A Microcomputer Accounting System For Your Client

By Harold C. Gellis

Here is a systematic methodology to guide a practitioner in recommending and installing a microcomputer system for a client. The author presents a comparison of numerous software packages that may meet certain system needs. Selecting the proper package is the key element in designing a system—a task not to be undertaken without careful preparation, for which the author presents a road map.

Today's business environment is fast-paced and competitive. To survive and prosper, a computer-based strategic-information system is essential. Such a system can help the company to manage its financial and operating results efficiently and provide management with timely and accurate information about the company, its customers, creditors, and competitors.

It is not surprising that more and more companies are recognizing the need to automate their accounting and financial systems. This results in a new opportunity for CPAs—computer consulting. Installation of microcomputer accounting systems for small to mid-sized businesses is a fast growing and successful practice area.

THE CHALLENGES OF DESIGN

The challenges facing a practitioner are daunting. There are numerous types of microcomputers ranging from desktop to laptop, and just as many brands. In addition, the increasing need for "connectivity" among workstations, workgroups, and far-flung business units has resulted in a proliferation of network designs and data communications configurations.

Accounting software represents another challenge. There are hundreds of different accounting software packages on the market. The price range, features, and capabilities among these products is enormous.

The almost infinite variety of hardware and software configurations challenge the practitioner interested in implementing a client's computerized accounting system. What kind of computer hardware and accounting software package is appropriate for a particular business? Should a stand-alone system be installed or a local area network?

There are other considerations: How should conversion of the client's manual accounting records to the computerized system be achieved? When should conversion occur? What new accounting and operating procedures will be required, and how will they be implemented? What new security features will be required?

STEPS IN SELECTING AND IMPLEMENTING A SYSTEM

A phased implementation divides the process into manageable components and allows for evaluation of the effectiveness of each step. The steps involved include the following:

- Analyze the client's financial information needs;
- Describe potential benefits;
- Identify alternative systems providing proposed solutions;
- Prepare an implementation plan;
- Install the system; and
- Assist the client after installation.

At the end of each step, a document reviewing the activities performed and conclusions reached should be prepared. Each document should be acknowledged by the client to indicate agreement.

The steps comprising phased implementation of the system should be described in an engagement letter. After a description of objectives, the letter should list specific procedures to be performed in implementation.

Analyze Client's Accounting and Financial Needs

The initial phase determines whether a client's manual accounting system should be computerized. Usually, either a problem in accounting functions, or inadequate information from financial statements and reports, indicates deficiencies in the current accounting system.

For example, a company's financial reports may be chronically late or inaccurate, and excessive overtime is required to bring records up-to-date. Other symptoms of a poor accounting system include the following characteristics:

- Inability to take advantage of purchase discounts;
- Overdue and late invoice payments to vendors;
- Excessive collection time of customer receivables;
- Inability to handle customer inquiries about inventory;
- Excessive time lag in preparing customer orders and bills; and
- Rapid turnover of bookkeepers.

Describe Proposed Benefits

The second step is to describe potential benefits from implementation of the proposed system. Improvement in cash flow, for example, is one important benefit. A

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computerized accounting system can generate an aging of accounts receivable schedule to show the breakdown of customer balances by amount and time period. Past due accounts can be noted and remedial action taken quickly. Other benefits include:

- Reduction of inventory carrying costs;
- Expediting of sales orders processing; and
- Reduction in payroll processing time and expense.

Identify Alternative Systems

In many situations involving proposed computerized accounting systems, a hardware environment is already in place. A client may already have an IBM PC-XT or PS/2 that is being used for word processing or spreadsheet analysis. Accordingly, an analysis of proposed system alternatives will usually concentrate around selection of appropriate accounting software packages.

There are different categories of software: bookkeeping, integrated accounting, write-up, audit, and specialized applications. Both bookkeeping and integrated accounting software maintain a business's chart of accounts, process transactions, and prepare financial statements. Bookkeeping software is usually cheaper than integrated accounting software but lacks the functionality and power. Integrated accounting software consists of the following basic software modules:

- General Ledger;
- Accounts Receivable;
- Accounts Payable;
- Inventory;
- Order Entry; and
- Payroll.

What kind of computer hardware and accounting software package is appropriate for a particular business?

