



marketplace needs a real systems approach to record-keeping automation. However, the traditional money-management hierarchy has been very resistant to the proper utilization of small business computers. I don't know why! Wall Street still believes service bureaus and the purchase of computer time is the most expedient way to get data processing done," he added. "Most service bureaus serving the financial marketplace charge rental fees for central processing and disk access time. With the volume of data processing consummated by investment brokers, banks, insurance houses and money-managers, the price of renting service bureau time is sometimes exorbitant. Also, these institutions experience frustration from renting computer time from service bureaus, due to the amount of time lost while waiting for the main disk or CPU to poll the individual account and free-up user time and the lack of user interactivity inherent in a large mainframe-type environment," explained Stan Rose, the local Wang sales representative. According to Mast, the service bureau's charges seemed excessive, "so I looked toward the most viable alternative, the purchase of my own small business system."

"Perhaps more pragmatically, Mast chose Wang Laboratories 2200 System for its ease of use, fast CPU cycle times, disk access speeds and serviceability," added Jim Daly, the second local Wang sales representative involved with Conklin, Cahill, Inc. "Remember, most of our office personnel had never even seen a computer. We needed a system that was CRT-prompted and with comprehensive edit capabilities. Also, our benchmarks showed Wang's cycle times to be much quicker than most of the competition," noted Mast. The final selling point was obvious: "Wang has a sales and service office in the World Trade Center. If my system goes down, someone can be here in five minutes. Believe me, that's a comforting thought," said Mast. All in all, Mast was impressed with the technological expertise and support capabilities offered by Wang Laboratories. Also, he emphasized the corporate concern and professionalism exhibited by both Wang sales representatives, Stan Rose and Jim Daly.

#### **Application Background/Implementation**

Mast, who offered systems and financial marketing expertise, together with his New York software consultants, developed a data base management system designed specifically for Conklin, Cahill's needs, but general enough to be applicable for any investment management firm. "The idea struck me that if we could develop a system that automated all of our record-keeping functions, we could eventually market this package to other money-management firms. You could say we were keeping our eyes on the future," stated Mast. The necessary functions to be developed into the system included the ability

to create and maintain data required to produce a complete range of reports needed by all investment/money managers. The ability to produce listings of any/all clients holding particular securities within seconds was made possible by Wang's interactive, TV-like CRT screen. The finalized 2943, Investment Management Support System, is designed as a management information system as well as a traditional accounting package. The primary distinction between these two design methods centers around speed of display and the conciseness of the information presented. All of Conklin, Cahill's data bases have been organized in such a manner as to provide rapid CRT display of necessary information required by the user. Printed customer, management, and accounting reports are also produced as an auxiliary benefit of the system.

Bob Mast further emphasized, "We stressed speed and efficiency in developing this system. We have the capability of displaying a list of all clients who hold a given security within seconds. Also, each report that is produced has extensive review and edit capabilities."

"We feel we have created a practical yet highly sophisticated management tool that provides maximum time efficiency in the routine management of client accounts. We're very proud of this system, you can be sure," explained Mast.

The organization of the data base is solely dependent on the hardware configuration. "No matter how the files are organized to fit the hardware requirements, the following information is always contained within the data base," noted Mast:

#### **Customer Information**

- Account number
- Full customer name/address
- Number of units for per-asset valuation
- Beginning date for profit/loss report
- Short- and long-term profit/loss to date
- Current net balance in account
- Date of last activity in account
- Amount of commission paid from start of profit and loss report date

#### **Broker Information**

- Broker number
- Commission paid on calendar year-to-date basis

#### **Transactions Information**

- Type of transaction
- Transaction date
- Quantity
- Commission
- Accrued interest
- Lot number
- Hedge number
- Net amount
- Security symbol

there are five basic groups of potential clients for the system: investment managers, banks, broker-dealers, insurance companies, and corporations which maintain an in-house investment management staff. He pointed out, "There are over 950 potential customers in New York City alone, quite a ripe market for record-keeping automation."

Mr. Mast was particularly confident about the eventual success of the 2943 System in the financial marketplace. "This system was designed for money-managers by money-managers. Developing the program was a three-man year job. We've tested the system thoroughly, and we know that it works."

"You've got to remember," he continued, "that when this system is marketed, it will be marketed under the Conklin, Cahill name. Our firm enjoys a highly respected reputation on Wall Street. We value that reputation, and we are very conscientious in maintaining it."

When asked why the firm chose to O.E.M. Wang equipment, Mr. Mast replied, "Wang has cooperated with us consistently throughout the development of this project. Their equipment has a reputation for reliability. We were impressed with the size and efficiency of their service organization. We know that we can depend on Wang to provide the type of hardware that can back up the Conklin, Cahill name in the future."

The 2943 System takes up only ten square feet of floor space and measures 3.3 feet high. "The best salesman for the system is the unit itself; I can talk all I want, but what really converts prospects is sitting down and actually operating the system. Once they see what it can do with them at the controls, little else is necessary," stated Mast.

The 2943 Investment Management Support System, running smoothly on Wang Laboratories' equipment easily justifies its position within today's modern investment management firm. The system offers a complete computing system which automates all aspects of the money-manager's data with options to enhance the system with word processing, accounting, or security analysis in the future. The list of applications is limited only by the investment manager's ingenuity. By taking advantage of the power which has been gained in having a full-service computer at one's own location, investment managers will be in an enhanced position to meet the current and future needs dictated by a highly competitive industry. As Mast concluded, "...and at a lower price with more flexibility and power than a service bureau could ever offer. No doubt about it, small business computers are definitely the wave of the future in the financial marketplace."

## Security Information

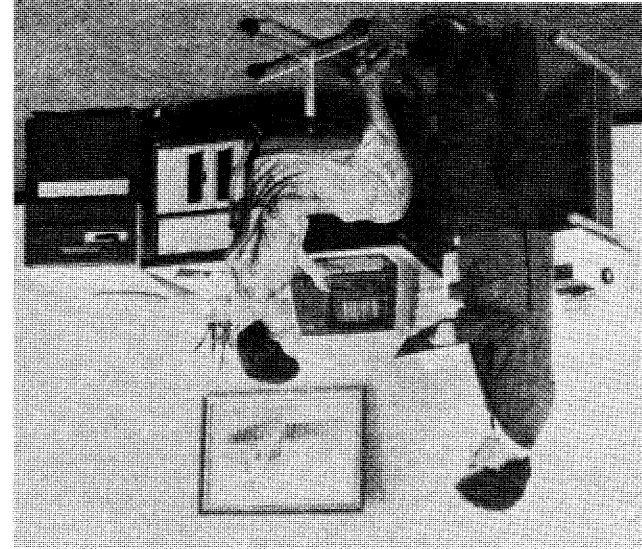
Description  
Customer Security Description  
Multifactor  
Dividends  
Dividend date  
Security ID number  
Last transaction date  
Current and previous price

"Obviously, a great deal of care has also been taken in the design of the data entry procedures in order to provide the operator with an easy to understand, yet highly efficient method of operation. Much time and human engineering has been devoted to the task of making the transaction entry procedures as simple and error-free as possible," explained Mast. As Mast continued to explain the virtues of his system, it was obvious that the investment manager of virtually any size firm could utilize this system's approach to money management, "at an incredible savings," according to Mast.

The 2943 Investment Management Support System has been successfully up and running at Conklin, Cahill for over six months now. Recently they installed their second system at Balch, Hardy, & Scheinman, another local Wall Street concern. With the successful installations at two thriving Wall Street institutions, "...we decided to test the waters and become a Wang O.E.M. distributor," confided Mast.

## Why Conklin, Cahill chose to O.E.M.

When asked why Conklin, Cahill was setting out to market their investment management system, Bob Mast explained that the firm was seeking diversification. "Especially today, when the market is so volatile, a young and aggressive company must diversify to stay alive. We feel that the investment management industry, which is largely unautomated, has enormous growth potential for the 2943." Mr. Mast explained that





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## CASE HISTORY

No. 010 Distribution/Inventory Management Application

### Doe & Ingalls, Inc. Distributor Benefits From Computerized Inventory Management

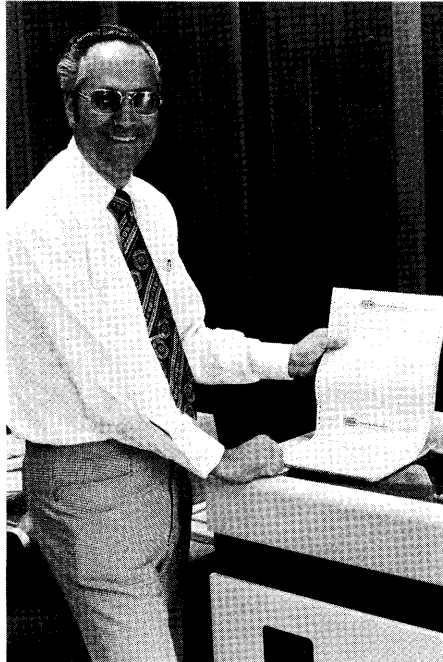
*"We didn't have to change anything when we computerized; the forms were identical to what we were using. That's what sold us on the Wang System..."* Larry J. Liebman, President, Doe & Ingalls, Inc.; Medford, Massachusetts.

