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AICPA Computer Conference in Chicago Attracts Largest Attendance to Date - Part 2

Management Services Staff Report

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Part 2—

*Selecting the 'right' service bureau, the 'right' equip-
ment, and problems of auditing were covered at the
recent AICPA automation meeting in Chicago—*

AICPA COMPUTER CONFERENCE IN CHICAGO ATTRACTS LARGEST ATTENDANCE TO DATE

A Management Services Staff Report

THE SECOND half of the AICPA computer conference in Chicago in May (the first half was reported in the last issue of the magazine) began on Tuesday afternoon, May 20, with the conference attendance divided into two large groups, one for CPAs considering involvement in EDP, the other for those currently involved in electronics. Significantly, attendance at the latter session ran about twice as high as that for the group merely considering EDP.

The session for those considering use of EDP opened with a panel discussion, "The Local Practitioner's Approach to Harnessing EDP," moderated by Robert Nadel, Hertz, Herson & Co. Panel members were Edwin T. Boyle, own account, Hackensack, N.J.; Roy Lindorf, Joseph Bentley & Co.; and William I. Murrell, Parish, Murrell & Co.

Mr. Nadel said that it had been determined that the panel format would require each participant to give the approximate size of his firm, the type of practice it engaged in, and the type of EDP equipment it used. Panelists were

asked to comment on three questions:

How did they get started in EDP and what method they used to obtain the necessary knowledge and training?

How are they currently using their equipment?

What problems had they run into and what warnings would they give someone just starting out on the EDP route?

Mr. Boyle, who has been extremely active in the computer field for years, surprised his audience by advising that CPAs, no matter how heavily they became involved with computers, avoid ownership or rental of such machinery. He conceded that this went against the advice he had been giving for years, but said:

"Today, I have reservations with regard to the extent to which a CPA should be a participant in this field—not because of his background or his capability—but because I feel that the CPA organizational structure in which he must operate does not accommodate itself to the demands of the com-

puter industry. I do not question whether or not he should be involved—it is merely the degree of involvement by the CPA. To get involved in complete hardware capability and complete service bureau capability is, I think, highly questionable today."

Questioning whether it is feasible to conduct a computer operation within the CPA framework, Mr. Boyle contrasted some of the problems of the computer industry with the CPA form of organization.

Computers cost a great deal of money both for initial outlay and for keeping the installation modern. CPA firms, on the other hand, are generally limited to the capital of the partners. They cannot raise outside capital freely as can non-CPA groups.

Another problem lies in the field of personnel, he pointed out. The CPA who is just starting a computer installation is not likely to know too much about EDP. Yet he must direct technical personnel in a field with which he himself is unfamiliar. Moreover, trained people in the EDP field are hard to get

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and hard to keep. The non-CPA firm can offer stock or stock options, a wealth of financial rewards impossible for the CPA.

Computers also provide a new risk area in terms of accountants' liability.

And, finally, the CPA code of ethics throws major difficulties in the path of a CPA trying to offer service center capabilities, he said, prohibiting as it does advertising, soliciting, and all forms of marketing while the non-CPA service center has no such restrictions.

"The key to success in the computer business is to develop and batch process an application," Mr. Boyle said, "in other words to completely develop and debug a program for industry-wide application or general business application, perfect it, and run that program on a broad scale. Personnel then become completely familiar with operating procedures, the program itself gets debugged to the point of minor maintenance, the client becomes completely familiar with the effectiveness of the application, and profits are made.

"Let me tell you how it is in my office:

"We have one hospital client.
"We have one golf club.
"We have one bank.
"We have one newspaper.
"Etc."

His firm has spent considerable sums of money in developing each of these programs, but it cannot market them to other hospitals, other clubs, or other newspapers, he pointed out.

But competitive non-CPA EDP firms can develop such "dedicated" services and market them to as

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The first part of this report, which appeared in the September-October issue, had two errors: The cost of the AICPA video-tape computer course presentation is $300 per participant per course; John W. Wagner, identified as associate professor of accounting at the University of California at Los Angeles, is actually at the University of Southern California at Los Angeles.

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many customers as they can find.

Mr. Boyle said that he wasn't suggesting altering the CPA code of ethics to permit solicitation, because he felt that would be too harmful to the CPA's professional stature and image.

