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AICPA Computer Conference in Chicago Attracts Largest Attendance to Date

Management Services Staff Report

Part 1

Time sharing and 'dedicated services' called most significant recent automation developments by keynote speaker; quality control and auditing of EDP also stressed at Midwest meeting

AICPA COMPUTER CONFERENCE IN CHICAGO ATTRACTS LARGEST ATTENDANCE TO DATE

A Management Services Staff Report

TIME SHARING, quality control in computer operations, and the auditing of EDP were among the main emphases at the AICPA-sponsored Fifth National Conference of Computer Users, held in Chicago, May 19-21.

The meeting, which drew the largest attendance yet recorded for an AICPA computer conference, was the first in a new series of annual automation meetings. Up until now, such conferences have been held semi-annually.

The keynote for the conference was set by Isaac Auerbach, president, Auerbach Corporation, when he described time sharing and "dedicated services" as being two of the most important developments in EDP in the recent past.

No data processing equipment or concept has any use unless it is adequate to meet the user's need, Mr. Auerbach said. The stress must always be on the user.

The CPA's role in data processing is unique because he is both an advisor and a critic to his clients—the potential users, he continued.

"The most important development in EDP during the past year has been the realization that technology for technology's sake is not enough. We now realize that the real future of automation lies not in the development of better black boxes, but rather in learning how to better use the developments we already have," he said.

"Perhaps the most significant developments of the recent past have been the rise of time sharing and the concept of dedicated services. Dedicated services may eventually be the largest part of information services. Dedicated services remove the handicap of management's unfamiliarity with EDP concepts and terms."

Dedicated services is a concept wherein computer services geared to the needs of one particular industry are developed, and marketed to companies within that industry.

Time sharing, properly used, he said, is an interpretive computer service that significantly extends the use of the computer as a problem solving device, just as time sharing's conversational mode significantly extends the number of potential users. Actually today, more than 70 per cent of time sharing users have in-house computers.

The problems that exist in the field will have to be solved mainly by the next generation, he maintained. Those who invent devices are never the ones who make the best uses of them. Those who have grown up accepting the computer as a *fait accompli* are not in awe of it, and consequently will be able to make the greatest breakthroughs in its use.

Time sharing and dedicated services give better responses to users' needs than any other EDP developments.

To a query as to whether remote batch processing was practicable in the near future, the computer

expert replied that FCC cooperation on lowering communications costs could make such processing extremely practicable.

The second session of the conference's opening day, considering the computer input problem, first from the practitioner's viewpoint and then from the standpoint of the system supplier, was moderated by Jerome Farmer, J. K. Lasser & Co. The first speaker, Vance Genzlinger, Plante and Moran, said that his firm believed it was wrong for CPAs to believe they must correct errors in input data supplied by their clients.

"It's better to give the client feedback so he can correct his own errors," he said. "This means that the computer has to be programed to flag errors for feedback to the originating department."

He said his firm has each client prepare all his own rate data for computer input. Plante and Moran gives the client a list of errors found in his data by the computer, after the run.

James Mann, Elmer Fox & Co., said that although 85 manufacturers offer nearly 300 different types of input devices, these should not be accepted blindly. "Thorough analysis and the choice of the best of the alternatives available is still the best approach to the input problem," he said.

Claude Robinson, of Manning, Perkinson and Floyd, last of the speakers on the first part of the panel, said that small installations in particular simply don't have enough time to get and train good personnel. Thus, effective and stringent input controls are essential. A firm must know what its data processing personnel are involved in and what their activities are. This is best accomplished, he feels, by getting one knowledgeable man, putting him in charge of EDP personnel and letting him serve as liaison between the EDP and the accounting staff.

This leads to better management control and understanding of the entire EDP process, he said.

This entire problem becomes acute in smaller cities where the pool of well qualified programers and other EDP personnel is small.

He said his firm had found that the best choice for a liaison officer between the accounting staff and the EDP staff was a CPA who had learned EDP, and he recommended that firms without such personnel train one of their accountants in EDP systems and procedures. At a lower level, a keypunch operator with some bookkeeping experience can also be invaluable, he said.

The second part of the panel, composed of manufacturers' representatives, understandably talked mostly about their own particular input devices.