#### Background

##### Inventory Out of Control

Describing the manual inventory system his company used until January of this year, Larry Liebman says that it "... was next to impossible to update, so we lived with its inaccuracies." Larry is president of Doe & Ingalls, a chemical distributor based in Medford, Massachusetts. With as many as 2,300 different items stocked in his 24,000-square-foot warehouse, ranging from one-gram bottles to industrial chemicals in fifty-five-gallon drums, Larry's profit-making potential depends on a smoothly functioning system of inventory control. On a typical day, fifty or sixty orders involving several hundred items are filled and shipped to customers among the more than 600 who regularly buy from Doe & Ingalls. To keep them coming back, Larry strives for one-day service. "About eighty percent of our orders go out the next day," he says.

Before computerizing his inventory, this goal was not always easy to meet. The card-based manual system in use at D&I worked well, but the number of movements it was asked to monitor became so large that the office staff of five could not keep up with them. Late vendor deliveries went unrecorded. Standard practice assumed three weeks to restock after orders were placed with a vendor; but, in practice, as many as



three months frequently elapsed between trigger point and resupply. Because of this, Larry's biggest problem with the system was "... not knowing what we had out on the floor." Some items were overstocked while others were sold out. There appeared to be no simple way of expanding the card system to bring this situation back under control. Larry concluded that computerized data handling was the answer, not only to meet his immediate need but also as a means of giving him the capacity to realize his projected goal of doubling sales within three years.

#### Seeking a Solution

Hoping to find a ready-made inventory control package, Larry spent more than three months evaluating products offered by IBM, DEC, Litton, NCR, and Wang. Most offered systems which lacked the flexibility to work within the context of his manual system, and required new procedures and new forms. Noting that "the systems were pretty competitive price-wise; hence, we were sold on the Wang approach when I learned it could be programmed to identically match our manual records and systems. The other computer manufacturers wanted us to change our forms, the way we did things, and the way we obtained our reports. This was simply not for us; we certainly did not want to begin again. We're a small company, and our systems served our business very well; the Wang programs fit beautifully, as they would program exactly what we wanted."

Working through an approved vendor, Data Processing Services, Incorporated (DPSI), Wang provided a customized version of their GBS package tailor-made to the requirements of Doe & Ingalls. Explaining his feelings about this solution to his problem, Liebman says, "Looking back on it, I'd do it again, many times over."

#### Customized Software Takes the Uncertainty Out of Inventory Management

##### The Hardware

Hardware consists of a Wang small business computing system with 32K, a ten-megabyte disk, a 240-line-per-minute printer, and one video display workstation. Software is

stored on a hard disk. Placing equipment in the office was as easy as installing ordinary business furniture; it required no special wiring and no air conditioning.

### **Standard System Modified**

Working closely with both D&I and Wang, programmers from DPSI modified the standard GBS package to make it compatible with the existing manual system. According to Norman Goldman, a vice president of DPSI, the job was made much simpler by the basic flexibility of GBS. He estimates that if software had been developed from scratch, "... it would have cost five times as much."

The package emerging from this effort provides exact inventory control, but does more as well. It prints orders, picking papers, and shipping documents. It writes invoices and prepares management reports. In short, it has taken over much of the burden of paperwork formerly borne by the office staff.

When an order is received, data is taken from the phone and logged onto a standard form. Order entry data includes customer number, product number, discount code, and quantity. Keying the product number into the machine brings up a CRT display depicting case price and cost, unit selling price and unit cost, chemical nomenclature, and package type and size. The system then goes on to print a complete order, with appropriate prices, on a four-part carbon form. Shipping and picking papers are generated as part of the same package.

A custom feature of the D&I system is the listing of materials by their DOT shipping classification. Larry feels that this will become more important in the future as government regulations are tightened. Some customers, he indicates, are already requiring DOT hazard ratings to be on all documents.

### **Time Savings**

During most of a typical working day, the machine is available for taking orders as they are phoned in. Between order entries, operators do a number of other functions, such as posting cash, inventory control, or receivables accounting. Two forty-minute periods, one at the opening of business and another at closing, are devoted to data processing. During these periods, the system produces invoices based upon the day's sales. Since no business is transacted overnight, the morning session acts as a backup. Larry makes the second run because, as he points out, "invoicing is a critical stage."

During these periods, all processing is done; invoices are written, backorders are generated, the invoice register is completed, sales analysis is made current, and a commission report is generated. Larry explains that invoicing alone used to occupy one member of his staff full-time.

### **Accurate Inventory at All Times**

Larry stresses that GBS gives him an accurate inventory count. Sixty percent of the system's value lies in the fact that he can now "... better control my inventory dollars."

Because the need for accuracy is critical, Larry has kept tabs on the machine by comparing it with physical inventories on two occasions. Both times there has been excellent agreement. Convinced, Larry says that he now "relies completely on the computer."

### **Reports**

Asked what reports he obtains from the system, Larry replied, "as few as possible. We don't like a lot of paperwork." At month's end, a sales report is prepared, listing customer-by-customer profit margins and supplying the sales activity for the month and year-to-date. With the modified GBS software, Larry can display the last twenty-one transactions made for any given product - a feature from which an average demand can be computed for purchasing and stock forecasting. The Wang system is selectively used to print quarterly sales activity reports which are mailed to those customers desiring them, showing what they have purchased from D&I. It can also retrieve,

by product, a listing of customers for any given time period. This is of vital importance when a manufacturer issues a product recall.

Describing this ability to tally by vendor, Norm Goldman explains that "GBS had inventory in one big clump," but D&I wanted to key all items to vendor and product groups. How did Larry do all this with his manual system? "We didn't," was the answer. Now he can break down and analyze inventory by supplier, by product group within the list of items purchased from a particular vendor, or by product group for all vendors.

### **Employee Reaction**

His biggest concern over installing a computerized system, Larry states, was employee reaction. "They were worried about doing things differently and feared that retraining would be needed. But, when they saw how simple it was, they were tickled to death," says Larry. Initial reluctance to use the machine was quickly overcome as the staff watched Larry and his office manager performing much of the work. Larry reports, "Two of the girls caught on in a day or so." He attributes this partly to the fact that the system is conversational, but considers the major reason to be that "they knew what they were doing, because the basic system of doing things was unchanged from the old routine."

### **Benefits**

#### **A More-Relaxed Office**

Paperwork required to support the manual system was so great that the filling of orders stopped, and "nothing got done after 3:30 p.m., when the office staff turned its attention to preparing shipping documents." The atmosphere was rushed and hectic. This pressure was compounded when items were found to be out of stock, requiring that papers be retyped and backorders written. All of this is now a thing of the past. Larry reports, "It's such a relaxed atmosphere now; when the phone rings, they practically fight to see who will

answer it." While it's difficult to assign a dollar value to the change, he says that much of "the value of that machine is the ease it has created in the office and warehouse, the comfort the morale...."

### **Overstocking Eliminated**

The computerized system has virtually eliminated overstocking. Larry relates his surprise at finding the extent of extra inventory he was carrying. "When we went on the Wang system," he says, "we cut our inventory by \$100,000. In fact, one of our major vendors thought we were giving up his line when we dropped from a truckload per week to one every three weeks."

### **Benefits**

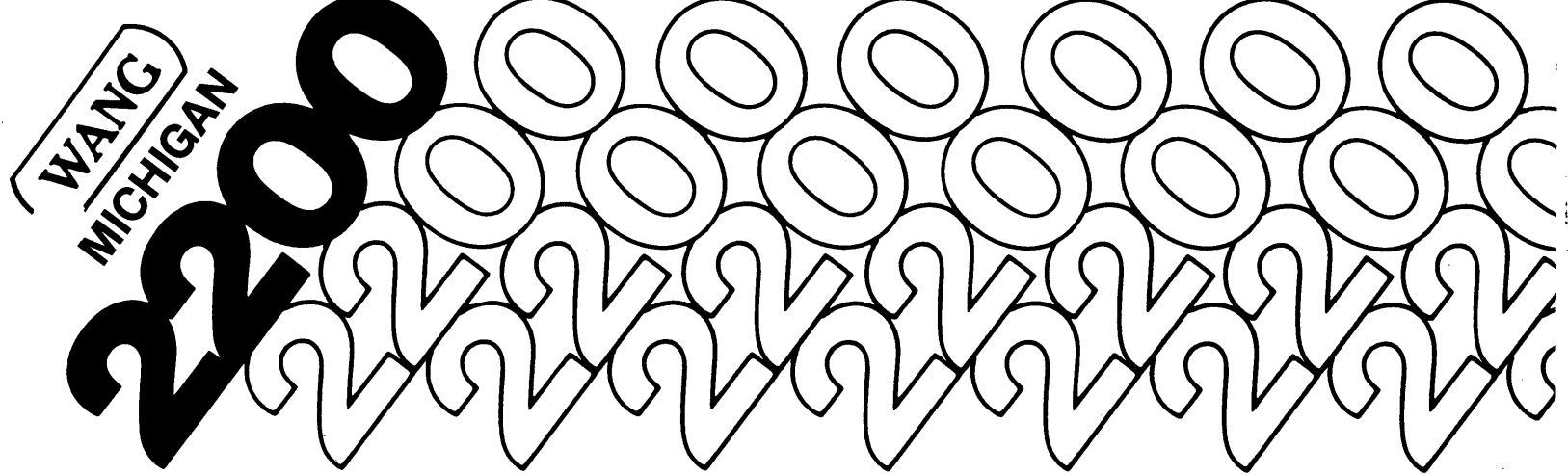
#### **Future Plans**

Looking to the future, Larry does not foresee an immediate need for expanding the system. "We can do three or four times the business with this machine and not have to change it," he says. With a smoothly running operation, accurate inventory, and this kind of room for growth, Doe & Ingalls has been able to turn attention from operational problems to concentrate on meeting Larry's ambitious sales goals.