"My point is," he said, "that the conduct of a broad computer practice within the code of ethics is difficult where one has his hands tied by his sides. Therefore, we must evaluate whether or not our individual practices justify heavy involvement in the computer industry, or possibly a more limited relationship."

Mr. Boyle said that if he were considering computer involvement today for the first time he would try first of all to determine the degree of involvement.

"If immediate cash requirements were no particular problem, I would then try to evaluate how large a captive market I might have within my own clientele to support computer operation," he said. "For example, I might be a specialist in hospital accounting and thereby have a large potential market built in. . .

"But if I satisfied these two requirements, money and market, I then would have to weigh the relative advantages of in-house capabilities versus access to large CPUs [central processing units] that seem to me inevitable in the near future."

CPAs without either sufficient capital or a captive market, Mr. Boyle said, should probably forego complete involvement in the hardware side of computers. But that would not be a reason to preclude their involvement with applications as they related to their clients. And they should have sufficient knowledge of both the hardware and software technology to be able to audit clients' records with confidence.

Remote terminals are rapidly becoming feasible, Mr. Boyle pointed out, so that accountants may very soon have input and output stations right in their own offices, tied into central computers where not

only their own proprietary programs but those of service bureaus as well would be available to service clients' needs.

The CPA should be involved with computers, heavily involved, Mr. Boyle concluded. But this need not necessarily encompass the ownership or control of the hardware.

Mr. Murrell and Mr. Lindorf both flatly disagreed with Mr. Boyle. Mr. Lindorf said that within the last five years his Southern California firm had grown by 80 per cent, and that much of this expansion could be attributed to the increased prestige the firm gained through its EDP expertise. After some unfortunate equipment experiments, the firm had settled for an RPC-4000, with paper tape input and output, that cost less than $25,000. On this equipment, Joseph Bentley & Co. carry over 100 write-up accounts, and do some specialized payrolls and job costs for clients, as well as all their own internal work, accounts receivable, work-in-process, and overhead analysis. They have hired no outside EDP personnel, and they have managed to rent their machine at night to another organization.

"I agree with Ed [Boyle] that no CPA should even consider going into EDP as far as becoming a service bureau is concerned," Mr. Lindorf stated. "I don't agree that if a CPA is doing any write-up work and wants to do any special work for the client based on the premise that the computer is just a tool, like a pencil, an adding machine, or a calculator, he shouldn't have his own equipment. I think the main difference lies in the answer when I asked Ed what he was spending per month for equipment rental. He stated $26,000. We didn't even pay this much for our total set-up."

Mr. Murrell also was enthusiastic about his firm's "in-house" computer. "By having our own in-house-type operations, we have been able to utilize our computer center for experimental-type system design, thus educating ourselves, as well as offer our clients

a customized computer service unequalled by another CPA firm or service-bureau-type firm in this area. We have on hand approximately 850 different program applications which we have developed," he said.

"Our clients do not want to go to one place for their auditing, another place for their computer service, another for their management advisory services, and still another for their tax services. They would rather deal with our firm, one that is familiar with their overall operation and one that can give them more value for their dollars spent.

"In broadening the services offered to our clients, we have been able to enlarge our audit, tax, and M. S. divisions by utilizing our own computer in these areas.

"Finally, by purchasing our computer rather than leasing, we have been able to generate an additional $250,000 profit to the firm as projected over a ten-year period, our estimated period for use of the equipment."

Major commitment needed

Mr. Nadel in summarizing, said that every CPA contemplating the use of or involvement in EDP must be prepared to spend considerable time in the effort. The rate of change in the EDP field is so rapid and the implications for the client are so great that a CPA cannot look upon an EDP endeavor as merely a sideline to be dealt with as time permits, he continued. The practitioner who cannot devote such time must be prepared to rely on outside consulting advice, he said, but even here he must learn enough about the field so that he can select the right consultant and then evaluate his work.

"The most important reason for the CPA to have an intimate involvement with EDP is not for the EDP processing services he can directly offer his client," he said. "More important is the fact that there is no better way for the CPA to gain the expertise necessary to

offer the client professional consulting advice regarding EPD problems."

Gordon Davis, professor of accounting, University of Minnesota, and director of its information processing center, discussing "Selecting A Service Center," defined a data processing service center as any organization that provides data processing services to outside clients on a fee basis. There are now between 1200 and 1800 such organizations in the country, he said.

