accounting

The overall theme of this session seemed to be that the computer should and will have an impact on accounting. The speakers emphasized the need for the accountant to play an active part in reevaluating accounting systems, considering new capabilities versus just using new capabilities to do old things.

Prof. Edward Zschar of Stanford University stressed the fact that accountants will have real opportunities to make improvements in accounting systems with new computer capabilities. These capabilities include: auto-

matic input, output in many forms and directly to users, storage capabilities, and ability to combine large amounts of data in any manner desired.

Prof. C. Clifford Wendler of Southern Methodist University emphasized the need for the accountant to play a more aggressive role in systems work. The accountant should in his words "go out and grab the area" by expanding responsibilities of accountants to include systems analysis and operations research. He also commented on the need for curriculums to be adjusted to recognize the impact of the computer and that students should be kept up-to-date on the state of the art.

Impact of SEC Disclosure Requirements

Prof. George J. Benston, University of Rochester, examined into the question of whether or not the Securities Act of 1933 and the Securities Exchange Act of 1934 were, in fact, justified, and what their impact has been. The examination was limited to the accounting disclosure requirements of the acts and excluded consideration of such other provisions as those concerning regulating the operation of stock exchanges, registration of brokers, etc.

To evaluate whether the Securities and Exchange Commission can or has improved the lot of investors, the study considered the following major questions:

1. Were the accounting disclosure requirements justified?
2. What evidence is there to support or deny the underlying assumption of the securities acts that dis-

- closure of financial accounting information is of value to investors?
3. What is the impact of the SEC's accounting disclosure requirements on the securities market?
 4. What has been the impact of the acts on the accounting profession?

Professor Benston concluded that there was little justification for the accounting disclosure required by the acts on the basis of his findings that during the period just prior to their enactment (1926-34) there was little evidence of fraud related to financial statements, and there was no widespread lack of disclosure.

Secondly, Professor Benston concluded that the data required by the SEC does not seem to be useful to investors. This conclusion was based on a statistical association between accounting data reported to the SEC and stock prices, and on comparisons which indicated that mutual funds (which presumably rely heavily on analyses of accounting reports) did not perform better than randomly selected portfolio of stocks.

On the third question, the author's analysis of new stock issues before and after SEC's creation led him to conclude that the SEC contributed little of positive value to the use of stock markets by corporations. Further, he concluded that conservatively biased SEC accounting regulations appear to have had an important influence on the shift of many corporations away from public markets to the direct placement of securities.

Finally, the author concluded that the acts have had a more salutary im-

act on the accounting profession than on the securities market, but he expressed reservations as to whether or not accounting practices have improved. In particular, he indicated that SEC has contributed to a conservative bias in accounting.

Prof. Morton Backer of the University of Massachusetts challenged the author's conclusions and his methods of correlating and analyzing much of the data underlying his findings. He pointed out that the studies of performance of mutual funds were not current, the most recent period covered extending only through 1964. Professor Backer also questioned the validity of the finding that there was little evidence of fraud prior to the acts because of the difficulties in obtaining convictions of fraud during the earlier period. He observed that he considered Professor Benston's study to be a pioneering effort in terms of the mathematical approaches used if not in terms of the conclusions reached.

Andrew Barr, chief accountant of the SEC, also took issue with Professor Benston's overall conclusions, and he proceeded to comment on the content and implications of a number of specific passages in the paper which he apparently considered to be erroneous or misleading. In his comments Mr. Barr emphasized the practical problems encountered by the SEC in fulfilling its responsibilities.

Views of Accountants

Selwyn W. Becker, professor of psychology at the University of Chicago, presented a tongue-in-cheek analysis and discussion of the well-known accountants' group personality. In a

sampling of high school students and teachers, he found that they considered accountants as more honest than lawyers. Equally encouraging was his finding that, in rating 57 different occupations and professions, college undergraduates rated accountants 30th, just ahead of undertakers. Other traits noted in Professor Becker's survey were that accountants are most likely to (1) straighten a picture when visiting a friend's home, (2) play a practical joke, (3) beat their children, and (4) run off and join a circus. On the negative side, it was noted that accountants are least likely to talk back or join a protest march.

Prof. W. W. Cooper of Carnegie-Mellon University stated that operations research articles are often critical of accounting. Of the three basic areas of management—planning, operations, and control—he observed that the operations research analyst specializes in planning whereas accountants become involved in all three functions.

Accordingly, Professor Cooper recommended that operations research be regarded as part of the accounting system.

Mr. Sommer discussed several of the accounting profession's problems from a lawyer's point of view. He questioned whether an accountant can be truly independent with the client paying his bill.

Mr. Sommer offered the following suggestions as potential means of increasing and protecting the independence of accountants: (1) let shareholders select auditors, (2) rotate auditors, and/or (3) limit or at least publicize the number of options available in presenting financial statements.

Mr. Sommer also expressed the opinion that the auditor's responsibility should extend beyond the date on which he expresses his opinion in the financial statements; i.e., he has a responsibility to disclose subsequent facts or events which may have a material bearing on the financial statements.

American Institute of CPAs—Annual Meeting Notes

The 81st annual meeting of the American Institute of CPAs was held in Washington, D.C., October 12–13, 1968. The following commentary on the meeting is provided by *Douglas E. Cameron* of the Office of Policy and Special Studies.

The Crisis of Our Times

The most important session of particular relevance to current GAO activities bore the title “The Crisis of Our Times.”

The main speakers for this session were Dr. Daniel J. Bell, professor of sociology, Columbia University, who spoke on social problems of the day; Dr. Mancur Olson, Jr., Deputy Assistant Secretary for Social Indicators, HEW, who spoke on social indicators and social accounts; and David F. Linowes, Institute Council member, who spoke on socioeconomic accounting.

Social Problems of the Day

Dr. Bell pointed out that our society is undergoing four major structural changes:

1. Our population is growing and shifting. It numbered 180 million in 1960, 200 million in 1967, and 265 million is seen by the year 2000. At the same time it is shifting from the center to the rims of the United States and from the country to the cities. The poor move into city centers and residents of city centers move to the suburbs when they can afford to.

2. We have become a national society.

The argument is that most of our social problems have a new dimension in recent years because of the emergence, beginning roughly 30 years ago, of a national society. We have always been a nation, but only in the last 30 years have we seen the situation where problems generated in one part of a society (economic or social) have an immediate resonance and impact in every other and where there is an almost immediate need to bring these problems to a national, organized center. * * *

If one seeks to discern the shaping elements of the national society, there are, I think, three distinct elements:

- A. The demands of excluded and disadvantaged groups for a place in the society: ethnic groups, labor, farmers.
- B. The revolutions in communication and transport: jet airplane, television, coast-to-coast telephone dialing.
- C. War and the demands of foreign policy, with the revolutions in military technology as a more specific subvariable.

3. We are becoming a communal society with increasing nonmarket public decisionmaking. We are obtaining more and more communal goods such as defense, schools, highways, water and power supplies. With decisions to employ resources being made

more on a communal basis the problem becomes one of selecting the criteria used to allocate public moneys.

Claims for social rights are increasingly being made on behalf of groups; minorities, unions, associations and so forth. There is no easy answer to who has more right—groups or individuals.

The shift from individual or market decisionmaking to non-market decisionmaking and from assertion of individual rights to assertion of group rights is a shift toward a communal society and will lead to strife.

4. We are becoming a postindustrial society where most of the labor force, estimated at from 60 to 65 percent by 1975, will be in the service sector. One result of this is an increase in smaller firms of less than 500 employees. Another result is a shift to technical and professional occupations which will make our society more dependent on codification of technical knowledge.

Industries of the future will be science based and universities will play the role in society that industry played in the past.

Social Indicators and Social Accounts

Dr. Olson described the lack of social indicators and social accounts and discussed the definition of the phrases.

The following passages from his discussion are pertinent to these points.

The government normally does not publish statistics on whether or not children are learning more than they used to, or on

whether social mobility is increasing or decreasing. It does publish statistics on life expectancy and the incidence of disability due to ill health, but some diseases are becoming more common and others less common, and no summary measure indicating whether we can expect more healthy life has been available.

The inadequacy of our statistics on social conditions, and on the severity of various socioeconomic problems, means that the Nation lacks the information it needs to discern emerging problems and to make informed decisions about national priorities.

* * * * *

* * * many of our statistics on social problems are merely a byproduct of the activities of the accountant and the informational requirements of routine management. We have volumes of data on public expenditures on education, and on the number of teachers and students, because these data are needed by accountants and superintendents; we have almost no data on what children have come to know, because that information is not essential for routine administrative activity. We have detailed data on public expenditures on pollution and on the number of licensed automobiles, but nothing on how much it would be worth to the average citizens to be rid of the contaminants in the environment.

* * * * *

The definition of a social indicator, and its operational significance, should now be clear. As we have seen, a social indicator is a statistic of direct normative significance, which in addition fits into a systematic set of measures of the condition of society obtained by classification, or aggregation, or in both ways. When a balanced, organized, and concise set of measures of the condition of a society is available, emerging problems can be identified more quickly, and the information needed for a knowledgeable decision about national priorities will be available.

The next step in any logical process of policy formation is to choose the most efficient program for dealing with the undesirable conditions that have been exposed, and then there must be a decision about how much should be spent on the program to deal with

the difficulty. If these decisions are to be made intelligently, the society needs information on the benefits and costs of alternative programs at alternative levels of funding.

* * * * *

The fact that rational policy demands benefit and cost estimates for public programs, however difficult they may be to obtain, suggests the definition we ought to give to the phrase "Social Accounts." A Social Account would be defined to be a table, starting with a Social Indicator, and including also estimates of the changes in the Social Indicator that could be expected to result from alternative levels of expenditure on the relevant public program. The monetary value the government or society would put on the changes in the Social Indicator could then be compared with the costs of obtaining that change. Something like the Social Account described here has already been advocated by Dr. Harvey Perloff, and it is quite clear that such account or table is implicit in the Planning-Programming-Budgeting System. This should not be surprising, for the Social Account defined here includes nothing less, and nothing more, than the quantitative information needed for fully rational public decision-making. Every effort at a rational, quantitative assessment of a public policy has therefore naturally tended to approximate it.

Though an impressive set of Social Indicators can be developed at modest cost in the near-term future, a complete set of Social Accounts is a utopian goal at present. This does not mean that work on Social Accounts should be postponed. These accounts will never be even close to available unless we start thinking about the statistics we need for rational decisionmaking, even at the expense of marginal changes in the statistics we already have. The social statistics that we need will almost never be obtained as a byproduct of accounting or administrative routine, or as a result of a series of *ad hoc* decisions, however intelligent each of these decisions might be. Only a systematic, almost theoretical approach, which starts with the informational requirements of public policy, will do. Social Indicators and Social Accounts, as we have defined them, provide such an approach.

Socioeconomic Accounting

Mr. Linowes concluded with a discussion of socioeconomic accounting. He pointed out that:

The accounting profession has long been regarded as essentially an adjunct of business. In fact, accountancy is sometimes described as "the language of business." In the last several years, however, this definition has been giving way to "the measurement and communication of economic and financial data"—without specific reference to a business orientation.

* * * * *

The area of accounting beyond the field of business has sometimes been referred to as social accounting. It includes the activities denoted by the terms national income accounting, government accounting and macro-accounting * * *.

Socioeconomic accounting is intended here to mean the application of accounting in the field of the social sciences. These include sociology, political science, and economics. Economics, of course, deals with the production, distribution and use of income and wealth; sociology with the development, organization, and functioning of human society; and political science with the conduct of government. These disciplines use measurements—whether they be indexes, ratios, trends. Thus, in the broad sense of the term, accounting is already common to all the social sciences. I submit that CPAs, by becoming more aware of this fact, and by being alert to the concerns of the social sciences, can contribute importantly to the most effective use of accounting techniques in these disciplines.

* * * * *

Quantification in areas beyond that of business is being performed today, however, inadequately. Sociologists, economists, statisticians—all perform accounting (some might call it social bookkeeping) in areas with which their respective disciplines are involved. They do this without an understanding of accounting principles and concepts, without familiarity with budgetary procedures and managerial control.

It would seem clear, therefore, that collaboration between these disciplines and the accounting profession is becoming increasingly critical.

* * * * *

Out of a Federal budget approaching \$186 billion, how much should be spent to deal with the causes of poverty? How much on space exploration? On highways? On the Military Establishment in general? How important is it that the Federal Government spend almost \$4½ billion on space exploration, and less than \$3½ billion on education? Programs for the needy take slightly over \$7 billion, or about 10 percent of our military budget. Is this ratio appropriate? Supersonic transport development takes over \$350 million. Could this development safely be postponed?

Not all questions can be answered and some answers must be based on political considerations. But many quantitative fragments are determinable and would inform and sharpen the action of legislators, administrators, and the voting public. Furnish Congress and the President with the facts and analyses which CPAs can supply would help them to do their job more effectively.

* * * * *

The profession has a tradition of responding to the needs of society. Today it has an

obligation to respond creatively to new problems by expanding its discipline into socioeconomic accounting.

I believe the time has come to identify and classify these new areas of opportunity and challenge, in no less fashion than we have identified and classified our services in the management advisory area during recent years.

Mr. Linowes' presentation appears in full in the November 1968 issue of *The Journal of Accountancy*.

