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D. C. Shaw

J. J. Connelly

System Development Corporation

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Computer Survey Results

Voluntary Comments

PREPARED BY THE SYSTEM DEVELOPMENT CORPORATION
FOR THE AMERICAN INSTITUTE OF CPAs

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This bulletin is published for the information and assistance of members of the American Institute of Certified Public Accountants and others interested in the subject. The section on survey results was prepared by D. C. Shaw and the section on voluntary comments by J. J. Connelly of System Development Corporation as part of a research program undertaken for the Institute. It does not represent the views or an official position of the Institute.

Foreword

In June 1965, the American Institute of Certified Public Accountants engaged the System Development Corporation, Santa Monica, California, to undertake a six-month research program on the impact of computers on the public accounting profession.

Part of the program included the preparation of research studies. This booklet is the first in a series presenting the results of such studies.

The research studies were prepared by, and represent the findings and conclusions of, the System Development Corporation. Accordingly, they do not present the views or an official position of the American Institute of Certified Public Accountants. They are being published only for the information of the Institute membership.

JOHN L. CAREY
Executive Director

February 1966

Computer Survey Results

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I.

Highlights from the EDP survey results

A survey questionnaire was mailed to 13,888 member firms of the American Institute of Certified Public Accountants in June, 1965.

Responses to the questionnaire were received from 3,492 firms. The highlights of the survey results are given below. All of the following statements relate only to the respondent sample and are not to be interpreted as necessarily being representative of all firms in the nation.

A. Loss or Gain of EDP Engagements.

Five per cent, or 189, of the firms reported losing clients because EDP service was offered by someone else.

A percentage of 24, or 741 firms, reported that additional clients would have been acquired by offering EDP service.

B. Number of Computers.

Only 100 firms reported that they had acquired their first computer since 1956.

It was reported by 35 per cent, or 1,182 firms, that one or more clients have computers.

C. *Plans for Initial Installation of Data Processing Equipment.*

Six per cent, or 180, of the respondent firms are planning to make an initial installation of electronic accounting machinery (EAM).

Nearly 2 per cent, or 51, of the firms are planning to make an initial computer installation (EDP).

D. *Future Plans—Equipment Owners and Renters.*

A greater amount of equipment change can be expected from 1967 to 1970 than in 1965 or 1966. Firms planning to add equipment number 46, 64, and 118 for 1965, 1966, and 1967-70, respectively. The percentages for these firms are 8, 13, and 24.

A very small number of firms, 5, 3, and 2, are planning to eliminate equipment in 1965, 1966, or 1967-70.

E. *Computer Program Libraries.*

More respondent firms have computer program libraries than rent or own computers. The number of firms reporting a computer program library is 337 or 11 per cent.

Many respondent firms report the application of computer programs to the firm's internal management reports and record-keeping. These firms number 200, or 6.4 per cent.

F. *EDP Activity of Staff Members.*

Almost 40 per cent of the respondent firms, 1,374, have one or more staff members participating in EDP engagements.

Nearly 25 per cent of the firms, 845, have one or more staff members currently in EDP training.

Less than 7 per cent, 181, of the respondent firms have full-time employees with computer programming assignments.

The number of firms reporting employees with equipment responsibility is 136.

G. *Computers and Dollar Costs.*

Reported computer purchase prices ranged from less than \$10,000 to between \$50,000 and \$100,000.

The reported monthly rental price median average is \$1,687.

The reported site preparation cost median average is \$909.

The reported median average annual salary for programmers is \$5,894.

The reported median average annual salary for equipment operators is \$6,052.

H. Use of Off-Premise EDP Equipment.

Many respondent firms are making use of off-premise EDP equipment:

Nearly 33 per cent, or 1,065 firms, use service bureaus.

Nearly 10 per cent, or 317 firms, use bank EDP service.

Under 2 per cent, or 55 firms, use another CPA's equipment.

Nearly 8 per cent, or 243 firms, use client equipment.

Almost 3 per cent, or 91 firms, use a cooperative or some other source of equipment.

I. Types and Extent of EDP Service.

The respondent firms reported this EDP service:

Seven hundred fifty-four, or 23 per cent, are conducting feasibility studies.

One hundred sixty-nine, or 5 per cent, are designing and producing computer programs.

Two hundred thirty-six, or 8 per cent, modify and correct computer programs.

Six hundred sixty-two, or 21 per cent, advise on computer selection and purchase.

Six hundred twenty-nine, or 20 per cent, advise on EDP expansion or reduction.

Larger numbers and proportions are planning to offer these same services.

Thirty-seven per cent, or 1,218, plan to conduct feasibility studies.

Twenty-eight per cent, or 903, plan to design and produce computer programs.

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Twenty-seven per cent, or 837, plan to modify and correct computer programs.

Thirty per cent, or 937, plan to advise on computer selection and purchase.

Thirty-one per cent, or 970, plan to advise on EDP expansion or reduction.

II.

Introduction

There has been some feeling among certified public accountants that the accounting profession has lagged behind business and other professions in the use of computers. It has been felt that there is competition from banks and service bureaus which may affect accounting firms. Because of these feelings it has become necessary to assess the current impact of EDP upon the practice of accounting and to ascertain whether the profession has been affected.

The assessment of current EDP impact has been undertaken by means of a national survey of the individual practitioners and firms with membership in the AICPA. A questionnaire was produced and mailed as of June 9, 1965, to 13,888 firms throughout the United States.

The questionnaire was designed to ascertain the nature of the responding sample of CPA firms and to obtain information relative to these questions:

- A. Has there been an effect upon accounting engagements which may be related to lack of EDP capability?
- B. How extensively are computers now found among accounting firms and clients?
- C. What are the accounting firms' plans for initial installation of equipment?

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- D. What are the future plans for accounting firms that own or rent equipment?
- E. How extensively are computer programs found in the accounting profession, and are they being produced at a slow or rapid rate?
- F. What effect has EDP had upon the personnel organization of accounting firms?
- G. What are the dollar costs that are associated with computers?
- H. Is the accounting use of EDP confined to firms that have or will have acquired a computer?
- I. How extensively have accounting firms engaged in EDP services other than operational data processing?

Responses were received from 3,492 firms. Not all items in the questionnaire were answered by every firm. Certain items were applicable only to those firms with a computer or some other special feature. All firms were asked to answer only those items that applied to the firm making the response.

The following sections contain results from the questionnaire returns. Section III describes the general quality of the responses and describes the population of firms in the sample returned, and Section IV reports information related to the questions listed above.

III.

Quality of the information returned

A. *Quality Factors.*

It can be stated that substantial data was received and that the sample information is considered reliable and useful.

1. Responses to unrestricted items ranged in number from 3,092 to 3,492.
2. The geographical distribution, staff size distribution, and gross billing distribution features of this sample have been found to be in agreement with the same features in samples obtained by other AICPA surveys.
3. Response distribution curves for the various items were found to be regular in shape and to taper off well at the extreme ends. This indicates that the information was satisfactorily sampled for each item.
4. The known errors in the data were found to be of a small and acceptable proportion. Some types of errors could be and were corrected before final analysis of the results.

B. *Population of Accounting Firms in the Sample.*

The population of accounting firms in the sample is described and identified by the following six factors:

1. Geographic Distribution by Region (Survey Items 11 and 12).

PER CENT	FIRMS	REGION
5.5	192	New England: Conn., Maine, Mass., N.H., R.I., Vt.
22.2	776	Mid-Atlantic: Del., D.C., Md., N.J., N.Y., Pa., W. Va.
9.1	319	South Atlantic: Fla., Ga., N.C., S.C., Va.
6.8	237	South: Ala., Ark., Ky., La., Miss., Tenn.
19.9	696	Central: Iowa, Ill., Ind., Mich., Minn., Mo., Ohio, Wis.
6.5	228	Northwest: Colo., Idaho, Kans., Mont., Nebr., N. Dak., S. Dak., Utah, Wyo.
10.6	372	Southwest: Ariz., N.M., Okla., Tex.
19.4	677	Far West: Alaska, Calif., Hawaii, Nev., Ore., Wash.

2. Size of Firm's Staff—Partners and Accountants (Survey Item 4).

PER CENT	FIRMS	NUMBER ON STAFF
24.8	864	1
31.4	1,095	2-3
26.4	916	4-7
16.2	564	8-35
1.2	43	Over 35
100.0	3,482	Total

MEDIAN AVERAGE: 2.6

3. Gross Billings for 1964 (Survey Item 6).

PER CENT	FIRMS	AMOUNTS PER YEAR
15.9	555	\$000 to 17,999
33.8	1,176	\$18,000 to 49,999
24.9	869	\$50,000 to 99,999
24.5	851	\$100,000 to 749,999
.9	33	Over \$750,000
100.0	3,484	Total

MEDIAN AVERAGE: \$54,032

4. Clients Served in 1964 (Survey Item 5).

PER CENT	FIRMS	NUMBER OF CLIENTS
14.7	512	Up to 50
16.9	587	50-99
24.2	838	100-199
15.4	535	200-299
15.9	553	300-499
7.1	245	500-750
5.8	203	Over 750
100.0	3,473	Total

MEDIAN AVERAGE: 175

5. Use of EAM Equipment—Tabulators, Sorters, and Printers (Survey Item 9).

PER CENT	FIRMS	USE OF EAM
20.4	713	Yes
5.6	195	No longer do
74.0	2,584	Never did
100.0	3,492	Total

6. Use of EDP-stored program computers (Survey Item 10).

PER CENT	FIRMS	USE OF EDP
7.3	248	Yes
1.4	49	No longer do
91.3	3,134	Never did
100.0	3,431	Total

IV.

Results from the survey

The impact of EDP upon accounting practice as found in the survey sample responses is revealed in the answers to the nine questions listed as part of Section II. The results of the survey are now reported as answers to these nine questions.

A. Has there been an effect upon accounting engagements which may be related to lack of EDP capability?

A small proportion of firms reports that clients have been lost because EDP service has been offered by someone else.

1. Clients lost because EDP service has been offered by someone else (Survey item 7).

PER CENT	FIRMS	NO. OF CLIENTS
94.5	3,261	None
5.5	189	1 or more
100.0	3,450	Total

Nearly one-fourth of the firms report that they would have acquired additional clients had they offered EDP service.

2. Would the firm have acquired additional clients or engagements had it offered EDP service? (Survey item 8)

PER CENT	FIRMS	ADDITIONAL ENGAGEMENTS
24.0	741	Yes
76.0	2,339	No
100.0	3,080	Total

B. *How extensively are computers now found among accounting firms and clients?*

The number of acquired computers reported by accounting firms in the sample is a relatively small one. The number of computers among the clients is substantial, however.

1. Year firm acquired first computer (Survey item 41).

FIRMS	YEAR COMPUTER WAS ACQUIRED
8	1957 or earlier
2	1958
3	1959
8	1960
10	1961
6	1962
16	1963
25	1964
22	1965
100	Total

2. Types of CPA firm computers acquired and on order (Survey items 51 through 57).

ACQUIRED		MANUFACTURER	ON ORDER	
PER CENT	FIRMS		PER CENT	FIRMS
44.6	29	IBM	66.7	34
16.9	11	NCR	11.8	6
12.3	8	Monroe	3.9	2
9.2	6	Friden	3.9	2
6.1	4	Burroughs	2.0	1
4.6	3	Univac	2.0	1
4.6	3	General Precision		
1.5	1	Clary		
		Honeywell	7.7	4
		RCA	2.0	1
99.9	65*		99.9	51

See a listing of the computer types and numbers in Appendix I.

**This data comes from a different survey item than the item for the previous table.*

3. Clients who have purchased or leased computers (Survey item 27).

PER CENT	FIRMS	NUMBER OF CLIENTS
64.6	2,154	None
35.4	1,182	1 or more
100.0	3,336	Total

C. *What are the accounting firms' plans for the initial installation of equipment?*

At least 75 per cent of the respondent firms have no plans with regard to either EAM or EDP initial equipment. Six per cent of the respondent firms are planning to make an initial installation of EAM equipment, and slightly less than 2 per cent of the respondent firms are planning to install EDP equipment. Other changes are also planned, and these include the addition, reduction, or elimination of EAM equipment.