Audit software such as Pre-Audit is used by auditors to produce an automated trial balance and sets of financial statements that are integrated with audit workpapers and supporting schedules. Specialized, "vertical" application packages automate the business and accounting functions of a particular industry or market. These packages may be third-party "add-ons" to an existing line of accounting software or they can be "stand-alone" products.

Prepare an Implementation Plan

The implementation plan is a document that lists a series of step-by-step procedures that include: installing the various accounting modules; designing the chart of accounts and master customer, vendor, inventory, and payroll records; and entering the opening balances for each module.

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In addition to serving as a road map, the implementation plan provides a basis for estimating fees to charge the client. It is also useful for monitoring the progress of the engagement.

Install the System

Installation comprises client training, system conversion, and monitoring. Designated client staff should be trained in operation of the software. They should also be responsible for reviewing the adequacy of account codes for the general ledger,

customer, vendor, inventory and payroll master records.

A conversion timetable should determine the schedule of module installation. If an integrated accounting system is used, beginning account balances for the general ledger should be entered first, followed by opening balances for the remaining modules.

Afterwards, transactions should be entered into the computerized system for processing. While the new system is being installed, the manual system should be maintained. This is called "running the systems in parallel" and ensures that if the computerized system has bugs or errors, the manual system will still provide backup. After the accuracy of the new system has been proven by running it for several transaction cycles, the manual system can be terminated.

Provide Assistance after Installation

Even after the system has been successfully installed, the practitioner has opportunities to provide additional consulting services for a client. These include a review of the client's operating procedures, and evaluation of reports and statements generated by the system.

Documenting the system by writing reference and operators' manuals for the client's staff is another area of assistance. Training of new staff and advising the client of software updates and hardware developments are additional services that can be provided.

BENCHMARK CRITERIA

No one accounting package can completely provide all accounting and financial solutions for any company. Instead, the accounting package providing the majority of the proposed benefits should be selected. To accomplish this, each potential software candidate should be evaluated against a series of benchmark criteria that includes:

- Capacity;
- Installation;
- Documentation;
- Ease of use;
- Error handling;
- Support;
- Security;
- Integration; and
- Interface.

Capacity

The system should be able to accommodate current and future processing activity. General restrictions for accounting software include excessive RAM or memory storage requirements, limits on the amount of accounting data that can be stored in records and fields, and limits on the number of transactions in a period.

In addition to general restrictions, each accounting module may also have specific limits. For each of the following modules, the components that should be examined for capacity limitations include:

General Ledger

- Maximum number of accounts;
- Restrictions on account coding structure; and
- Maximum number of reference journals.

Accounts Receivable

- Maximum number of customer records;
- Limits on accounts receivable control accounts; and
- Limits on the number of aging periods.

Accounts Payable

- Maximum number of vendor records; and
- Limits on accounts payable control accounts.

Inventory

- Maximum number of inventory items and categories; and
- Limits on pricing structure.

Order Entry

- Restrictions on format of sales invoices; and
- Limits on number of sales discounts on sales invoices.

Payroll

- Limits on number of payroll deductions;
- Limits on number of payment frequencies; and
- Limits on number of state payroll tax calculations.

Installation

The system should be easy to install and installation support should be provided by the vendor. To simplify installation, many accounting software packages have an overall software product to coordinate the activities of the integrated modules, such as ACCPAC's Windowing System Manager and RealWorld's System Program.

Documentation

The software package should have an installation manual with a table of contents and an index. Documentation should contain a tutorial with step-by-step instructions to walk the user through the system. A tutorial enables a user to set up financial records and accounts for a hypothetical company, enter transactions, post, and produce financial statements and reports.

An operations manual should describe actual workings of the program, operational procedures, and the output generated. The following information should be provided:

- Flowchart of the program;
- Description of files used;
- Samples of computer screens used by the program;
- Sample reports;
- Error messages;
- Troubleshooting guide; and
- Safeguards.

Ease of Use

It should be possible to easily view, edit, add, or delete data entered into the system. Data entry forms that match screen displays and a menu structure that provides easy access to different options and screens facilitate data entry.

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One-Write Plus's data entry screens are exact replicas of manual one-write system cash receipts, disbursements, receivables, and payable journals. Data entry by a company's bookkeeper who is unsophisticated with computer methodology is, therefore, painless.

ACCPAC allows modifications to be made easily to entered data. Transactions, accounts, journals, and ledgers can also be viewed on the screen or printed on hard copy to facilitate data review.

