Management Adviser

Volume 8 | Number 3 Article 6

5-1971

Accounting Profession's Opportunities in EDP - Today and Tomorrow

Louis M. Kessler

The verbatim text of a luncheon talk given at last year's AICPA conference on computers by Louis M. Kessler, AICPA immediate past president, underlines the vital importance of automation to all CPAs—

ACCOUNTING PROFESSION'S OPPORTUNITIES IN EDP—TODAY AND TOMORROW

by Louis M. Kessler
Alexander Grant & Company

BACK in 1956 I participated in a feasibility study regarding the installation of computers in Signal Corps depots throughout the United States. It was just five years after the first commercially available computer was installed and only two years after the first business installation of a computer. We decided on a configuration not then in being—the old drum-storage IBM 650 with tape drives hung on. The "far-out" or "Cloud 9" item that was then mentioned was the 350 Ramac—disk storage with random access.

Shortly thereafter I wrote a book for the use of our staff and talked about "on and off" binary bits, bi-quinary numbers, seven-channel tape, record lengths, and "check bits." I even illustrated a program routine on the 650 for processing social security deductions, to check to see if the maximum had been reached, and illustrating the "branching" routine.

Beginning in the '60s the computer age was upon us, and I quickly recognized a generation gap.

On October 3, 1969, the *San Francisco Examiner* devoted a full-page article to the computer and its usefulness to commit fraud. The article discussed various cases of computer-aided fraud and included a rather startling comment. "The gap is clearly evident. The science of auditing now is about 10 years behind the computers," says one data processing expert. "And it will stay behind."

The quote from the *San Francisco Examiner* indicates an awareness of how some of the public view auditors and their relationship to computers. Fraud, of course, is not the part to be emphasized; the part about being "10 years behind" is. Are we really this far behind, or are we behind at all?

Each of these questions must be viewed by each member in relation to his type and size of practice, objectives, and available resources.

The accounting profession is challenged in many ways and data processing is only one of them. However, my remarks today will concentrate on the subject of data processing and its challenge to the profession.

Let's look at the areas of service which we offer our clients and the opportunities which data processing capabilities make available to us.

First let's discuss auditing—and the attest function still accounts for well over 50 per cent of the work of most public accounting firms.

Reviewing the internal control of

a data processing system provides us with an opportunity to give constructive comments concerning the client's operation. It may also allow us to reduce audit time if internal control is exceptionally good. However, good internal control in data processing tends to be the exception rather than the rule.

Finally, a thorough review of internal control will aid the auditor in determining the proper scope of the audit, along with spotting areas where the computer can be used as an audit tool.

The AICPA has published an excellent book, *Auditing and EDP*, by Gordon Davis, and over 20,000 copies have been sold. This book provides a good background for an auditor and offers some guidelines, for example, a sample internal control questionnaire, and examples of documentation.

The Institute is currently working on a follow-up study—a guide for the auditing of service-bureau-produced records.

Gordon Davis says, "If he is to deal effectively with the computer, the auditor should have computer knowledge and capability at two levels:

"(1) A knowledge of computers and computer-based data processing sufficient to review adequately the internal control of the system he is auditing, to conduct proper tests of the system and to evaluate the quality of the records, and (2) an ability to use the computer itself in the tests, if necessary or desirable."

This use of the computer as an audit tool is something that must be explored thoroughly in any audit of computerized operations.

If we are very knowledgeable, and can review and control the client's work, then programs written by the client may continue to be a good approach for auditing the client's computerized files. However, this review and control function is very time-consuming and will therefore often be impractical as a means of auditing the data. A better approach would be to independently review the client's files through auditor-written programs in connection with the review of internal control.

The problem with this, again, is time, and it is often not practical to teach the auditor how to program. But he should be given the capability to deal with the computer directly without spending a lot of time acquiring specialized training.

In other words, the auditor may use programs written by the client, he may use generalized audit programs, or he may use programs he has written himself or that have been prepared under his supervision. If the auditor uses programs written by the client, he must satisfy himself that the program is performing correctly and in accordance with his wishes.

He may obtain this assurance by testing samples, tracing totals to controls, etc.

There are many audit functions which do not vary greatly from client to client. Accordingly, several firms within the profession and others outside the profession have developed generalized audit programs or routines which can help the CPA while at the same time committing him to a minimum time for training and likewise requiring a minimum time per application per client. Some of these programs have been or will be made available through the Institute.

For example, the Institute has previously offered training in the AUDITAPE system. This system allows the auditor to select data from client files on the client's premises using the client's computer. Now the Institute will offer training in AUDASSIST. This system involves elementary computer language which uses audit terminology. It is planned that processing of client files and system support will be offered by the AICPA through a central processing center.* Training for AUDITAPE lasts two days. Training for AUDASSIST

. . . a thorough review of internal control will aid the auditor in determining the proper scope of the audit, along with spotting areas where the computer can be used as an audit tool . . .

* Such a center was opened by the AICPA in late fall, 1970.

is three and a half days. Most other systems involve comparable training-time requirements. These times are well within the budgets of even the smallest firms.