1. Firm's plans for EAM equipment, e.g., tab equipment, printer, punched tape, etc. (Survey item 17).

PER CENT	FIRMS	
6.0	180	Make initial installation
12.3	367	No change to current equipment
5.3	159	Add equipment
.3	9	Reduce equipment
.6	18	Eliminate equipment
75.5	2,257	No plans exist
100.0	2,990	Total

2. Firm's plans for initial EDP equipment, i.e., stored program computer (Survey item 18).

PER CENT	FIRMS	
5.9	178	Conduct feasibility study—1965
3.5	106	Conduct feasibility study—1966
1.0	29	Place order for equipment—1965
.2	5	Place order for equipment—1966
1.0	29	Install equipment—1965
.7	22	Install equipment—1966
87.9	2,666	No plans exist
100.0	3,035	Total

D. *What are the future plans for accounting firms that own or rent equipment?*

One-half of the respondent firms have no plans for the next five years. More firms plan to add EDP equipment in 1967-70 than plan to add it in 1965 or 1966. A very small proportion of firms are planning to reduce or eliminate equipment.

1. Plans for 1965, 1966, 1967-70 (Survey items 19, 20, 21).

PER CENT			FIRMS			
1965	1966	1967-70	1965	1966	1967-70	
50.4	51.8	56.8	305	264	280	No plans exist
40.9	34.6	18.7	247	176	92	No change
7.6	12.6	23.9	46	64	118	Add equipment
.2	.4	.2	1	2	1	Reduce equipment
.8	.6	.4	5	3	2	Elim. equipment
100.0	100.0	100.0	604	509	493	Total

E. *How extensively are computer programs found in the accounting profession, and are they being produced at a slow or rapid rate?*

Nearly 11 per cent of the firms in the sample now have a library of computer programs regardless of whether the firm has a computer on premise or not. Some 6 per cent of the firms in the sample have computer programs that are used for internal management purposes of the firm.

1. Number of firms with a computer program library (Survey item 34).

PER CENT	FIRMS	COMPUTER PROGRAMS IN LIBRARY
89.3	2,806	None
10.7	337	1 or more
100.0	3,143	Total

2. Computer programs with application to the firm's internal management reports and record-keeping (Survey item 35).

PER CENT	FIRMS	NO. OF COMPUTER PROGRAMS
93.6	2,908	None
6.4	200	1 or more
100.0	3,108	Total

There may be a trend toward increasing computer program production among accounting firms. Production in 1964 was equaled in the first six months of 1965. Less than one-tenth of the firms in the sample are producing computer programs.

3. New computer programs produced in 1964 (Survey item 36).

PER CENT	FIRMS	NO. OF COMPUTER PROGRAMS
92.6	2,871	None
7.4	227	1 or more
100.0	3,098	Total

4. New computer programs produced or in process in 1965 (Survey item 37).

PER CENT	FIRMS	NO. OF COMPUTER PROGRAMS
91.2	2,819	None
8.8	273	1 or more
100.0	3,092	Total

F. *What effect has EDP had upon the total staff of accounting firms?*

The impact of EDP is reflected in the personnel staff of accounting firms.

Some 40 per cent of the firms in the sample report a number of staff members with EDP experience. Nearly one-fourth of the firms in the sample report a number of staff members in training to render EDP client service. Also EDP skills now appear in the total staff of the respondent accounting firms. Firms in the

sample report some 6 per cent as having computer programmer employees. Personnel with equipment responsibility are employed by 136 firms in the sample.

1. Accounting staff members participating in EDP engagements (Survey item 14).

PER CENT	FIRMS	NO. OF STAFF MEMBERS
60.3	2,087	None
39.7	1,374	1 or more
100.0	3,461	Total

2. Accounting staff and partners currently in EDP training (Survey item 13).

PER CENT	FIRMS	NO. OF STAFF AND PARTNERS
75.6	2,621	None
24.4	845	1 or more
100.0	3,466	Total

3. Firm's full-time employees with computer programming assignments (Survey item 39).

PER CENT	FIRMS	NO. OF EMPLOYEES
93.7	2,705	None
6.3	181	1 or more
100.0	2,886	Total

4. Employees with equipment responsibility (Survey item 45).

FIRMS	NO. OF EMPLOYEES
61	1
32	2
28	3-4
12	5-10
3	Over 10
136	Total

The respondent firms reported the use of several sources of

formal EDP training. The largest proportion of these firms used some combination of sources. For the single sources the largest proportion used manufacturers' courses and the next to the largest proportion used the AICPA Professional Development courses. The same order of proportional use by firms was found when the reported combinations were examined.

A majority of the respondent firms expressed dissatisfaction with the present sources of EDP training.

5. Sources of Formal EDP training used by the firm (Survey item 15).

PER CENT FIRMS

49.0	951	A combination of the following:
28.8	559	Equipment manufacturer
4.7	91	College or university
.2	3	American Management Association
.4	7	Correspondence course
2.4	47	State CPA association
8.5	164	AICPA Professional Development course
6.0	117	Other
100.0	1,939	Total

6. Is the firm satisfied with present sources of EDP training? (Survey item 16)

PER CENT	FIRMS	
46.5	933	Yes
53.5	1,071	No
100.0	2,004	Total

G. *What are the dollar costs that are associated with computers?*

The more obvious dollar outlays are for computer purchase or rental, site preparation, and salaries. The median of the reported site preparation cost is \$909. The median salary paid to computer programmers is \$5,894, and the median for employees with equipment responsibility is \$6,052.

A median average purchase cost for computers was calculated. However, the obtained median seemed to be more a result of the computational procedure and not a valid representation of computer purchase cost. Hence, this calculation is not reported here. The actual response distribution seems a more usable kind of information in this instance. The median average rental obtained from the responses is \$1,687 per month.

1. Total purchase price paid for computer equipment (Survey item 49).

PER CENT	FIRMS	AMOUNT
84.3	43	Under \$10,000
11.8	6	\$10,000-\$49,999
3.9	2	\$50,000-\$100,000
100.0	51	Total

2. Average monthly rental paid for firm's computers during calendar 1964 (Survey item 48).

PER CENT	FIRMS	AMOUNT
39.2	20	\$500-\$999
31.4	16	\$1,000-\$2,999
23.5	12	\$3,000-\$4,999
3.9	2	\$5,000-\$6,999
2.0	1	\$7,000-\$9,999
100.0	51	Total

MEDIAN AVERAGE: \$1,687

3. Total cost for computer site preparation only (for all computers) (Survey item 47).

PER CENT	FIRMS	AMOUNT
55.0	44	Under \$1,000
23.7	19	\$1,000-\$4,999
12.5	10	\$5,000-\$9,999
6.3	5	\$10,000-\$49,999
2.5	2	\$50,000-\$100,000
100.0	80	Total

MEDIAN AVERAGE: \$909

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4. Total salary paid annually to all full-time employees with computer programming assignments (Survey item 40).

PER CENT	FIRMS	AMOUNT
50.9	170	Under \$6,000
19.5	65	\$6,000-\$9,999
23.6	79	\$10,000-\$24,999
4.8	16	\$25,000-\$74,999
1.2	4	\$75,000 and over
100.0	334	Total

MEDIAN AVERAGE: \$5,894

5. Total salary paid annually to all equipment personnel (Survey item 46).

PER CENT	FIRMS	AMOUNT
46.4	85	Under \$5,000
20.8	38	\$5,000-\$9,999
18.6	34	\$10,000-\$19,999
11.5	21	\$20,000-\$50,000
2.7	5	Over \$50,000
100.0	183	Total

MEDIAN AVERAGE: \$6,052

H. *Is the accounting use of EDP confined to firms that have or will have acquired a computer?*

Many firms are using electronic data processing even though they do not have an on-premise computer:

Nearly one-third of the firms in the sample use service bureaus.

Some 10 per cent have clients served by use of bank equipment.

About 2 per cent use another CPA's equipment.

Nearly 8 per cent use clients' computers.

About 2 per cent are members of an EDP cooperative.

About 3 per cent use some EDP service other than those mentioned above.

1. Extent of service bureau equipment use (Survey item 28).

PER CENT	FIRMS	NO. OF CLIENTS SERVED
67.8	2,241	None
32.2	1,065	1 or more
100.0	3,306	Total

2. Extent of bank EDP equipment use (Survey item 29).

PER CENT	FIRMS	NO. OF CLIENTS SERVED
90.2	2,929	None
9.8	317	1 or more
100.0	3,246	Total

3. Extent of another CPA firm's equipment use (Survey item 30).

PER CENT	FIRMS	NO. OF CLIENTS SERVED
98.3	3,187	None
1.7	55	1 or more
100.0	3,242	Total

4. Extent of client's EDP equipment use (Survey item 31).

PER CENT	FIRMS	NO. OF CLIENTS SERVED
92.4	2,960	None
7.6	243	1 or more
100.0	3,203	Total

5. Extent of any other sources of EDP equipment use, e.g., CPA computer cooperative (Survey item 32).

PER CENT	FIRMS	NO. OF CLIENTS SERVED
97.1	3,088	None
2.9	91	1 or more
100.0	3,179	Total

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6. Is the firm a member of a CPA computer cooperative? (Survey item 33).

PER CENT	FIRMS	
91.6	3,039	No—Never have been
.8	25	No longer
5.6	184	Intend to become
2.0	64	Yes
100.0	3,312	Total

I. *How extensively have accounting firms engaged in EDP services other than operational data processing?*

Many firms in the sample report that they are rendering EDP services other than operational data processing such as a service bureau renders:

Nearly one-fourth of the respondent firms report that they are doing EDP feasibility studies.

Five per cent report that they are designing and producing computer programs.

Over 7 per cent say that they modify and correct computer programs.

One-fifth of the respondent firms advise on computer selection and acquisition.

One-fifth of these firms advise on facility expansion or reduction.

Even larger proportions of the respondent firms indicate that they are planning to offer such services:

Feasibility Studies	37%
Computer Program Production	28%
Modify Computer Programs	27%
Computer Selection	30%
Advise on Expansion	31%

1. Does the firm conduct EDP feasibility studies for clients? (Survey item 22)

PER CENT	FIRMS	
23.1	754	Yes
37.2	1,218	No—Plan to offer
39.7	1,299	No—Do not plan to offer
100.0	3,271	Total

2. Does the firm design and produce computer programs for clients? (Survey item 23)

PER CENT	FIRMS	
5.2	169	Yes
28.0	903	No—Plan to offer
66.8	2,158	No—Do not plan to offer
100.0	3,230	Total

3. Does the firm modify and correct computer programs for clients? (Survey item 24)

PER CENT	FIRMS	
7.5	236	Yes
26.6	837	No—Plan to offer
65.9	2,074	No—Do not plan to offer
100.0	3,147	Total

4. Does the firm advise on computer selection or purchase? (Survey item 25)

PER CENT	FIRMS	
20.9	662	Yes
29.6	937	No—Plan to offer
49.5	1,561	No—Do not plan to offer
100.0	3,160	Total

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**5. Does the firm advise on EDP facility expansion or reduction?
(Survey item 26)**

PER CENT	FIRMS	
20.0	629	Yes
30.9	970	No—Plan to offer
49.1	1,543	No—Do not plan to offer
100.0	3,142	Total

V.

Conclusions

Major conclusions can be reached by integrating and summarizing the answers to the questions contained in Section IV. Three major areas of conclusions emerge. It is recognized that there are many implications for follow-up activities in these conclusions. However, these implications will be dealt with in another project report.

A. Current EDP Impact on Accounting Practice Engagements.

A small but significant number of firms report that they have lost engagements because someone else offered EDP service. Possibly, there may always be a similar phenomenon existing. There is no way to tell at present whether this loss of engagements is excessive or more than should be expected.

A substantial part of the respondent firms, nearly one-quarter, report that offering EDP service would have brought additional engagements. This clearly indicates the need for attention to existing possibilities.