Error Handling

The program should contain reliable error capturing and reporting facilities. Operator, program, hardware and data errors may occur in the computer system.

An operator error occurs if the operator enters invalid data. A program error, on the other hand, is an error in the logic of the program itself and results from a step in the program being executed out of sequence.

Hardware errors arise if there is a power interruption. Data errors result from erroneous entry of data such as incorrect dollar amounts. The editing function corrects data errors.

EXHIBIT 1
COMPARATIVE INFORMATION ABOUT ACCOUNTING SOFTWARE

Product	***ACCPAC Plus 6.0***	***Client Write-Up 2.20***	***Cyma Accounting 2.0***
Address	Computer Associates 711 Stewart Avenue Garden City, NY 11530 (800) 531-5236	CPAid 1061 Fraternity Circle Kent, Ohio 44240 (800) 227-2437	CYMA/Worldwide Technology 1400 E. Southern Ave. Tempe, Ariz 85282 (800) 292-CYMA
Type of Software	Integrated accounting	Write-up	Integrated Accounting
Modules Available	GL, AR, AP, PR, IN, OE	N/A	GL, AR, AP, PR, IN, OE
Cost	$795 per module	$995	$495-$1195 per module
Operating systems supported	MS-DOS OS/2	MS-DOS	MS-DOS SCO XENIX
Networks supported	Novell, 3COM 3+, IBM PC	Novell, 3COM 3+, IBM PC	Novell, 3COM3+, IBM PC
Support Policy	Different support plans available including SupportPlus maintenance contract	Free (includes Bulletin Board Service)	$2.00 per minute with $20 minimum: toll-free line; authorized support centers throughout USA

Product	***DacEasy Accounting 4.1***	***Great Plains Accounting***	***Hashavshevet***	***NewViews 1.13***
Address	DAC Software, Inc. 17950 Preston Rd. Dallas, Texas 75252 (800) 992-7779	Great Plains Software 1701 Southwest 38th St. Fargo, N.D. 58103 (800)456-0025	Hashavshevet 65 Petach Tikva Rd. Tel Aviv, Israel 67138 (03) 561-1961	Q.W. Page Assoc. One St. Claire Ave W Toronto, Canada M4V 2Z5 (800) 322-8813
Type of Software	Bookkeeping	Integrated accounting	Multi-currency applications	Bookkeeping
Modules Available	GL, AR, AP, PR, PO	GL, AR, AP, PR, IN, OE	GL, AR, AP, IN	n/a
Cost	$149	$795 per module	$2,000	$995
Operating systems supported	MS-DOS	MS-DOS Macintosh	MS-DOS	MS-DOS
Networks supported	Novell	Novell, 3COM 3+, IBM PC, Appleshare, Tops	none	none
Support Policy	$45 for 30 minutes; $90 for 1 hour	Different support plans available	free	free (no toll-free line)

Legend

GL - General Ledger AR - Accounts Receivable AP - Accounts Payable IN - Inventory OE - Order Entry
PR - Payroll PO - Purchase Order AR/IN - Accounts Receivable/Invoicing

EXHIBIT 1
COMPARATIVE INFORMATION ABOUT ACCOUNTING SOFTWARE (Continued)

Product	*One-Write Plus 2.06*	*Peachtree Complete III*	*Property Manager*	*Quik InvoicePlus/Reports*
Address	Great American Software 615 Amherst St. Nashua, N.H. 03063 (800) 388-8000	Peachtree Software 1505 Pavilion Place Norcross, GA 30093 (800) 247-3224	L & L Services 102 Suite E. Centre Blvd. Marlton, NJ 08053 (800) 544-7890	Crystal Services 890 W. Pender St, Rm. 450 Vancouver, Canada V6C 1J9 (604)681-3435
Type of Software	Bookkeeping	Bookkeeping	Real Estate applications	Service Companies; special reports
Modules Available	GL, AR, AP, PR,	GL, AR/IN, AP, PR, IN, PO	n/a	n/a
Cost	$149-$299	$199	$1,995	$345/$395
Operating systems supported	MS-DOS	MS-DOS	MS-DOS OS/2	MS-DOS OS/2
Networks supported	none	none	Novell, 3COM 3+, IBM PC	Novell
Support Policy	$1.50 per minute with $20 minimum; $125 per year with unlimited calls	$1 per minute with $20 minimum; 65 authorized support centers throughout U.S.A.	$495 a year unlimited support	$75 per year unlimited support