After listening to three speakers discuss the crises, the enormous needs, and the complexity and uncertainties of the unresolved problems our times are faced with, one of Edgar Guest's poems seems appropriate:

Somebody said that it couldn't be done,
But he with a chuckle replied
That "maybe it couldn't," but he would be
one
Who wouldn't say so till he'd tried.
So he buckled right down with a trace of a
grin
On his face. If he worried he hid it.
He started to sing as he tackled the thing
That couldn't be done, and he did it.

NEWS and NOTES

Revised GAO Statement on Internal Auditing Issued

On October 1, 1968, the Comptroller General released a revised statement of basic principles and concepts for the guidance of Federal agencies in the design and operation of their internal audit systems.

The revised statement replaces an earlier one issued by GAO in 1957 to assist Federal agencies in carrying out an important objective stated in the Budget and Accounting Procedures Act of 1950; namely, that the management control systems of Federal agencies should include internal auditing.

The purpose of the revision is to reflect the benefit of over 10 years' experience in the development and practice of internal auditing in Federal agencies and programs. As the foreword by the Comptroller General to the revised statement notes, it also reflects:

* * * the benefit of extensive discussions with representatives of agencies, staff members of congressional committees and individuals outside of Government with experience in private industry and other public and private organizations.

The revised statement was published in pamphlet form and widely distributed in the Federal agencies. Copies were sent directly by the Comptroller General to the heads of Federal agencies with the following comments:

You will note the greatly increased emphasis placed in this statement on the usefulness of internal auditing to strengthen management systems and on the very essential role the heads of Federal departments

and agencies must play to make internal audit systems function effectively.

I hope that this revision will be of value to you and your staff and that you will have an opportunity to discuss it with your staff.

The pamphlet was also sent to numerous professional accounting and auditing organizations. In view of the potential applicability to State agencies of the principles discussed, copies were also sent to members of the National Association of State Auditors, Comptrollers and Treasurers, and to members of the National Association of State Budget Officers.

The statement has also been published as chapter 11 of Title 3 of the *GAO Policy and Procedures Manual for Guidance of Federal Agencies*.

Federal Executive Institute

This Institute, a Civil Service Commission center for advanced study for top civil service executives, was dedicated in Charlottesville, Va., on October 13, 1968. Speaking at the dedication of this facility, the Chairman of the Commission, John W. Macy, Jr., identified 10 ways in which the Federal manager of the future will be different.

1. He will be more broadly educated. Instead of being well versed in *one* primary discipline and conversant in one or two secondary ones, he may have to be the master of *two* or *three* primary disciplines and conversant in several others.

* * * * *

In addition to being more broadly educated, tomorrow's executive will be more *continually* educated. The Federal Executive Institute will provide

some of this continuing education for those of highest leadership responsibility. But the universities and other centers of knowledge must be our partners in this quest of learning.
* * *

2. Tomorrow's executive will be far more mobile. Less and less will he rise—a career rung at a time—on the ladder of his own organization. He may spend portions of his career in State and local governments, in universities, foundations, research centers, businesses, and industries. In short, he will be moved by a rising trend, already advancing toward us, known as *executive interchange*. * * *

* * * * *

3. He may lose much of his current identity as a Federal executive. We may well borrow from the title of CPA and designate tomorrow's executive a CPE—Certified Public Executive. Though federally based, he will be trained and conditioned to serve where needed.
4. Tomorrow's executive may be *less* committed to his parent organization and *less* committed to specific programs *and* their own special methodologies. But, he will be *more* committed to a specific public policy, regardless of where he may be working at any given time, in the interests of carrying out that policy.
5. He will *identify more* with his constituency—the people to be served by his programs. In spending part of his career at the local level, he will see that the people as well as program results are highly visible.

* * * * *

6. He will have new and sharpened tools with which to work. He will be more facile with systems analysis, program evaluation, manpower planning, operations research techniques, computer programming, cost effectiveness, and PPBS. And, of course, there will be *new* tools as yet unknown to us.
7. He will be more carefully—even sci-

entifically—selected for training, assignment, and reassignment.

* * * * *

8. Tomorrow's top career official will have greatly expanded career opportunities. There will be great demand for leadership in all of our changing institutions, both public and private. Men and women trained in a variety of Federal positions of increasing responsibility will be in demand to play leadership roles in many theatres of American life—in business and labor, education, and in the professions. Tomorrow's executive will most certainly find abundant opportunities in the public service at the highest levels of government. A principal source of future Presidential appointees will be the top career element in the executive branch. * * *
9. Tomorrow's executive will have greater recognition and prestige. He will, especially through interchange, become better known and better appreciated throughout the Nation.
10. The executive and professional of tomorrow will discover and enjoy many new personal interests and satisfactions. Freed of his old-style commitments and career boundaries—and projected into new arenas of endeavor—he will meet many more interesting and stimulating people. This will do more than enlarge his circle of friends and professional associates. It will enlarge his *thinking* and his own interests and satisfactions in what he and others are doing for the benefit of mankind. He will find new excitements, new challenges, and new rewards.

What Is Right With the United States

When he addressed the 52d annual meeting of the National Industrial Conference Board in New York on September 20, 1968, the Secretary of the Treasury, Henry H. Fowler, prefaced

his remarks on contours of recent economic progress by saying that he was tired of hearing about what is wrong with our country. He suggested that it was time that somebody talked about what is right with the United States. He went on:

Let me do my part in the area with which I am most familiar by saying that the U.S. economy—with its free enterprise system and a working partnership between business, labor and government—is providing more prosperity, more opportunity, more sharing in abundance, more educational and health and cultural advances, than any society since the world began, and at a much higher and more sustained pace than ever before in its history.

We must not permit the sustained economic progress on which this is based to be undermined by a loss of confidence in ourselves and our country. But that can happen here if our total emphasis is on racial strife, student revolt and campus unrest, crime, and dissent over U.S. involvement in the maintenance of free world security and development.

Recognizing that these problems exist, Mr. Fowler added that:

* * * we should not be deluded into believing that they reflect some ailment peculiar to the United States—some strange virus that surely will bring our system down.

He then pointed out that:

The principal difference between the United States and most of the rest of the world, in the perspective of these problems, is that the United States is tackling racial discrimination, student alienation and crime—and doing so within a framework of democracy, justice and order.

And the United States Government is subjected to outspoken dissent on foreign affairs for two reasons:

First, the nation believes in the right of dissent and second, the United States is doing its share, with many other nations defaulting, in providing the security from aggression that peoples everywhere thought

was guaranteed under the Charter of the United Nations.

And the United States is doing all this in the broad daylight of a free press and national TV networks aided by communications satellites working hard to give the world the news about the United States which, under the accepted definition of news, accentuates conflict rather than accomplishment—what is wrong rather than what is right.

The recognition of these sources of divisiveness in our society makes it all the more important to emphasize and conserve the blessings we share in this good land which is our heritage. That may not be the road to winning a Pulitzer or Nobel prize, but it can give one the satisfaction of helping to “tell it like it is.”

Conserving that which is good is as important as changing that which is undesirable. Continuity as well as change are essential to constructive economic life and progressive evolution in political and social affairs.

GAO Report on Pesticide Regulation

An independent audit report which summarizes an inquiry into the effectiveness of a Federal agency's procedures for regulating products for the protection of consumers is of more than passing interest. Such a report was submitted by the Comptroller General to the Congress on September 10, 1968.

The report, entitled “Need to Improve Regulatory Enforcement Procedures Involving Pesticides” (B-133192), reviews the effectiveness of some of the procedures of the Agricultural Research Service (ARS) of the Department of Agriculture in enforcing the Federal Insecticide, Fungicide, and Rodenticide Act—the basic consumer-protection law in the area of pesticides. This law requires that all pesticide products shipped across a State line be

safe and effective and be registered with ARS before being sold to the public.

Among the auditors' findings was the failure of the regulatory agency, in taking action against products, to obtain product quantity and location data to determine whether other shipments of the same misbranded, adulterated, or unregistered products were available to the public in other locations. As a result, enforcement actions taken may not have removed violative and, in some instances, potentially harmful products from the market.

The auditors also found that the regulatory agency's internal instructions did not provide guidance for determining when shippers that had allegedly violated the law would be reported to the Department of Justice for prosecution. The auditors noted that ARS had reported no violators of the law for prosecution in 13 years, even in instances where repeated major violations were cited by ARS and when shippers failed to satisfactorily correct violations or ignored notifications that prosecution was being contemplated.

The report included several recommendations for strengthening the regulatory procedures and these were accepted by the agency.

The audit report was extensively reviewed in the September 16, 1968, issue of *Food Chemical News* and received notice in numerous other periodicals and newspapers.

The assignment which culminated in this report was carried out under the supervision of *Morton A. Myers*, audit supervisor, and under the general direction of *Victor L. Lowe*, associate di-

rector, and *Willard L. Russ*, assistant director, Civil Division.

Competition in Federal Procurement

A subject of recurring interest in the management of the farflung business of the U.S. Government is the method used in procuring needed goods and services. The extent to which procurement contracts are awarded on the basis of competition is of continuing concern to a number of congressional committees.

In testifying on November 11, 1968, before the Subcommittee on Economy in Government of the Joint Economic Committee, the Comptroller General, *Elmer B. Staats*, commented as follows on this subject:

The departments and agencies of the Government are awarding contracts at the current rate of about \$50 billion a year to procure property and services for use in their programs and activities. The Department of Defense alone is awarding contracts for weapon systems and related equipment and supplies at the rate of about \$43 billion annually. For fiscal year 1968 the Department of Defense reported that advertised procurement averaged 11.5 percent, competitive negotiation 30.6 percent, and single source negotiation 57.9 percent.

A comparison of this information with similar information for the previous 4 years shows a downward trend in the use of both formally advertised and competitively negotiated procurement procedures. The decline in competitive procurements during the past few years has been attributed to urgent procurements for the Southeast Asia conflict. Statistics relating to competitive and noncompetitive procurement for the last 5 years are summarized in an appendix. In this connection, we believe that statistics on methods of procurement would be more meaningful to the Congress if they were more closely related to amounts of procurement susceptible to use of the particular method. That is, if DOD

could segregate those types of procurements that even under optimum conditions would not be subject to formal advertising, the Congress would then be able to better evaluate the extent of procurements made under this method in light of urgency and other factors that may be involved.

Contractor Profits

At the same hearing, the Comptroller General also had occasion to comment on the profits realized by defense contractors. He stated:

In any discussion of profits, we believe it is important to make a clear distinction between *contemplated* profits agreed upon in negotiations, and *actual* profit subsequently realized.

Generally, we have not attempted to evaluate the reasonableness or adequacy of profits which have been agreed upon in negotiations. However, we believe it is important that profits be sufficient to maintain a healthy defense industry and encourage contractors to undertake Government work and provide them with financial incentives to perform in an efficient and economical manner.

In August 1966 we were requested by the chairman of the House Committee on Appropriations to review the administration of the weighted guidelines and to inform the committee whether there had been an increase in the profits agreed upon during negotiations since the advent of this method of computing profit objectives, and, if so, whether the increase was warranted. This study which we concluded in early 1967, related to the negotiated or going-in profits as distinct from actual profits realized in contract performance.

We reported to the committee that a comparison of the average profit rate negotiated in the 5-year period preceding the establishment of the weighted guidelines with the average profit rate negotiated on 200 contracts during the last 6 months of 1966 showed an increase from 7.7 percent to 9.7 percent. Our review covered more than \$2 billion worth of negotiated procurement. This increase of 2 percentage points in the

rate of profit, applied to total negotiated procurement subject to the weighted guidelines in fiscal year 1966, could have resulted in the negotiation of about \$270 million in additional profit and fee allowances for that fiscal year. We observed, however, that the objective of widening the profit ranges for the various types of contracts and departing from the historical pattern of fees so as to recognize differences in contractors' assumptions of risks, in performance, and in complexities of tasks undertaken, had not been achieved. We did not obtain information on realized profits on the contracts we reviewed.

With respect to the weighted guidelines, we believe there is a need to revise the profit factor relating to contractors' investments in facilities and operating capital to be used in the performance of Government contracts. * * *

The weighted guidelines provide for a reduction in profit or fees of as much as 2 percent, depending on the extent of reliance on Government furnished facilities. Contractors who provide their own facilities receive a zero percentage for this factor—that is, they incur no penalty. However, the weighted guidelines do not distinguish between contractors who purchase their facilities outright and contractors who lease them. The means used by contractors to acquire their facilities could have a significant effect on Government costs.

Study of Indirect Costs of Research Grants

Prior to fiscal year 1966 fixed limitations on indirect costs of research grants were included in the appropriation acts. Because of the problems experienced with those limitations, beginning with fiscal year 1966 the appropriation acts have not included limitations on indirect costs but have provided that the Government would not pay as much as the entire cost of research performed under grants. A similar provision was in-

cluded in the Defense Appropriation Act as passed originally by the House for fiscal year 1969. The Senate, however, passed an amendment which required that indirect costs be limited to 25 percent of direct costs. This provision, as well as the one originally passed by the House, was deleted in the Senate-House Conference.

The House Conference Report called for new and comprehensive studies to be made by the General Accounting Office, the appropriate legislative committees and the Appropriations Committees, directed toward achieving a uniform formula for the ascertaining of indirect costs on research grants throughout the entire Government. The report stated that the Government should set the basis for indirect costs in accordance with sound accounting principles and expressed the view that if such allocation is properly made between direct and indirect cost, the proper proportion of indirect cost to direct cost should not exceed 25 percent.