Closed-circuit TV used

The assistant director of the IRS Regional Service Center, Kansas City, Mo., Emil A. Marecki, spoke on "The IRS, Its Computers and You" at the luncheon session. He outlined the way in which regional IRS service centers are organized and the role they play.

The afternoon session was something of a novelty at AICPA computer conferences. Five closed-circuit television sets were set up in the Grand Ballroom of the Palmer House so that all members of the audience were able to follow the action on at least one set. The screens displayed excerpts from two of the new AICPA video-tape computer courses which were developed by the Canadian Institute of Chartered Accountants. The courses from which excerpts were shown were "Computer Concepts" and "Control and Auditing of EDP Systems." Jerome Mauze, project manager, Professional Development Division, AICPA, introduced the presentations and provided a narrative linking the excerpts. He emphasized the practical approach of the courses, and said they were designed to dispel many of the current myths about computer applications. Each course includes classroom instruction, discussion, and problem solution as well as "hands on" computer experience.

Throughout, the unique characteristics of the computer—its speed, its immense storage capacity, and its logic—were emphasized. These together mean that simply computerizing traditional functions like Payroll, Accounts Receivable, and Accounts Payable is wasting the capacity of the computer, the presentation asserted. It is only when the computer is used for management and control purposes that it begins to add new dimensions to modern business.

The "Computer Concepts" presentation outlined the history of computing devices and discussed the various types of number systems. It showed how the computer can perform the same duties as simple mechanical machines but in computer fashion. Input and output devices, and sorting, as well as direct and random access storage systems were discussed. Machine language and assembly language were covered; then the higher-level languages were outlined.

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The excerpts from the first course ended with discussion of areas where mathematical techniques are being used in business, a discussion of the cost and other factors involved in a yes-or-no computer decision, and the uses of a service center and time sharing.

The "Control and Auditing" course excerpts illustrated the types of controls best adapted for a computer environment, displayed excerpts from a programing control application, and offered a checklist for use in designing a good system.

The excerpts concluded with a discussion of auditing procedures for a computer system. It was stated that verifying the controls in any program was essential, first through identification of the program control points in the documentation for the program, and then through testing the controls themselves. There are several ways of doing this, it was pointed out. One of the most common has been through the use of test decks of cards. CPAs were advised against this for these reasons:

1. Test decks are difficult and time-consuming to create.
2. They may distort the master file.
3. They may require testing of all related master runs.
4. They may use valuable computer time.
5. They suffer because of the absence of true operating conditions.

Use of decision boxes in the client's flow chart is another method of control, but it was maintained that that too had its disadvantages. A third alternative was suggested: considering all of the firm's operations for the previous month as one vast test deck, coupled with a review of the error report for the same period. This is the fastest way to check computer controls as long as the error reports themselves are checked to ensure that the error was actually made, the course excerpt asserted.

The excerpts from the second course concluded with a discussion of systems gaps that occur in the average audit trial and what the auditor can do to repair them.

Subsequent afternoon and evening sessions of the first day were devoted to concurrent discussions by suppliers regarding hardware, software, and service capabilities. A reception was held for all attending the meeting in the late afternoon.

The next session, devoted to aspects of time sharing, was opened by Carmen Spinelli, J. K. Lasser & Co., who spoke on "Using Time Sharing to Extend the Results of a Generalized Audit Approach."

Time sharing can radically reduce the cost of an audit, and permits a more effective audit job, Mr. Spinelli said. He gave as an example a client of his firm's which carried an accounts receivable balance of $2.5 million in subscription income. The client had its accounts receivable files on a unit record system. In performing the audit, Lasser decided to use statistical sampling, and to use a computer accounts receivable package. Its first step was to have all subscribers' cards reproduced and then put on tape. Then a statistical sample from the entire universe of subscribers was selected from the tape records for individual investigation.

From that point on, the entire process of the audit was performed on a computer, but Lasser, for purposes of comparison, noted the amount of manual time that would have been required if a computer had not been used. These are their results:

For preliminary investigation and discussion, the differences favored the manual approach: only four hours manual time would have been required compared to the 10 hours of computer time actually used. But from that point on, the difference was radically in favor of the computer usage. Comparative figures are shown below.