If the auditor prepares a computer program to perform processing on client records, his audit objectives must be clearly defined. As in the case of a client program, he must satisfy himself that it will perform satisfactorily and in accordance with his wishes, but he has added responsibilities in that he is preparing his own program specifically for that assignment.

As the CPA uses the computer as an audit tool, he will discover new opportunities to study the interrelationships of data contained on various client files. He will thus minimize audit time while at the same time expanding the audit scope and providing better client service.

The Institute is now performing audit research which includes data processing relationships with auditing. Noel Zakin and John Mullarkey discussed other areas in which the Institute stands ready to serve its members. Also, an advisory subcommittee of the committee on computers and information systems is currently reviewing the educational requirements of CPAs as they relate to data processing. Another advisory subcommittee is conducting an audit software study in order to determine which programs are currently available or are going to be made available to the profession, as well as a review of their capabilities.

In our concern with computer auditing, we should not lose sight of the generally accepted auditing standards promulgated by the Institute and should see that they are applied in the auditing of computerized systems.

For example, the first general standard relates to adequate technical training. This means that the auditor should be trained in examining computer-based accounting systems—and fortunately this applies to most of you.

The second general standard relates to independence of mental attitude. The auditor must be capable of making his own judgments. It is not sufficient to rely on explanations of the client's own EDP staff. Furthermore, he cannot rely on a service bureau on the theory that it is independent.

The third general standard relates to due professional care. This implies an ability to use procedures specifically designed for computer-based systems.

The first field work standard says that work should be adequately planned and assistants properly supervised. This involves timing problems, and if you don't understand the procedures you can hardly give adequate supervision to an assistant.

The second field work standard pertains to evaluation of internal control. This is perhaps the clearest example of the need to develop special skills. If a client has spent vast sums of money to build controls into its systems, it will expect the auditor to understand and appreciate them and not to ignore them, even though the auditor may make some tests of his own.

The third field work standard deals with competent evidential matter. This involves new methods of documentation—for example, flow charts, logic diagrams, and decision tables.

In specific applications, it does not take a computer genius to understand some of the obvious uses of the computer in auditing.

For example:

1. Searching an inventory file of 50,000 items for excess quantities, high-cost items, ABC stratification, slow-moving items, and obsolescence, or
2. selection of random samples—and perhaps printing out accounts receivable confirmations, or
3. the use of test data—to test not only the clients' programs, but to balance to controls, verify computations, and check file maintenance.

Other obvious uses are checking inventory pricing and extensions, checking expense ratios to highlight items for further investigation, comparing physical inventory test counts to perpetual records, checking actual costs against engineering estimates and standard costs, and matching receivable confirmations against the clients' open items.

These are just a few of the more obvious examples which take some of the drudgery out of auditing and make it, as Harold Weiss said this morning, interesting and exciting.

Many of you here are obviously quite knowledgeable in computer auditing techniques. You are either already with it or you are getting with it—and I congratulate you. And the fact that most of you are a generation younger than I is not a coincidence. But, like the problem of the preacher on Sunday morning, the problem is those who are not here—and I urge you to spread the word to your CPA colleagues—and don't hesitate to use the facilities of the Institute—to help in the educational process.

In the area of management advisory services, data processing pro-

LOUIS M. KESSLER, CPA, is chairman of the executive committee of Alexander Grant & Company and is in charge of the firm's international relations. He is the immediate past president of the AICPA. Mr. Kessler has also been active in the Texas and Illinois Societies of CPAs. He received his B.S. and M.S. degrees from the University of Illinois and also served on the university's faculty.

vides us with many opportunities to serve our clients.

The one aspect of data processing we can be certain will remain constant is change. Man's ability to create has been increased many fold through the computer, and new uses are developed daily.

For those who believe the computer is just a high-speed, expensive accounting machine, there is little hope. But those who see the computer as a facility to accomplish new techniques or objectives will receive gratifying long-range benefits. The computer can enable management to obtain better decision-making data.

As CPAs we are in an excellent position to know the needs of our clients and to propose new and beneficial uses of the computer—regardless of whether the hardware is on or off the client's premises.

Practical-minded businessmen are turning to service bureaus in increasing numbers through time sharing and remote batch operations. The glamour and status of an on-premises computer seems to be declining in favor of the service bureau route.

Management is finally beginning to realize the computer is not a toy. *We* should accept the responsibility of educating our clients' managements to get maximum performance from their computers. Above all, we must get our clients' managements *involved* in the decisions which affect the computer and its control.

We must accept this responsibility and educate our clients to get top management involved.

The January, 1970, issue of *Business Automation* had this observation, ". . . management for the most part is yet to really get involved in the systems function. Surrounded by technological revolution they remain reactionaries, clinging to past methodologies, seeking to isolate themselves from the changes they seem unwilling to understand." This attitude by management has to be changed, and we are in a unique position to provide the education which will change this attitude and allow business to move, through the use of computers, much more effectively and quickly.