As a result of this report, the General Accounting Office has been requested by the House Appropriations Committee to make new and comprehensive studies of this entire area to assist in achieving a realistic and uniform formula for the ascertaining of indirect cost on research grants based upon sound accounting principles.

The requested study has been undertaken under the general leadership of the Office of Policy and Special Studies, with immediate direction of regional office work and work in the Department of Defense provided by the Defense Division.

Robert L. Rasor, associate director, OPSS, *Harold H. Rubin*, associate director, DD, and *Susumu Uyeda*, assistant director, OPSS, are providing the overall direction for this assignment. Active participation will also be obtained from the Civil Division staffs assigned to the major civil agencies conducting research grant programs. Work will be done in the headquarters offices of those agencies, as well as at a number of institutions receiving research grants. The bulk of these funds are awarded to educational institutions, although some awards are made also to hospitals and other nonprofit organizations.

It appears that major concern stems from the wide variations in indirect cost rates charged by grantee institutions. Preliminary information indicates that these variations in rates are largely attributable to differing methods of performing research work. Some operations are in large part separately conducted with most cost being of a direct nature, while others are almost completely integrated with other activities of the institution and receive most of their operating and administrative support from common service organizations in the form of indirect cost.

The General Accounting Office study will include consideration of the feasibility of establishing a uniform indirect cost formula which is realistic and conforms to sound accounting principles. The principal reasons for variations in indirect cost rates will be determined and presented for consideration. Alternative approaches to the control of research cost will also be explored.

Discussions have been held with representatives of some Federal agencies and organizations concerned with this matter, including organizations representing grant recipients, and there will be further discussions. The administrative agencies and representatives of the institutions concerned will be asked to express their views concerning those aspects of the problem which appear to be of particular importance to the study. They will also be requested to provide the results of any studies they have made in this area or any information they are in a position to furnish concerning this matter.

Cost of C-5A Cargo Airplane

The chairman of the Subcommittee on Economy in Government of the Joint Economic Committee has requested GAO to make a "complete investigation of the cost overruns and total costs" of the C-5A cargo airplane being built for the Air Force by the Lockheed Aircraft Corp.

Information on the cost overruns was presented by an Air Force official at hearings on military procurement by the subcommittee in November 1968. It was stated that the total cost for 120 planes (58 ordered with an option for 62 more) could run as much as \$2 billion over the original estimate which provided for a ceiling of \$3 billion if the option is exercised.

In his formal request to the Comptroller General, the chairman of the subcommittee stated:

* * * an increase on a single contract which is to total at least \$1 billion, and possibly as much as \$2 billion, more than the original estimate, and more than the

amount originally stipulated in the contract, is a matter of extreme seriousness. In my opinion, it would be a dereliction of duty for the Congress and the General Accounting Office to permit the Federal Government to obligate itself to pay such an exorbitant increase in contract costs without scrutinizing the reasons given for the increases and, indeed, the entire circumstances.

Department of Labor Accounting System

A good source of published information on the design of major parts of the accounting system of the Department of Labor will be found in the printed hearing of the Special Studies Subcommittee of the House Committee on Government Operations entitled "A Review of Labor Department Accounting Systems."

The information in this document was presented at a committee meeting on June 26, 1968, which was also attended by 143 management officials from the following departments and agencies:

- Agriculture.
- Commerce.
- Health, Education, and Welfare.
- Housing and Urban Development.
- Interior.
- Justice.
- Post Office.
- State.
- Agency for International Development.
- U.S. Information Agency.
- Peace Corps.
- Transportation.
- Treasury.
- Office of Economic Opportunity.
- Small Business Administration.
- District of Columbia Government.
- Veterans Administration.

The Department engaged the public accounting firm of Touche, Ross, Bailey & Smart to develop its cost

NEWS AND NOTES

accounting system and the accounting system for funds granted to States for use in administering the employment security system.

Officials of the Department and of the contractor made the detailed presentation which, along with the accompanying discussion, is included in the 64-page printed hearing document. The printed hearing includes

numerous charts, illustrations, reports, and other visual aids which contribute greatly to an understanding of the verbal explanation.

Accounting System Approvals

Accounting systems approved by the Comptroller General during the 6-month period ended November 30, 1968, were as follows:

PRINCIPLES AND STANDARDS

	<i>Date approved</i>
Department of Agriculture:	
Office of Management Services:	
Appropriated funds.....	8- 6-68
Working capital fund.....	10-24-68
Agricultural Research Service:	
Appropriated funds.....	6-17-68
Working capital fund.....	6-17-68
Stabilization and Conservation Service.....	10-24-68
Consumer and Marketing Service.....	7-29-68
Forest Service: Appropriated funds.....	10-24-68
Department of the Interior: Bonneville Power Administration.....	7- 8-68
Department of State.....	9-20-68
Civil Service Commission.....	11-18-68
Railroad Retirement Board.....	6-26-68
Securities and Exchange Commission.....	6-26-68

COMPLETE SYSTEMS

Department of the Treasury:	
Bureau of the Public Debt: Administrative accounting.....	6-25-68
Office of the Treasurer of the United States: Administrative accounting.....	6-28-68
Bureau of Accounts: Central accounting for cash operations of the Federal Government	10-31-68
Civil Service Commission:	
Retirement and disability fund.....	11-18-68
Group life insurance fund.....	11-18-68
Employees health benefits.....	11-18-68
Retired employees health benefits.....	11-18-68
Interstate Commerce Commission.....	6-14-68

SEGMENTS OF SYSTEMS

Department of Labor: Back wage accounting.....	10-24-68
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With respect to the Department of Defense during the same 6-month period, the following three Instructions setting forth accounting principles and standards were approved:

Cost Accounting for Central Supply Management and Industrial Preparedness.
 Operating Budget Status Report.
 Accounting for Accrued Expenditures and Revenues.

Building a Management Accounting System

Clemens A. Erdahl, partner of Price Waterhouse & Co., writing in the Autumn 1968 issue of *The Price Waterhouse Review*, makes the following useful suggestions for building a management accounting system:

1. Try to develop simple accounting tools which can highlight how the company is doing on a current basis—remember time is of the essence if the data are to be acted upon. * * *
2. If management is to install an effective management accounting system, it should start from the bottom and build the foundation. First, it should get basic accounting systems in order (accounts payable, payroll, etc.). Then, and only then, it should proceed to develop cost systems. The final phase is the integrated control and planning systems.
3. Communicate in language the users of the information can understand.
4. The time to begin is NOW. The future will place heavier demands on management and on management accountants and they must plan ahead and adapt to changing conditions.

A View of Efficiency

In addressing a conference of the National Industrial Conference Board in New York on November 14, 1968, James M. Gavin, chairman of the board of Arthur D. Little, Inc., included the following remarks on the meaning of the term "efficiency."

* * * We have come to recognize, for example, that not only must the mass transit user be consulted about a new system, but those whose homes will be taken for a right of way must participate as well. Those whose homes will be subjected to the noise and smells of an urban highway must be consulted along with those who will use the highway. Identification of the affected groups

will be difficult, and mistakes will be made. But unless we enter all these elements into the calculus of decision, discontent will continue to grow.

I recognize that on the surface the approach I am proposing seems to promise inefficiency. * * * The fault, I think, lies in our present definition of efficiency. Until now we have defined it in terms of meeting narrow technical and monetary criteria, thus neglecting all social costs but those that government regulation forced us to recognize. And I submit that the only way to get a true picture of all costs is to provide channels of communication with all affected groups. Only then is the issue of efficiency broadened to include the question, "Efficiency of what, efficiency for whom?"

The CPA and His Government

The report of the American Institute of CPAs Federal Government Committee rendered to the Council of the Institute in May 1968 is entitled "The CPA and His Government." It is a document well worth reading by professional accountants whether in Government service or in private or other practice.

The report, which is printed in full in the September 1968 issue of *The Federal Accountant*, was authored by Herman W. Bevis, chairman of the committee. Mr. Bevis, a well-known member of the profession, is senior partner of Price Waterhouse & Co. He is also a consultant to the Comptroller General of the United States.

The report notes that Government and its programs are going to continue to be a part of the CPA's environment, probably on an increasing scale, that CPAs should get involved, and that they should get to know and understand those who serve in the Government ranks. Without attempting to re-

view the report in full, the following excerpts reflect a point of view that is gratifying to those in the Federal career service:

Anyone who has had an opportunity to observe the Washington scene at close-hand cannot fail to acquire a considerable respect for those who occupy positions of responsibility in the government. There are a remarkable number of first-rate people on the Federal payroll—men and women with a high level of skill, with an admirable sense of dedication to their mission, with a professional attitude toward their jobs.

There is another misguided view which needs to be challenged. It is assumed in some quarters that the private sector has a monopoly on imagination and innovative qualities—that the government official is a prisoner of archaic techniques who shuns new ideas.

This, too, is an illusion. A number of the agencies in Washington have been in the forefront of the computer revolution; they have pioneered in extending the traditional audit into the evaluation of managerial performance; they have engaged in some highly sophisticated use of cost-benefit analysis—first in the military sphere, and now to the measurement of the effectiveness of social programs. Out of our own wide-ranging experience in the world of business, we have a good deal to teach them: but we would be ill-advised to assume that we have nothing to learn from them.

Space Agency Use of GAO Audit Reports

At the request of the National Aeronautics and Space Administration, arrangements have been made to provide that agency with copies of all unclassified GAO audit reports to the Congress after they are issued. NASA plans to analyze the reports relating to the operations of other Federal agencies to determine whether the findings and recommendations warrant attention and application in NASA operations.

The GAO reports are sent to the NASA Audit Division where they are first examined and a determination is made as to whether the information in the reports should be called to the attention of NASA functional, program, or institutional officials.

This procedure, as adopted by NASA, is a commendable step forward in utilizing GAO audit findings and recommendations, irrespective of the department or agency to which they directly pertain, as a source of information for consideration in the continuing drive to improve Federal agency operations.

GAO Attendance at National Guard Conference

James L. DiGuseppi, associate director, and *Andrew B. McConnell*, assistant director, Manpower Group, Defense Division, attended the 90th General Conference of the National Guard Association of the United States in Hot Springs, Ark., from October 7–10, 1968, at the invitation of Maj. Gen. James F. Cantwell, president of the National Guard Association. The Conference drew approximately 1,500 Air and National Guard officers and official guests. They represented all 50 States, the District of Columbia, and Puerto Rico.

Catalog of Federal Domestic Assistance

By Circular No. A-89 of August 23, 1968, the Bureau of the Budget provided for a comprehensive catalog describing all Federal domestic assistance programs and activities.

Under policies established by the Bureau of the Budget and Bureau monitoring, the Office of Economic Opportunity (OEO) will collect information for, compile, and publish the catalog late each calendar year.

The OEO "Catalog of Federal Assistance Programs" (June 1, 1968, edition) will be the starting point of the new catalog which will supersede similar more limited documents being published by various executive departments and agencies.

Assistance covered in the catalog will include, but will not necessarily be limited to:

- Financial assistance (grants, loans and advances, loan guarantees, shared revenues).
- Assistance in the form of direct construction or provision of Federal facilities, goods, or services.
- Donation or provision of surplus real and personal property.
- Technical assistance and counseling.
- Statistical and other informational services.

A comprehensive scheme of distribution will be developed by OEO after consulting with representatives of the Bureau of the Budget, other executive agencies, and user groups.

New GAO Office of Personnel Management

On December 5, 1968, the Comptroller General announced the creation of an Office of Personnel Management in the General Accounting Office. The new Office consolidates the functions of the former Office of Personnel and the staff development group of the Office of Policy and Special Studies. *Leo Herbert*, former deputy director for

staff development in the Office of Policy and Special Studies, is the new director of the Office of Personnel Management.

The change in organization was occasioned by the retirement from Federal service in December 1968 of *Thomas A. Flynn*, who served as the GAO director of personnel for many years. In announcing the change, the Comptroller General stated that the consolidation of the former separate organizations would give the GAO management "a better opportunity to implement improved recruiting, personnel operations, and employee development programs throughout the Office."

Assistant directors designated to be in charge of the functional groups in the new Office of Personnel Management are:

Ernest C. Andersen, personnel development.

Harley R. Climpson, recruitment and assignment.

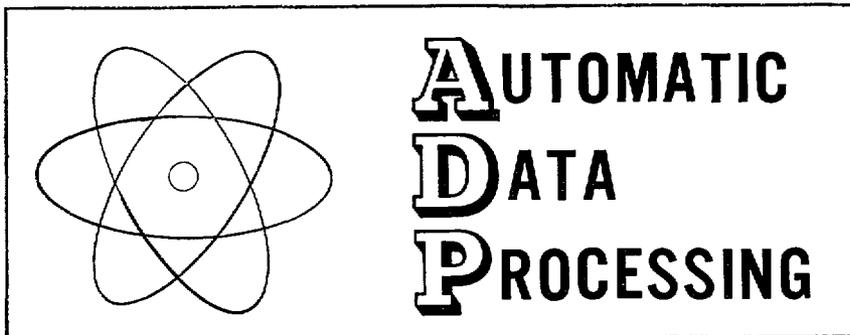
Vincent J. Kirby, personnel operations.