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Lowell, Massachusetts 01851  
Tel. (617) 459-5000







## Case History

No. 095

Accounting Application

Valley Plastics Corp.

### Custom Plastics Manufacturer Automates Paperwork

Valley Plastics of Kalamazoo, Michigan, was started by Bob Brown, owner and president, back in 1971. The company has done well ever since. Valley Plastics is an injection molder of custom thermoplastic materials, producing a wide variety of plastic components for a wide variety of industries, including the pharmaceutical, computer, office furniture and equipment, and automotive industries. The company employs eighty-five people and generated over \$2-1/2 million in revenues for fiscal year 1979.

Business was booming enough at Valley Plastics back in 1975 to justify looking into a small business computer to automate the company's various accounting paperwork. After some study, Valley Plastics decided to go with a Wang 2200T Series Computer. The reasons were cost/performance, the quality of the BASIC, and the secondary backup storage.

Wang GBS software was installed. The Valley Plastics Systems Analyst Programmer, Uche Ozuzu, then went on to modify the software for a more customized fit. Ozuzu, who studied computer science at Western Michigan University and gained experience in private industry, found the Wang GBS to be "nice software as far as modification is concerned." Explained Ozuzu, "We had to modify in the first place because of the diverse customers we service. We make plastics to someone else's blueprints. Wang's GBS was a little too general, but I was able to modify the order entry system very easily to capture all the different information the different customers need."

The Wang 2200T does Valley Plastics' accounts payable and receivable, order entry, inventory, business reports, and general ledger. Reports can be generated for the shipping department, and a master schedule can be generated from the order entry. The computer is also being used to do property management for owner Brown's other properties.

The Wang computer has proven easy to use. Ozuzu picked up Wang BASIC on his own and had no trouble

instructing the others in the office on its use.

Service for the computer, when it has been necessary, has been quick and thorough from the Wang office in Grand Rapids. And it should be so much more so with the new opening of a Wang office in Kalamazoo itself.

Valley Plastics is so pleased with Wang that it has decided to upgrade to the Wang 2200MVP, for the sake of more workstations and speed. The Wang 2200T is reaching the limits of its capacity. Explained Bill Becker, consultant to Valley Plastics and a business associate of Bob Brown, "We expect the 2200MVP to be in very good service five years from now. We are actually biting the bullet by buying the 2200MVP, because it is more computer than we presently need, but things should work out in the long run. We are already doing things that we couldn't do without a computer, so we should be able to find ways to make full use of it, and our people will be comfortable with it for a good long time to come."



*Uche Ozuzu stands before a display of Valley Plastics products.*

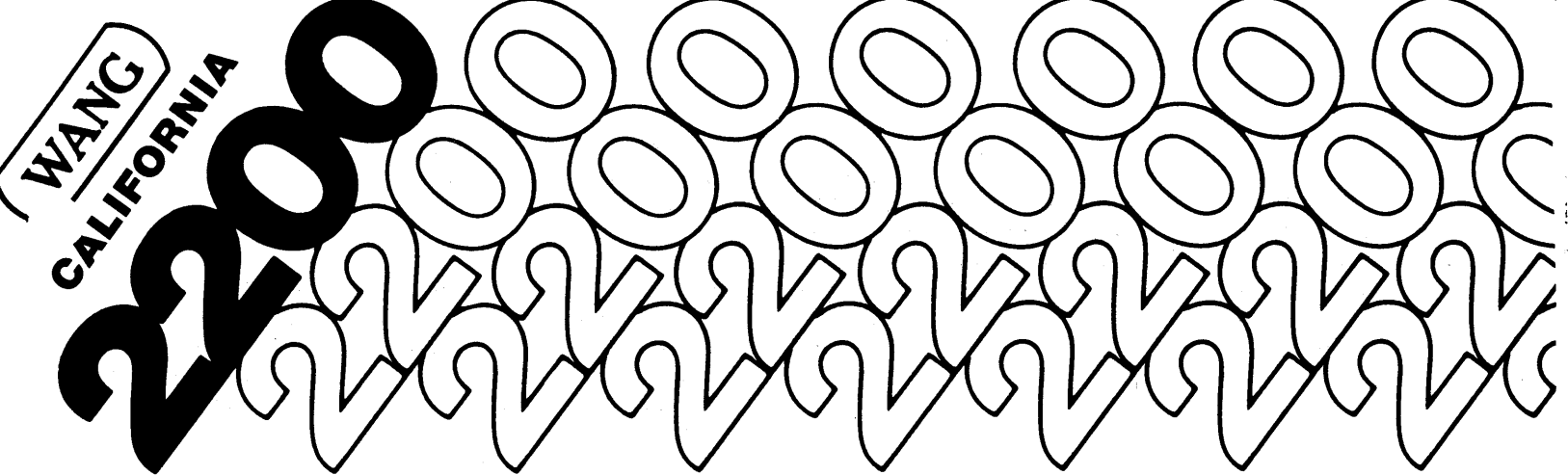


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## Case History

**No. 101**

**Insurance Application**

**Pacific Insurance Agency**

"WE ARE AN INSURANCE AGENCY. THAT MEANS WE ARE IN THE BUSINESS OF GAINING NEW CUSTOMERS AND WRITING NEW POLICIES EVERY DAY. IF OUR COMPUTER COULDN'T HELP US DO THAT, IT WOULDN'T BE HERE." Glenn Dethloff, Vice President; Pacific Insurance Agency; San Diego, California.

Pacific Insurance Agency is a San Diego-based commercial insurance agency specializing in service to the construction industry. "We handle property and liability insurance, Workmen's Compensation, and surety bonding for construction firms. Roughly seventy percent of our clients are in the construction business," said Glenn Dethloff, VP Pacific. "That figure is roughly the same for our branches in Santa Ana, Phoenix, Seattle, and Dallas. Our only exception is our Riverside branch which specializes in insuring trucking firms."

The construction market is a difficult one to service and is highly competitive. Often Pacific finds itself in the position of bidding insurance. "Typically there is never enough time to get a quote 'by the book.' We are supposed to get all of the pertinent information from our customer, fill out an application, and send it off to the insurer for rating and coverage. That process is supposed to require sixty days, however, in practice, we seldom have more than two weeks to turn it around. Thirty days is rare. A company bidding a \$20 million shopping center isn't going to wait two months for insurance. The agency that gets him coverage quicker than the others at a competitive price is going to write the coverage," declared Mr. Dethloff. "Right now our turnaround time is a day."

This drastic reduction in turnaround on certain lines of business is made possible by a telecommunications interface between Pacific's in-home computer and the central computer at Commercial

Union; one of the nation's largest insurance companies. "We were the eighth agency in the country to interface with Commercial Union," explained Max Gelwix, Treasurer at Pacific. "The way the system works now, a customer can call us, we set up a risk file on our system and record all the information we need to quote the policy. Our computer is programmed to rate the risk and arrive at a policy quote. This information is transmitted over regular telephone lines by high-speed electronic impulse to Commercial Union's central computer where the risk is either accepted or rejected by the next day."

"When we receive acceptance, a policy can be generated by the computer using its word processing capabilities," said Mr. Gelwix.

"This is the trend of the industry," Mr. Dethloff stated. "Commercial Union is the first major company to interface, but the others are preparing to get into it too. They have to, just like the agencies have to, because insurance is a service business. Whoever provides better service at a competitive price has an edge, and right now we are very competitive."

The interface with Commercial Union is a recent outgrowth of Pacific's computerization program. "Our daily office routine," said Mr. Gelwix, "is patterned around the computer. We were looking for a system which would make processing policies easier and give us tighter accounting controls. We were impressed with the Redshaw Company software package and purchased a Wang 2200 Series computer system, which the Redshaw package was designed to run on."

The system has been a unqualified success. "It's our primary management tool," noted Mr. Dethloff. "In the past three years, we've grown from a \$3 million agency to a \$12 million agency. The volume of accounting and clerical work would have swamped us without a strong computerized system."

"We're only beginning to tap the system's potential," pointed out Mr. Gelwix. "The front office now has five terminals being used by nine staffers. Those terminals are in use throughout the day. We plan to purchase four more terminals and expect they will be busy full time too. When a customer calls, all of the information for the risk file is input at a terminal. Billings are posted in the system, as are checks. When a customer gets a summary of coverage, a loss report, a Certificate of Insurance, a bill, or a statement, he is receiving a computer generated document. The computer has freed our staff from countless hours of clerical work and the clear result is that they are more productive. The average agency produces approximately \$40,000 of revenue per employee. We're producing approximately \$60,000."

"The computer has enabled us to accomplish rapid growth without greatly increasing our staff," stated Mr. Dethloff. "But most important to me is having detailed records at my fingertips. Before we installed the system, we couldn't be sure where we stood before the end of the month. Now I can know daily - in an instant. At the push of a button, I can know what coverage a customer is carrying, what policies are paid, and what is still owed."

Collections are often a problem for agencies. Pacific previously had to rely on the insurance companies to send out notices of cancellation to customers. "That always created problems," said Mr. Gelwix, "because the notice is sent to a lot of people besides the insured. We've initiated our own series of notices. The customer receives a bill, then a second notice asking him to remit. This is followed up by a statement and finally our own notice of intent to cancel. This is well before the insurance company cancels the coverage." The system is working well. Pacific's over-sixty-day accounts are down significantly and are expected to fall below eight percent in the next few months. Pacific's customers are happier since they are re-

ceiving more frequent and discrete warnings before the insurance company sends a simple cancellation notice.