The second team of speakers on the time sharing program, Nicholas Baumkirchner and Donald Adams,

	Manual	Computer
Footing accounts receivable file and audit of file contents	35	3
Selecting confirmation sample and preparing list	28	1
Preparing confirmations, stuffing, and mailing	31	2
Accumulating and appraising sample results	45	21

of Peat, Marwick, Mitchell & Co., discussing "Advanced Audit Techniques Utilizing Time Sharing," again used slides to illustrate many of their points. Mr. Adams demonstrated the economies of time sharing by showing how a company's financial statement could be made more meaningful by comparing each figure shown with the average figure for its industry. After showing a rather exhaustive list of such comparisons for the company he disclosed that computer costs for the entire analysis had been 30¢.

Mr. Baumkirchner said that at Peat, Marwick, time sharing is used for the source and application of funds statements for clients and requires only the entry of the proper figures.

Time sharing is also used very heavily in the firm's own staff training program, he continued.

To questions from the floor, Mr. Spinelli said that time sharing equipment was extremely useful in debugging programs to be put on an in-house computer because the in-house computer is tied up so much more than a time sharing computer facility, and debugging can take so much machine time.

Speaker lists AICPA aids

Opening the second day of the meeting, Noel Zakin, manager, Computer Technical Services, AICPA, said that the great growth of EDP is progressively bringing the level of automation among the CPA's clients to smaller and smaller firms. This in turn increases the responsibility of every CPA to be in a position to give the very best advice on EDP installations and applications and to watch auditing procedures more carefully than ever, adapting to the environment as required, he declared.

The AICPA is helping the practitioner cope with EDP's challenge through the following mechanisms: the "Auditing and EDP" book; the "Auerbach Computer Notebook for Accountants" service; the new video-tape and other Professional Development courses; the new CPAUDIO programs — many of which cover aspects of automation; *Journal* and *Management Services* articles; and through efforts of the Committee on Computers and Information Systems and its various subcommittees.

"EDP has just begun to expand," he declared, "and every expansion will affect CPAs and their clients. The power of the computer is not as a bookkeeping device but as an aid to management decision making."

In response to questions from the floor, Mr. Zakin said that the AICPA video-tape presentation would cost about $25 a participant per course.

He said that the video-tape course will be offered freely around the country at locations where computer installations will permit those taking the course to have a hands-on interaction with the computer.

New accounting approach urged

The final speaker of the Tuesday morning session was John W. Wagner, associate professor of accounting at the University of California at Los Angeles, who spoke on what he believes to be a recasting of accounting philosophy called for by the new abilities of the computer.

Dr. Wagner's thesis is that accounting under manual methods has traditionally been output oriented, systems where the questions are designed in advance to be answered by the system. Such an arrangement restricts input data to those necessary to answer the preconceived questions.

"Under the circumstances this is a very practical approach to answering our information requirements but it is also a rather restrictive one," he said. "If at some future time we wish to answer a question not contemplated in our original system, we cannot do so except by some special analysis which must again refer to the source data."

An "input" oriented system, on the other hand, is hampered by no such arbitrary restrictions since it is more interested in classifying data in terms of various type of input rather than classifying it in relation to some preconceived type of output.

Flexibility increased

"With the input approach," he continued, "any question is permitted that some combination of the input accounts can answer."

The use of an input oriented chart of accounts assumes the availability of new capabilities, he said. "Among these are an ability to handle much more detail than is usually practical in a manual system, an ability to combine this detail, as desired with a high degree of clerical accuracy and, finally, an ability to do this with extreme speed, preferably in a fraction of a second.

"This is where the computer comes into the picture," he declared. "It can meet these requirements and so it can make such a system a practical possibility."

Nor do accountants have to become computer technicians in order to make full use of the machines, Dr. Wagner said.

"I would contend, contrary to a number of studies on the subject, that accountants do not need a great deal of knowledge about specific pieces of computer hardware or skill in programing," he continued. "I doubt seriously that computer specialists are going to develop the sophisticated accounting systems of the future. I think instead these systems will be developed by accountants who have familiarized themselves with the conceptual implications of the computer. It is the expert accountant who knows enough about accounting to give wings to his imagination on what he would like a new accounting system to do. It is the computer expert who can then install it. Ability to communicate with the computer experts is the real requirement and responsibility that all accountants should strive to meet." (*To be continued.*)