GAO Publications Branch

The Publications Branch, formerly known as the Report Department, was made a part of the GAO Office of Administrative Services on September 6, 1968.

Anthony P. Kostrzewsky was designated chief of the Publications Branch, succeeding *George M. Sullivan* who retired on July 16, 1968.

Mr. Kostrzewsky came to the GAO from the Air Force Systems Command at Andrews Air Force Base where he was chief of the reproduction division. Previously, he had 26 years' experience with the Government Printing Office.



1968 International Systems Meeting

The annual meeting of the Systems and Procedures Association was held in St. Louis, Mo., October 20–23, 1968. *Edward J. Mahoney*, associate director, Office of Policy and Special Studies, attended the meeting and provided the following commentary.

This year's meeting continued the trend of recent annual meetings in that very extensive coverage was given to the subject of overall management information systems with heavy emphasis on the use of computers in such systems. Technical computer system sessions devoted to specific applications and/or technical problem areas were predominant. These sessions involved such matters as business computer systems design, management by exception in the electronic age, the computer utility for tomorrow's business, command control for future management planning, engineered design of EDP systems, direct access systems applications, and decision tables as a systems technique.

A highlight of the conference involved a series of related technical presentations on the subject of "Computerized Management Information Systems." This series covered the "to-

tal systems concept" of systems design under which an effort is made to relate the total computational and data processing requirements of an organization to the decisionmaking as well as the data handling needs of the organization.

Within this context of overall data information and processing needs, presentations were made covering such matters as

- Planning for the orderly design of a management information system (MIS).
- Identifying the requirements of an environment in which the system is to operate.
- Long-range planning for MIS development.
- Development of performance measurement criteria.
- Establishment of data communication requirements.
- Data base design.
- Implementation planning.
- Control and evaluation of MIS systems.

Throughout these discussions, emphasis was placed on the planning aspects of each phase of the systems design and developmental program and on the need for a coordinated approach to be followed throughout the entire effort. The following points were also

stressed repeatedly by the various discussion leaders:

1. Using a full-time staff for MIS alone, the fundamental organization objectives should be defined and related to the MIS system. Long-range planning objectives and subobjectives should be analyzed, performance measurement criteria established, decisionmaking activities analyzed and then used in the development of the MIS system.
2. Boundaries should be recognized to control developmental efforts and to keep within functional limitations of what is feasible and achievable within certain constraints on funding and manpower availability, design limitations imposed by equipment or communication facilities, etc.
3. In general, the approach considered by most discussion leaders involved the establishment of a conceptual systems design effort which used a data base system under which real-time processing methods are employed for information processing and retrieval operations. Discussions were held on the content of the data base with regard to inclusion criteria to be used; i.e., category of data, usage, availability, maintainability, source, economic worth, etc.
4. Processing concepts covering data collection, functional integration of data, need for communications interfacing, use of data management systems for operating in a segmented mode, and other processing techniques were

presented generally in relation to the concept of establishing and operating an MIS system based on an integrated data processing system having retrieval capabilities.

5. Management considerations discussed involved economic justification of the system which centered on the question of return on investment, the value of information in relation to the cost of obtaining and maintaining the information, etc.

At this year's meeting, it was interesting to see that the concepts of design and development of management information systems in the industrial sector were taking on essentially the same shape as the computer design efforts which were undertaken some years earlier in military command and control system design efforts.

In addition to advanced systems design matters, several technical sessions were held on specific applications of computers to business systems. In general, these sessions covered the particular way in which the company or Government agency chose to use the computer to process data in a specific functional area of activity rather than for an overall MIS system. Varying concepts of applications, ranging from straight batch processing to on-line, real-time processing, were presented at these sessions.

Under the heading of technical topics, the conference presented several specific items which could be called systems techniques. For example, there was an excellent presentation on the use of decision tables as a system technique.

Other sessions covered hardware selection, software development, and use. One session was devoted to time-sharing of computers. In this session extensive coverage was given to the software involved in terminal-oriented systems. This session also covered the various concepts currently being used in modern system design where variations in data collection, file interrogation, and file processing are used under a variety of operating situations.

Attendees at the meeting were presented with a copy of a book entitled "Ideas for Management" which was published by the Association. This book is available in the GAO for use by staff members who are interested in inquiring, in more depth, into the various matters covered at the conference.

The Law of Software

Over the past few years an increasing controversy over the legal status of software has developed. To get the interested lawyers and computer people together, the Computer-in-Law Institute of The George Washington University, Washington, D.C., held a conference on "The Law of Software" on October 22 and 23, 1968, in Washington. The conference was held in cooperation with the American Patent Law Association, the Association of Computing Machinery, and the Data Processing Management Association.

About 320 lawyers and 80 computer personnel attended the meeting. Following are comments on the major points discussed prepared by *Kenneth W. Hunter* of the Office of Policy and Special Studies who attended the meeting.

The Business Aspects. It was pointed out that frequently computer programs are very expensive to develop and do have value to others. For this reason the program developer would like whatever legal protection he can obtain to make his program a marketable commodity. To indicate the monetary significance, it was estimated that the EDP industry is spending about \$6 billion annually for the development of software.

For further discussion, software was divided into system and application software. System software includes the basic programs needed to control the equipment functions and some common operations. Application software are those programs needed to perform tasks unique to a particular problem.

Historically, the major equipment manufacturers have supplied the system software, provided some application software, and assisted the users to develop their application programs. In the past few years, software houses have been formed which develop software for a price (and, hopefully, profit). The software houses are demanding that the equipment manufacturers put price tags on the software they provide to users so there will be effective price competition. They argue that, with price competition and legal protection, an effective market will be formed and the quality of programs will improve and the current proliferation of similar programs will end.

The equipment manufacturers claim they produce, market, and maintain systems, not just products. They say they sell their products with sufficient systems software and basic application

software to make the system operate. They claim that the vast majority of application software is developed by the users and that the programs they do provide are either very general and common to almost all users or are programs passed on from one user to another. The manufacturers do not feel there is any basis for pricing these programs separately from the equipment.

The controversy has raised the legal issues of patentability and copyrightability of programs and the antitrust aspects of the hardware-software relationship.

The Patent Aspects. The patentability of computer programs is uncertain; it has not been tested in the courts. The U.S. Patent Office contends that they are *not* patentable on the basis of a well-established doctrine that processes which can be performed solely by mental acts do not constitute patentable subject matter. In the past few years several patent reform bills have been introduced, including specific provisions making computer programs not patentable, as was recommended by the President's Commission on the Patent System. However, these provisions had been dropped from most of the bills that were before the 90th Congress when it adjourned, indicating the Congress was not ready to tackle the issue.

The Commissioner of Patents also claims that the Patent Office is in a poor position to sustain the tremendous burden that would be put upon it if there was a general acceptance of programs as patentable subject matter.

The Commissioner also announced that his Office has instituted a study to examine the various types of protection

available, including patent, copyright, trade secret, and a possible new system which would include features derived from each of these.

The software houses would like to obtain patent protection for their products. They claim that hardware and software are equivalents; i.e., sets of instructions can be designed into the hardware itself or they can be programmed and then read into the computer memory each time they are needed. The decision as to which is used is a basic design alternative dependent upon the use to be made of the computer. They contend that a program is the control mechanism of the computer and that a computer has little or no practical value when it is not operating under the direction of a computer program. For these reasons they believe a program is a machine device and, therefore, patentable.

Both sides are forming their arguments around the existing patent law and both are subject to extensive debate on technical grounds. This debate, no doubt, will be continued as part of the overall conflict over software protection and pricing.

The Copyright Aspects. The Copyright Office has been registering computer programs since 1964. It has wrestled through such technical problems as the "visibility" of the copyrighable material on punched cards and magnetic tape. The copyrightability has not been challenged in court; thus, it is still uncertain.

The scope of protection afforded by copyright is debatable. There is no doubt that a violation of a computer program copyright will be more diffi-

cult to detect than an ordinary copyright infringement. Ordinary copyright protection is largely intended to prevent mass production and distribution by unauthorized persons; private copying is not usually of major economic concern. In the case of computer programs, however, the significant infringement will probably involve private copying for individual use. Detection will, likewise, be hampered because of the ease of translating from one computer language to another and because programs are normally stored in a form which is not readable even by operating personnel.

Factors favoring copyrighting as a means of protecting computer programs include the following:

- If a company were caught “stealing” a program, its reputation would be tarnished.
- The copyright owner might be alerted to a possible copying simply by learning of the use of another program to perform the same operation.
- If any segment of the data processing community were to become firmly convinced of the advantages of copyright protection, unified action by a group could be a powerful deterrent and perhaps a means of detecting infringement.

It was pointed out that it is up to the computer industry to decide if it wants to use copyright protection or to maintain the free interchange of programs. If the courts decide that the overall interchange of programs would be enhanced by protection which would allow marketing like any other valuable commodity, they are more likely

to look favorably on the system and to construe the protection broadly.

The Antitrust Aspects. The single firm dominance of the computer industry automatically raises the antitrust question whenever any current practice is challenged. In addition, in a comparison of software houses with the major computer manufacturers, the largest software house is smaller than the smallest of the major manufacturers. Accordingly, the speakers mentioned the possibility of implications under the Small Business Act as well as the antitrust legislation regarding the need for separate pricing of hardware and software.

The arguments on both sides were extremely general, restating the industry practices (see *Business Aspects* above) and the antitrust laws. Those for separate pricing concluded that “package” pricing for hardware and software is detrimental to the interest of computer users and injures competition in the software market.

General Note. The issues surrounding the pricing and protection of software are just being formulated by various interests. It can be expected that arguments will continue to be presented in the trade journals, the conference halls, the courts, and the congressional committee rooms over the next few years.

CPA Computer Users Conference

On November 12–13, 1968, the American Institute of Certified Public Accountants (AICPA) held its fourth semiannual conference of CPA computer users in Washington, D.C. “Accounting, Auditing, and the Computer”

was the theme for the conference. The conference was designed for CPAs providing electronic data processing services or planning to do so. About 200 persons attended the conference sessions, including *Darrell Massier* of the Office of Policy and Special Studies.

On the day preceding the conference, a special half-day workshop in computer auditing was conducted. The purpose of the workshop was to familiarize CPAs with the use of the computer as an audit tool. The workshop was provided for the benefit of those in charge of audit review and staff men with assignments related to computer auditing. Actual cases were presented by members of S. D. Leidesdorf & Co. who illustrated approaches to selected computer-auditing applications.

In discussing the challenge ahead, one speaker pointed out that the computer offers two basic challenges to the auditor—the technological challenge of changes in computer hardware and software and the challenge of mastering application of the technology. It was suggested that the auditor must think of the computer in the light that it not only can perform mathematical calculations, but it also can make comparisons and logical decisions. As a result, the computer can facilitate management decisionmaking.

In a panel discussion by members from public accounting firms, panelists discussed their approaches to the use of automated techniques in auditing clients' records. A representative of one firm explained that, to be economical, generalized computer audit techniques were employed. The panelists added that a series of generalized computer

audit programs had been developed for footing, scanning, selecting, and other audit operations, and these programs could easily be adjusted for application on a number of clients' records. Another firm's approach included the development of computer programs tailored to test the system being audited. To the extent possible, standard modules of computer programs are used in testing the various clients' systems and, where necessary, programs are developed by a staff of programmers.

Another panel discussion was devoted to the use of remote access devices to make an accounting practice more effective. It was pointed out that computer time-sharing service is a current and competitive industry and this service is available at a nominal monthly cost. Panel members explained that terminals (computer access devices) are easily installed in the users' place of business, are easy to operate, and are very useful tools in problem solving. A terminal provides almost immediate access to a computer and a large number of programs capable of solving complex mathematical problems.

As evidence of the portability and use of a terminal, one panel member provided demonstrations on a terminal being rented by his firm. He explained that, through the terminal, his firm was performing statistical analysis work and actuarial computations. Also, the terminal is a highly useful training device for introducing staff members to computer operations.

All panelists readily agreed that the terminal is limited in that it is not practical for applications involving large amounts of input or output data.

Emphasis was placed on education of the auditor in the computer era through a discussion by panelists representing public accounting firms and the AICPA. All panelists agreed that education of staff members was one of the most important and difficult problems confronting the accounting profession.

Generally, the panelists stated that basic computer or fundamental data processing courses in the form of programmed instruction were being used and attempts were made to relate these courses to current audit efforts. The instruction courses were supplemented by classroom instruction and periodic seminars. Audio tapes and visual aids were among the techniques used for instruction.

The AICPA representative stated that the Institute hoped to arrange a 6-week data processing course to be offered at the University of Minnesota during 1969 for individuals earmarked for technical ADP training by their organizations.

Throughout the conference emphasis was placed on the need for the accountant to develop an expertise in ADP as indicated by such statements as:

- We must learn to use the computer as an audit tool.
- If you do any auditing at all in the future, you must have knowledge of computers.
- An auditor cannot audit any but the very smallest businesses without some knowledge of computers.