B. The Impact of Computers as Currently Found Among Accounting Firms.

Computers have not landed with a great splash among the accounting firms. A small proportion, from 5 to 10 per cent of the

respondent firms, indicates actual involvement with EDP on premises. There may be less than 5 per cent of these firms that have acquired an on-premise computer, while some 10 per cent report the possession of a computer program library. About 7 per cent indicate the employment of programmer and operator personnel. Clearly, it is not necessary for a firm to have an on-premise computer in order to obtain the benefits of EDP. On the other hand, it is useful to have EDP knowledge and skills as part of the firm's capabilities. There are two reasons for this: first, to cope with the firm's own computer or EDP needs and, second, to provide service for the firm's clients (which will include audit problems among others) as the next section will show. There is an increasing trend of computer acquisition among the firms, and there are many computers on order among the clients.

C. The Current Impact of Computers and EDP Among the Clients.

The greatest impact on the accounting firms stems from the client's computer and EDP needs.

There are several hundred times as many computers among the clients as there are among the accounting firms. It has been reported that there are some 25,000 computers now installed in government, business, and industry. The Survey revealed no more than one hundred computers among the firms responding.

This situation mentioned in the above paragraph explains part of the EDP impact upon the accounting profession. Accounting firms are offering services necessary to client-owned computers, and at the same time they are guiding clients to the use of available packaged EDP services at the service bureaus and to a lesser extent at the banks. This is not the paradox or the conflict that it might seem to be. Some clients have the data volume and the other requirements that make for advantages in use of computers. A large proportion of the clients individually do not have the requirements for economical use of an on-premise computer. Collectively, these latter clients do have the requirements, and so they can benefit from the packaged services offered by the service bureaus.

Many of the respondent accounting firms are now involved in the above-mentioned EDP areas, and more of them expect to become involved. Up to one-fourth of the Survey respondents

are now offering services necessary for client-owned computers. An additional one-fourth of the firms are planning to offer these services. One-third of the respondent firms have clients on service bureau EDP, and it is certainly reasonable to expect that the number of such clients will increase.

There is a clear and definite indication that accounting firms should be prepared to render services directly related to computerized systems and also should be prepared to render guidance and management of service bureau type data processing when this is the most economical for the client.

APPENDIX 1

COMPUTER TYPES (From Survey Items 51 through 58)

COMPUTER	ACQUIRED	ORDERED	
IBM			
1401	13	1	
1401-G	6	1	
1410	1	0	
1440	6	1	
1240	0	1	
650	1	0	
1130	0	6	
1620	1	0	
360/20, 30, 40	1	21	
360/50	<u>0</u>	<u>3</u>	
Total	29	34	
 Friden			
All types	<u>6</u>	<u>2</u>	
Total	6	2	
 Clary			
All types	<u>1</u>	<u>0</u>	
Total	1	0	

SURVEY RESULTS

COMPUTER	ACQUIRED		ORDERED	
Monroe				
Monrobot IX	4		0	
Monrobot XI	<u>4</u>		<u>2</u>	
Total		8		2
UNIVAC				
1004	3		0	
1107	<u>0</u>		<u>1</u>	
Total		3		1
NCR				
395	2		2	
390	5		1	
500	0		3	
315	2		0	
310	1		0	
304	<u>1</u>		<u>0</u>	
Total		11		6
Honeywell				
H-200	0		2	
H-120	<u>0</u>		<u>2</u>	
Total		0		4
Burroughs				
B-260	3		0	
E101-103	<u>1</u>		<u>0</u>	
Total		4		0
General Precision				
LPG-21	1		0	
RPC-4000	<u>2</u>		<u>0</u>	
Total		3		0
RCA				
70/15, 25	<u>0</u>		<u>1</u>	
Total		<u>0</u>		<u>1</u>
Combined				
totals		65		50

Voluntary Comments

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Introduction

The American Institute of Certified Public Accountants initiated the Computer Research and Education Project in May, 1965. As a first step it was necessary to conduct an EDP survey in order to gain insight into the profession's current experience and status.

The data processing and analysis for this survey was automated and, therefore, only objective items were used in the questionnaire. In order to elicit as much information as possible, a blank page for "additional comments" was attached to the questionnaire. Almost four hundred respondents included additional prose comments. These comments tell an important story. In respect to the sensitivity of the data, the names of individuals and cities have been eliminated.

SECTION I

Service bureau use

Our use of data processing equipment is limited to an IBM keypunch in our own office. All processing is done through a local service bureau.

We have an IBM card punch which we use for general ledger bookkeeping work. We use a local service bureau which has an IBM 450 setup and expects to have an IBM 360 within a year.

The AICPA sure goofed in the early stages of computer development. We had to organize an EDP corporation and, of course, the firm is the largest user.

We have income tax returns (100+ per annum) processed by "computers."

We also processed some tax returns and expect to use such a process to a greater extent in the future.

This survey does not define the difference between EDP and EAM service bureaus. I use a service bureau that uses EAM (according to your definition).

We use a service bureau and have indicated its use and rental fee. We are now looking at a Monroe MONROBOT 11 for purchase. Service bureau may soon acquire a Honeywell H200.

COMPUTER RESEARCH STUDIES

The firm has a Monroe Punched Tape machine. Processing is done by a service bureau. Eight or ten clients have been processed on this machine in the past, but we currently have only one account on tape. We are trying to keep up with the changes in available equipment and what this equipment will accomplish, but we see no current benefits to our clients or ourselves by using EDP.

This firm leases a Burroughs "Add Punch" machine for its write-up work and uses the services of a service bureau. At the present time we do not have any clients using computers, but we are aware of the fact that the time is approaching when we will be called on to help our clients along these lines. We are interested in the results of your survey and would like to gain more knowledge of the application of computers.

We have a Monroe PO-3 add punch. The tape is processed through a service center which handles all computer programming and activity. We expect all of our accountants to physically run the add punch and be responsible for correct input. We are expecting to increase our hardware by using a dataphone as soon as it is feasible. Our monthly service center rental fees range from \$250 to \$350.

I am using a processing center for write-up work only. Small bookkeeping accounts.

Am planning to use NCR Optical Font Adder to be processed by service bureau.

We are using a Friden Add Punch for write-up (bookkeeping work) and are having the punched paper tape processed. We have one client (a drug rack jobber) using ADP for billing, accounts receivable, and sales analysis. He is considering a computer, since the rental is no more than he is now paying on his ADP (IBM) equipment. We have at least one other client for whom we probably will want to recommend EDP within two to three years. We need to learn about what size and types of clients need what kinds of bookkeeping equipment (regular hard copy multiregister bookkeeping, ADP, EDP, tapes as by-products, etc.). Can we save in office clerical salaries more than the cost of the equipment? Can we get more sales and cost information at the same over-all office expense? What information can we get at what cost and how will this help management? We don't have any clients at the present time with sales over \$3,000,000.

I have used an add punch and had processing center process tape since 1960. Plan to continue.

The only ADP equipment we own is a Burrough's Add Punch Machine. We send punched tapes to service center on 13 accounting clients.

We have Monroe Punch Tape Machine and did have about 15 clients' books, etc., processed. The processing center did not render as fast a service as desired, and we found that a large number of account schedules had to be maintained. Two different centers I used were not too accurate. I no longer use the punch tape machine. A center takes checks that are coded, punches them, and runs the information, giving alpha as well as numbers. I have just started to use this source and will probably add the second client soon. My business is not large enough to install a computer, etc., for our own use. I would consider a CPA cooperative installation.

We use a punch tape machine—tapes sent to service bureau. This is our only type of equipment.

All I have is a Friden Add Punch with the punched tape being sent to a service bureau, which converts tape into IBM cards, etc.

Using a service center. Burroughs Add Punch Tape is our source of input. Have about 12 accounts.

We are a small firm but have purchased a Burroughs Punch Tape Add Punch. We are using the machine to record write-up work for our clients. The tape is taken to a service bureau which produces the final reports. The service bureau has a Burroughs 270 system.

We use a service center—currently a 1402.

We have had a Monroe Add Punch machine for two years. Our punched tape is processed by a service bureau. We also did a special county tax roll codification covering years 1919-1962 (over 550,000 lines) on leased IBM equipment.

Rent Monroe Punch Paper Tape machine with tape being sent to service bureau for processing.

Our only connection with computer operations is through a Monroe

COMPUTER RESEARCH STUDIES

Add Punch machine which we lease on a monthly basis. We have our tape processed by a local service bureau.

Our firm uses a service center to do write-up work and prepare interim financial statements for about 25 of our clients.

We have a punched tape machine. Tapes processed by a service bureau which produces general ledger and financial reports.

This firm owns a punch tape adding machine acquired in 1960 and sends the tape to a service bureau specially geared to produce financial reports for small clients. We also use punch tape for analysis of checks for annual tax clients.

I use only the Monroe Synchro Punch Tape machine. A service bureau processes the tape for me.

We are using only punch tape at the present time. We have our tapes processed by a processing service.

I have an add punch (Friden) producing punched tape, which I send to the service bureau.

Own Monroe Add Punch (paper tape). Send to service bureaus.

We have an 8-channel punched tape Monroe on lease from the Monroe Company. We use it for all our write-ups and also some general ledger work using journal totals.

This is all "Greek" to me. All we have is a Monroe Punch Tape machine, and we send all of our work to a processing center for processing. None of our clients have any machines and, so far as I know, none are contemplating purchasing any. In fact, we are seriously considering selling our punch tape and going back to the old handwritten method, as most of our accounts are small businesses and farmers, and the mass of figures from this system just confuses them.

Our firm works with an independent contractor on data processing assignments. This individual, who runs a service bureau, goes out on consulting jobs as a member of our organization. He bills us per diem, and we, in turn, bill our clients at our consulting rates.

Own a Burroughs P-1100 Add Punch. Use a processing center. Have six monthly accounts on this equipment.

Our firm uses a Burroughs Add Punch and processes the tape through a service center. We have just begun to expand on this, and we feel this will eventually lead to more advanced equipment.

I do not rent the EAM machine, but use a service bureau that charges me for each transaction entered.

In May, 1965, I added a Burroughs P-1100 Add Punch and have contracted with a computer service center to process my tape. I have just completed programming all my regular bookkeeping accounts, and the results received from the service center are more than satisfactory. I now find that my practice is more flexible and can offer my clients a multitude of new services at a reasonable cost to them.

We have had a little experience on a trial basis with the Burroughs Add Punch equipment, using the facilities of a service center for processing. This was not satisfactory.

We have used off-premise (service bureau) EAM (tab equipment) for an average of six (6) clients for over ten (10) years.

In June, 1965, we began using the facilities of a service bureau for write-up work and account analyses. We use an NCR Adding Machine which has an optical font for feeding data to the computer in the service bureau. We are planning to expand the use of the computer to inventory control and cost analysis.

Firm uses a Monroe Punch Tape machine and a service bureau. Programs used are the bureau's basic programs with some modifications.

We are only now setting up one client on punched tape. We expect to have five clients on punched tape by the end of 1965. These are all small retail businesses.

We process on add punch (Friden) and send to service bureau.

We use Monroe Punch Tape Input machine and send tapes to a service bureau.

COMPUTER RESEARCH STUDIES

We use service bureau (1401) to process time and expense reports, prepare engagement cost sheets, and maintain work in process detail.

We use another service bureau (1004) to prepare comparative operating and financial analyses each quarter on a complimentary basis for 100 or so automobile dealers.

We have a service center which handles our programs from key-punching through printing. They have an IBM 1401 computer, etc. We have worked with them in setting up various programs.

Have had working arrangement with a service bureau for ten years. Technical assistance always available to whatever extent necessary; cost billed direct to client to avoid misunderstanding cost of EDP. In 1965 have utilized three different banks' payroll computer facilities. All EDP work done without any staff employees (only service bureau). My services have become higher priced per hour while decreasing total productive hours steadily to less than one hundred per month. Total gross income relatively unchanged.

Presently have in operation an IBM "Tab" system with a 604 electronic calculator. Performing invoicing, perpetual inventory, accounts receivable, sales analysis, general ledger, and statements. We find our cost of operation is approximately four (4) times equipment cost at a minimum.

We have a punch tape only and a service bureau runs all tapes on computer.

We rent a Monroe Synchro Input machine and use a service bureau. Perhaps this questionnaire doesn't fully apply to me.