Communications and scientific management are methodologies which are finally coming into vogue. The technicians are learning that in order for their ideas to be accepted by management, they must be able to explain them to the average manager, and not just to each other. CPAs are in an excellent position to act as a liaison between client and technician, but it will, of course, be necessary for the CPA to acquire the technical background in order to provide this type of professional service.

CPAs are also in a unique position to help clients plan the use of the computer, and one way is to act as a buffer between management and the technicians, who mean well, but who may not understand management's problems.

Manual systems will become very important in order to feed the voracious appetite of the computer. We can significantly help our clients in this area to more efficiently feed and control the input to the computer.

The so called "unbundling" (that is, separate pricing of hardware and software) has also created opportunities for the profession. Large numbers of software packages are and will become available for purchase. We should be in a position to provide our clients with an independent evaluation of these packages in relation to their needs. In order to do so, we must, of course, have the requisite technical knowledge.

The third area which offers an opportunity to serve our clients is that of general accounting services.

New developments in data processing allow small clients to economically take advantage of the computer to process their data on a relatively sophisticated basis. Our clients' competition will in fact dictate the necessity for them to have available information which may not be currently available, for example, project control, forecasting, simulation, etc. Clients of all sizes will be taking advantage of services provided by time sharing facilities and service bureaus whether or not they are operated by CPAs.

By providing data processing services to his clients, the CPA can strengthen his client relationship, provide better service, and increase the chances of retaining clientele as they grow and as technology evolves. The CPA can use these services as a natural step toward providing the management advisory services previously discussed. Services of this nature help strengthen the public image of the CPA, and they provide him with a basis to develop himself further as computer technology evolves.

The CPA has many opportunities to turn the computer to his own use. We should not have the same fault as the shoemaker and his children. We should use the expertise and advice we give our clients to improve the management of our practices. If we are capable of designing management information systems for clients, we should also put these skills to use for ourselves; after all, we have a business organization to operate also. There are many areas to be considered for data processing—each of course must be weighed the same way we tell our clients to weigh them.

That is, each of the firm's systems to be computerized must meet the objectives of the practice and be valid for economic and managerial reasons. Some of the areas of opportunities are:

1) Billing Information and Analysis

2) Financial Statements
3) Personnel Records
4) Statistical Data Regarding Clients, etc.

I believe the profession is beginning to gear up to meet its client opportunities and responsibilities.

Those who are still behind will have to catch up; those who are current will have to work even harder to meet the challenge of data processing in the Seventies.

Dick Helstein, as president of the New York State Society of CPAs, prepared a paper for delivery at the 73rd annual meeting of the Society a week ago tonight. Unfortunately, Dick was not able to give it because of illness, but it was made available to us at the meeting.

The audit team will change. Responsibility will be divided between specialists and generalists, with overlapping but separate knowledge and skills. The specialists will know something about auditing—and a lot about computers. The generalists will know something about computing—and a lot about auditing.

In discussing "The Challenge of the Computer," Dick said, "EDP introduced radically new ways of preserving operational information, and while EDP users have been slow to adopt advanced applications, radically new ways of auditing will ultimately be needed. They will be needed because as industry continues its transition from the old information systems to the new, traditional audit trails will disappear. We'll need new audit procedures to analyze that information and new audit procedures to test its reliability.

"To implement these procedures, we'll need new techniques—computer techniques. The computer itself will become increasingly an audit tool, through the accountant's own audit programs.

"With computer programs doing part of the work the auditor did in the past, the education, activities, and responsibilities of the auditor will change. The audit team will change. Responsibility will be divided between specialists and generalists, with overlapping but separate knowledge and skills. The specialists will know something about auditing—and a lot about computers. The generalists will know something about computers—and a lot about auditing. Neither will be complete without the other, and from their interdependence, we'll have a new auditor to go with the new auditing."

The pace of innovation will quicken, and we and management must learn to cope with change. The computer will aid in directing and controlling new challenges, but only if it is used wisely.

Certain graduate schools are implementing curricula which teach their students not to be administrators, but to be managers, that is, they will become *managers of change.* (As mentioned in the April 25, 1970, issue of *Business Week.*)

We will have to be prepared to meet the demands these new "managers" will impose on our profession.

Education will be a key in the next decade. All college graduates will most likely have encountered the computer in some form and will be ready to put it to new and more sophisticated uses. People in nearly all occupations will need to know how to use computers effectively in order for their companies to compete. There will be computer scientists who will do the programing and the developing of new hardware. And there will be many others who will make extensive use of the computer as part of their day-to-day routine.

CPAs should be leaders in this area. According to *Business Automation* magazine, the future will see more than one-half of all computers communications-oriented. They will be used for remote computing as well as message switching.

Minicomputers will also become a significant part of the computer community and will be used to solve many specialized problems for businesses of all sizes.

We must meet these challenges of enabling our clients to cope with the technology of the future or concede a good portion of our practice to others.

As you can see, the challenges are many and varied. All of them will affect our personal and our professional lives. We must not only keep up as CPAs; we must be leaders and not followers.