National Symposium on Documenting ADP Operations

On October 15–17, the GSA National Archives and Records Service con-

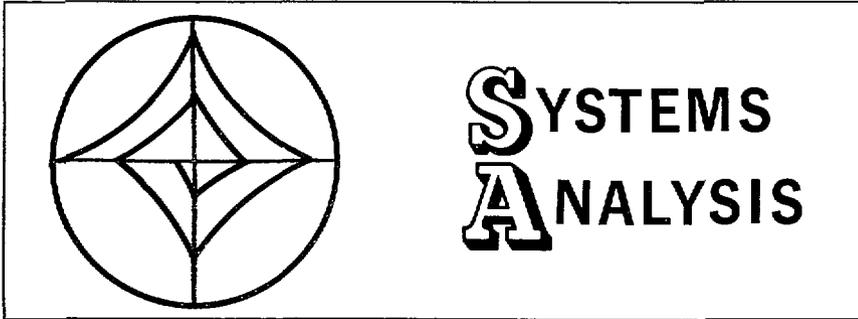
ducted a national symposium on this subject at the State Department. *Edward J. Mahoney* from the Office of Policy and Special Studies was one of the program speakers. In his topic on “Systems Documentation and Audit Trail Requirements” he stated that all Federal agencies are being encouraged by GAO to (1) establish strong internal controls in new systems design efforts, (2) require internal audit staffs to participate in systems programs through review of systems design work, and (3) require these staffs to review operating systems.

The need for ADP system documentation was stressed by all the speakers as being essential for the efficient and effective use of computers in Federal Government operations. The point was made that properly recorded products of preliminary studies, systems design, programming efforts, and testing contribute to smooth conversion to new systems and to the continuity of operations during and after organizational and personnel changes. Without documentation, facts have to be re-researched and techniques have to be rediscovered.

The consensus of expressed thought was that documentation is costly and time consuming but, with proper management interest and backing, certain controls and standards can be developed to minimize these limitations and to produce many significant benefits. One speaker stated that “the results of not having good documentation are intolerable.”

Most speakers held that (1) in general, management should decide what

documentation is needed and what is desirable, (2) well-designed forms, computer-assisted documentation, and standard procedures all help to get the facts down on paper, (3) flexible but meaningful standards should be published and kept up-to-date, and (4) these standards should be centrally controlled and fully supported by management.



***Congressional Committee Study
of Interest Rate Policy and
Discounting Analysis***

The Subcommittee on Economy in Government of the Joint Economic Committee has published a report on its further inquiry into this subject during July and August 1968. The report is in the form of a Joint Committee Print (90th Cong., 2d sess.) and is entitled "Economic Analysis of Public Investment Decisions: Interest Rate Policy and Discounting Analysis."

The report presents the subcommittee's conclusions on the application of discounting procedures in the Federal agencies under the following heads:

- The Planning-Programming-Budgeting System is the means for more efficient Government decisions.
- The discounting procedure must be used if good public investment decisions are to be made.
- Current discounting practices in the Federal agencies are neither adequate nor consistent.
- The appropriate interest rate concept is the opportunity cost of displaced private spending.
- The current risk-free interest rate which should be used for evaluating public investments is at least 5 percent.
- All Federal agencies should establish consistent and appropriate discounting procedures utilizing an appropriate base interest rate computed and published on a continuing basis.

The subcommittee, which is made up of five members from the Senate and five from the House of Representatives, was not unanimous in reaching its conclusions and the report contains dissenting and qualifying views of several members.

The record of the subcommittee's hearings, which bears the same title, has also been printed.

A hearing was first held by the subcommittee on this subject on January 29, 1968, on the basis of the GAO report on Federal agency discounting practices. This report summarized the results of a GAO survey of Federal agency practices in the use of discounting in evaluating future Government programs and brought out the wide variation in rates and techniques in use (*GAO Review*, Spring 1968, p. 73).

In the letter of transmittal for the subcommittee's current report, the chairman commented as follows on the GAO report.

I express the appreciation of the subcommittee to Comptroller General Staats and his staff in the General Accounting Office for the outstanding report, "Survey of Use by Federal Agencies of the Discounting Technique in Evaluating Future Programs." This report was the basis for the January hearings and prompted the followup hearings in July and August. Their study has made a special contribution to economy in Government and will be of assistance in improving the allocation of public resources.

PPB Survey

The Systems Analysis Group in the Office of Policy and Special Studies is making a comprehensive survey of Planning - Programming - Budgeting (PPB) in 21 Federal departments and agencies. The survey includes obtaining information on:

- The written policies and procedures used to implement the system prescribed by the President for use in designated departments and agencies in August 1965.
- The program structures developed.
- The number and types of personnel used in PPB work and their location in the organization.
- The analytical studies carried out by the agencies in support of the system.
- The relationship of PPB and the accounting systems of the agencies.
- The use made by the agencies of the PPB system.

A report to the Congress on this work is being prepared. In addition to summarizing and evaluating the above information, the report will also contain a discussion of the impediments to the full and effective implementation of the PPB system.

GAO Staff Changes



Thomas A. Flynn

Thomas A. Flynn, director of personnel of the General Accounting Office for over 20 years, retired from active service on December 27, 1968.

Mr. Flynn, a native of Pittsburgh, Pa., and later a resident of Kansas, began his Federal Government service in 1934 in the Department of Agriculture. He came to the General Accounting Office on August 6, 1942, as assistant director of personnel and was designated director of personnel on April 6, 1947.

He was a member of the Civil Service Committee of Expert Examiners and chairman of the GAO incentive awards committee.

In announcing Mr. Flynn's retirement, Comptroller General Elmer B. Staats noted "how much we are indebted to him for his long and fruitful career with *this Office.*"

Mr. Staats also stated: "Tom joined the Government 34 years ago as a member of a group pioneering in personnel administration in the Farm Credit Administration, and he has served 26 years of that period with the GAO. He will be missed personally and officially by his many friends and associates."

At the time of his retirement, the Comptroller General presented Mr. Flynn with a Distinguished Service Award in recognition of his long, dedicated, and loyal service in the General Accounting Office.



Leo Herbert

Leo Herbert was designated as director of the newly formed Office of Personnel Management, effective December 5, 1968. The new office consolidates the former Office of Personnel which had been directed for many years by Thomas A. Flynn who retired from Federal service on December 27, 1968, and the staff development group which Mr. Herbert directed as deputy director of the Office of Policy and Special Studies.

Mr. Herbert became associated with the GAO in 1956, first as a consultant to the Comptroller General and then as director of the Office of Staff Management until November 1966 when that office was merged with the Office of Policy and Special Studies.

Mr. Herbert is a graduate of Brigham Young University and received his doctorate from Louisiana State University in 1944.

For many years Mr. Herbert taught accounting and statistics, first at Louisiana State University and later at Brigham Young University and Louisiana Polytechnic Institute, where he became professor of accounting and head of its Department of Business Administration.

He was Assistant State Auditor, State of Louisiana, from August 1952 to April 1956 when he joined the General Accounting Office.

Mr. Herbert is a certified public accountant (Louisiana and Utah) and a member of many professional associations, including the American Accounting Association (vice president in 1964), American Institute of CPAs, Southwestern Social Science Association, National Association of Accountants, Society of Louisiana CPAs, District of Columbia Institute of CPAs, and the Federal Government Accountants Association.



Charles M. Howard

Charles M. Howard was designated as director of the GAO Claims Division, effective December 1, 1968.

Mr. Howard succeeds Lawrence V. Denney who served as the director of this division for 11 years and who retired from active service in September 1968.

As director of the Claims Division, Mr. Howard is responsible for planning and managing the work of that division which encompasses the adjudication and settling of all claims required to be settled in the General Accounting Office, except transportation claims, and the taking of appropriate action on debts reported as uncollectible by administrative agencies.

Since joining the General Accounting Office in July 1936, Mr. Howard has had extensive experience in the adjudication of claims and, from December 1956, in programming the work of the Claims Division as deputy director. He received a B.S. degree in business administration from Davidson College in 1933 and an LL.B. degree from Georgetown University Law School in 1941.



John P. Gibbons

John P. Gibbons was designated as deputy director of the GAO Claims Division, effective December 1, 1968.

Mr. Gibbons joined the staff of the General Accounting Office as an attorney-advisor in the Office of the General Counsel in August 1965. Prior to that time, he gained extensive legal experience in the U.S. Navy in the Office of Judge Advocate General and as Captain and Special Legal Assistant in the Office of the Chief, Office of Industrial Relations.

He attended St. Mary's College and De Paul University and was graduated from De Paul University Law School with an LL.B. degree in 1940. He is a member of the bar (Illinois, 1940) and of the Federal Bar Association.



Frank C. Conahan

Frank C. Conahan was designated as an assistant director in the International Division, effective November 17, 1968.

Mr. Conahan received his bachelor of science degree in accounting from Kings College in 1955 and attended the Executive Development Program at the University of Michigan Graduate School of Business Administration in 1968.

After joining the GAO in 1955, Mr. Conahan served in the Navy from 1956 to 1958. He received the Meritorious Service Award in 1963 and the GAO Career Development Award in 1968. He is a member of the American Accounting Association.

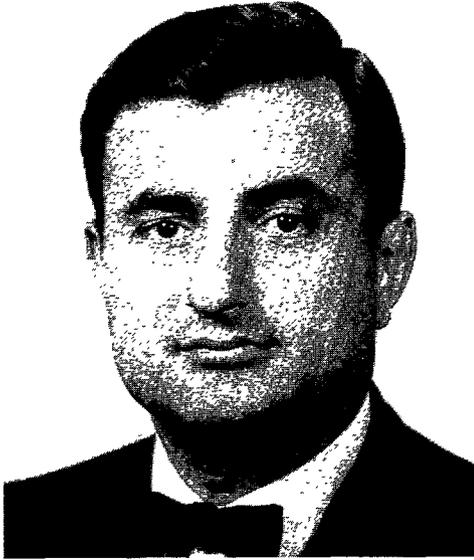


Paul C. deLassus

Paul C. deLassus was designated assistant regional manager of the New Orleans Regional Office, effective November 17, 1968.

- Mr. deLassus was granted a B.S. degree by Louisiana State University in 1949. He is a CPA (Louisiana) and a member of the American Institute of Certified Public Accountants, the Society of Louisiana Certified Public Accountants, and the National Association of Accountants. In 1967 he attended the Executive Development Program at Cornell University.

Prior to joining the General Accounting Office in 1955, Mr. deLassus had about 5½ years' experience in public accounting. He served in the U.S. Marine Corps from 1944 to 1946.



Fred Dziadek

Fred Dziadek was appointed assistant director for economics in the International Division, effective September 29, 1968.

Prior to coming with the General Accounting Office, Mr. Dziadek was assistant chief in the Office of Policy and Program Coordination of the Agency for International Development. He was associate chief of the Socio-Economics Division of the Battelle Memorial Institute in 1965-66. From 1959 to 1965, he was an economist in the Research Department of the International Monetary Fund. Mr. Dziadek was a lecturer in economics at Georgetown University from 1960 to 1965 and an instructor in political economy at the Johns Hopkins University from 1956 to 1959.

Mr. Dziadek received his Ph. D. in economics from the Johns Hopkins University in 1960. At Johns Hopkins, he held various fellowships and assistantships. During 1955 and 1956, he was the Andrew White Fellow in Economics at Cornell University. He graduated, with honors, from Columbia University in 1955.



Edwin C. Eads

Edwin C. Eads has been designated as an assistant director of the Defense Division. In this capacity, he will assist the associate director, support services, and be in charge of work relating to communications and automatic data processing systems.

Mr. Eads' prior experience included diversified auditing and business management activities in public accounting and private industry. He served in the U.S. Navy from 1945 to 1947. Mr. Eads is a graduate of Benjamin Franklin University.

Since Mr. Eads joined the General Accounting Office in 1958, his assignments have primarily involved activities of the military departments. He was assigned for 2 years to the European Branch, Frankfurt, Germany. He received the GAO Meritorious Service Award in 1960 and 1967.



Kenneth W. Hitzeman

Kenneth W. Hitzeman was designated as assistant manager of the Chicago Regional Office, effective November 17, 1968.

Mr. Hitzeman served in the U.S. Navy from 1945 to 1946. He attended Northwestern University and received a diploma in commerce in 1953. Mr. Hitzeman is a CPA (Illinois) and a member of the Federal Government Accountants Association.

Mr. Hitzeman joined the Field Operations Division, Chicago Regional Office, in March 1946. He was assigned to the International Division, Far East Branch, in July 1966 and returned to the Chicago Regional Office in August 1968.

Prior to joining GAO, Mr. Hitzeman was an auditor with the Air Force (1941-45) and an accountant with the Standard Oil Co. (Indiana) from 1934 to 1941.



Donald J. Horan

Donald J. Horan was designated as the assistant director for auditing policy in the Office of Policy and Special Studies, effective November 4, 1968.

Mr. Horan graduated from Kings College in 1955 with a bachelor of science degree in accounting. He has had a wide range of audit experience since joining the staff of the New York Regional Office in 1955. In the year prior to his transfer to the policy staff in Washington in July 1965, he served as audit manager-in-charge of the Syracuse, N.Y., suboffice.

Mr. Horan received a Meritorious Service Award in 1968.



Walter B. Hunter

Walter B. Hunter was designated as an assistant director in the Civil Division, effective November 17, 1968.

Mr. Hunter graduated in 1939 from Southwestern in Memphis with a bachelor of arts degree and from Miller-Hawkins Business School with a commercial teacher's certificate.

Before joining the General Accounting Office in 1946, Mr. Hunter had extensive experience in Government and industry. He served more than 3 years in the Army during World War II, principally as a supervisory auditor with the Philadelphia Ordnance District. He also served 2 years as chief accountant and office manager of a building supply firm and 2 years as a teacher for the business school he attended.