This firm owns only input equipment consisting of a National Tape Input machine. All of our needs for write-up work, together with our clients' needs, are serviced by a full IBM computer and programmer or a National 315 computer, both of which are leased by us or the client on an *item* basis.

I purchased my accounting practice on January 1, 1964. I purchased it from a public accountant, and he had eight clients on punch tape and was sending the tapes to a service center. I continued to use this computer service until June, 1964, at which time I transferred to a different computer service center. In December, 1964, I

discontinued using my punch tape machine and traded it for three adding machines. The reason for the changes in service centers and discontinued use of punch tape is because of the poor service from the service centers. I feel that data processing in this area for accounting firms of my size is at least five years off because the computer centers do not have qualified personnel to run them. At the present time I feel that I should keep my clients on accounting machines so that I have control over the information that they desire.

We use a service bureau to post general ledgers of clients and in preparation of balance sheets and operating statements.

Our firm has one Friden Tape Punch machine. With this machine we process (code) clients' records and prepare punched tapes. These tapes are mailed to a service bureau for processing. The finished reports are mailed back to us. The primary reports are financial statements (on a monthly basis) and a general ledger.

We rent a Monroe Punch Tape Adding machine and send tapes to a service bureau. This service bureau. This service has been successfully used for small client write-up work and occasionally for special tabulating runs on the computer. The service bureau furnished a manual and has programs already set up into which we fit our needs. We feel that we have cut our time about 50 per cent on clients whose work remains about the same from year to year. The nominal cost of data processing is well worth the effort we put forth to successfully set up our clients on data processing. However, we have had to custom design every client's needs, even where we had several clients in the same business.

I use a service bureau for EDP for my clients and find this very satisfactory.

We processed a few computer-prepared income tax returns this year and were well pleased with the results. We are now investigating service bureaus and plan to transfer 20 to 30 monthly service clients to computer-prepared general ledgers, payroll records, etc., this year or next by use of a punch tape machine in our office. Neither our firm nor any of our clients are large enough to rent or own computers.

We are using a Monroe Add Punch machine and a service bureau for processing. If the answers herein regarding computers used and

COMPUTER RESEARCH STUDIES

owned are in conflict, please adjust where necessary. Our plans for future rental or purchase of equipment are not firm but are definite in need for meeting demands of accounting of the future.

We do use a service bureau for our own time records, although this does not seem to have been covered in the questions. In addition, we have caused several clients to have work done for them by service bureaus. In these cases, we worked with the client and bureau to develop procedures and reports.

We find that in answering this survey, little emphasis has been placed upon the type of application of EDP which our firm uses. We are a small organization with small- to medium-size agricultural and corporate clients. We have used a service center in conjunction with our firm-owned Monroe Add Punch with very satisfactory results. We foresee extending this service to our clients in the future, but question if we will ever own or employ programmers within our organization.

Hope these answers are okay. We have used a service bureau since August, 1962. Our relations have been most successful, and we have a wide variety of uses for this type of service. In our office we have a full banked Monroe Add Punch Tape machine and mail the tapes to the center. Even though we're a small firm, we are proud of our advanced service that we can offer to our clients through this medium.

We are in process of converting to EDP. We obtained an NCR bookkeeping machine with tape which we will send to a service bureau.

Friden Punch Tape. Use computer service at 5½ cents per line.

Basic experience with a tax service (accounts for large number of clients). Service bureau on insurance agency work in first month. Use punch tape and service bureau for time analysis and billing analysis.

I have found that it is very convenient as well as extremely economical to engage a local service bureau to process all of our work. They will write for us all our programs, and we as a firm have no capital risk.

The firm owns a Burroughs P-1100 Tape Punch for processing

write-up clients, through the services of an independent service bureau specializing in such accounts for accountants only. The procedures are based on standard programs and have proved very satisfactory to clients and to us. We have no plans for expansion of our equipment or services offered.

Don't know whether we're your target. We have a Burroughs P-1111 Add Punch machine and send tape to a service bureau.

Firm has used a service bureau on a trial basis, no other client experience.

Have been using punch tape since '62. Currently expanding to optical scanning; hope to do local conversion in '66 with "on-line" connection to master computer.

I rent a Monroe Punch Tape machine. My annual rental for this machine is \$675. I design programs for my clients where it is feasible to use the punched tape accounting. I am in the process of adding two new clients for my punched tape machine. I have the tapes processed by service bureaus. I have not had anything to do with computers as yet. My answers on the attached questionnaire are based on my use of the punched tape machine.

Our firm has been using punch tape for general ledger posting and write-up work for the past three years. We have been very pleased with the results.

I have been practicing for 15 months only and have no large clients. However, I have ordered a Monroe Model 410-11-011-PO3 for punched tape accounting that I will put as many clients on as possible.

I am presently engaged in the process of installing a tape input machine (NCR) to have data processed at a commercial EDP center. The machine is in my office. I am awaiting instructions and initiation.

I am using a local service center for "write-up assignments" and extensive use for accounts receivable confirmations on financial institution audits; also we are using the by-product of the write-up for internal sales and profitable studies. There were, and still are, some basic data transmission problems, but it has been very well received and has been the source of some referral work here in our local area.

COMPUTER RESEARCH STUDIES

At present our planning is on the use of peripheral equipment tied to a remote Model 40 series 360 IBM.

Had Burroughs Sensimatic Tape Punching machine for one year. Used central service bureau for write-up work. Discontinued. Not enough write-up work to warrant the additional expense. Did not want to develop any more write-up work.

We have rented (on lease) a Monroe Tape Punch machine for the past five years. At present we are using it for one client—general ledger and profit and loss, and balance sheet monthly.

Service bureau use confined to tax returns at present.

SECTION 2

Hardware, including EDP (computers) and EAM (tab installations)

We have used (rented and installed in our office) IBM 50 series card punch equipment for over four years for write-up work, utility billings, payroll (and check) preparation, etc., very successfully.

During 1946-1948 we used punch card tabulating equipment to record routine bookkeeping functions for about 50 clients. The way we did this did not provide satisfactory records for our clients, so all of the program was discontinued. We lost \$30,000 during this three-year period.

IBM tabulating equipment—accounting, sorter, computer, two keypunches.

As of September 1, 1965, we are acquiring the IBM series 50 tab equipment, but answered questionnaire as if we did not have it. At present we only have thoughts of which clients we will put on this equipment.

Plan to install NCR 395 in July, 1965, to complement existing IBM tab equipment. Will eliminate both IBM tab equipment and NCR 395 in July, 1966, when IBM 360 Model 20 is delivered (ordered December, 1964).

COMPUTER RESEARCH STUDIES

We have had IBM series 50 since 1963—equipment 402, 602, 082, 26, and 514.

We are not using a computer but rather IBM 402 accounting machine, keypunch, sorter, and reproducer.

Our firm owns a Burroughs F506 and a Burroughs Sensimatic. This is the extent of our larger accounting machines.

For further clarification: EAM equipment is on order for August installation. EDP Equipment: For next 12 months service bureau equipment will be used. After one-year trial in-house equipment will be rented. Note: Equipment will not be used for managerial functions such as inventory controls, sales controls, etc. Equipment will be used for bookkeeping (write-ups) for small- and medium-sized clients only.

It is of utmost importance that we receive the results of this survey as soon as possible after they have been compiled!

We have IBM 402 Tab machine on rental arrangement.

All internal records, including staff production, are on tab equipment, i.e., IBM 403, 602, etc. Write up work direct from client's tape (paper) on paper tape in our office from Burrough's Add Punch with special thirteen-column keyboard.

This may have been handled improperly. We only have following IBM units: one tab, three keypunches, one verifier, one calculator, two sorters, one collator, one reproducer.

We are presently doing write-up work with a Burroughs Punch Tape machine. We have on order and expect delivery in three months a complete complement of IBM unit record equipment. We will use this equipment until June, 1966, which is our scheduled delivery date for an IBM 1130 computing system.

Presently have a series of 50, 402 installation. Am planning to upgrade to IBM 360/20 and buy block time on a 1401 to reduce cost of transition.

We only have one Monroe Punch Tape machine, which we acquired in 1961 at a cost of approximately \$2,000. We are currently

considering putting in an IBM installation which will rent for approximately \$450 monthly.

Our firm has an extensive tab operation using IBM 407, serving both our own internal needs as well as clients'. Services range from general ledger work to accounts receivable with dataphone input.

We are currently using punched card systems centered around an IBM 402 Accounting Machine with the various accessory machines, including keypunch, sorter, collator, reproducer, etc. Panels have been developed which enable us to do ordinary bookkeeping, prepare depreciation schedules, prepare earnings records and payroll returns, prepare tax rolls and tax statements, and produce various types of schedules for use in audit working papers, such as working trial balances, lead schedules, income and expense vouching schedules, payroll tests, etc. We are very pleased with the equipment we now have and feel that we have just begun to learn of its capabilities.

This firm is presently renting following IBM items: 402 Accounting Machine, 526 Key punch, 82 Sorter.

Town of 25,000—small retail business—few large manufacturing firms (mostly branches of national concerns). Our firm does a minimum of service work, what we do is on Burroughs 1500 Accounting Machine. We feel that we must become aware of the applications of EDP, especially as applied to small business. We expect to be among the first to apply it locally when it becomes needed; in the meantime, we try to prepare.

For the past three years we have operated an IBM 402 card system. At the present time we are considering the possibility of installing an EDP system; however, most systems appear to be designed for the larger company, and we are questioning the desirability of so large a step. Any information as to what other firms with problems of our nature have done will be appreciated. At present we have approximately 200 write-up jobs on our IBM equipment.

We have just started in this field with IBM series 50 tab equipment, e.g., 402 keypunch sorter. Our plans are to expand this to computer stage in next 2-3 years, probably IBM 360 Model 20.

We had IBM 403 accounting machine but discontinued December, 1964.

COMPUTER RESEARCH STUDIES

Computer is to be installed in September-October, 1965. Site has not yet been prepared; however, keypunch(es) and sorters are in office and being used. Presently a parallel operation is being processed on another company's computer. Computer is to be used initially to render service for clients and later also to maintain some of our own records.

I have used a combination of Burroughs Punch Tape machine and local service bureaus prior to 1964; however, none in 1964. At present I have in my office a Smith Corona Marchant Typetronic 7816, which is in process of being programmed. It is to be in production within the next three months. It is hoped that it will fully handle all clients of mine by the end of 1965.

This firm has had series 50 IBM ADP installation since late 1964. Rapid growth experience. We are currently converting all of our own record keeping in addition to services being rendered for clients.

We are in the middle of installing Burroughs E2100 computer in our office.

We have ordered Burroughs 2190.

SECTION 3

Information: EDP status

We doubt that we have been of much help in this survey with our answers, but possibly a few words of clarification may help. We installed a tape machine about two years ago, using a nearby computer system in a larger city for processing. This was unsatisfactory for many reasons, primarily liaison. This was discontinued after only a few months. We rented and installed a series 50 IBM system in 1964. One of our staff men was trained for programming, and we use two machine operators. Most of the use is for general accounting, accounts receivable processing, statements of accounts receivable, data analysis, contractors' job costs, etc. We are considering a 1401 but have no definite decision. Our city has about 25,000 population with highly diversified industry. We think that it can support a service center, but the problems are many. It is our opinion that even a firm as small as ours must keep close to EDP, and we lean toward continued expansion and operation of hardware. So far, the program has been a financial drain but has gradually approached a self-supporting stage. Financially, we would have been better off to have ignored the program, we think, but for longer range we think it a must.

We used EAM keypunch with use of five different service bureaus (some of 1963). We were on it for over three years—three whole years, 1959-1962—and had unhappy clients. We lost over \$12,000. Have now sold all our equipment and have gone back to making money. I read a lot about those who have or are using it and are

happy, but I believe you ought to send out a question as to how many accountants have tried it and had many serious regrets before they could get out. I guess one of the biggest problems is service bureaus. We feel that the MONROBOT or the new \$15,000-SCM machine may be the way that we might get back into it again—but we got hurt and we know of many others that have, so it will be a long, slow go before we “pioneer” anything again.

We can't advertise and get our clients informed or our public informed ethically. We are considering sending an info sheet to our clients that we have had such services available for 3-4 years. We use a Synchro Monroe Add Punch Tape machine in the office. Send all tapes to center for processing.