His talk, he went on, was designed to assist potential users of such centers to:

1. Locate the most suitable service center for their needs,
2. Prepare a request form to use in obtaining proposals from service centers,
3. Evaluate such proposals,
4. Negotiate a contract,
5. Implement the decision to use a service center.

Service centers fall into three main categories, he said: those owned and run by computer manufacturers, those independently owned and operated, and those run by companies with their own computer facilities which are leasing time on their equipment. Subcategories are universities with data processing facilities and CPAs with EDP equipment, he said.

The typical service bureau is organized to carry out three major functions, he went on: sales, consulting and programing, and production.

Characteristics of a data processing application that might well be turned over to a service bureau are:

1. A very large number of records to be processed,
2. Considerable computation required for those records,
3. The necessity to rearrange data in several different ways to obtain different tabulations or to perform different computations,
4. Applications so large that the time available for processing is too short to be handled by the regular in-house staff,

Mr. Nadel said that every CPA contemplating the use of EDP must be prepared to spend considerable time in the effort. The rate of change in the EDP field is so rapid and the implications for the client are so great that a CPA cannot look upon an EDP endeavor as merely a sideline to be dealt with as time permits . . .

5. Specialized knowledge in the data center that is not available in-house.

As guides to locating accessible data centers, he suggested:

1. Local classified telephone directories under "Data Processing Services"

2. The Directory of the Association of Data Processing Organizations (He pointed out that the ADAPSO Directory lists only its own members, all of whom are subject to strict rules so that such a listing is in effect at least some guarantee of the ethics and financial stability of the data centers listed)

3. Magazine listings of such centers (Mr. Davis recommended particularly the list published each July by *Systems* magazine)

4. Computer manufacturers who can give information either on their own centers or on centers using their equipment.

Clients using service centers may either keep their own records, transporting them to the center only when processing is necessary, or let the service center keep their records, Professor Davis said. Obviously, the client's security-consciousness and the precautions observed at the center will be the determining factor in making this decision. But he observed that, at a minimum, any user should assure himself that a service center has adequate fireproof storage facilities, that access to records and files is strictly controlled by stringent procedures, and that the center has enough insurance to compensate for any losses to the user's property while it is on the premises.

Back-up facilities

Another thing to watch out for in a service center, he warned, is to ensure that it has adequate back-up facilities in case any malfunction or downtime on its own equipment should interrupt service to the client.

In requesting proposals from ser-

vice centers the client should spell out his requirements in some detail, Professor Davis said, even if he must call in professional help to do it. He should list:

The number of his records that will have to be processed and the frequency with which they will have to be processed,

The manner in which he wants exceptions handled,

His specifications for timeliness,

Complete description of the final reports he will expect from the data center as well as their format if that is important,

Copies of the input documents he will furnish to the center.

In evaluating the proposals from potential centers, Professor Davis said, the leading contenders should be listed and then compared on each of the factors the client thinks important. It is a good idea to visit each of the leading contenders personally, he suggested, to evaluate their approach to operations and their apparent efficiency.

When a tentative selection has finally been made, a written agreement should be prepared either by the client or the service bureau, he said. He cautioned that before any final ironbound agreement is made, a sample run of the work to be processed should be handled by the data center.

The session devoted to accountants already involved in EDP, entitled "Synergistics," held simultaneously with the program designed for those considering such involvement, opened with a discussion of auditing service bureau output by Arnold Schneidman, Seymour Schneidman & Associates, and W. Thomas Porter, professor of accounting, University of Washington. Checking service bureau production is vital, Professor Porter warned the group, citing instances where neither the service bureau nor the client had used batch control for punched card records. Mr. Schneidman suggested that all present report any difficulty they had had with service bureaus so that these data may be analyzed by

appropriate Institute committees.

Donald Adams and Nicholas Baumkirschner, Peat, Marwick, Mitchell & Co., opened the second half of the program, a discussion of putting time sharing to work, with an outline of how Peat, Marwick is using time sharing now. The firm has experienced difficulties in reconciling an ITT time sharing print line with a Teletype print line, but is working that out and is currently using time sharing for field work throughout its offices, Mr. Adams said.

Jerome Farmer, J. K. Lasser & Co., who was moderating the discussion, suggested that a time sharing application could cut costs to a minimum by keypunching the necessary information for the computer in advance, and transmitting the data in the punched card electronically. This would save both computer time and transmission time.