In the General Accounting Office, Mr. Hunter has had a wide variety of assignments at the Post Office Department, the Department of Housing and Urban Development, the District of Columbia Government, the Panama Canal Company and Canal Zone Government, the Veterans Administration, the Maritime Administration, and the Department of Agriculture. He also completed an assignment with the survey and investigations staff of the House Committee on Appropriations. He received Meritorious Service Awards in 1963 and 1966.



Vincent J. Kirby

Vincent J. Kirby was designated assistant director, Office of Personnel Management, in December 1968. He will be responsible for matters pertaining to personnel.

Mr. Kirby was graduated from Bates College with an A.B. degree in 1933 and from Boston University in 1934 with a master's degree in education. He is a member of the Public Personnel Association and the American Society for Public Administration.

Prior to joining the General Accounting Office, Mr. Kirby was associated with the Federal Bureau of Investigation (1935-36); the Social Security Board (1936-39); the Federal Security Agency (1939-41); and the War Department, Office of the Quartermaster General (1941-42). He joined the General Accounting Office on April 27, 1942.



Charles P. McAuley

Charles P. McAuley was designated as an assistant director in the Civil Division, effective November 17, 1968. In this position he is responsible for the accounting, auditing, and investigative work at the Bureau of Reclamation, the Bonneville Power Administration, the Southwestern Power Administration, the Bureau of Indian Affairs, and the Bureau of Outdoor Recreation in the Department of the Interior.

Mr. McAuley has had broad experience with the Civil Division, including an assignment to the Subcommittee on Strategic and Critical Material Stockpile of the Senate Armed Services Committee. Prior to joining the General Accounting Office in 1950, he was associated with Alexander F. Makey & Co. in New York City.

Mr. McAuley received a bachelor of business administration degree from Manhattan College and is a certified public accountant of the State of New York.



William L. Martino

William L. Martino was designated an assistant director of the International Division, effective November 17, 1968. He will be responsible for conducting reviews of international interagency programs.

Mr. Martino is a CPA (District of Columbia) and a member of the Federal Government Accountants Association. He is a graduate of Strayer Business College with a bachelor of commercial science degree.

Prior to joining the General Accounting Office, Mr. Martino was associated with a public accounting firm. He joined the GAO in 1956 and from 1958 to 1963 served in the Far East Branch.



Max A. Neuwirth

Max A. Neuwirth was designated associate director, Civil Division, effective September 23, 1968.

Mr. Neuwirth is currently responsible for GAO accounting, auditing, and investigative work at the Department of Justice, the Treasury Department, the Post Office Department, the Federal Deposit Insurance Corporation, and the Federal Home Loan Bank Board and Corporations Supervised. Mr. Neuwirth began service with the General Accounting Office in 1935 and has held diverse assignments of increasing responsibility in the former Audits and Corporation Audits Divisions, and in the Defense and Civil Divisions.

Prior to joining the General Accounting Office in 1935, Mr. Neuwirth was employed with Eli Berman Co., Inc.; Loew's, Inc.—Metro Goldwyn Mayer, Inc.; and was a practicing public accountant in New York City. Mr. Neuwirth attended the City College of New York, Strayer College of Accounting, and Washington College of Law, and holds a bachelor and a master's degree in commercial science and a bachelor of law degree. He served in the U.S. Navy from 1942 to 1945.

Mr. Neuwirth received a Meritorious Service Award in 1967 and a Superior Performance Award in 1968. He is a member of the National Association of Accountants and is presently serving as the Director of Manuscripts of its Washington Chapter.



Eugene C. Wohlhorn

Eugene C. Wohlhorn was designated as an assistant director in the International Division, effective November 17, 1968. He will have the primary responsibility for directing the audit and review of special Defense activities in Southeast Asia.

Since joining the General Accounting Office in 1955, Mr. Wohlhorn has had a wide diversity of experience with the Office of Investigations, the Defense Division, and the Tokyo Office of the International Division's Far East Branch. Prior to joining GAO, Mr. Wohlhorn was a practicing attorney in New York City.

Mr. Wohlhorn received his LL.B. degree from the University of Notre Dame, and his LL.M. from New York University in 1949. He is a member of the New York State Bar and the American Bar Association's Section on International Law and is licensed to practice before the New York State Court of Appeals and the Supreme Court of the United States.

Professional Activities

Office of the Comptroller General

The Comptroller General, *Elmer B. Staats*, addressed the following groups in recent months:

29th Annual Taxpayers' Conference, sponsored by the Public Expenditure Survey of Wisconsin, September 24, in Milwaukee, on "Federal Spending Controls: The Role of the General Accounting Office."

American Management Association's 45th Anniversary Convocation, New York City, September 26.

Annual meeting of the Office of the General Counsel, National Aeronautics and Space Administration, October 23, on "What GAO Hopes to Accomplish with our Audits and Surveys—or What the Lawyers in the Field Can Do to Help GAO Accomplish its Mission."

Executive Seminar Center, Civil Service Commission, Kings Point, N.Y., on October 24.

Stuart Cameron McLeod Society of the National Association of Accountants, Miami, October 29, on "Uniform Cost Accounting Standards in Negotiated Defense Contracts." Mr. Staats' address appears in this issue of the *Review*.

Federal Executive Board in Los Angeles, November 12, on "What's Ahead for the Federal Manager."

11th Annual Symposium of the Institute of Management Sciences, College on Planning, Los Angeles, November 13, on "Industry-Govern-

ment Relationships: Issues Facing the New Administration."

On November 20, Mr. Staats introduced the speaker, Senator A. S. Mike Monroney, to the luncheon meeting of the American Society for Public Administration.

Mr. Staats' speech on "The Growing Importance of Internal Audit in Government" delivered at the Annual International Conference of the Institute of Internal Auditors on June 19, 1968, is printed in the Winter 1968 issue of *The U.S. Army Audit Agency Bulletin*.

Mr. Staats' speech on "Management Information Needs in An Era of Change" before the 49th Annual International Conference of the National Association of Accountants in New Orleans, La., on June 17, 1968, is printed in the October 1968 issue of *Management Accounting*.

The Assistant Comptroller General, *Frank H. Weitzel*, addressed the following groups:

Civil Service Commission's Mid-Management Institute, Washington, D.C., October 17.

Program for Federal career audit managers on Managerial Techniques for Auditors, presented by the Office of Director, Interagency Audit Training, Department of Commerce. Mr. Weitzel spoke on November 18 on "Relationship of Internal Audit to the General Accounting Office." An article based on this speech appears in this issue of the *Review*.

PROFESSIONAL ACTIVITIES

Dallas Chapter of Federal Government Accountants Association, November 21, on "Recent Developments in Federal Financial Management."

The Special Assistant to the Comptroller General, *William A. Newman, Jr.*, discussed the GAO feasibility study of uniform cost accounting standards with the following groups:

Atlanta Chapter of Federal Government Accountants Association, Atlanta, Ga., September 19.

Joint Government/Aerospace Industries Association Session of the annual meeting of the AIA Procurement and Finance Committee, San Francisco, Calif., October 17.

Financial Executives Institute's 37th International Conference, New York City, October 25.

Government Contracting Discussion Group of the Washington Chapter, National Association of Accountants, Washington, D.C., October 28.

Fourth Annual Meeting of the Government Procurement Relations Department, Electronic Industries Association, Miami, Fla., November 7.

Joint meeting of the Government Contracts Committee, Administrative Law Section, Bar Association of the District of Columbia; the Public Contracts Committee of the Federal the District of Columbia; the Public Contracts Section, Third Region, American Bar Association, National Lawyers Club, Washington, D.C., November 19.

Strategic Industries Association Conference, Los Angeles, Calif., November 22.

Ralph M. Kee, assistant director, who is assisting Mr. Newman in the GAO feasibility study of uniform cost accounting standards, addressed the Long Island Chapter of the Federal Government Accountants Association on this subject on October 15.

Office of the General Counsel

Robert F. Keller, general counsel:

Spoke on September 12 before the Eighth Annual Institute on Government Contracts of the Southwestern Legal Foundation at Dallas, Tex., on "The Role of the General Accounting Office in the Enactment and Implementation of Public Law 87-653—The Truth in Negotiations Act."

Addressed the annual procurement conference, National Aeronautics and Space Administration, November 13, on "GAO Looks at Government Procurement."

Has been appointed a member of the Board of Advisors of the National Contract Management Association, a nonprofit organization devoted to the furtherance of education and to the recognition of contract management as a profession.

J. Edward Welch, deputy general counsel:

Spoke on September 30 to the Procurement Law Course at Charlottesville, Va., on "GAO's Role in Government Contracting."

Lectured on October 14-18 in a course on Procurement Contracting and Policy on "Role of GAO in Procurement Field," GSA, San Francisco, Calif.

Spoke on November 4 before the GSA School on "Role of GAO in

Procurement Field—Mistakes in Bids—Protests—Before and After Award.”

Spoke on November 5 at the GSA School on “Administrative Handling of Contract Appeals.”

Spoke on November 19 at George Washington University on “Bid Protest Cases—Why GAO Handles and Why They Should.”

Stephen P. Haycock, assistant general counsel:

Spoke on September 19, before the New York Chapter of the National Contract Management Association on “Protest of Award to the Comptroller General—A Real or Fanciful Remedy?”

Addressed the Contract Management Institute, Mayflower Hotel, Washington, D.C., September 25, on “Public Law 87-653—The Truth in Negotiations Act.”

Spoke on October 8 before San Francisco Chapter of National Contract Management Association on “Bid Protests to the GAO—A Real or Fanciful Remedy?”

Spoke on October 9 before a conference sponsored by Federal Bar Association on “Recent Decisions of the Comptroller General of Special Interest to Contract Administrators,” San Francisco.

Addressed on October 15 a joint meeting of FGAA and the National Contract Management Association, Nutmeg Chapter, on “Public Law 87-653, Truth in Negotiations Act,” Fairfield, Conn.

Participated on October 25 as panelist at the International Conference of the Government Procurement

Policies Committee of the Financial Executives Institute in New York on discussion of “An Examination of Public Law 87-653—Truth in Negotiations.”

Spoke on October 29, 1968, on “Public Law 87-653—Truth in Negotiations” before the Contract Management Institute, Mayflower Hotel, Washington, D.C.

Spoke on October 31 before Defense Advanced Procurement Management Course, Fort Lee, Va., on “Problems in Formal Advertising.”

Spoke at a Briefing Conference on Government Construction Contracts sponsored by the Federal Bar Association and Foundation of FBA in cooperation with Fordham University School of Law and the Bureau of National Affairs on “Truth in Negotiations Act,” Lincoln Center, New York City, December 2-3.

Paul Shnitzer, deputy assistant general counsel:

Spoke at Suffolk Community College, Selden, N.Y., Hofstra University, Hempstead, N.Y., and Suffolk Community College, Riverhead, N.Y., on “Government Procurement and Formal Advertising” before a course in Government Contracts co-sponsored by the Small Business Administration, September 17-19.

Lectured on “GAO in Contracting” on September 25 at the Federal Contract Negotiation Institute, U.S. Department of Agriculture Graduate School.

Spoke on October 3-4 at the University of Houston and Louisiana State University on “Government Procurement and Formal Advertising.”

Lectured on November 20 at the Federal Contract Negotiation Institute, U.S. Department of Agriculture Graduate School, on "Functions of GAO in Procurement."

Lectured on December 4 at the GSA Special Course on Procurement of Construction Services offered to selected personnel of Office of Education, HEW, on "Role of GAO in Procurement Field, Mistakes in Bids, Protests—Before and After Award."

Spoke on December 5 before the Defense Advanced Procurement Management Course, Fort Lee, Va., on "Problems in Formal Advertising."

Seymour Efros, attorney-adviser (contract), spoke on September 25 before the annual meeting of the Procurement Advisory Committee, National Security Industrial Association, Washington, D.C., on "Subcontracting and Truth in Negotiations."

L. Fred Thompson, legislative attorney, spoke on October 2 on the "Role of the General Accounting Office in the Government" before the Washington Semester Program, Special Course in Government—American University.

F. Henry Barclay, Jr., assistant general counsel, spoke on October 9 before a conference sponsored by the Federal Bar Association on "General Accounting Office and Support Service Contracts—Reactions From Onsite Review," San Francisco, Calif.

Charles P. Hovis, attorney-adviser (contract), and *Robert W. Johnson*, attorney-adviser (contract), attended a 3-week course in Procurement Law at the Judge Advocate General's School,

U.S. Army, Charlottesville, Va., September 16 to October 4.

Melvin E. Miller, assistant general counsel, spoke on October 22 before the Defense Procurement Management Course, Fort Lee, Va., on "The Role of GAO in Defense Procurement."

Office of Policy and Special Studies

E. H. Morse, Jr., director:

Participated in a seminar on the trends in the education of accountants held on the campus of Virginia Polytechnic Institute, Blacksburg, Va., on November 1. Mr. Morse discussed "What We Look for in the Accounting Graduate."

Addressed the 53d annual convention of the National Association of State Auditors, Comptrollers and Treasurers, in New Orleans, La., on December 3. Mr. Morse spoke on "Auditing Federal Grant Programs."

Edward J. Mahoney, associate director, has been designated by the Comptroller General to serve as a member of the Committee on Information Systems of the Council of State Governments.