Tried a service bureau for several months on write-up accounts but abandoned it because of inability to obtain accurate monthly statements without reruns. Could only furnish acceptable statements by correcting and typing statements in our office manually. Some errors were our fault—faulty data codes—and some were errors of service bureau in punching cards from our handwritten transmittal sheets.

I do not think we can compete with banks on the purchase of equipment and development of programs. We try to use their service as it becomes available and, in the meantime, are marking time with punch tape input to a service bureau.

We are vitally concerned with the impact of the computer developments on the practice of professional accounting. Our experience to date in this area has been: (1) purchase of Monroe Add Punch machine three years ago and the processing of approximately 15 monthly write-up clients thereon, utilizing the facilities of two independent service bureaus; (2) audits of several clients who have punched card accounting equipment only; (3) attendance of one partner and one staff man at four-day seminar sponsored by equipment manufacturer; and (4) very limited consultations with clients on computer and/or data processing applications, feasibility studies, etc.

We are very pleased to see that the American Institute recognizes the immediacy of this problem and is taking steps to effect a program to assist practitioners to become more knowledgeable and proficient in this area.

We are considering something in order to compile analytical information for clients to whom Uni-spread reports are now presented. We have in mind now to study possible equipment adaptable to our needs. Possibly there are small practitioners who are badly in need of counsel and suggestions. We believe the small merchant is in dire need of assistance as compared to the larger businesses. In light of these comments, we would appreciate a response pertaining thereto.

This may clarify some of the answers given above. This office is a branch of a multi-office firm. Computer will be installed in another office about 10-1-65. This office plans teleprocessing access to computer in another office. Firm currently renting second-shift time on a 1401G. Delivery of 1440 on or about 10-1-65, with delivery of 360 on or about 1-1-67 to replace 1440. Full-time personnel of firm assigned to computer are in other office.

Our service is general journal-ledger posting monthly financial statements. We began in 1958 by punched tape—service bureau. In 1963 we rented tab equipment. In 1964 we began writing payroll checks, accounts receivable, processing internal time sheets, and determining A/R. In 1965 we are going to Friden Disc Memory for random access internal storage for perpetual inventory, payroll computing. Plan to progress from this to IBM 1130 by 1966-67.

You didn't ask how we like EDP—we like it! My practice consists of about twenty-two write-ups per month, one informal quarterly audit, three or four small audit engagements, and seventy or so tax clients a year. I only use it on write-ups. It would be impossible to handle this business in 1965 without EDP—our gross will reach \$14,000 for 1965 with a staff of one CPA, one part-time junior accountant, and one clerk who punches tape and doesn't know a debit from a credit!

We are a small firm but realize the importance and far reaching implications of EDP equipment. Although we have done little to date in the use of such sophisticated machines, we plan to engage in such aspects of management services to the fullest extent possible. We intend to broaden our understanding of EDP by attending some of the AICPA Professional Development courses and a local technical school.

Since I only opened my office 11/1/64, I have based my gross billing (Item 6) on my estimate for 1965. At (blank) Corporation I had

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4½ years' experience dealing with a service bureau which handled an account representing 150 separate entities and general ledgers. Working with this same service bureau, I have set up four hospitals on IBM using the service bureau, which has worked nicely since the clients could not afford their own equipment. The service bureau bills the clients direct for their time, while I bill them for mine. It's sort of a joint effort. I draw up the end results, statement format, etc., and work some with their programmer who does the actual programming of the machine. In addition, I have set up a building rental company on IBM and audit the service bureau which has a 1401G. This working together with a competent service bureau has proven very satisfactory to the clients.

We are watching this program very closely. Have given it much study. Up to present time have not been able to determine any manner to use or fit it with *smaller* accounts.

Our small firm in a small community has little immediate need or desire for computer facilities. We do feel that the time may well come when we can use such equipment beneficially. Meanwhile, we do hope to have at least one staff person obtain some formal training as insurance against our own possible obsolescence.

Our firm is interested in EDP programs and procedures but cannot possibly afford to rent time for the small number of clients who would need the services. It is also very difficult to get CPAs in this area to cooperate in a pooling arrangement.

My only contact with a computer and computer equipment is through one client, an educational institution (junior college), who has purchased and leases this equipment primarily for instructing students. However, this equipment is also used, through cooperative endeavors of instructors, a programmer, and myself, for many accounting, analysis, and clerical functions.

I doubt if our firm should be considered in this survey, since we do primarily tax returns as an aid to our teaching of tax courses. What little audit work we do is normally university activities connected. The need for knowledge in machine accounting is certainly felt by us to be a necessity in today's accounting career preparation, whether public or private, and our university is now in the process of beefing up its data processing and systems courses. An NCR 3100 machine was used by us when we kept the books for a number

of fraternities and sororities on campus, but the volume got so low that the fees charged merely met the salary of the operator; therefore, we discontinued both and have no current plans to undertake such work again.

It would seem to me that the average practitioner's greatest problem in this field is *software* not *hardware*. If you will point your efforts in this direction, I believe this will be of greatest service to the profession.

Getting a practical education in EDP presents a problem for a sole practitioner in an isolated rural community. The AICPA program being developed will be very much appreciated.

Our installation (subleased from a local bank) is just currently being set up and we consequently have no programs on the air at this time, nor do we have cost figures available.

We are keenly interested in this field and are in the process of considering the use in our office of at least EAM, if not EDP. The results of your survey will be eagerly awaited.

We service small clients in a small town several hundred miles away from the nearest service center. The one attempt at automation through the use of a leased add punch and having tapes serviced several hundred miles away ended unsatisfactorily.

Causes of unsatisfactory conclusion:

1. Inadequate service
 - a. Little, if any, collaboration in programming clients.
 - b. Form of reports unsatisfactory with plans to improve never materializing.
2. Insufficient knowledge of EDP on our part.
3. Inability to obtain adequate consultation from manufacturer.
4. Inability to attend training centers because of time and distance.

I am contemplating the purchase, rental, or use of an optical printer adding machine for write-up work for clients; no such questions asked.

I have one client, an insurance broker, whom I have placed on a service bureau that handles insurance brokers exclusively. This service had been poor for a long time but has improved tremendously since they moved and changed their equipment. I have been

approached by a service bureau to pay \$250 initial fee and rent an NCR optical printer from them and pay them a per-line fee for processing the tapes.

Although we desire to have knowledge of EDP, we seriously question whether or not the small firm can accumulate sufficient knowledge to properly serve in this area. In those situations where we are required to make installations or review systems, it is our present thinking to retain one of the national firms to assist us.

The small firms cannot be all things to all people and they must realize that fact. In certain specialized areas we must not be too proud to call on other practitioners. The job must be done properly or it should not be undertaken. I am afraid that many local firms do not realize how limited their knowledge of EDP and management services actually is. It certainly should be stressed that the profession as a whole will suffer if CPAs undertake assignments in fields in which they are not qualified.

In my opinion, what is badly needed by small practitioners in my area is:

1. Basic orientation program on what would be needed to perform regular bookkeeping and accounting functions.
 - a. How much memory capacity is needed for a payroll, weekly, of 25 persons (all payroll records, payroll checks, and distribution of charges required to be made).
 - b. *Not needed*, initially, is how memory works electronically, or how circuits are hooked up in machines, etc.

I have employed a staff man (with partnership potential) effective 7/1/65 with theoretical and practical computer operation and programming background. He will participate with me in a feasibility study shortly.

I am a middle-aged sole practitioner with nothing up my sleeve, and I am running out of economic responsibility. This is to say that I can be truly objective in commenting on the impact of EDP on our profession. For the sake of our clients we should continue in our present capacity, using EDP in place of the manpower we do not possess because with EDP we can do all the things we know could be done instead of the little we have been doing. It is analogous to IRS being enabled by EDP to check and correct (and collect) *all* of its tax returns and reports.

A second miracle is suddenly necessary. We must all have access to our relative EDP requirements, so that the whole profession can remain status quo, except for the increase in the amount and quality of the work we each turn out. We cannot flounder around with some of us outstripping the majority. The result would be that the majority would be competing from the outside for a short time because suddenly there would be no inside. Since we are all back in the days of Columbus in this respect, I have as much right as anyone to pick a route! All members of AICPA who are in public practice should be invited to make a realistic contribution to be used immediately for the study and start of a national cooperative society, managed by members on a fully paid basis and who are (if available) fully trained to this point in time. Dues might be set on a per capita basis, but the "profits" could be shared by the billing costs, or by a "co-op" refund. No public work would be accepted. This might be the way in which our superior and essential services are offered in the near future—by *us*.

We cannot reconcile using a service bureau or CPA cooperative with ethics prescribed by AICPA because of loss of control of clients' records. We have assisted in installing systems at several clients, but do not plan to use services of others or install in our own office.

With so many tax, auditing, and accounting problems unsolved, why do we get into EDP and management problems?

I believe there are more economical ways to do accounting in large and small firms than doing it by EDP. Nowhere in this questionnaire have you asked about other types of installation experience where EDP was not as efficient as other systems.

In all of my experiences I have yet to find a service bureau or an installation of accounting on EDP as economical as other old-line systems. In too many cases the EDP is compared to an *inefficient* system that is in operation and management believes this is progress. This answer sheet is the old mark sensing which has been so troublesome in the past and still has not been improved, yet this is considered progress. My answers reflect my thinking, and my experience justifies my conviction that accounting, because of its many variables, cannot be done efficiently with EDP.

My client's use of EDP equipment is cutting down our auditing time and income. It appears that this reduction in income will continue because of client's use of EDP equipment. I was hoping that this

questionnaire would result in some advice concerning this reduction in income.

If not correct for a CPA to write up books and then render an opinion on the financial statements, how can the use of computers, etc., change his status. Is the old theory that by doing write-up work a CPA is not auditing, therefore, cannot render an opinion outmoded (it certainly looks that way)?

We have two clients with computers. Have relied on the manufacturers principally in setting up programs, etc.

We released one client who was fascinated by the lights and bells of these magic wonders because his business did not warrant such extra costs to obtain results he was already getting with much less expense and with greater flexibility. About four years ago we had taken over his work after a sad experience with an "Electronic Accounting Service" and straightened out the mess they had made, cutting his annual costs about \$2,000. (However, he continues to read magazines.) Our clients are all small (volume under \$2,000,000), and none have enough repetitive transactions to justify even the source equipment, much less the machines that can make 10,000 errors a minute. Also, no one wants to standardize his operations enough to adapt to a service bureau setup. It is our feeling that to prepare the data is generally as costly as doing it by hand, unless the same record (card, tape, etc.) is to be used over and over for various summaries at least three times. By the time that all small businesses are done away with in "1984," it may be necessary to use EDP systems 100 per cent, but probably not until then. At this time I consider much of the activity in this field EDPM (Enthusiastic Departure from Proven Methods). If the machine feed-in can be made up as a by-product of some other operation (already being done), the only extra cost to be justified is time or machine rental, but the *two* costs are usually prohibitive.

However, for firms with thousands of *repetitive* transactions which have gone to EDP (like banks), there is really nothing to audit except *by* EDP, and large CPA firms will be forced into some kind of service bureau on the purchase of their own equipment. Either that or a crystal ball.

Checked with a service bureau regarding advisability, and they were very wary of talking to a small practitioner. Evidently, this is for large ones only.

How does an NCR 395 rate as a computer? It has cards in but no tape in. The 395 is merely an extension of Compu-tronic 35. The 395 will have to have an NCR 406 sorter to provide sorting capabilities before you could even use punch cards. Don't get me wrong. This is a good idea—we need more of this type information. Please be sure to send me a copy of the survey. Only hope you break survey down by regions or states.

Our clients are small merchants, or small businesses, none of which have more than 20 or 30 employees, except school districts and a municipality. None are large enough to justify the installation of a computer. We do write-up work for about 90 clients (no accounts receivable or accounts payable detail work) and have been considering installing punched tape equipment and may eventually install a small computer such as the Monrobot XI, or NCR 395 or 390. We have delayed installation due to the fact that we have a great number of income tax clients, and when the income tax season is over the staff required for that work can easily handle all the write-up work. The real "bind" is during the income tax season, as we prepare about one thousand income tax returns between January 1 and April 15. Our firm is located in a rural town of about 14,000 population. The nearest city from which equipment could be serviced, if installed, is 55 miles which presents a problem that we have to consider.