Use in debugging

A speaker from the floor suggested that a time sharing application which can prepare mortgage amortization tables for any conceivable set of circumstances allows the CPA to awe a client by the speed with which he can produce such tables.

Mr. Adams said through use of COBOL (Common Business Oriented Language) time sharing could also be used to debug programs written for any computer accepting COBOL. One can assemble, test, and debug entire programs through the terminal in his office, he said.

Following a coffee break the separate audiences for the two discussions met again for a talk on "Management Science Applications—What You Can Do" by Paul Heit, Lybrand, Ross Bros. & Montgomery. Time sharing opens all kinds of opportunities for sophisticated problem solving, he pointed out. A company president, through simulating situations and conditions on a computer, can afford to "be wrong thousands of times" without

harm to the company. Regression analysis can measure the relationship between company sales and outside events that are apparently unrelated.

His own firm, he answered in reply to a question from the floor, has already developed a budgeting model, a marketing model, and a forecasting model for use in such simulation studies. In answer to another question, he said that he knew of only one CPA firm not in the "Big Eight" that had created such models, but that with time sharing there was no reason any CPA firm, whatever its size, should be forestalled from such work.

The final Tuesday session was devoted to a discussion of "Evaluation and Selection of EDP Equipment and Software" by John R. Hillegass and J. Burt Totaro, president and vice president respectively of Computer Conversions, Inc. Mr. Hillegass's talk, which dealt with fairly precise measurements of various computers' capacities that could be used as standards of comparison for several alternative machines, has already been printed in its entirety in MANAGEMENT SERVICES. (See "Systematic Techniques for Computer Evaluation and Selection," July-August '69, p. 35.) Mr. Totaro reviewed the in-company work that must precede any computer selection. A thorough study of the company work load, not only at present but for the foreseeable future, is the first basic step in any computer program, he said, a study that covers all applications that are to be put on the computer. Then top management and all key department heads must be thoroughly interviewed to ensure that all work routines they envision for the computer have been taken into account.

When all this has been done, the consultant is ready to prepare technical specifications for each of the programs that is to be run, Mr. Totaro continued.

When the technical specifications have been completed, requests for proposals can be prepared and circulated. Such requests should cer-

tainly include the specifications prepared in the previous stage and should also request the prospective vendor's system concept, his equipment, his software, and, last but not least, his price structure.

Weighing proposals

When the proposals come in from the various manufacturers being considered, each should be judged as to whether it is complete, whether it is accurate, and whether it meets all the requirements set by the prospective buyer. Then the purchaser can also prepare any further questions he wants to ask in a face-to-face interview.

At the personal interviews with the prospective vendors the purchaser should clear up any questions that have occurred to him during the review phase, and he should make certain that the vendor is encouraged to speak freely after the questions have been answered. The vendor may not have exactly what the purchaser wants, but he might be able to suggest something better.

After the interviews, the prospects are narrowed down to one or two, all those whose equipment is obviously inadequate or over-adequate being weeded out.

Now one or more of the scientific evaluation techniques previously described by Mr. Hillegass should be used to make the final selection from the one or two vendors who have survived all the earlier eliminations, Mr. Totaro said.

He added that all prospective purchasers should make it a point to visit the facilities of the vendors at some stage so they can form their own impressions of the manufacturing resources and, above all, of the support the company can give its customers.

As a final point, he said the purchaser should always negotiate the best possible equipment contract. He may be dealing with two manufacturers whose equipment seems in every way equally suitable to

him. Then he has a bargaining position, since he can equally well choose either vendor. Negotiation is important enough to merit the purchaser's getting legal assistance, Mr. Totaro said.

The contract should always specify in the most concrete terms:
1. Hardware and software delivery dates,
2. Purchaser's option to delay delivery if he should wish,
3. Free debugging time for the purchaser's system to be perfected on the equipment.

Tuesday evening was devoted to concurrent orientation sessions for CPAs just considering EDP activities as well as those currently involved in such activities. Here participants had the opportunity of exchanging ideas and information and benefiting from each other's experience.