Product	*RealWorld 5.0*	*SBT Database 6.3*	*System/II 3.08*
Address	RealWorld Corporation 282 Loudon Road Concord, N.H. 03302 (800) 678-6336	SBT One Harbor Drive Sausalito, Calif 94965 (415) 331-9900	Mesa Software 3435 Greystone Dr., Rm 106 Austin, Texas 78731 (800) 531-5483
Type of Software	Integrated accounting	Integrated accounting	Bookkeeping
Modules Available	GL, AR, AP, IN, PR, OE	GL, AR, AP, PR, PO	GL, AR, AP, PR
Cost	$695-$995 per module	$295 per module	$795-$1,595
Operating systems supported	MS-DOS ALTOS XENIX SCO XENIX	MS-DOS XENIX Macintosh	MS-DOS
Networks supported	Novell, 3COM 3+, Alloy	Novell, 3COM 3+	Novell
Support Policy	$175 per module for 6 months	Free support for 5 years	Free support for all current versions

Support

Software vendors should provide the following support:

- Classroom training, courses, and seminars;
- User groups;
- Toll-free hotline; and
- Upgrades and revisions available at nominal cost.

Security

The software should provide controls to safeguard the integrity of the accounting software and data by ensuring that only valid data is entered into the system, and that it is processed and reported properly. Two methods of ensuring system security are passwords and audit trails.

No one accounting package can completely provide all accounting and financial solutions for any company.

There are different levels of password protection. A user password allows only authorized users to access the system. An application password allows access to a specific module, such as General Ledger. A function password allows access to a specific function within a module, e.g., transaction entry.

Audit trails link data input, processing, and output. An audit trail provides evidence of all transactions entered into the system, the processing that occurs to these transactions, and provides a path to the final reports.

The audit trail begins at data entry. If each transaction batch and each transaction within the batch are assigned a sequential number, then accountability for the transactions is enhanced, and each transaction can be traced to the final reports. Another security feature, batch totals, ensures that all data is entered properly by maintaining a running total of debit and credit inputs.

The software should not be able to post transactions prior to the user obtaining a hard-copy printout. By listing all transactions that have been posted to the ledger, a posting journal provides evidence of data that is processed through posting.

Integration

Integrated accounting modules transfer information from one module to another without having to re-enter the data. Data from the accounts receivable and payable, inventory, and payroll modules should be transferred to the general ledger to update its accounts. Data entered in an order entry should automatically update customer balances in accounts receivable, and records in inventory.

For most accounting packages, the general ledger is not updated immediately, but rather on a periodic basis using the "posting" command. These packages operate in "batch" mode because transaction batches created in specialized modules have to be posted to the general ledger in order to update its accounts.

One non-modular package, however, NewViews, operates in "real-time" mode. When transactions are entered, they immediately update all related accounts and reports without the need to post.

Interface

This feature allows the user to import data from and export data to spreadsheet, word processing, or database packages. Thus, a financial statement created within the accounting system can be embellished using a word processing package. Or, data used to generate financial statements can simultaneously generate the client's corporate tax return.

A GUIDE TO EVALUATING SOFTWARE ALTERNATIVES

The benchmark criteria described previously serve as a basis for evaluating software alternatives. *Exhibit 1* displays comparative information on 14 accounting software packages.

Another useful source for determining a particular package's specifications is "The Requirements Analyst," published by Sheldon Needle. This combined loose-leaf and spreadsheet service allows a user to select the optimum package for a particular business.

LOCAL AREA NETWORKS

Even a small company's accounting and reporting needs require, almost invariably, services of numerous bookkeepers to keep track, simultaneously, of accounts receivable, accounts payable, payroll, and the general ledger. A local area network (LAN) providing shared resources and a shared database in this multi-user environment is, therefore, virtually a necessity. A LAN provides the following benefits:

- Division of the accounting function into separate components for improved efficiency and performance;
- Shared access to a common accounting database; and
- Shared access to peripherals such as printers and modems.

A LAN consists of at least two microcomputers connected by cables and network interface cards to a file server. Each microcomputer is a workstation used for a particular accounting task such as order entry or billing. The file server contains accounting modules and data that will be shared by the workstations.