My firm used a service bureau on about two-thirds of my tax clients last year. Program was reasonably successful—rather expensive, however, for fees under \$35. Turn-around time increased considerably toward end of tax season as the service bureau's volume increased. Will probably use service again next year but on a more selective basis unless their fees are lowered.

With reference to Section V, we did employ a service bureau to process approximately 400 individual income tax returns for 1964, and intend to repeat for 1965.

This survey is necessary, I suppose, but serves as another illustration of the limitations of practicability in many AICPA programs. To wit:

All small firms (of one or two professional staff) which I have known, who undertook computer activities, have found that it was not practical for them. I have attended an AICPA two-day course on management services as well as smaller sessions. All available information indicates that a sole practitioner could never devote

the time needed to become qualified in this field and that 10 to 14 partners are needed to allow one partner to devote his entire time to this field.

Excellent thing you are doing. It's later than you think.

We are interested but have not acted.

I am glad to supply this information.

My future EDP training is being developed by attending Professional Development courses when possible.

Have one client who used a computer service all of 1964 and is satisfied. Cost to them about \$400 per month. Monthly statements received promptly. My objection on audit and income tax preparation is that twelve separate monthly ledgers are not readily subject to audit or information gathering. Also it is necessary to trace journals from two or more references to obtain the basic information needed, such as names of payees and creditors and debtors. I understand that for an additional fee it may be possible to obtain an annual rerun of the punch cards to present a yearly ledger for this client. This was not done for the year 1964.

EDP should be a *mechanical* specialty to be utilized by CPAs as they would typewriter repairmen, or duplicating servicemen!

Before I went into business for myself, I worked for a CPA firm that bought an add punch and sent the tapes to an outside processor. I always keep my eyes open for a client who could possibly use EDP. At present I have a prospective client (dentist) who is interested in putting his billing statement and cash collection on a bank's computer.

Our firm will only use EDP in situations where it is more economical or profitable to the individual client in the solution of the related problem.

1. Located in a city of over 300,000 but in which industry is essentially nonexistent. For this reason the practice is essentially income tax oriented. And the clients are rarely in a position to make use of EDP.
2. One staff member has *some* training in EAM but not EDP.

3. We have experimented with punch tape and service bureaus, but experimentation was limited and not entirely satisfactory, in any event, impractical because of heavy slack time in summer and fall.
4. Currently attempting to get one multi-outlet retail client to acquire NCR optical font cash registers in order to make use of a service bureau for sales analysis and accounts receivable, but substantial outlay for equipment seems to be overwhelming drawback.
5. Should the situation arise, we are prepared to work with or work through a local service bureau with whom we are in occasional contact.

This is in the future—there is a lot of manual work still to be done.

Several clients use *bank computer facilities* available in this area for payroll or cost data.

SECTION 4

Long-range plans and trends

In discussing EAM with other small accountants, I find that too many of them are letting the hardware *replace* the accountant, not just assist him. If this trend continues, there will be little, if any, justification for the small practitioner.

As firm grows, undoubtedly, we will be involved in EDP in one way or the other.

Other than over-all study, most accounting firms that I am acquainted with are using punched tape as a toy; one solid bookkeeper could do the work quicker, and the client would be more satisfied because he at least would be somewhat able to follow the work through in answer to a specific question.

I am associated with a business and we do use the equipment, but I think there is a vast difference in the client's mind as to whether it is "his equipment" (infallible) or "your equipment" (capable of vast error).

It is my own opinion that the operation of a "bookkeeping service" or a "service bureau" is not a professional function. Good programmers can be hired.

While certain duties outside of public accounting now take the bulk of my time (and I have been able to limit myself to just the work I really want to do), I find I really enjoy the management end of

the work (tax and financial management), estate planning, and even getting a new client with IRS problems. (The net hourly rate has also benefited.)

I somehow cannot become excited over actual EDP programming or selection, only over the possibilities it affords the client.

We feel this area is a revolution in accounting that requires a great deal of exposure by all CPAs before the profession as a whole will be qualified to maintain their present status in the financial world. Action probably should be initiated and directed to all CPAs, if possible, to insure that the CPA professional is not bypassed.

Many of the questions relating to EDP and computer programs are left unanswered. My practice is in its embryonic stages but with a good growth potential. Questions relating to EDP and computer programs which have been answered as no plans for adoption must be viewed as *no immediate plans*. In addition to my practice, I am an assistant professor of accounting and taxation at a local college. This college is building a new campus and a new computer center will be developed. I am deferring any action regarding computer arrangements until the feasibility of using this new center has been determined.

Have been considering purchase of punched tape adding machine and use of outside data processing service for bookkeeping services which account for 40 per cent of gross billing. I feel that the machine could be used for special jobs that come up from time to time which require too much clerical work for us to undertake at the present time. I have several clients (and prospective clients) who, I believe, could benefit from EDP if it were available and if I or someone else would suggest its advantages. I am going to have to get my feet wet sooner or later—the sooner, the better.

We used EDP processes in 1949 for some clients. At that time no clients were interested in continuing the work, and we gave up the use of the machines. Since that time, we have been using a modified type of machine that will give us the same results as a computer for the regular write-ups we have. We have available locally an IBM computer operation that we can use. It is controlled through a corporation by another CPA. It apparently does good work if needed. It, like all other computer operations, lacks “the professional look.” The important factor insofar as accounting is concerned is the

original classification of items. A computer cannot do this. A person with sufficient judgment must be used. If this is not done, we find that bad records result. A method of analysis is also needed. This can be done visually or by a rerun of certain items. We find that making this analysis as an original by-product of postings is the best way. There has been very little publicity about the method we use. It is so simple and accomplishes all the work we need in our small office to take care of our clientele that we say nothing about the work it does and can do. At the present time it is used less than 5 per cent of the time. So far we have been able to compete but in the future we may have to reassess its value. We have also found this machine valuable in certain audit work for small companies and is especially valuable in small income tax work. Our situation is probably not unique. The small practitioner is still the important part of the profession. If conditions continue as they are, however, the large firms will swallow up these small practitioners within the next twenty years. Restrictions placed on us are so great that salesmen from manufacturing firms are trying to replace our services with automation or new systems. Nothing can be done about this in a free economy. It seems that we must plan to expand or plan to continue a small high profit operation, operated alone, spending a great number of hours each day at lower hourly rates but performing services that the large firms cannot perform.

This is an excellent beginning. I believe that this matter should be given top priority for the next few years. I for one would be willing to pay increased dues, provided they would be allocated to a study of this program and training programs especially for the small firm.

Doesn't this emphasize our frail tendency toward *gear* rather than *think*? Being sensitive to need is one thing. Programming a computer installation—quite different. Is it truly professional to provide rental facilities for hire? Are we panicking as a result of equipment manufacturers' puffing?

AICPA should provide a computer service.

I started my accounting firm on January 1, 1965, and own no EDP equipment. However, I am doing a survey on the efficiency of a client's EDP department and am currently learning to program client's 1004 UNIVAC.

We do not intend to go into computer rental or ownership for our

firm. However, the local bank now is offering a customer computer service. We have one client who is interested in this for accounts receivable. We are currently checking into the possibility of our church's using the bank's computer to record budget and building fund pledges. We have recommended to several of our clients to check into the service offered by the bank. The bank's service rates are so reasonable that the client may be better off to let the bank do this work rather than have to be concerned with the problem themselves. I am very impressed with what the bank is offering and have suggested to several clients that this might be the answer to some of their problems on accounts receivable, inventory controls, etc. My thinking on this is that this is a tool to be used for small businesses, like an adding machine, typewriter, calculator, or similar piece of office equipment. Would welcome any comments on this.

The problem of the small CPA attempting to create EDP service for the small business doing between \$100,000 to \$2,000,000 annually. Two problems develop: (1) service time between office of CPA and service bureau creates a problem, (2) cost is prohibitive. If some service could be devised that would be economically feasible at a minimum monthly rate of \$2,500 to \$4,000 per month for a very small business, much activity could be created in this area.

Though not in the planning stages yet, we expect to use some type of EDP in two to three years.

We will acquire EDP equipment if or when client demand warrants it. Since solicitation is unethical, there is no point in acquiring such equipment before that time. Unfortunately, not all firms have as high professional ethics.

We harbor a feeling of insecurity relative to our knowledge of EDP potential in the profession.

I am a small individual practitioner who works entirely alone. My clients are also small; however, in the near future nearly all will need EDP if they can afford the extra cost. I cannot answer many of the questions on EDP.

The policy of this firm is to educate its accountants to the feasibility study in order to be able to recommend installation to its clients. We do not intend to offer computer programs or actual installation service, nor do we intend to run a service bureau. Such bureaus are

too much of a business operation. Since the firm is small, only the larger clients have ability and need of computers. Several small clients are using service bureaus at our recommendation. One large client has IBM 1401 and one is installing a smaller Burroughs computer.

At the present time my firm is not large enough to enter into data processing services to my clients. However, I recognize the necessity to develop potential in this field. I, therefore, anticipate that within two years I will have entered into a training program for myself and staff. Whether I will actively enter into the field of design and installation of computer programs will be determined at that time.

It could rightly be concluded from the answers given that little thought or consideration has been given to EDP. This is not entirely so. Much thought and consideration has been and is being given to the installation of EDP facilities, either alone or in conjunction with other members of the profession.

There are a number of stumbling blocks, the prime one being how will the certified public accountant obtain enough clients to warrant the expenditure in a fast and rapidly becoming highly competitive field?

Banks, insurance companies, and others in this area are openly selling EDP services. They are using their customer account and loan contacts and in some cases the leverage they provide, as well as engaging in door-to-door selling.

I certainly do not advocate solicitation of clients, should a certified public accountant install EDP facilities, nor do I feel this obstacle can be surmounted without sacrificing some of the very things we are striving to save.

The form letter accompanying the questionnaire states, "EDP will have a profound impact on the practice of professional accounting." No statement could be more accurate.

It can easily be determined from the answers on the answer sheet that I am a single practitioner with *no* computer or electronic work in my practice. This questionnaire to me represents the handwriting on the wall for the small man whose clients *do* need the EDP systems but refuse to let him work them into the client's business operation. The companies selling these units will do all they can to switch the client to an outfit accountant or otherwise which will fit into the selling company's scheme of things. With the big accounting firms going to colleges and literally grabbing off the best brains for

themselves, the labor pool shrinking because accounting *does not* attract the best brains, the little fellow like me is in a definite bind for assistance. Further I do not have to expound. You know the answer better than I. It behooves the Institute to do something about it. Maybe this questionnaire handled honestly and fairly will get us little guys some results.

Plan to investigate use of a service bureau for 1966 tax season. After spending about one hour on this, I feel that EDP is *many* years away for this office.

Our firm was just organized in 1964 by merger of two small individual practices. We are young and plan to keep our eyes and minds open with respect to opportunities in EDP. At this time our interest is pretty well limited to the AICPA Professional Development courses and what we can learn from such periodicals as *Management Services* magazine.

We would like to use EDP for general ledger work, sales analyses, payroll records and reports. We prefer in-town facilities. These generally have inadequate programs available for CPAs. Flexibility of financial statements is a great problem. Cost appears to be a deterring factor. We are exploring various facilities: banks and service bureaus on a limited scale. We hope to have some very limited work on one or two clients automated by the end of the year.

Most of the questions do not apply, since we have no data processing equipment. We are currently studying the feasibility of using a Monroe Punch Tape machine for our bookkeeping work.

I specialize only in corporate tax problems. I am merging a smaller firm into mine in 1966 and one junior partner will attempt to partially specialize in the computer area in addition to management services.