Quality control analyzed

Wednesday, the final day of the conference, opened with a panel discussion on quality control in various computer environments. The panel, moderated by Philip Scallon, Arthur Young & Co., had as speakers Audrey Kleinschmidt, Smith & Gesteland, discussing small in-house equipment; Nicholas Baumkirchner, Peat, Marwick, Mitchell & Co., speaking on large in-house equipment; Robert F. White, Robert F. White & Co., talking on outside data processing centers; and William Hawkins, United Computing Systems, Inc., handling time sharing.

Mr. Kleinschmidt said that his firm owns a computer center jointly with another CPA firm. Thus, both organizations were forced from the very beginning of their association to create a fairly detailed philosophy of how the center was to be operated. To ensure quality of output, they trained their own personnel to run the center on block time programs at another installation. They made each of their systems conform to those in use by their clients rather than trying to force all clients into a mold estab-

lished by them. Their center has a control secretary who has a list of control specifications for each job that is run. This is reviewed as each job is run just as an airplane pilot must review his check list each time he takes off. Finally, the entire output for each job is reviewed by a member of the CPA staff before the results are sent to the client.

Top-quality personnel are essential to a good data center, and almost as important is good communication between the CPAs and the data processing technicians. This is one of the weakest areas in most data centers run by CPA firms, Mr. Kleinschmidt said.

As safeguards to ensure a good quality control program he said that first of all, of course, it is necessary to ensure that input data are valid. Then the three guarantees of good quality are:

1. Top-grade personnel,
2. High performance standards,
3. Good communications.

Mr. Baumkirchner echoed Mr. Kleinschmidt's emphasis on the necessity for finding the best possible personnel. He suggested that the CPA firm might be best advised to train its own people through intensive electronic data processing courses. This is especially wise in a tight labor market, he asserted, as is insistence on the most rigorous standards.

Documentation vital

Proper documentation is also essential to a good quality control program, he said, and its importance increases as the labor market increases personnel turnover. Such documentation should include at least:

1. The original request for a program,
2. The flow charts diagramming the program,
3. The actual numerical program,
4. The testing and debugging operations used when the program was first developed.

One also needs good control over files and adequate back-up for the files, he said.

The typical data processing staff in a CPA firm, he continued, should have three distinct groups, a systems group, a programing group, and the machine operators. The systems group will probably have several different projects going at any given time, so strict, well observed time controls are essential if chaos is to be avoided. Programers should have standard instructions to follow, and standard subroutines to work with. There must be complete procedures for testing and debugging, and operations should be so arranged that testing and debugging is always performed by someone other than the programer who created the program.

The machine operators should be nothing more than "button pushers," he continued. They should be guided every step of the way by detailed instructions, with nothing left to the imagination.

Mr. White said that commercial data processing centers are extremely sensitive to the problems of quality control even though there is a feeling among many CPAs that they are not. He said that in his view the only sure path to good quality control in an independent data processing center is specialization in one particular area. He advised the client wishing to use a data center to search out one specializing in the particular type of work he wants done.

Quality control in a time shared program offers special problems, Mr. Hawkins asserted. The number of clients using the system at any given time can vary sharply, and the number of customers unknown to each other doing unknown operations frightens many potential clients.

So the main quality control problem in time sharing is a question of security of the user's files, he maintained. The system must be so designed that the computer has a means of recognizing the individual user when he gets in touch with it. Each user is, of course,

given a number for identification purposes, but Mr. Hawkins also recommended that he be given a password to use in "talking" with the computer.

He pointed out that the particular terminal being used can be identified by the distant computer but the person who is using it cannot. A password gets past this difficulty and can be easily changed if there is any reason to think it has been compromised.

Guarding client files

The customer's files should also be given complete protection; if an outsider is given access to them it should be on a "Read Only" instruction to the computer, so there is no danger of any unauthorized person's manipulating file data. Files should also be duplicated at some location away from the computer, perhaps a data processing center, so they can be recreated if by any chance the tapes or discs at the computer are damaged.

The second session of the final day was devoted to approaches to the auditing of EDP and was conducted by a panel moderated by W. Thomas Porter, Jr., professor of accounting, University of Washington. Panelists were Richard Webb, Alexander Grant & Co.; Joseph D. Wesselkamper, Haskins & Sells; Stanley Halper, S. D. Leidesdorf & Co.; and Geoffrey Horwitz, Lybrand, Ross Bros. & Montgomery.

A distinction was made at the start of the meeting between the auditing of records maintained by computer and a review of the computer system itself. This session was concerned only with auditing of records maintained by the computer, and all panel members had agreed that their discussions would be based on the assumption that the computer system producing the records had already been audited and proved valid.