Computerization has enabled Pacific to maintain an aggressive growth rate without increasing staff and has measurably increased staff productivity. Most important however, computerization has placed Pacific ahead of its competitors. Pacific's interface with Commercial Union gives the agency an unqualified edge on their competitors. "Nobody can match our service," stated Mr. Dethloff. "If we can rate and underwrite on our risks and get acceptance in one day at a competitive price, it is simply hard to beat us. Match that with our expertise in the construction business (and the trucking business in Riverside), and I'd say we're two years ahead of our competition; and by the time they catch up, we'll have moved in."

Pacific is already moving. Talks are underway with other major insurers to initiate telecommunication interfaces with their central computers. Mr. Dethloff foresees the day when the agency, interfaced with only four to five major companies, will be able to service all of their customers with the best possible rates and service. Already the agency is committed to computerization at all their branches. "Eventually," said Mr. Gelwix, "the computers at each branch will be interfaced with the insurance companies and will conduct all of their own business separately. Each night the branch accounting records will be telecommunicated to the computer in San Diego to facilitate the firm's centralized accounting."

Undoubtedly a new generation of computers is revolutionizing the insurance industry, and Pacific's management is happy to be able to point to the fact that they are in the vanguard of that revolution. Mr. Dethloff summed up management's attitude in evaluating the success of the system quite succinctly. "We are in the business of writing new policies every day, and if our computer couldn't help us do that, it wouldn't be here."

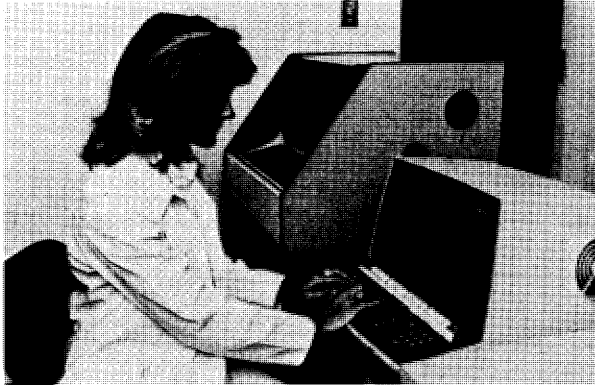


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## Wang 2200



*Wang 2200 helps innovative neurological clinic treat patients and maintain profitability.*

## Center for Neurological Services Turns Medicine Men into Businessmen with Wang 2200 Computer

The Center for Neurological Services (CNS) in Fort Lauderdale, Florida, is one of a comparatively new breed of neurological clinics—the privately owned and operated, one-stop facility for complete diagnostic and therapeutic neurological services.

Early on, CNS founder Dr. Joseph E. Gelety saw the need for a new kind of computerized information processing system to support his ambitious undertaking. "When you attempt to bring together some of the country's top medical talent and some of the most costly diagnostic and therapeutic equipment available, and then try to mold the two into a multi-disciplinary approach—you need a way to tie it all together," says Gelety.

What Dr. Gelety had in mind when he and two of his neurosurgeon colleagues opened CNS in 1979 was a computer system that could help them manage not only their billing, accounting, insurance and other business paperwork, but also the patient history and diagnostic/treatment information essential to their practice. That is precisely what CNS has put together.

### Integrated Business/Medical System Simplifies Practice Management

According to Dr. Ronald Goldstein, BCS president, "At the top of Dr. Gelety's requirements was a system that would be fully integrated in a data processing and word processing sense. He wanted to be able to enter data and text-based information into the computer, and then use it repeatedly on both the business and professional sides of the practice."

For his computer, Dr. Gelety chose a Wang 2200 MVP with 128 kilobytes of main memory, 80-megabyte and 10-megabyte disk storage units, four CRT workstations, two word processing daisy

wheel printers and a 250 lines-per-minute band printer. By April of 1980, CNS had retained the services of an independent software vendor, Business Computer Solutions (BCS), Inc. of Hialeah, Florida, to design and produce the software for the system.

BCS's success in integrating the DP and WP files resulted in a totally integrated system that provides Dr. Gelety and CNS staff with instantaneous access to total historical data on every patient, every account, every diagnostic and therapeutic modality used at the center, and every financial and operational aspect of the business. The system takes care of all accounting and billing functions, and renders a variety of sophisticated reports that greatly facilitate day-to-day practice management.

### **Computerizing Appointment Schedules and Patient Histories Improve Office Flow**

The Wang computer system at CNS is an integral part of patient processing—from the time the patient calls for an appointment or walks in the door, until his treatment has been completed and his bills have been paid.

Appointments are kept by the computer, and can be scheduled into the future indefinitely. Using the CRT workstation, center staff can instantly find out from the computer whether or not a specific time is open or, if they prefer, they can view all open times on a particular day or between two specified dates. The patient's choice can then be quickly keyed in at the workstation.

Each appointment is assigned a priority code, based upon information provided by the patient. When a cancellation or other unexpected circumstance makes it necessary to reschedule the appointments for a given day, the priority code is used to rearrange them, beginning with the most critical. The computer automatically prints out the patients' names, phone numbers, and new times for all rescheduled appointments.

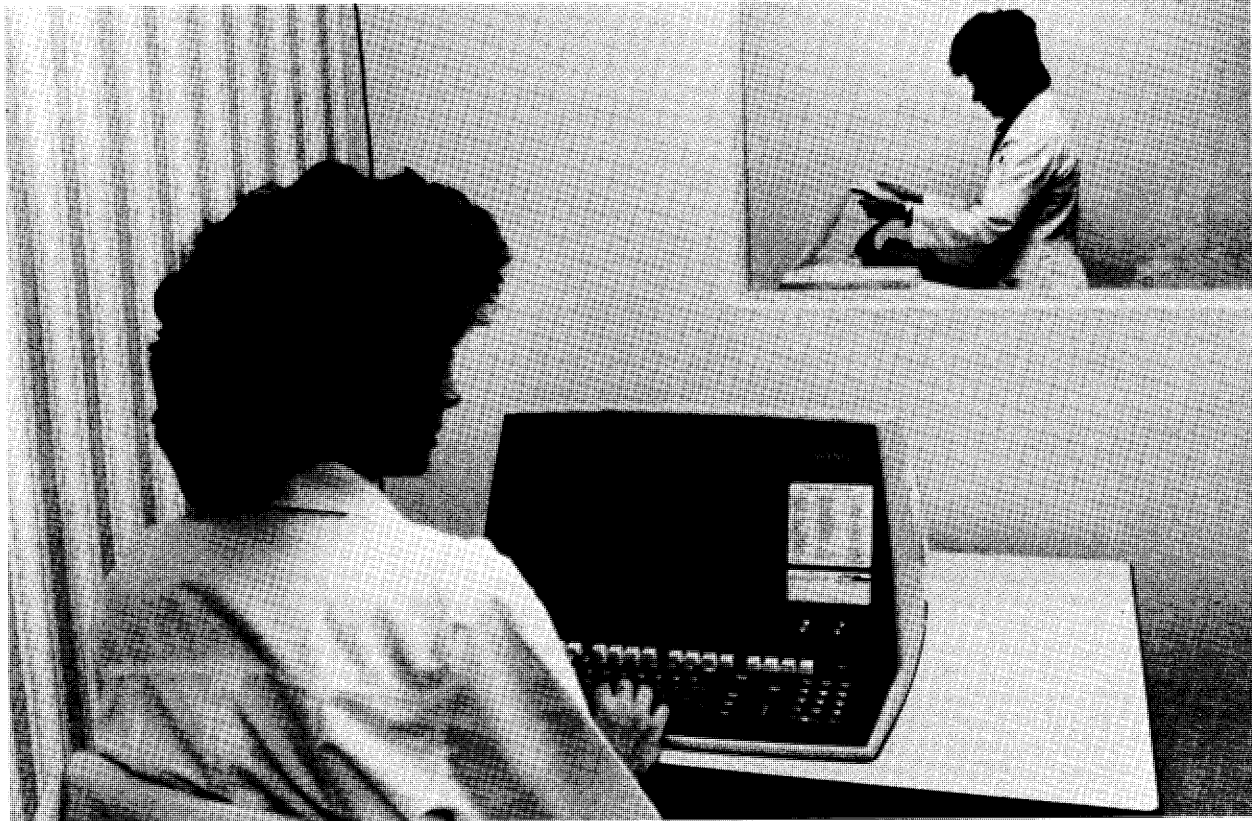
An attractive feature of the system, especially for heavily scheduled professionals like Dr. Gelety and his staff, is that the appointment program can also be used to manage an entire calendar—including

personal commitments. When requested, the computer can then generate a listing of each day's complete schedule.

When the patient arrives for an appointment, he or she is asked to fill out a "face sheet," or personal and medical history form. The data is keyed from the form directly into the computer, and constitutes the primary database on the patient. It includes all pertinent personal data, complete payment and insurance information, the patient's dependent status, and the name of the physician who referred him or her to the center.

Once the patient has been examined and/or treated and is ready to leave, the system automatically generates a letter back to the referring physician informing him of the patient's status and what further action is planned. "With the system's word processing capability," explains Dr. Gelety, "we can select an appropriate pre-stored letter and tailor it with patient-specific data. The computer then adds the referring agent's name and address from our master file." Important correspondence that also helps assure a continuing flow of referrals and new business is thus tended to immediately and automatically.