On October 16, Mr. Mahoney spoke on "Systems Documentation and Audit Trail Requirements" at the National Symposium on Documenting ADP Operations, sponsored by the National Archives and Records Service of the General Services Administration.

The October 1968 edition of *Armed Forces Comptroller* includes an article by Mr. Mahoney on "General Accounting Office Views on Government Management Information Systems."

Keith E. Marvin, associate director:

Addressed the Institute on Program Planning and Budgeting Sys-

tems for Librarians at Wayne State University, Detroit, Mich., on October 2.

Participated as a panel member on "The Practical Integration of PPB With the Management Information System" before the Washington Chapter of the National Association of Accountants, November 20.

Addressed the Working Group on Weapon Systems Costing, Military Operations Research Symposium, Monterey, Calif., December 11, on "Time Preference and Uncertainty in Evaluation of Federal Program Alternatives."

Leo Herbert, deputy director for staff development, spoke to the Training-Fiscal Review Committee, State of Tennessee, and before the Middle Tennessee Education Association, College of Business Administration Teachers Subsection, on October 9-11.

Harley R. Climpson, assistant director, was the principal speaker at the meeting of the Cincinnati Chapter of the Federal Government Accountants Association on October 21. He spoke on the "Professional Accountant and Management Audits."

On November 4, Messrs. Herbert and Climpson attended the semiannual meeting of the Accounting Careers Council which was held in the Senate Appropriations Committee hearing room. The Accounting Careers Council is made up of representatives of the national accounting organizations such as the American Institute of CPAs, American Accounting Association, Financial Executives Institute, National Association of Accountants, Institute of Internal Auditors, Federal Govern-

ment Accountants Association, and American Women's Society of CPAs.

William L. Campfield, assistant director, currently on leave of absence to teach during the 1968-69 academic year at the University of Missouri and the University of Illinois:

Spoke at a meeting of Beta Alpha Psi at the University of Missouri, October 8, on "Professional Opportunities for Accountants and Auditors in the Federal Service."

Addressed the St. Louis Chapter of the Institute of Internal Auditors, November 12, on "Trends in Education and Staff Development for Internal Auditors."

Has an article entitled "Insights and Guidelines for Increasing the Proficiency of Accountants" in *The Singapore Accountant*, volume 3, Fall 1968 issue.

Mr. Campfield is a member of the Professional Advisory Board of the Department of Accountancy of the University of Illinois which held its first meeting November 15 and 16 at Allerton House near Monticello, Ill. The board, consisting of nine prominent men from industry, Government, and public accounting, was established to promote accounting education, particularly as it is understood at the University of Illinois at Urbana-Champaign. Furthering of the development of accounting in all its applications is intended through a planned interchange between the board and members of the faculty.

Douglas E. Cameron, supervisory accountant, has been appointed to the Research Committee of the Washington Chapter, FGAA, for the 1968-69 program year.

PROFESSIONAL ACTIVITIES

Mr. Cameron discussed on November 26 GAO functions and operations as they relate to the Federal budget cycle, at a 2-day program put on for Federal employees in financial management and administrative positions by the Civil Service Commission on the "Federal Budget Process."

Civil Division

In December 1968 *Joseph D. Warren, Jr.*, supervisory auditor, was appointed to the position of Associate Director of Educational Activities for the Washington Chapter of the National Association of Accountants.

Mr. Warren also participated in the Washington and Lee High School Career Day in Arlington, Va., on November 12, 1968.

On December 10, *Stephen J. Varholy* spoke at the Accounting Career Day at Sacred Heart University, in Bridgeport, Conn. The Career Day, sponsored by the National Association of Accountants, was attended by approximately 125 students and representatives from public accounting firms and industry.

Joseph D. Comtois, William D. Martin, Jr., Jack L. Mertz, Donald M. Mutzabaugh, and J. Benjamin Williams were awarded certificates of merit in recognition of their outstanding service to the Washington Chapter, National Association of Accountants, during the chapter year 1967-68.

Defense Division

Charles M. Bailey, director, addressed the Institute of the Naval Audit Service, on October 25, on the subject "Views on the GAO Approach to Audits Within DOD." His talk was di-

rected to deputy directors of the Naval Area Audit Services and to headquarters management personnel.

Harold H. Rubin, associate director, Research and Development Group, addressed the Northern Virginia Chapter, Federal Government Accountants Association, on October 10 on "An Approach to Audit of Research and Development Activities." Mr. Rubin also participated as a panelist in two conferences on recent developments and current trends in research and development contracting. These conferences, which were held November 7-8 in Washington, D.C., and November 25-26 in San Francisco, Calif., were co-sponsored by George Washington University and Federal Publications, Inc.

Daniel Borth, associate director, Management Control Systems Group, was recently appointed a member of the Long-Range Planning Committee of the Federal Government Accountants Association.

Jerome H. Stolarow, assistant director, Supply Management Group, spoke on November 15 to the Army supply management class at the Army Logistics Management Center, Fort Lee, Va., on GAO observations on the Army supply system.

Inadvertently omitted from the listing in the Fall 1968 issue of the *Review* of successful candidates who took the May 1968 CPA examination was the name of *Donald E. Day*. Mr. Day sat for the examination in Maryland.

International Division

Edward T. Johnson, associate director, met on November 13 with the Executive-Congressional Relations Management Intern Group of the Federal



Oye V. Stovall, director, International Division, and Joseph P. Normile, director, European Branch, visited the New Delhi suboffice in India to review GAO work in that area, November 22-27, 1968.

Pictured above during this visit are from the left: George B. Lucas; Joseph

P. Normile; Oye V. Stovall; Oliver G. Abston; Joanne L. Lykens; Andrew J. Olson; Michael Gasso, manager, New Delhi suboffice; Edward L. Ukele; and Robert W. Coffman. Members of the suboffice not pictured are Larry E. Hirschler, Donald Cartright, and Harold M. Boulden.

PROFESSIONAL ACTIVITIES

Aviation Administration, Department of Transportation. Mr. Johnson discussed the role of the General Accounting Office in the appropriations process.

John E. Milgate, assistant director, and *Charles E. William*, supervisory auditor, spoke on October 10 at the Administrative Operations and Management Course given by the Foreign Service Institute. They described the responsibilities and activities of the General Accounting Office, especially with respect to the State Department.

Field Operations Division

Forrest R. Browne, deputy director, on September 25, spoke at the Civil Service Commission Executive Seminar Center, Kings Point, Long Island, N.Y. His subject was "Duties and Responsibilities of the General Accounting Office."

Anthony L. Komac, supervisory auditor, Atlanta, participated in the Accounting Careers Day Program sponsored at Florida State University by the Beta Alpha Psi Chapter in October and spoke also to the University of Georgia Chapter of the same fraternity on the subject "Employment Opportunities in the GAO."

On December 11, *D. P. Sorando*, regional manager, and *D. V. Loesch*, supervisory auditor, Cincinnati, spoke at a meeting of the Beta Alpha Psi Chapter of Indiana State University, Terre Haute, Ind. The subject was "The Functions and Responsibilities of the General Accounting Office."

Mr. Loesch and *W. A. Broadus, Jr.*, supervisory auditor, Cincinnati, participated in a 2-day Careers Unlimited Conference at Indiana State University on October 1 and 2.

W. C. Herrmann, Jr., audit manager, Cincinnati, attended the Management Program for Executives at the University of Pittsburgh Graduate School of Business held from September 15–November 8, 1968. On November 11, Mr. Herrmann was notified by the American Institute of Certified Public Accountants that a problem he had previously submitted to the Institute was used on the November 1968 CPA Examination. In recognition of his contribution, Mr. Herrmann received an award of \$100.

On November 18, Mr. Herrmann and *R. J. Nolan*, auditor, Cincinnati, spoke at a meeting of the Accounting Club at Bellarmine College, Louisville, Ky., concerning "The Role of the General Accounting Office."

D. L. Allgyer, supervisory auditor, Cincinnati, has been admitted to membership in the Ohio Society of Certified Public Accountants.

Stewart D. McElyea, regional manager, Denver, spoke to a group of 50 high school principals and guidance counselors at a meeting cosponsored by the Accounting Careers Council and the Beta Alpha Psi Chapter at the University of Denver on December 11. He discussed opportunities for careers in accounting.

John E. Murphy, supervisory auditor, Denver, participated in a panel discussion on managerial accounting at a seminar for high school students on the profession of accounting, sponsored by the University of Colorado, on November 13.

Charles H. Moore, regional manager, Detroit, on December 5, spoke before the Beta Alpha Psi, University of De-

troit, on "Recent Developments in Government Affecting the Accounting Profession."

Herbert R. Martinson and *Garry W. Martin*, supervisory auditors, Los Angeles, participated in "Career Day" activities at San Diego State College. *Harlan Hively* and *Richard Herrera*, supervisory auditors, Los Angeles, participated in similar activities at the University of Arizona and California State College at Los Angeles, respectively.

Ernest J. Candilora, Jr., and *Malcolm J. Ledet*, supervisory auditors, New Orleans, participated in a 7-week program on Government Contract Administration sponsored by the Small Business Administration and Louisiana State University in New Orleans.

Mr. Ledet served as one of a five-member panel during a Career Opportunities Conference on October 3, sponsored by Delta Sigma Pi and Nicholls State College.

R. Peter Taliancich, supervisory auditor, New Orleans, spoke at a meeting of the Accounting Club, Northeast Louisiana State College, on November 14. The subject of his talk was "The Functions and Responsibilities of the General Accounting Office."

George D. Runnels, supervisory auditor, New Orleans, addressed the members of Beta Gamma Psi at Northwestern Louisiana State College on October 23. The subject of his talk was "Management Auditing."

Werner Grosshans, assistant regional manager, San Francisco, visited a number of firms on the west coast in November in connection with the In-

dustrial Management portion of his year-long course of study at the Industrial College of the Armed Forces.

Transportation Division

T. E. Sullivan, director, addressed the transportation members of the Denver Chamber of Commerce, on October 3, on the role of the General Accounting Office in the transportation and traffic management activities of the Federal Government.

F. J. Shafer, deputy director, on November 22 addressed the annual meeting of the Household Goods Forwarders' Association at Honolulu, Hawaii, on GAO's court work and reviews involving military systems for the shipment of household goods.

R. E. West, assistant director, and *T. C. McNeill*, assistant to the director, attended the meeting of the Freight Committee, Association of American Railroads, Montreal, Quebec, September 30 to October 2. They discussed numerous problems of mutual concern, including overcharges and claims settlements on contractors' export shipments to Southeast Asia.

In November, Mr. McNeill also addressed the rail carriers' Southeastern Accounting Conference in New Orleans on the subject of GAO's audit of Government payments for rail transportation service.

Joseph Goldman, traffic manager, and *C. C. Loomis*, chief, motor audit branch, participated as guest lecturers at the Defense Advanced Traffic Management Course, U.S. Army Transportation School, Ft. Eustis, Va., on October 28.



Indian Government Financial Management Study Team and GAO Officials,
September 20, 1968

Visit of Indian Government Financial Management Study Team

Among the 58 foreign visitors to the General Accounting Office in Washington during 1968 was a group of 13 from various governmental organizations in India. This group was in the United States during the period September 3 to December 24, 1968, under the auspices of the Agency for International Development, Department of State.

Their program brought them to the GAO on September 20 where they spent a full day learning about GAO functions and operations from the Comptroller General and members of his top staff. The accompanying pictorial record of this visit was made at that time.

Seated (left to right)

- K. A. Chandrasekharan, Deputy Finance Manager, Fertilizers, Chemicals, Travancore, Kerala.
- A. N. Sivaramakrishnan, Deputy Financial Adviser, Fertilizer Corp. of India, New Delhi.
- M. C. Sarin, Financial and Accounting Manager, Indian Telephone Ind., Bangalore.
- A. K. Mathur, Financial Advisor and Chief Accounts Officer, Mormugao Port Trust.
- E. H. Morse, Jr., Director, Office of Policy and Special Studies.
- Elmer B. Staats, Comptroller General of the United States.
- S. P. Gugnani, Financial Adviser and Chief

- Accounts Officer, National Projects Construction Corp., New Delhi.
- S. Krishnan, Financial Advisor to North East Frontier Agency, New Delhi.
- P. G. Biswas, Deputy Chief Accounts Officer, Central Inland Water Transport Corp.
- G. Jayaraman, Senior Deputy Accountant General, Maharashtra, Nagpur.

Standing (left to right)

- Lawrence J. Powers, Assistant to the Comptroller General.
- Gilbert Stromvall, Assistant Director, International Division.
- Frederic H. Smith, Deputy Director, Office of Policy and Special Studies.
- T. M. George, Senior Deputy Accountant General, Uttar Pradesh, Allahabad.
- N. J. Mathew, Senior Accounts Officer, Madras Refineries, Ltd., Madras.
- Charles M. Bailey, Director, Defense Division.
- S. S. Roy Chowdhury, Director of Audit and Accounts, P and T Stores, Calcutta.
- Leo Herbert, Deputy Director for Staff Development, Office of Policy and Special Studies.
- P. K. Basu, Financial Adviser and Chief Accounts Officer, National Small Industries Corp., New Delhi.
- R. C. Sekhar, Chief Auditor Commercial Accounts, New Delhi.
- Charles D. Hylander, Deputy Director, International Division.
- Oye V. Stovall, Director, International Division.
- Gregory J. Ahart, Deputy Director, Civil Division.
- J. Edward Welch, Deputy General Counsel.
- George Werner, Agency for International Development.