Mr. Wesselkamper led off the discussion with a description of Auditape, a set of generalized audit routines developed by Haskins &

Sells. Auditape is not an overall solution to the problems of auditing client records, he said, but it does meet Haskins & Sells' primary objectives for it, that it be:

1. Usable by staff accountants with a minimum of EDP training,
2. Usable on any computer so the client's equipment could be used,
3. Machine readable.

Auditape has a modular construction, Mr. Wesselkamper said, and each module has these characteristics:

1. It has a routine that puts every record in a standard format.
2. It has an include-exclude routine that is able to select only those items that the CPA wants to review.
3. It has a mathematical routine to permit simple calculations with the records.
4. It has a summarize routine to write summary data for each field used.

Auditape is now available for IBM 1400 tape systems (this tape can also be used on IBM 360 units), for Honeywell 200 series, and for the IBM 360. It is currently being adapted for use with RCA Spectra 70 equipment.

Two other systems outlined

Mr. Webb displayed via slides some of the abilities of Alexander Grant's AUDASSIST, a computer audit program analagous to Auditape, which is, however, used in Alexander Grant data centers rather than on the client's own computer. The auditor in the field determines what his audit objectives are, codes his instructions, and then sends client records and instructions to the data center where the actual audit work is performed.

Mr. Horwitz, who also used slides, described Lybrand, Ross' Auditpak, a system written in COBOL that can extend, foot, select, count, and match data from client records. Since it is written in COBOL, it can be used on the client's computer if he has one.

The final speaker of the session was Stanley Halper, who said his firm uses generalized routines. He said that Leidesdorf feels the auditor's function is to audit, that he should not become directly involved with the computer. Leidesdorf believes that the auditor should say what it is he wants; then the firm's own technical staff and the client's employees get it for him. His firm uses its clients' programs in most instances, modifying them to meet the auditors' particular needs by use of generalized audit modules. The generalized audit modules are themselves broken into small modules so the module will work in conjunction with the client's system.

Leadership role urged

The last speaker of the morning, James Kobak, of J. K. Lasser & Co., brought a quick change of pace to the program. His talk, entitled "You Have Ruined My Nice, Comfortable Happy Life and I Hate You All—A Rebuttal to the Rest of the Program by a Real Accountant," posed the fateful question:

"What have computers done about generally accepted accounting principles?"

In a slightly more serious vein, he said that accountants were the most logical people to run computers but that they still lack EDP knowledge to an abysmal degree.

"It is up to you people here at this computer conference to communicate with other accountants," he said. "There's still too much jargon, too much mystique about the whole field of computers. The rest of the accounting profession wants to know about computers, but it's up to the leaders in this field (like those at this conference) to act as interpreters."

The accounting profession has been expanding faster than the total economy, and will continue to do so in the years ahead, Ralph Kent, Arthur Young & Company, and at that time president of the AICPA, said at the concluding conference luncheon session.

Although the profession is still growing at a more rapid pace than the gross national output, and has a tremendous potential for even further growth, Mr. Kent said, it does face serious problems. Perhaps the most serious of these is the shortage of personnel; there is a grossly inadequate supply of accounting graduates to meet recruitment needs.

Also, such graduates receive broader-type education, as recommended in the Ford and Carnegie Foundation reports of ten years ago, and consequently are not as fully trained in technical detail as they have been in the past. While the broader-type education is desirable, the decrease in technical training leads to an enlarged professional development requirement.

Management services practices by CPAs must be established on a fully professional basis and additional standards are needed, he said. To date, the management services committee of the AICPA had issued only two formal statements [the third, just approved, appears in this issue of M/S] on the practice of management services by CPAs. Also the existence of non-CPAs at work in the management services departments of CPA firms causes problems, perhaps requiring a re-examination of the proposal to grant associate membership to such personnel.

Still, with all these problems, the future of the profession is bright, he reported. But more segments of the accounting profession are obliged to learn to handle EDP problems, if they are to stay with the leaders in the profession. "Auditors can't really meet their own standards today, unless they can work with EDP controls and understand them," he said. The auditor must also understand what makes "good management sense" in all computer applications.

It was announced at the meeting that the next conference will be held in San Francisco May 18-20, 1970.

November-December, 1969