There are two types of file servers: dedicated, and non-dedicated. A dedicated server is a specially configured microcomputer designed specifically for handling overall network operations such as delivering programs and files to individual workstations. Although it cannot be used as a workstation, a dedicated server provides a more secure environment for the accounting system, which is a major advantage.

A non-dedicated server, on the other hand, is a regular microcomputer that can also be used as an ordinary workstation. Posting should never be done on a non-dedicated server because, if a crash occurs, the accounting database will be corrupted and everything on the network will crash.

Two methods of ensuring system security are passwords and audit trails.

ACCPAC's LanPak, for example, is a network version of their Plus accounting software. LanPak allows up to four users to share a single module as well as its data files. It also provides file locking protection to protect accounting data from being changed by two users at the same time, and bridges DOS and OS/2 by supporting users working in the different operating environments.

Network operating software (NOS) is the software component of the LAN. NOS is the most critical part of the network because it controls all functions of the LAN.

The most popular and widely installed NOS is Novell's NetWare which comes in several versions such as ELS, SFT, and Advanced. ELS Netware I, for instance, links four workstations and provides file and resource sharing. NetWare's popularity is due to its ability to run on Ethernet, IBM Token Ring, and ARCNET networks. In addition, Novell also provides an excellent series of computer-based training courses on all aspects of network installation and operations.

The following issues must be considered prior to setting up a LAN:

- Number and location of present and future network users;
- Type and number of microcomputers available;
- Operating system in use; and
- Software applications that will be used on the LAN.

DATA COMMUNICATIONS

LANs are needed to link workstations located within a limited geographic area. With decentralization of a business's operations over far-flung geographic areas, however, connectivity is another critical requirement for successful operations.

Data communications allow remote access to a centralized host. For example, a business with many geographically separate units or branches must keep track of each unit's operations and results. Wide area network links must be established to facilitate these data communications. This will ensure timely communication of financial and operational results of a business's branches and operations, located in different parts of the country, to corporate headquarters for analysis and consolidation.

COMPUTER PERIPHERALS

Many low-cost, effective peripherals are available to improve performance of a company's computerized system. This can be done by boosting performance of existing microcomputers, thereby protecting the business's hardware investment. Staff efficiency can also be dramatically improved through several hardware devices.

Advances in technology have produced new products that can "turbo" tired, old PC and XT computers. A PC's CPU speed of 4.77 MHz can be raised exponentially through installation of accelerator cards such as Accelerator 286. RAM limitations of 640K can be overcome by installing an Intel AboveBoard. Hard-disk memory storage can be doubled using InfoChip's Expanz! card.

MAKE THE JUMP

Computer consulting represents a new and profitable service that a practitioner can offer clients. But how does a practitioner learn a particular software package?

Many seminars provide "hands-on" experience in popular accounting packages. Such seminars can save a practitioner hundreds of working hours of study and wasted time, and enable establishment of a lucrative consulting practice.

The practitioner who is unwilling or unable to learn new software technology, however, is best advised to form a strategic relationship with a consultant. Together, the practitioner and the consultant can service the existing client base. The consultant can provide necessary computer system expertise while the practitioner can retain traditional accounting and tax responsibilities.

A local area network . . . providing shared resources and a shared database in this multi-user environment is . . . virtually a necessity. With decentralization of a business's operations over far-flung geographic areas, however, connectivity is another critical requirement . . .

What is the best path for a company, unsophisticated in computer expertise, to automate its accounting function? According to Richard Morochove, a Toronto-based information technology consultant, a business should first acquire an "entry-level" version of a "high-end" software package that shares the same interface and structure of the more powerful package. This allows the business to learn basic procedures of computerized accounting at a nominal cost. Once the business has become proficient in entry level software, it can "graduate" to a high-end version.

For example, in addition to its full-blown line of integrated accounting modules, RealWorld provides an entry-level package, "4-in-1 Basic Accounting," for novices. ACCPAC also provides a family of accounting solutions: ACCPAC Easy for small businesses new to automated bookkeeping; BPI Accounting for mid-sized businesses; and an upgrade path to its premier accounting line, ACCPAC Plus.

For the enterprising practitioner, microcomputer accounting information systems present almost unlimited growth opportunity. The practitioner must be willing to make the commitment of time and effort needed to master this new technology. It is a commitment that will be amply rewarded in the long run. Ω