Answers to our questionnaire are misleading. One might believe from our answers that we were hostile to EDP. Such is not the case. We have never used EDP primarily because we have felt that the use in our practice would not justify the cost that would be required. We are a small firm. A large number of the total clients of ours come to us for individual income tax returns only. None of our staff has been trained thoroughly in EDP, although several have had casual acquaintances with EDP equipment. We have not studied the

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sources of EDP training and, consequently, we are not in a position to say whether existing programs are adequate. We know of no clients that we have lost because EDP has been offered by someone else, nor do we know of any clients that we might have had if our training in EDP had been more complete. We are aware of the impact of EDP and plan in the near future to direct considerable attention in this direction.

Our firm is only three years old, so all of our clients are relatively small. We feel that it will be three or four more years before we need to get into EDP.

We are aware of the terrific impact the computer will have, and we are just beginning to train ourselves to work with the computer. We do not use it in our office, nor will we in the near future; but we intend to make ourselves proficient in computer usage for the benefit of our clients.

Our office is presently considering ordering either one of the following two systems:

1. IBM 360/20
2. NCR Series 500

A member of our staff has attended two familiarization courses presented by equipment manufacturers to help us to determine what, if anything, we should do about getting into the computer field. Our practice is located in a small community with no computer systems presently in the area.

Although I am an individual practitioner with three employees, I anticipate using services or installing a system myself. I shall be discussing the establishment of a computer program training school and service bureau work with a gentleman in New York on 7/6/65.

We are at the present time studying a Monroe Punched Paper Tape system and hope to install it this year.

In regard to EDP, our firm has not discussed it sufficiently to "have a plan." I suggest a copy be attached for our retention and future comparison in any further questionnaires.

Have been in practice for myself only since 9/64; therefore, future

plans in question as clientele increases. Prior familiarity with EDP obtained with previous employers.

1. Questionnaire does not cover "Clients' Use" of "off-premise" EDP facilities.
2. Size of our community to 1965 has not warranted EDP use by our CPA firm; growth of community in past year, however, has brought about the recommendation to and subsequent use of "off-premise" EDP facilities by some of our clients.

We have made no definite plans for use of data processing equipment, but we have considered tape cutting machines for future uses.

Very shortly we plan to put a three-M.D. office on EDP services for accounts receivable. We find in our geographical area that EDP would not benefit many of our clients. However, the systems we install enable a client to grow into Peg Board System and then into EDP. At this point one of our clients is ready for EDP; however, we cannot seem to convince them as yet.

SECTION 5

Survey critique

This survey does not appear to consider the use of service bureaus which are the full source of our EDP equipment, and no need is felt at this time to change this arrangement. It was difficult to apply certain questions to our situation.

I am sorry to say that we do not feel your questionnaire is very clear. We believe the term computer referred to stored memory capability and answered accordingly. Our only equipment is a Friden Add Punch operated about 25 hours per month. For Item 10 by "using," we "use" a processing center.

1. I don't mind circling correct answers, but can't you do the transferring either by eliminating it entirely (printing the questionnaire on sheets that can be optically scanned) or having some bright, young lady do it faster and more accurately for me?
2. Regarding "Number of Clients." Difficult to give a categorical answer to this. For instance, we make up a partnership tax return and separate returns for each of five partners. Is this one client or six? What about affiliated corporations under the control of a single person?
3. Item 14—I don't know what you mean by "EDP engagement."

If you mean audit of a company having EDP equipment, answer is 6-7; if you mean helping client to install EDP equipment or anything other than auditing, answer is "no."

4. Item 27—This is probably too elementary, but how do you define a "computer"? Are Burroughs NCR core storage (99 ± totals) machines, which are used in banks for continuous computation of interest on savings of c's, "computers"?

I cannot think of a quicker way to discourage members from answering a questionnaire than this needlessly complicated format of transferring circles to answer sheets. If this were not a subject of vital interest to me, I would never have bothered to read past the first page.

What is software? I think you could make better use of the English language in framing your questions.

I have purchased several books on data processing but have not as yet read any of the books. Therefore, many of the terms used in the questionnaire were "Greek" to me, and my answers may not have been consistent.

Suggest that page 1 instructions are just a bit confusing: "Circle the number, etc.," leads one to want to "circle" on the answer sheet also. "Mark the answer position" leaves one in doubt as to "what kind of mark" to use until page 2 "Solution" visually shows that the kind of mark required is a heavy dash. Here's a rather verbose suggestion: "Transfer circled number position *by means of a heavy dash between dotted lines* on answer sheet Item 1.

I did not complete the attached sheet as it is time consuming, and I can't see circling 8 for number of days in week. This must be number of days used by the national firms.

There ought to be an easier way.

Why are numbers missing from every other row of answer sheet? Why not have the top of each column numbered only? Because of above confusion, please fill in the answer sheet on the basis of my answers to the questionnaire. Perhaps you should have planned to do it that way instead of issuing such complicated instructions.

Have you calculated the cost of this survey at \$25 per member?

Down time? Is the benefit worth the cost? Those are the questions we help our clients decide. How about ourselves?

I am a sole practitioner, no juniors, only a part-time typist. I'm satisfied if my client has a bookkeeper, let alone a computer.

It would have been much simpler if questions *and* answers had the same corresponding numbers. As it is, it's too much trouble to underline the answers. Sorry, but you will have to do it yourselves.

We had series 50 IBM equipment in 1961. This was transferred to the office of our largest client in 1963. We no longer operate any equipment. The design of the answer sheet to this survey is terrible. Vertical questions call for vertical answers.

As I have just opened my own office and have no staff or any clients, I believe the questionnaire in its entirety is inapplicable to me.

This questionnaire and survey does not seem logical for the small individual practitioner.

This questionnaire should not be required of a sole practitioner.

I have a feeling these answers are misleading because they mix up audit, MAS, and internal management. I often did not feel sure just what answer to give. For example, in Section VI: (1) Should answer include programs written by MAS for clients or only programs written for own use? (2) Should major changes in programs made when installing disks be considered a new program or not? (3) Should programs written for use on audits be included?

Some of the exact numbers are also guesses, as in Section V, because the firm has many offices and clients. If we had checked the highest number given, it would still have represented less than 1 per cent of the clients (and those numbers would give no recognition to either relative size of client or relative amount of use).

Questions 51-58 are quite unclear, if not completely lacking. There is a lot of talk *about* questions 51-58 on page 8, but there are no questions which I can identify as questions. On the fourth reading, however, I concluded that you mean list for questions 51-52 our largest computer and for questions 53-54 our next largest one, etc. Well, we have none. And we have none on order.

Questions should have been numbered.

SECTION 6

Cost, volume, and rate items

Use service bureau for processing at five cents per entry.

1. We use Monroe Add Punch unit to process clients' work on paper tape which is sent to a service bureau for completion (cost \$2,100).
2. We use a Burroughs E2100 direct accounting computer (hard ledger cards—no storage capacity—100 units of memory). It is used only 25 per cent of the normal 40-hour week and is externally programmed. It is used for computing payrolls and general accounting application for what we consider to be medium-sized companies (cost \$22,000).

A one-year trial of IBM for monthly service accounts and special services to clients was closely watched, with dual runs and cost studies. The horrible result was that the IBM cost of monthly service was twice that of traditional means and the special services for clients did not work out to mutual best interest. We also found that in order to make the IBM department a break-even operation at best, we would have to, in effect, become a service center which we feel is incompatible with public accounting.

Only two of my clients have a sales volume in excess of \$1,000,000 a year, and neither has enough small detail volume to make the use of a computer program feasible.

We have not perceived a need for a computer for ourselves or any of our clients; however, we have only three engagements where the fee exceeds \$1,000 per year. Our practice is only four years old.

We are most pleased to try to cooperate with you and are also interested in computer developments. We are a 1½-person office (one half-time assistant) grossing about \$15,000 or \$16,000 (plus we are given interests in real estate deals as an additional gross). To date, we have made several contacts with IBM organizations, but have not taken any of them on. Several of the local accountants (competitors) have installed IBM's \$450 a month record keeping setup.

We are a small firm with three staff men including owner. About 35 per cent of our gross volume is in write-up work. We tried a punch tape machine with a processing station in another city. It was unsatisfactory. Cost was too much. We have plans to add two new men in the next year, one in August, 1965, and another in February, 1966. We recognize the need for EDP equipment, but our experience has been that the cost is prohibitive for small assignments.

Most of my clients are small. Only four go over \$500,000 per year. One has considered putting payroll on IBM, but we turned it down as there are only 75-90 employees; and it would not be feasible. I am interested in the results of this study.

SECTION 7

Needs for training and aid

My practice is two years old and is approximately 60 per cent tax work and 40 per cent certified audit work. I would like to know the following:

1. Cost of EDP as it affects small clients.
2. How small a business can use EDP economically.
3. What type of work can EDP be adapted to in small businesses?
4. What can EDP do in a small practice or for small clients.

Generally, my fellow practitioners in this area and I know very little about EDP and computers and would appreciate a resume of their potential for the small business and the small accounting practice.

We need instruction badly here. One of our CPAs took the AICPA course in ADP but felt it was too advanced for most of us with no background and no clients with data processing equipment. We would appreciate perhaps a series of courses from the very elementary on up. Most of your courses to date have been presented in cities great distances from us.

There seems to be a singular lack of *independent* computer information and educational matter available to a small, beginning individual practitioner. Where is the best place to begin getting competent *practical* information?

I should like to be kept informed as to when the American Institute or state society is giving any courses close by. Although I filled out a

request in mid-April for a course with equipment manufacturers on an inquiry from the Institute, I heard nothing further. In addition to this, I have received notices of other courses, but the communication has reached me invariably after the course has been given.

I would be interested in *critical point*, i.e., minimum quantity (of certain types of clients) justifying EDP in CPA's organization, including co-op, or other service outside. This might be revealed in this survey but perhaps not highlighted, however, only if all clients are assumed to be a type justifying EDP operations in CPA's office—even if mere supervision of product. Catalog of computer types was appreciated.

The Institute should maintain a program library and sufficient hardware to service the small- and medium-size firms. If hardware is not practical, the Institute should maintain a directory of service centers together with "price lists" and a technical staff to aid small firms in selecting programs.

1. We are and have been studying the computer program for two years, 1964 and 1965.
2. We have two persons who have attended AICPA or company programs.
3. Two CPA firms with which we cooperate have equipment—each has separate programs. One or two of our clients use the data processing centers for payroll or royalty runs only.
4. We are interested in evaluation of the various services and equipment available.

I plan to attend the CPA seminar on July 8 and 9, 1965, because I have one client who has installed IBM computers, and I may need to know something about the business, or it might be well if I did.

Firm is at a complete standstill at this time on this important field—time for training, where to have personnel trained, or obtaining trained help are the big questions. The firm will invest the money needed to move ahead if program and personnel are available.

We are hoping that the AICPA will come up with additional EDP courses to enable us to obtain a better general knowledge of computers, their capabilities, and the methods of programming.

We have been holding up on this EDP subject until something came

to us a bit more disinterested than the promotion material of the companies which have electronic equipment to sell. We are a small firm and most of our clients are very small; very, very few have a gross of a million dollars—most of them far less. We are very doubtful of the whole EDP program as a boon to our clients in general. Tell us how a firm our size can fit into all this.

Am interested in taking courses in EDP. Would you recommend any particular school?

Let's see more EDP development courses!

I think it's about time the Institute gave consideration to providing access for the small accounting firm to the large computer operations. Unless something is done, heavy inroads into the practice of the small firm will result from the operations of the "computer centers." Our heads are in the sand, as usual.

I need rather extensive education in this area before I can fully appreciate the problems and opportunities. Am so busy with other facets of the practice and so limited in personnel because of the "market area" that I have not given sufficient attention to EDP. I hope to take advantage of an AICPA program to determine whether I should move in this direction. An acquaintance-type, orientation-type session is needed.

1. Clients own or rent computers.
2. Installed by NCR.
3. Accounting firms require material additional experience before correct economical system could be recommended to clients.
4. Most clients involve tax accounting preparations and representation.

I would like to see a full-time accounting system placed on any one of the present computers, namely where a general ledger and books of original entry resulting from all the tape and card punching resemble the conventional ones. All installations I have seen result in trial balances, not ledgers and journals.

Bravo! Good luck. Let us know what happens.