Finally, if the patient is to be examined again at some future date, he or she can make another appointment before leaving the office or place his or her name in a "call notice" file maintained by the computer. The system continuously tracks recalls, and generates notices in advance for mailing to patients.



*CNS staff have instantaneous access to complete medical records on every patient, as well as full financial accountability.*

### **Automatic Invoicing and Insurance Form Reporting Improve Cash Flow**

Cash payments and account adjustments can be made and posted to the computer on the spot, while the patient is in the office. The patient can also choose to be billed, with all billing and invoicing performed by the computer at the end of the business day.

The patient accounting system at CNS automatically prepares preformatted reports for all insurance carriers (e.g., Blue Cross/Blue Shield, Workmen's Compensation, etc.) and standard forms for private third-party carriers—even accommodating form changes as they are made, without reprogramming. What's more, when multiple parties are to

assume financial responsibility for the costs of the center's services, the system renders invoices to each party for the amount of their liability.

According to Dr. Gelety, the advantages of immediate billing are significant. "We no longer have to set aside three or four days at the end of each month to catch up on our invoicing. The system automatically ages each account at 30-60-90 days and issues appropriate dunning notices to each overdue account. Our cash flow has greatly improved, and we always know the up-to-the-minute status of our receivables."

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### **Comprehensive Medical Database of Past Diagnoses Aids Treatment**

CNS staff members have assigned unique codes to the standard nomenclature of neurological diseases, as well as to each neurological, diagnostic and therapeutic procedure. The appropriate codes are entered for each patient during the course of treatment, and no patient's name ever leaves the computer master file without a final diagnosis. This insures that the center maintains a complete medical database on all of its patients—data that can be drawn upon in evaluating new cases.

"We can generate just about any type of analysis or report we want on this data," observes Dr. Gelety. "For example, we could analyze the methods used in evaluating and treating all patients in certain stages of coma, all patients of a given age, or those from a particular part of the country. In a similar fashion, we could also track each doctor and analyze the diagnoses and procedures he renders and employs."

A recent addition to the system is a prescription and drug usage program that records all prescriptions and refills granted, together with all medications administered to each patient. The program also yields composite data on prescription and drug usage across the entire patient base, for all doctors and for each individual doctor.

"This kind of medical data is invaluable, not only in diagnosing and treating our patients," observes Dr. Gelety, "but also in managing the practice itself. If we want to remain competent, efficient and profitable, we need continuous feedback on how our staff members are performing, and how our assets are producing."

### **Time Management Reports Lead to Greater Profitability**

CNS to date has invested more than \$1 million in sophisticated diagnostic and therapeutic equipment—a regional cerebral blood flow analyzer, a fourth generation total body CAT scanner, hyperbaric oxygen chambers, clinical laboratory EMG and EEG equipment, X-ray equipment, a physical therapy and rehabilitation unit, and a bio-feedback and heavy treatment unit.

The Wang computer system at CNS monitors the usage of this equipment on a daily basis: who refers patients for treatment/diagnosis on the machine, how often, and at what profit. It also analyzes the percentage of time the equipment is actually in use/idle to determine the cost of ownership.

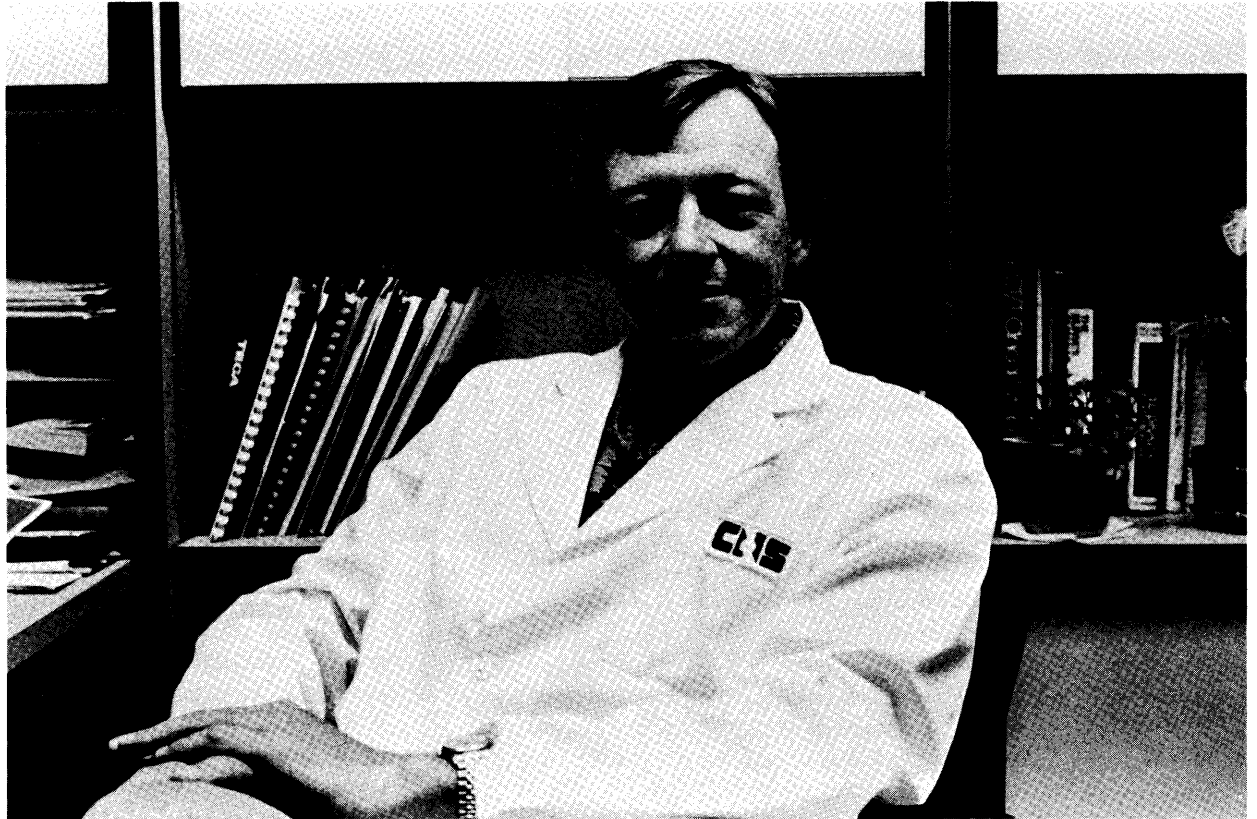
At CNS a time management system is employed, in which time units are assigned to each procedure (five-minute units) and appointment (15-minute units). This enables CNS to monitor staff performance and track the actual versus projected time required for particular procedures. By attaching a dollar value to the time units, it is also possible to track overtime costs and obtain expected revenue reports and profitability analyses by procedure and doctor for a given period.

### **Combining Business and Medicine in One System Pays Off**

The computer also handles the center's general ledger, accounts payable, and payroll functions. "But the real payoff," says Dr. Gelety, "is the integration of business and professional information provided by the system. We only have to enter the information once. After that, the computer manipulates it endlessly to better inform our decisions.

"It helps us do a better job as neurological and neurosurgical specialists, and a better job of managing the business."





*"We can generate any type of analysis or report we want with our Wang 2200," explains Dr. Joseph Gelety, founder of CNS.*



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**Wang 2200**

*According to Grover Moss, MOCO vice president, the installation of the Wang 2200 LVP has resulted in doubled data processing productivity and wide availability of up-to-date management reports.*

**Wang 2200 Keeps Pace with Growing Needs of Fast-Food Restaurant Chain**

Doubled data processing productivity, more current and up-to-date operating information, and greater availability of more types of management reports and analyses are the major benefits being derived from a new Wang computer system at MOCO, Inc., a Taco Bell restaurant franchise operation headquartered in Riverside, California.

"The system basically provides a faster, more efficient and more comprehensive method of handling the mechanics of accounting," says Grover Moss, vice president. "This not only helps to improve our operations but also enables us to do a better job of management."

Headed by H. G. Moss, president, MOCO operates 10 Taco Bell restaurants as part of the Moss Family Taco Bell Franchise Operations. The company has four locations in Riverside; two in Visalia, CA; two in Grand Junction, CO; and one each in Pocatello and Idaho Falls, ID.

**A History of Growth**

Growing rapidly in both units and in sales per unit since it opened its first location in 1967, MOCO operates one restaurant which was recently among the top 10 in monthly sales out of all 1,300 Taco Bell units in the country. Currently, the company is planning to open two more Taco Bell restaurants in Grand Junction, CO, and Sunnymeade, CA.

"We have a history of growth because we work harder to stay on top of problems," maintains vice president Moss, who also serves as director of Riverside operations in charge of the four Riverside Taco Bell units.

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## Manual Accounting Systems Inefficient

According to Moss, the company previously used manual bookkeeping methods to perform accounting services for all 10 Taco Bell locations. With continuing growth, however, this manual approach became increasingly slow and inefficient. "We needed to get more information quicker and more efficiently," Moss explains.

The company investigated the possibility of using an outside service bureau to meet its accounting needs. But this would have resulted in time lags and loss of control due to transit problems. Therefore, a decision to install an in-house computer system was made.