New Staff Members

The following new professional staff members reported for work during the period September 16 through December 15, 1968.

<i>Civil Division</i>	Baisey, James A. Black, Thomas R. Davies, Thomas L. Gregory, Jacquelyn A. (Miss) Havice, Philip L. Rees, James M. Shanley, Peter J. Vandiver, Patsy (Miss) Zimmerman, Michael	University of Maryland Youngstown State University Department of Agriculture Virginia State College Salem College University of Utah Boston College Texas Women's University Bureau of Public Roads
<i>Defense Division</i>	Barnes, Jeffrey R. Epperson, Arthur E. Ford, Jerrold L. Fowler, James A. Gorman, Richard L. Halsall, Jon R. Hetland, Lauren M. Oliver, James P. Patters, Joe S. Scheider, Charles F., III Sell, Jon D. Wolfe, Marvin L.	Virginia Polytechnic Institute Department of Defense Consolidated Freightways Auburn University U.S. Air Force University of Kentucky University of Omaha U.S. Navy American National Red Cross Department of the Air Force Nebraska Wesleyan University General Motors Corp.
<i>International Division— Washington</i>	Dziadek, Fred Thomas, Charles D.	Department of State Federal Highway Administration
 REGIONAL OFFICES		
<i>Detroit</i>	Denomme, Thomas J.	University of Detroit
<i>Kansas City</i>	Edgmon, Vester Garner, Jean L. (Miss)	Wichita State University Central Missouri State College
<i>Los Angeles</i>	Berg, Bernard G. Flann, Roger W.	University of Southern California California State College at Fullerton
<i>New York</i>	Raker, Richard R. Cesario, Michael D. Russo, Paula A. (Miss)	University of San Francisco Iona College University of Massachusetts
<i>Norfolk</i>	Webb, Joyce H. (Miss)	Old Dominion College
<i>Philadelphia</i>	Schmidt, David C.	Pennsylvania State University

NEW STAFF MEMBERS

<i>San Francisco</i>	Moon, Wayne C. Potter, David L.	San Francisco State College California State College at Hayward
<i>Seattle</i>	Mitchell, Gerald E. Toner, David J. White, Delano L.	California State College at Hayward Temple University University of Oregon
<i>Washington (Falls Church)</i>	Croushorn, Bertram L. Johnson, Albert F., Jr. Raynor, Kenneth M., Jr. Regelmann, Kenneth E., Jr.	Strayer College University of Maryland University of Maryland East Carolina University

Readings of Interest

The reviews of books, articles, and other documents in this section represent the views and opinions of the individual reviewers, and their publication should not be construed as an endorsement by GAO of either the reviewers' comments or the books, articles, and other documents reviewed.

Congress and the Science Budget

By Herbert Roback, Staff Administrator, Military Operations Subcommittee, House Committee on Government Operations, *Science Magazine*. May 31, 1968.

In this interesting and informative article, Mr. Roback discusses the principal legislative processes and procedures followed by the Congress in reviewing and disposing of requests received from executive departments and agencies for the approval and funding of programs and activities, with particular reference to the research and development area. Included is a brief discussion of the manner in which the Congress discharges its responsibilities to determine how well the agencies are administering these programs and how wisely the monies are being spent.

The article is of interest to GAO staff members who want or need to become more familiar with these matters.

Following is a summary of the more significant information discussed.

1. After World War II, a number of agencies were established to conserve the resources and sustain the momentum of war-induced scientific research, to advance missile and space technologies, to protect and further the national security, and to put science

and technology to work in solving problems such as traffic safety, urban transportation, air and water purification, public health, and crime prevention. This proliferation of agencies and programs created competition for technical talents and contractor resources, and demonstrated a need for procedures and mechanisms to coordinate and control interagency relationships, minimize overlap and duplication, develop joint projects, and identify gaps and omissions.

2. The yearly budget estimates developed by executive agencies are submitted by agency heads to a single source for final review and approval—the President, assisted by the Bureau of the Budget and, in technical fields, by the Office of Science and Technology, a coordinating agency in the President's Executive Office. There is no comparable organization and single source of authority in the Congress. All budgetary matters are handled by the Appropriations Committees in each House. For the Government as a whole, research and development is not a budget category but a jigsaw puzzle of activities in many agencies. Each year some 13 or 14 appropriations subcommittees in each House work on the agency budgets assigned them. Each

subcommittee reports out its own bill. These, together with supplemental bills, add up to 15 or 16 appropriations statutes each year.

3. The Constitution prohibits the spending of public funds without a legislative enactment. Legislative rules and procedures enjoin an appropriation without a prior authorization. This dual legislative process of authorization and appropriation, which is repeated in each House of the Congress, has introduced complications and delays in the processing of legislation. One complicating feature, for example, is the statutory requirement for *annual* authorizations as opposed to *no-year* appropriations. The research and development appropriations for the three agencies that together account for the bulk of the Government's outlays in this area are among the appropriations which must wait upon annual authorizing statutes.

4. Each year thousands of bills are introduced in the Congress, hundreds of them, perhaps, dealing with some aspect of science and technology. These bills are referred to appropriate committees. Some of these bills may get a hearing in committee and a favorable report leading to action in one or both Houses. Whether or not a bill is acted on depends on a number of factors. If, for example, the measure is a part of the President's legislative program for the year it stands high on his priority list. The chances for such measures to be approved are also increased if the President is forceful in conveying his views and his party has a substantial majority in the Congress. Also, whether a committee or subcommittee chairman

is strong or weak, liberal or conservative, interested or inactive, makes a big difference in the legislative result.

5. Congressional procedure is halloved by tradition, and the Congress is slow to change its ways. Most proposals for reform fall by the wayside. Some of the proposals to reform the Congress seem to assume that the Congress should duplicate the executive branch in planning and programming. However, although the Congress participates in policy formulation and is a policymaking body in the broadest sense, it is not an independent planning agency. The Congress can challenge, criticize, modify, or reject what the Executive proposes, but practically, it cannot develop an alternative budget or plan all operations for the Government as a whole.

6. The Congress needs to, above all, preserve its pragmatic, commonsense approach to public affairs. The answer is not to develop a corps of technical experts on the Hill. Committees and individual Members of the Congress can be as well informed about any subject as time and willingness permit. All the experts in Government, in universities, and elsewhere are available to them.

Mr. Roback concluded his remarks with a proposal that a Department of Science and Technology be established to (1) bring about a re-sorting of responsibilities and better integration of committee activities on the congressional side, (2) consolidate large, relatively self-contained technical agencies to serve as basic components of the new organization, and (3) house, in one agency, not only the older, more mature agencies but also the new ones,

such as oceanography, which have not yet found a permanent home, and any other technical agencies and bureaus which may now be in less congenial surroundings.

Donald B. Dawson,
SUPERVISORY INVESTIGATOR,
DEFENSE DIVISION.

Auditing & EDP

By Gordon B. Davis, American Institute of Certified Public Accountants, Inc., New York, 1968, 344 pp., \$12.

This book has the following stated purposes:

1. To guide CPAs in auditing business enterprises which use computers for recordkeeping.
2. To provide a starting point for building a consensus of expert opinion on auditing practices for examining such companies.
3. To suggest the utility and applicability of different auditing methods where experience is still lacking.
4. To provide source materials for training and informational purposes.

An introductory chapter cites the phenomenal growth of the computer industry in the recent past and forecasts continued growth in the future. It suggests that the auditor cannot ignore the computer in an audit because the computer has its own set of controls which must be considered. Controls normally resulting from the division of duties and manual review are now automated.

After the introductory chapter, the book is organized into three major sections, plus appendices. The first section,

chapters 2 through 7, discusses typical procedures and preferred practices utilized in the organization, administration, and control of data processing. Descriptions of practices and procedures a company should follow to provide proper management and control of its computer operations and background information to enable the auditor to competently judge the adequacy of data processing systems are discussed.

Documentation relating to a data processing system is frequently the best source of information on control features in systems. The book places emphasis on the importance of documentation and it explains that the review of internal controls may depend on the adequacy of available documentation.

Descriptions of general types of data processing equipment control are set out and some reasons for equipment malfunction are discussed. The author states that considerable reliance can be placed on equipment and hardware controls. However, he states that the lack of a particular type of equipment control generally should not affect the scope of an audit unless the system under consideration is experiencing a high error rate.

Control over input data is emphasized. Studies have shown that input data is a major source of error and a continuing problem. Controls over input data should be emphasized because a computer will process all valid data even though it is inaccurate. The result will be erroneous output.

The second section, chapters 8 through 12, discusses specific audit

procedures and the evaluation of a system's internal control and auditability. The use of automated audit techniques in testing a system and testing records produced by the system is also discussed. Certain criteria are cited which aid the selection of appropriate audit approaches.

The book points out that in the evaluation of internal controls the auditor must consider both the possibilities for errors and the existing controls against errors. Through his review the auditor should determine the nature of audit procedures to employ. Proper evaluation of existing controls will provide a basis for determining the reliance that can be placed on the system of internal controls and the extent to which audit tests must be performed on the records.

With respect to auditability, consideration is given to the effects of EDP on the audit trail. The author states that the audit trail (management inquiry trail) has been retained because of management's continuing requirement of an inquiry trail for reference purposes.

In discussing the use of the computer to test data processing systems, advantages and disadvantages related to two methods of testing computer programs are examined. They are the test data method and the controlled processing or reprocessing method. The test data or test deck method involves the preparation of test data for testing valid and invalid conditions with respect to system programs. The test data is processed under the control of the auditor by the system's program. In the controlled processing or reproc-

essing method the auditor controls the processing run, using a program which has been tested. This method provides assurance that a particular program is or was used by the client.

The book discusses three methods of using computer programs for testing machine-readable records produced by a data processing system:

1. Using clients' programs that had been tested and controlled by the auditor.
2. Using generalized audit routines.
3. Using special audit routines prepared under the supervision and control of the auditor.

The third section, chapters 13 through 15, discusses problems related to integrated systems, service centers and time sharing, and training necessary for auditing electronic data processing systems.

Auditing experience with advanced systems is still quite limited: however, characteristics of integrated systems suggest four problem areas. They are source documents, authorizations, audit trail, and control totals. Reasons for the existence of the above potential problems are discussed and selected audit approaches to integrated systems are highlighted.

The book suggests two reasons why the auditor should understand electronic data processing:

1. So that he can prepare a reliable evaluation of internal control of an electronic data processing system.
2. So that, when appropriate, he can use the computers in auditing.

The author suggests that the auditor need not be a specialist, but he should

READINGS OF INTEREST

have a good general understanding of EDP. Also, some of the sources of training which are available to the auditor are discussed.

The appendices include discussions of basic elements of data processing, concepts and terminology, standard flowchart symbols and their use, and a glossary of EDP terms.

This book should prove to be a useful guide in the auditing of computer-based records and reviewing EDP systems. Considerable emphasis is placed on suggested audit approaches and the

applicability of various audit techniques.

Since a significant amount of GAO audit effort involves agencies which utilize computers and the increased use of automated systems appears inevitable, the reviewer recommends this book for reading by all GAO staff members. Copies of the book are available in the Washington and field office libraries.

Darrell D. Massier,
ACCOUNTANT,
OFFICE OF POLICY
AND SPECIAL STUDIES.



The following letter was received by *Vincent J. Palazzolo*, supervisory auditor in the New York Regional Office, in connection with his article on college recruiting procedures in the Fall 1968 issue of the *Review*.

NOVEMBER 18, 1968.

Just a brief word to commend you on the excellent suggestions that you made in your article, "An Effective College Recruiting Procedure," which appeared in the *GAO Review*, Fall 1968. I hope that those charged with the responsibility of recruiting college graduates for GAO will implement your suggestions. It should help to reduce the scope of the problem to more manageable proportions.

Lawrence A. Lansner,
PLACEMENT DIRECTOR,
THE BERNARD M. BARUCH COLLEGE
OF THE CITY UNIVERSITY OF NEW YORK.

ANNUAL AWARDS FOR ARTICLES PUBLISHED IN THE GAO REVIEW

Cash awards are available each year for the best articles written by GAO staff members and published originally in the *GAO Review*. Each award is known as the GAO Award for Significant Contribution to Financial Management Literature and is presented during the GAO awards program held annually in June in Washington.

One award of \$250 is available to contributing staff members 31 years of age or under at the date of publication. Another award of \$250 is available to staff members over 31 years of age at that date.

Staff members through grade GS-15

at the time of publication are eligible for these awards.

The awards are based on recommendations of a panel of judges designated by the Comptroller General. The judges will evaluate articles from the standpoint of the excellence of their overall contribution to the knowledge and professional development of the GAO staff, with particular concern for:

Originality of concepts.

Quality and effectiveness of written expression.

Evidence of individual research performed.

Relevancy to GAO operations and performance.

STATEMENT OF EDITORIAL POLICIES

1. This publication is prepared for use by the professional staff members of the General Accounting Office.
2. Except where otherwise indicated, the articles and other submissions generally express the views of the authors, and they do not necessarily reflect an official position of the General Accounting Office.
3. Articles, technical memorandums, and other information may be submitted for publication by any professional staff member. Submissions may be made directly to liaison staff members who are responsible for representing their offices in obtaining and screening contributions to this publication.
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