We are currently spending much time deciding what to do for the future. If some of our answers seem to contradict others, it is because we are deciding between joining a cooperative processing center

and buying our own computer. Frankly, the obsolescence factor is very important to us, and we are very concerned lest we purchase a computer and find it obsolete before we can recover our investment. We are also concerned with the cost of transferring our clients over to computerized techniques since we feel we will have to absorb such costs. We feel that we can afford to absorb it once, but if in two years (for instance) our proposed computer is obsolete, we do not want to have to absorb such a cost again. We know that you cannot stop progress but we can't help yearning for some degree of stabilization in the whole computer field. Finally, we feel that the best thing that the AICPA could do to help us is to conduct a course telling just what each manufacturer's equipment can do and the relative cost thereof so that we obtain unbiased information with which to make our decisions. As it were, we need an "audit" of the various manufacturers' claims.

We would be extremely interested in an extended educational program covering all phases of EDP, starting with the basics. We would be particularly interested in application for a small- or medium-size CPA firm.

EDP is revolutionizing accounting. Both private and public. Practicing public accountants run the gamut from the individual practitioner to the Big 8. There is a great diversity in the nature of the services performed, particularly among the smaller firms. The Institute could render a prodigious service if it could develop specific guidelines for acquiring EDP know-how and capability applicable to specific types of firms. Thus, each firm could proceed under a guideline designed for its own size and nature, making appropriate modifications as it moves along. I believe that many smaller firms are so overawed and overwhelmed by the EDP problem that they are reluctant to come to grips with it.

1. Questions regarding 1964 are omitted because I started my practice in January of 1965.
2. I have had in the past some experience using punched tape and an EDP service but no experience with computers. I am very interested in this field, but I find the available information too technical and usually not written in such a way that informs me how computers might be used to provide clients with adequate service. I would like to see a publication that shows clearly the practical uses of a computer insofar as it is practiced in connection with a small practice.

The American Institute could provide a tremendous service to those of us with smaller firms if it could develop some EDP courses beyond the introductory course it now offers, but with the same high quality. At present those of us who have completed the introductory course can only look to manufacturers' courses for further information and training.

Objective hardware evaluation would be most helpful.

I have found that most EDP seminars are inadequate for small- and medium-sized CPA firms with smaller clientele.

Section IV, Client EDP Services, has spotlighted for me what services I could offer if I had the training. I am very anxious to learn not only the workings of the computer but also the services I might provide.

Suggest that expanded workshop courses of at least two to three weeks' duration be offered to train partners and staff of small CPA firms in the fundamentals of EDP services. Said courses should include courses in systems work on a practical down-to-earth working basis in order to provide the partners and staffs with sufficient background to make feasibility studies, analyses, etc. One of our partners attended a recent course and did not feel it went far enough.

My firm would be very much interested in formal study courses given in the field of EDP.

Suggest AICPA furnish local practitioner with rule of thumb guidelines of when EDP applications become applicable, generally speaking.

The AICPA should conduct more frequent and *smaller* seminars on EDP applications and use.

More courses needed at economy price for small practitioner on computers and EDP generally.

While you have requested information regarding machines, etc., you have not asked for the knowledge and experience that many CPAs may have. Many, like myself, have been required to work with and for an installation for clients without the need of using or having equipment in my own office. It might be wise to consider a questionnaire to determine if we have any CPAs that could be

considered specialists in this field who could possibly work as consultants for other CPAs.

We in our firm have had no experience with punched card equipment or computers as yet, but several of us wish to learn more about them.

If the Institute were to put out a study guide making recommendations as to the reading material, I believe it would be most helpful.

As a small practitioner in a city of 25,000 with small clients, I have not been able to see how to use computers, but I wish to keep informed and to use the latest and best methods.

The introduction to Automatic Data Processing was filled, and I believe the demand is great enough to warrant another class in this area.

What are potentials for tax work and write-up work on computers?

Would appreciate information on best procedure for obtaining introduction to EDP for one who has practically no working knowledge or familiarity with EDP.

Would appreciate a course not given during tax season in the evening under the accounting department at the local university. Cannot learn enough from one-day or two-day seminars, nor from equipment manufacturers pushing their equipment.

I am interested in learning about computers, and I'm waiting to see if the Institute is going to put on a program for training in the use of computers.

I would like to see the AICPA sponsor a course in which the practical application of EDP methods to an accountant's practice would be discussed, especially for the handling of write-up work.

I, as well as many other small practitioners, have a basic need for instruction in computers, beginning with the elementary. We need textbooks written in the simplest language progressing to the more sophisticated. I have a large client who is considering the purchase of a computer, and I will be requested to choose between four that are offered.

I'm an infant in this EDP business. I am aware that it is here to stay and I'm interested in a training program to make yourself thoroughly familiar with all phases.

Glad to see progress in this direction. We need it, we know it, and we are always glad to cooperate for the common good.

Much needs to be done to make ADP [*sic*] available to the small client. Every business can't be the size of General Motors!

I would like to enter into a form of EDP equipment as I feel that it is a necessity in the future if accountants are to give full service to clients and to survive as small- or medium-size firms.

SECTION 8

No need for EDP use

I have a small (myself and one full-time staff accountant) practice. The main source of fees is write-up work for clients that are too small to consider EDP and preparation of income tax returns. Therefore, I do not think my answers on the enclosed questionnaire are representative of the average accounting firm.

No computers used. Typewriters and adding machines all that are needed at present.

I am a sole practitioner and have no present use for EDP equipment.

This partnership formed 1/6/64. Two of the partners have a separate partnership in another town. Clients are primarily small businesses. Primary sources of income to date are:

1. Small business and farm tax returns.
2. Audits of hospital and farmers cooperatives.
3. Write-up work for small businesses.

EDP facilities are not yet appropriate for type of clients or locality.

My practice does not have clients of a size that computers are necessary. I have also noticed a reluctance by my clients to even consider any type of EDP due to cost and the errors that are apparent in the work of others who have such systems. I might also add that since the Internal Revenue Service has switched to EDP

in this district, my work has increased materially in replying to inquiries of little or no importance. It is my opinion that EDP is helpful as a tool of accounting, particularly in a large volume of transactions, but at the present time EDP has been oversold.

My practice is involved only with businesses too small to utilize EDP. Should I acquire larger clients who could utilize EDP, there are available such services from various people who can pick up the work in an evening, put it on a machine, and return the product the next morning. Since my practice is limited, I do not have plans for future use of EDP, except if the need arises. EDP would be utilized where economically feasible.

Only mechanical equipment in my office now (other than typewriters, etc.) is a model 33 NCR Accounting machine I use to maintain accounts receivable for three clients. These and other clients are not large enough to require more sophisticated equipment yet. My clients' main interests seem, naturally, to be to minimize their tax bills.

Am a lone wolf and have no employees and don't need any hardware. My clients aren't large enough to need it and wouldn't pay for it if I tried to introduce it.

I am an individual practitioner in a small community and do not anticipate any immediate or foreseeable applications of computer equipment.

No use contemplated. No, cannot use.

Most of my work is for the very small business and EDP is too costly at this time.

We have no experience with EDP and have no present plans to start up any program in this field.

Our work principally is comprised of taxes, audits, and write-ups in that order. Our clients are not ready to accept EDP; some have used it in the past but were unhappy with it. Might add volume ranges up to 2 or 3 million per annum.

As a sole practitioner I have no demand for EDP facilities. I have done internal auditing and analysis for one large firm for the last four years and one audit for a firm involving computers. I will convert to EDP when I find it advantageous to do so, not before.

COMPUTER RESEARCH STUDIES

No computer services are used.

Most of these questions are inapplicable to me, since this is my second year of practice and I do not use EDP facilities as of the present time.

We have found no instance for use of computers with existing clients. However, we periodically review clients' needs to see if some sort of mechanization would be beneficial.

If we in the future find that a client would benefit from either tab equipment or full computers, the services of one of the larger CPA firms would be employed for programming, equipment selection, and installation.

I opened my own office about 1½ years ago in a small community and have had no contact with computers. I did have some experience in this area while working for a large national firm.

This is inapplicable to us.

I practice as an individual in a limited way. No equipment used.

No computer equipment is used.

Too small a firm and clients could not afford service.

At the moment my "firm" consists solely of myself! None of my clientele seems to be growing large enough to require computer service.

I do no work with EDP at this time.

This questionnaire does not apply to me or my practice.

I am semiretired, and I do not intend to do anything with computers, etc.

SECTION 9

Computer cooperatives

We operate (and have for a number of years) a service bureau for *CPAs only*. We process from tape largely but also process from specially prepared transmittal sheets furnished by us. We have been very successful and have a healthy rate of growth. I am a member of AICPA, local state society, and a member of the state society committee on electronic accounting. I also have a successful CPA practice.

I use a punch tape accounting machine and send tape out to service bureau, another CPA office. My programs and setups must conform to his, as I use his software.

We have a Friden Punch Tape machine and process through a local CPA firm which has the equipment.

At present I am using the Monroe 1-DP Punch Tape. As of July 1 I am renting time on an IBM 402 and will do my own processing and should do another accountant's work. My ultimate plan is to form some sort of cooperative between 5-10 accountants wherein we can do our own processing for faster reports and to expand our service to clients.

When we started in this field, we offered the service to other CPA firms. A limited number took advantage (three CPA firms in 1959).

COMPUTER RESEARCH STUDIES

Our work from other CPAs has increased each year; in 1965 we are doing work for nearly seventy CPA firms. Our private practice has been reduced in this change; as a result, most of our time is spent working with other CPA firms and their clients.

Cooperative venture to provide EDP services to clients in this area is in discussion stage by several CPA firms.

We are very much interested in the possibility of cooperative use of computer equipment by small CPA firms. We would be interested in becoming a member of such a cooperative.

It is evident that if CPAs are going to maintain a competitive position in the future, they must have access to a computer and a working knowledge of computer programs, etc. For most smaller firms the cost in time and money of having their own computer is prohibitive. It seems to me that service bureaus offering computer services cooperatively owned by and for CPAs through the AICPA in several different areas of the United States would be a desirable solution to the problem.

Obviously, a firm of this size is not in a position to provide EDP services on its own. However, we would be interested in a cooperative type installation.

We are in contact with other small individual practitioners with the thought of a small computer jointly used.

SECTION 10

Miscellaneous

No computers in this area as yet. Reception from clients, banks, etc., extremely good. In community of this size public accountant must run a "service bureau" type operation and be prepared for a variety of programs.

I am interested in the feasibility of utilizing EDP equipment probably in 1966 or 1967. At present I do not have suitable office space for such equipment, but plans are now going forward for construction of new offices which I hope to occupy early next year and which are being designed with this type of expansion in mind. My immediate problem is cutting time involved in servicing monthly write-up clients; therefore, I am primarily interested in some type of punched tape equipment to be used in conjunction with a commercial tabulating center.

Only in second year of practice. In process now of determining hardware to acquire. Program is for ordering at least enough to get started in late summer.

Presently undergoing feasibility study to determine practicality of producing some of the lower level accounting-bookkeeping functions by EDP equipment through service bureau.

Computer-CPA situation seems to parallel the farm-machine area.

COMPUTER RESEARCH STUDIES

One firm member has studied (on his own) computers and consults with clients about computer applicability, extension, discontinuance, etc.

Use of service bureau in preparation of individual income tax only use of EDP services.

This is my first year as an individual practitioner and as yet do not have clients large enough to offer EDP. I am aware of the importance of EDP and do plan to offer machine accounting as soon as it is financially practical. I will probably use a tape machine and use a service center for the interpretation work.

Computer service is being used for tax returns.

For 1966 tax season converting tax returns preparation to computer prepared returns.

Plan to attend a manufacturer's school in late summer to get introduction to EDP.

Sheet listing types of computer equipment retained.

Time will tell how soon our firm will use computers.

I am no longer in individual practice, having merged my firm. This questionnaire will be answered by the firm if they are on the sample selected for this project.

Three clients are using NCR or Burroughs accounting machines for all books of original entry but no true EDP.

Most of my work is tax accounting.

We own a punch tape machine for bookkeeping purposes.

Small one-man practice. Practitioner has had some experience with EDP in private industry before start of practice. Would handle client on EDP if practicable for client.

I am a retired partner, a consultant, with no right to practice alone, within certain limits.