Based on an extensive evaluation of small business computers capable of meeting its needs, MOCO installed a Wang 2200 Series Model LVP in July 1981. Providing 32K bytes of main memory, an 8-megabyte permanent disk drive, and another drive for use with interchangeable dual-sided, dual-density, 1-megabyte floppy disks, the system includes a CRT workstation and a printer capable of operating at rates of 180 to 222 characters per second.

## Wang 2200: Specially Tailored to Fast-Food Operations

MOCO operates the Wang system using a "RestPak+" application package developed by an independent software company, MBS Software of San Diego, CA. Specifically designed for use on Wang computers, RestPak+ is a "user-friendly" package that totally integrates and automates accounting operations for fast-food restaurants.

"We chose the Wang computer and MBS RestPak+ application package based on the overall system's capability to meet our accounting needs and the ease of future system expansion," states Moss. "The application package is also highly flexible in that we can modify it to fit our specific requirements. Furthermore, MBS agreed to work with us so that we can effectively use the package without making any major changes in our basic operations."

## Wang 2200 Doubles Productivity

"Productivity has doubled because the time it now takes to perform accounting operations is reduced by half," Moss says. "As a result, we'll be able to expand in the future without adding staff."

Reports at MOCO are now produced faster on a more current, up-to-date basis. Profit and loss statements and inventory usage reports by unit, for example, are now produced by the 10th instead of the 20th of the month.

"More types of management reports and analyses are also made available by system operation," Moss explains. "For example, the system provides comparison reports of this year's sales and inventory usage by unit to last year's."

## Up-to-the-Minute Information

"Most importantly, operation of the system enables management to make better use of report data," Moss sums up. "This is because the system not only increases productivity but also makes it possible for a non-technical person with limited accounting experience to handle the mechanics."

MOCO operates the system under the management direction of Mable Rampey, controller. The system uses a general ledger module and a number of other accounting modules, all of which are totally integrated in the general ledger module. Other modules include accounts payable, payroll, daily reports and inventory. Data entries made to each of these modules automatically access and update balances in the general ledger module on a continuing basis.

The company uses a general ledger module with a chart containing about 100 accounts broken down by each of the company's 10 units. Automatically receiving postings from other modules, the general ledger module also produces up-to-the-minute data for profit and loss or income statements and balance sheets that are printed within hours after closing entries.

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## **Complete Invoice Control**

The accounts payable module is used to process invoice charges and payments for 225 vendors. Following entry of invoice data, the module tracks invoices by vendor, invoice number, amounts, due dates and other pertinent information. Total control is provided over each invoice, including the capability to hold payments, partially pay an invoice and automatically calculate discounts when earned. Vendor checks are printed with a stub detailing invoice numbers being paid with checks. General ledger data is automatically posted when invoice data is entered.

The payroll module is used to perform all functions of the payroll and personnel process for the 325 employees at the 10 units operated by MOCO. Breaking down the payroll operation by unit, the module permits the entry of a wide range of variable factors, maintains strict audit trails, and automatically prints out all reports, including summaries for management. Paychecks are printed as part of module operations, and quarterly totals and year-to-date updates are posted and retained in files for the printing of quarterly reports and annual W-2 forms.

## **Tracking Inventory with Accuracy**

MOCO uses the system's inventory module to keep track of 130 different items by unit. Integrated to the general ledger, this module provides both cost of goods sold and product line accounting. Each entry to the module updates new receipts and current costs, automatically increasing inventory value at the dollar value of goods received and computing the true average cost for the total number of items on hand. At the end of each month, the company keys in physical inventory totals, resulting in automatic updating of files with new quantities on hand and true dollar values.

The inventory module automatically provides data for reporting 12 categories of product costs shown in profit and loss statements produced by the general ledger module. For each location, the module is also used to produce the total cost of

goods sold during the month for each of 130 items. In addition, percentages of cost of goods sold to sales for each of the 130 items are calculated and produced.

## **Fixed Asset Accounting**

MOCO also uses a fixed asset accounting module that permits the use of both straight line and declining balance depreciation methods. Basic data such as asset values, method of depreciation, and salvage values are entered in the system to produce reports showing monthly or periodic depreciation, annual depreciation and life depreciation. Methods of depreciation can also be evaluated through use of a "what if?" capability provided by the module.

All modules are run using a fourth-generation language called AIMS (Automatic Information Management System), which enables module operation changes to be made in minutes instead of months.

## **The Bottom Line: Better Management Control**

According to Rampey, system reliability has been good. In addition, system support has been excellent.

"The system is very easy to learn and operate," she states. "We've received next-day service the few times we've had to call and most errors in system operations have been telephone-correctable.

"In the future, we plan to develop a new report which will average the percentages of cost of goods sold to sales for all 130 items handled by our units. Out-of-sync product usages will be earmarked for management review and action," she adds. "Overall, we are constantly finding new information that we can extract from the system to achieve better management control."



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## Application Story Estate Planning and Investment

### Wang 2200



*Wang 2200 helps insurance agents prepare sophisticated financial planning services which, according to C. Jim Rice, president of Balanced Investment Planning, Inc., "make life insurance much easier for the agent to sell."*

### Insurance Agents Use Wang 2200 for More Effective Financial Planning

In today's money and investment market, life insurance is becoming more and more difficult to sell. Few know this better than C. Jim Rice, president and founder of Balanced Investment Planning, Inc. in Marietta, Georgia.

According to Rice, "Inflation, higher interest rates, and longer life spans have enabled insurance companies to decrease their premiums — which then reduces agent commissions. At the same time, more people are buying term insurance, which means that agents must significantly increase their volume if they are to remain profitable. And this at a time when whole life insurance is not generally considered to be a particularly good investment."

The agent is clearly the one caught in the middle. Yet Jim Rice, a life member of the Million Dollar Roundtable, has managed to stay on top. How? "Through automation," says Rice, "specifically, the purchase of a Wang 2200 computer."

### Wang 2200 Automates Financial Planning, Frees Agents for Selling

Balanced Investment Planning, Inc. (BIP) is in the business of providing a variety of sophisticated financial planning services—including income and estate tax planning—to its more than 1,000 clients. "We specialize in showing owners of small, closely held corporations how to use the corporation to maximum tax advantage, and how to use tax deductible concepts to pass more of their personal estates on to the next generation without taxes," explains Rice. Life insurance naturally figures prominently in the financial plans of many of BIP's clients.

In January of 1981, Jim Rice not only purchased a Wang 2200 computer system but also formed his own independent software company (Rice Systems, Inc.) to develop an automated financial planning

report for use at BIP. The objective: to provide valuable client services that would help make life insurance more attractive than other investments, and free up more of the agent's time for actual selling.

By January 1982, the new company had completed initial development of a financial planning report that Rice feels could revolutionize the selling of life insurance. The computer system has cut the 40 hours required to put the financial report together manually to just under one hour. And insurance ledger illustrations that Rice used to take a full day to calculate are now completed in a mere three to five minutes.

"The best part," says Rice, "is that the system illustrates the advantages of utilizing permanent insurance (universal life). This product, because of its tax shelter, reveals a 17 to 18 percent return for those in a 50 percent tax bracket. This makes life insurance a relatively good buy, and much easier for the agent to sell."

The computer system used by BIP to service its clients is a Wang 2200 MVP with 128K of main memory, 10MB of mass storage, and a 2281W daisy-wheel printer. Rice Systems, Inc. is employing a Wang 2200 LVP with 128K of main memory, integral Winchester disk drive, three workstations, a 2281W with twinsheet feeder and a dot matrix printer for its continuing development work.

## **Tax-Saving Strategies Calculated in Seconds**

BIP starts by asking each client to complete a special 51-page fact-finding questionnaire that focuses on all aspects of the client's financial condition: his assets, liabilities, goals, wills, trusts, etc. The questionnaire typically requires about an hour and a half to complete. The information is then keyed into the computer, where it is automatically assembled into a Client Data File that can be accessed by the agent in preparing a living or estate tax plan.

The computerized system has been designed to enable a client to achieve his long-term personal and business financial goals—and save him significant tax dollars in the process. "Take the case of an

individual with an annual income of \$130,000 and five children whom he wants to eventually put through college," explains Rice. "We can tell him how much he needs to invest today in a lump sum or annual investments to pay for each child's education at various interest rates. The computer automatically performs the calculations on the various alternative investment approaches—insurance, trusts, income-splitting, etc.—and lists the trade-offs as they relate to that individual's particular situation.

"If, for the sake of argument, the system found that \$30,000 of this client's income was derived from a Certificate of Deposit (CD), it might well recommend that the technique of income-splitting be employed: cash-surrendering the CD, lending the money to the children and letting them buy a CD that allocates the income to each of the children equally. In this way, the client uses tax savings of \$15,000 to pay for his children's education. All of these alternatives can be presented in a matter of seconds."

Similarly, the computer analyzes the client's business fringe benefits program and identifies areas where additional tax savings can be realized; it calculates cash flow requirements to meet long-term retirement and immediate capital needs; and it computes the equivalent compound interest return on life insurance and other investments over time.



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## **Comprehensive Estate Planning Makes Sales Practically Automatic**

As for estate planning, the BIP financial report projects the estate tax impact of the individual's death and maps out a contingency plan for minimizing it. The system measures the tax implications of such tactics as placing life insurance into an irrevocable trust, creating a private annuity, using a different type of will, etc. It even determines whether or not the client qualifies for a government installment plan for paying his tax bill, what the interest rate would be, and how the payments would affect his cash flow situation.

The BIP financial report, the product of Rice's more than 25 years of experience in the insurance industry plus the expertise of numerous lawyers and accountants, has proven to be an extremely powerful selling tool. "When you present a strong financial case like this to your client," says Rice, "the investment or insurance sale is very nearly automatic."

## **Automating Routine Financial and Clerical Work Boosts Agent Productivity**

In addition to the financial planning report and ledger illustrations, the Rice Systems software includes a word processing facility and an agency management subsystem that can combine to completely automate the life agent's office.

"The Wang 2200 system is so fast, it can handle our calculation-intensive applications and still find time to generate all of our correspondence and other paperwork. On top of that, it performs our payroll and accounting functions and provides us with cash flow forecasts and a variety of management reports," explains Rice.

Rice's creative approach to financial planning services and Wang's sophisticated technology have combined to offer the customer of Balanced Investment Planning, Inc. the tailor-made financial services required to survive and succeed in today's complex economy.



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## Wang 2200



*Charles H. Price, III, general manager and president of Ohio 70-37 Truck Stop, claims the Wang 2200 is "like having an error-free management analyst around. It gives us a thorough and immediate picture of how the business is doing at any point in time."*

### Truck Stop Puts Brakes on Runaway Recordkeeping with Wang 2200

The Ohio 70-37 Truck Stop, located outside of Hebron, Ohio, is more than a place for a road-weary traveler to grab a cup of coffee. It's a 24-hour-a-day, 365-day-a-year business, serving between 15 and 20 thousand customers each week.

Its multifaceted operations include a 165-seat restaurant that offers a full menu and a retail store that carries a rotating inventory of nearly 4,000 articles — including novelty and practical items for both truckers and tourists. Three to four hundred thousand gallons of gasoline and diesel fuel are pumped at the fuel department each month. A service department repairs a variety of vehicles and keeps an inventory of parts in stock. The most recent addition, a 16-unit motel and carry-out located across the street, was completed in April 1981.

A diverse business like this is bound to generate a tremendous recordkeeping workload. Charles H. "Buzz" Price, III, general manager and president, thought about installing a computer for several years, but what he wanted and needed far exceeded his budget. As he recalls, "We needed a flexible system tailored for our requirements and only Wang was able to fill the bill."

#### Human Error Added Pressure to End of Month Pile-Up

Before computerization, the widely diverse departments had no central inventory control system. Employees in each section kept inventory records by either stapling tickets together or marking tally sheets and sending them upstairs to the office. Cash receipts were totalled manually and handled in a similar manner. "We often found discrepancies in inventory count and cash totals," observes Price. "They had to be redone and rechecked until the error was located."

The end of the month also resulted in another type of pressure. "Often we wouldn't get accounting information from the previous month until the 15th or 20th," says Price. "We might be losing money in a certain department and never know it. The slow turnaround time also meant that management decisions were sometimes made with insufficient or incomplete data."

### **Wang 2200 Proves Tops in the Long Haul**

Buzz Price felt that the right computer would eliminate many of these headaches. He wanted a system that would meet the specialized yet widely varied requirements of his business. For example, Buzz wanted the cash registers in the retail store to be directly hooked up with the computer to eliminate manual inventory. He was also looking for a system that would adapt to program improvements and changes. Basically, Price needed "a computer we could grow with."

In 1979, Price purchased a Wang 2200 MVP mini-computer with a 64K memory and three terminals, a 2280 disk drive, and a 2261 printer, tying them into seven Data Terminal Systems (DTS) 515 cash registers with OCR-A wand readers. The software was designed by Applied Cybernetics, an independent software company in Columbus, Ohio.

The hardware cost approximately \$50,000. "My investment has already paid off in both time and money savings," reflects Price. "And many of the benefits are intangible: the computer has improved nearly every aspect of our operations."

### **Better Inventory and Sales Control Put Ohio Truck Stop Back in Driver's Seat**

Because the cash registers are directly linked to the computer, the Wang 2200 MVP maintains inventory records for all operations. When a sale is rung up, either the clerk or the wand reader enters the information — item, amount sold, price, clerk number, and date — into the cash register. The computer automatically polls the registers twice a day, and the information flows into the database, where it is sorted by department.

"The computer can produce information on the status of all inventory," says Price. "We can compare stock levels with those of previous months or years; we can check for availability of seasonally popular items; we can tell how much of any given item we have sold."

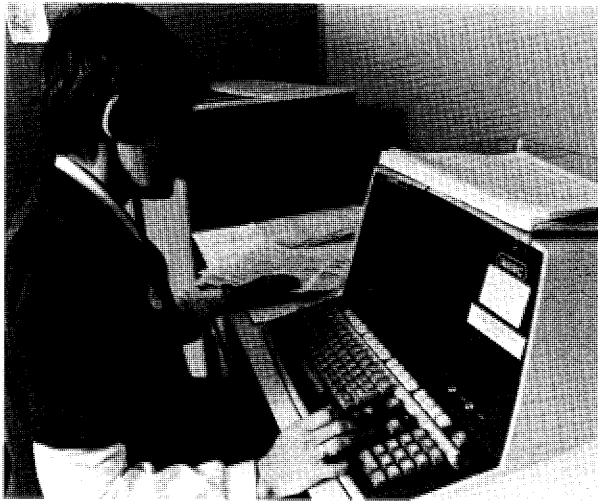
Inventory and sales records also reflect employee productivity. "If someone isn't properly trained, his or her mistakes are immediately spotted on the automated reports," he explains. "Conversely, super sales people can also be identified." Mechanics who make a commission on all repair parts they sell especially benefit from the automated system.

### **Automated Accounting Improves Payroll Distribution and Cash Flow**

The Truck Stop no longer uses a full-time accounting firm. "The Wang 2200 MVP does it all — payroll, general ledger, accounts payable, and accounts receivable," explains Faye St. John, operational vice president of computer services. "It's so easy to learn and use," observes St. John, who has been with the Truck Stop for six years, "that accounting and other data can be entered by following clear-cut screen prompts." Neither she nor her assistant, Stacey Copenhefer, types checks or invoices anymore. "We just press the right buttons and the computer produces them, freeing us to do other accounting functions," says St. John.

An electronic time clock in a DTS cash register has eliminated both manual time cards and written time distribution records, i.e., how many hours an employee spent in a given department. This data is automatically transmitted to the Wang 2200, giving an exact picture of the time worked. Salaries are deducted from each operation. "Neither employees nor departments get shortchanged," observes Price.

The accounting program also maintains a better cash flow. Accounts payable and receivable are issued weekly instead of monthly, so that finances are not depleted at the end of the month and incoming checks can be received more quickly. Prompt payment discounts are taken, and non-discountable invoices are paid only when they become due.



*The Wang 2200 has taken over the tedious task of typing out checks and invoices. According to Faye St. John, operational vice president of computer services, all it takes is "pressing the right buttons and the computer does it all."*

Price never has to wait more than four days for his end-of-the-month financial statement. For him, that's one of the most important benefits of the system: "It gives us an overall and immediate picture of how the business is doing. We can spot trends and make timely operating changes. If an item in the retail store isn't selling well, for example, we can return it to the vendor before it causes too great a loss."

### **Down the Road for Truck Stop Management**

Price has specific ideas about upgrading and improving his Wang 2200 MVP. He would like to set up a direct telecommunications link to the motel and carry-out across the highway. He is also thinking about adding a word processing system to automatically print labels for the wand readers. Computerization of both the scales in the restaurant for portion control and the gas pumps for more accurate recording of fuel consumption is also under consideration.

"Our system was among the first of its kind in the truck stop industry," Price remarks. "As other small businesses realize that computers can meet their specialized needs in a cost-effective way, they too will jump on the bandwagon. And we'll be there also, improving our business as computers advance."



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# Agency in-house computer pays two-way dividends

**Timmins, Ontario** — the home of Spooner, Mignacco, Macleod, Ltd., an independent insurance agency — is a town of 35,000 people 450 miles north of Toronto. Timmins prospered in the early 1900s with the mining of gold, but after many of the gold mines closed down the pace of business slackened. Then, in 1964, Texas Gulf Canada discovered that Timmins was located near one of the richest base metal deposits in the world. Couple this with the forestry business thriving on the plentiful woods in the area and you realize that Timmins is booming quite nicely.

And so is Spooner, Mignacco, Macleod, Ltd. The firm originally was called J.W. Spooner and Son, Ltd. J.W. Spooner is a former mayor of Timmins and cabinet minister in the provincial government. Spooner merged with Mignacco, a former representative of the Royal Insurance Company who operated a small agency, in 1971. In 1976 they decided to buy out a fairly large agency in Timmins. Subsequently, Macleod sold his business as an insurance adjuster and came on board to form the present agency.

The agency is general, offering insurance in life, casualty, property, and bonds. It now does about \$3.5-million in business annually and has more than 5,500 clients.

But things have not always been so rosy. In 1976, the agency did about \$2.5-million in business, employed 11 clerical people, and used a batch accounting system that proved quite unreliable. The agency would send its paperwork to a service bureau in Toronto for processing. Explained John Macleod, "Because of the distance, we were kind of forgotten. And you never knew when the service bureau were cutting off their month. You never had your month finish at the same time as theirs. It was disaster. You could never reconcile your books; you never knew what was going on."

Not to be daunted, the agency looked around for hardware and software that could be purchased outright. In the fall of 1977, Macleod and Mignacco attended a software presentation hosted by Redshaw, an independent software consultant. There they

saw the Redshaw software for independent insurance agencies being run on a Wang computer.

Impressed, Macleod and associates paid visits to agents in Kitchener-Waterloo who were using similar systems. After some judicious deliberation, the agency purchased a Wang 2200 T and had Redshaw install its insurance software. After using the system for a year, the agency upgraded to a Wang MVP with five screens and two printers.

Was the agency happy going in-house? Assured Macleod, "I now don't see how an agency such as ours can get by without a computer. We added another million dollars to our business and now take care of the total with eight female staff and two principals in insurance — three fewer than before we computerized in-house and acquired the other million dollars in business. I'd say something is going right."

The computer does just about everything but print cheques, and it does not do that because of the relatively low volume of cheques generated by the agency. What the computer does do is the paperwork within what are actually several mini-agencies in the office. Each of the clerical people handles a section of the alphabet within her mini-agency. The computer provides the various pertinent forms. Everything is controlled through the computer, even the performance of the operators.

Elaborated Macleod, "With the computer, I can tell you exactly what each one of the women in the office is doing, how many transactions they're making, how much money they're earning, how many cancellations they're making. This helps us keep a handle on performance throughout the year. And when it comes to raises, we can estimate who deserves what rewards."

Timmins has a small-town atmosphere, so it is important to maintain personal contact with the customers. The computer actually makes this task feasible. "We don't go ahead and do a thing without consulting the client," said Macleod. "Yet this is no easy task when you have in the range of 6,000

clients. With the computer, however, if your policy is due for renewal at a certain date, the computer sends you a personalized letter, referring to the policy. A second letter is sent if there is no response. The third step would be to send a registered letter stating that your policy has lapsed and that we haven't been able to reach you by phone. When the policy comes in, the invoicing is done on the computer. If the policy is arranged for, post-dated cheques are put on the computer. Daily deposits come off the computer. If I ask a company for renewal as an agent, that's done by computer. It's hard to imagine keeping on top of any of this without a computer system or more staff."

## Marketing tool

The system even functions as a marketing tool. Macleod simply has to go to it and inquire about every client who has an automobile policy yet lacks a homeowners policy. The system picks them out and sends them a letter. He can also go through the system for a direct solicitation to homeowners. The homeowner can be selected according to the area code he lives in, his classification as a driver, or whether his house is frame or brick.

But what about service headaches, especially since this would be a natural concern given the distance between Timmins and Toronto? It turns out that this Timmins agency can serve as something of a model example. People come from far and wide to observe the way in which the agency has automated. Ironically enough, the agency does not even have a service contract. If a screen goes down, it will simply be put in a box and sent to Toronto. Otherwise the agency pays for a customer engineer to fly in from Toronto. "Usually, when we send a screen in by box to Wang in Toronto, we get it back in our office in 72 hours," attested Macleod. "It's worked out so well so far that we once got a call from an agent in California because a Wang representative in Toronto had told him, "You want to know about service, you just call that agency up in the boon-docks.""

## Healthy future

The future looks healthy for the agency, and computers should continue to be a part of it. Macleod foresees upgrading. Indeed, the agency already is in the midst of a pilot project concerning the telecommunication of insurance data to a mainframe at the Zurich Insurance Co. This pilot has exciting implications as a breakthrough toward standardizing the insurance forms and communications abilities between insurance agents and the companies with which they work. Redshaw is at the forefront of this breakthrough, believing that the lack of such communications in the past between an independent agent and a company has been more the result of business decisions than any limitation in technology.

Commented Macleod on the idea behind the pilot project, 'We as an agency choose to do business with those companies that run in the same manner as we do. Automobile applications, automobile claim forms, endorsement forms — each company uses all these forms, each containing the same information but disparate in terms of format, logos, etc.

'Standardization of some of these forms is being talked about today as a matter of common sense and efficiency. So when you put something into your computer and transmit to a company mainframe, instead of having to go through the process of picking out this and this and this and putting it in such and such a block over here, everybody will say, fine, we can accept this

form, so information can be sent more easily. Every time you have to change your format, somebody is going to have to waste time retyping essentially the same information. It's so much better if we can send out vital information with the push of buttons and rest assured from there that the company mainframe has all the input it needs from us.'

So this independent insurance agency out in the 'boondocks' is keeping itself thoroughly modern. Wang hardware with Redshaw software is proving very helpful in meeting the agency's increased business opportunities in Timmins — not only allowing an increase in the volume of work, but bringing new-found orderliness, timeliness, and ease to bear on the processing of this work. #

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# A Favorable Verdict For Automated Legal Support

COLUMBUS, Ohio — The practice of law has changed significantly since the quill pen and high-top desk era more than a century ago when the doors of the 240-member firm of Porter, Wright, Morris & Arthur were first opened to clients. Tradition still abounds within this longstanding profession, but lawyers today are responding to new pressures by employing new tools.

More than two years ago, Porter, Wright's management recognized that transient economics of a successful law practice demanded accurate cost accounting and timely cash flow. One hundred and fifteen attorneys among eight different departments work on matters ranging from real estate, labor, and commercial law to trust, probate, and litigation for several hundred clients.

Time and paperwork are products of any attorney. Being in the top 100 of the nation's 15,000 law firms, the volume of time-accounting slips generated by Porter, Wright attorneys is sizable. Such slips range from recording a ten-minute phone call to another for a half hour of research and a third for a four-hour conference. With the combination of long hours and large staff, the firm generates over 1800 time-accounting slips daily.

The writing was on the wall — even before a recent merger doubled the firm's size. "Our management anticipated a potential bookkeeping nightmare and cash-flow logjam," stated Controller Chester Sheets, "and they reacted."

The response was the installation of a Wang VP Minicomputer with an 80-megabyte disk drive and 600-line-per-minute printer in the accounting department.

The lawyers chose Wang equipment, according to Sheets, because they required flexibility not found in other systems. With so many attorneys doing different kinds of legal work," he explained, "we needed a system that could solve our general problems, yet accommodate the special ways our attorneys report their client accounts." Customized software and the VP satisfied both requirements.

With timekeeping under control, paperwork was next on the agenda.

## On The Job Application


Private secretaries had been producing all typewritten material — including large multipage documents — on IBM magnetic-card systems. The legal profession requires a fast, reliable revision capability. Thus the intent was to reduce reliance on mag cards which forced secretaries to completely revise documents after an original had been typed.

An extensive survey was conducted of word processing equipment in use

at several law firms in the Columbus area and throughout New York state. "By talking with experienced users," Sheets reported, "our staff had the opportunity to hear about problems with different systems in a first-hand and unbiased manner.

"Wang's concept of distributed intelligence and built-in modular expandability was a major consideration," emphasized Sheets. "We're probably going to add ten to fifteen

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new attorneys each year, and the really nice thing about the Wang equipment is that it can be continually upgraded. You don't have to buy the whole works; you can simply keep adding on as your needs increase."

Porter, Wright, Morris & Arthur's paperwork needs are now served by a WPS/30 System with three video display workstations, two 240-character-per-second printers, and a 10-megabyte disk. The WPS is interfaced to an optical character reader (OCR) scanner.

The Word Processing Department now handles documents ten pages or longer from all eight departments. Fifty to seventy new documents reach Word Processing weekly, according to operator Sandy Goodson. "We act as the middle-person between a secretary and an attorney," Goodson explained. "The secretary types the original copy from the attorney's notes or dictation — since she understands best what the attorney wants. The first copy is typed in scanner-readable format. We then input that copy through the OCR equipment to the word processor, and all revisions are handled by our department from that point on."

A complex document, or one produced by collaboration among several attorneys, normally passes through five or more revision cycles. Edits are made on photocopies of the originals

and returned to the Word Processing Center for revision. "A revised document may come back to us again, or it may be used by the attorneys," stated Goodson. "Each of our documents, however, goes out looking like a final version because we never know which cycle will actually produce the final document. With the System 30, this kind of service is easy to provide."

The Litigation Department now updates monthly lists of court cases more efficiently than ever before. With the old mag-card systems, all litigation matters handled by the 30-attorney Litigation Department were listed in a monthly bulletin that was manually updated and retyped. The 100-page document usually involved nine days of a typist's time. By continually feeding current information to a master list stored in the System 30, revisions are completed in a matter of minutes.

The generation of periodic mailings announcing new associates has also become an easy task. With Wang's Sort package, duplicate addresses are automatically purged and more than 4,000 envelopes addressed with ease.

Accounting reports and billing summaries required by each department are now produced in a few hours rather than the several days required by manual processing. "Our Accounting Department staff has been reduced by half, and cash flow has improved

by thirty to sixty days," Sheets claimed. "In the two and a half years since installation, the VP has easily paid for itself."

Introduction of the WPS/30 has been equally successful, by meeting the law firm's expanding documentation demands, while freeing up secretarial time for administrative duties. Currently one secretary serves two attorneys. "This ratio will shortly increase to three to one because of our Wang System," predicted Sheets.

Wang's overall service and customer support has been "very good," according to Sheets. "Our high-quality Wang hardware has not presented any problems," he emphasized, "even though both systems are operating from fifty-five to sixty hours per week."

Sheets reflects on the future directions for computerized tools. "Our word processor will be interfaced with the accounting system, either by hardwiring or through diskette," he promised. "This interface will enable the Word Processing Department to generate bills directly — a job now handled by department secretaries. Our attorneys will have a forms library in the word processor, so they can instantly retrieve a particular form from one of several office locations and personalize a document."

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