

# WANG

# Printout Printout Printout

WANG

WANG LABORATORIES, INC., Tewksbury, Massachusetts 01876

VOL. V No. 3

**Would you like to cut your software cost by 50%**

Your answer, for sure, has to be "yes."

But your basic skepticism is probably telling you "It can't be done!"

In a few individual cases, it probably can't. But in an increasing number of computer user shops, it is very possible indeed to halve your software costs. And the experience and counsel of independent software firms, among them many of the 200 software vendors in Wang's network, indicates that there are many small things that almost any computer user with software requirements can do to bring his development and operating costs down significantly.

What are those things?

Let's first define what we mean by software. For this purpose, we mean it to encompass all phases of computer utilization except the actual hardware itself. That is, it does include planning, design, procedures, coding and testing, and final acceptance of completed work.

#### Unforeseen Cost Problem

Each of these areas involve costs, and most of them usually involve unpredicted costs that result in budget overruns or redesigns intended to save money or time.

In fact, it is these unplanned costs  
*(Continued on page 5)*

#### Record six-month orders:

## Customer response to WCS computer line is "highest ever"



### Wang markets printers to other manufacturers

For the first time in its 25-year history, Wang Laboratories has completed plans to sell products developed for its traditional product lines to original equipment firms that supply either hardware components or complete systems to computer users.

The initial entry in the OEM marketplace is Wang's Model 200W, a version of the Model 21W Line Printer, a 200 char-  
*(Continued on page 5)*

## More than 1200 orders received; production up

TEWKSBURY, Mass. -- More than 1,200 units of Wang's new WCS computer line have been shipped to or booked since production began in June last year, Dr. An Wang, company president, reported to company executives at a year-end meeting.

Incoming order rates for the product, Dr. Wang said, "have already exceeded all previous records for any computer-based Wang system, and we are encouraged by the continuation of that trend."

More than \$6 million of new orders have been booked since July for the three models of the WCS line, which are all based on a modular design of the Wang 2200T central processor.

The three computers range in price from \$6,100 to more than \$40,000 per system, depending upon processor size and the number of peripheral and storage units attached.

The small WCS/10 system is a self-contained processor with a memory up to 32,000 words and built-in tape cassette storage, plus a standard keyboard and visual display screen.

*(Continued on page 7)*

## R&D goes wild!!!

### We've got products, products, products!

The Terrace Room at the Plaza Hotel in New York City was the setting on March 24 when Wang Laboratories announced nine new products, and its continuing "frontal attack" strategy in the small computer marketplace.

According to John Cunningham, Senior V.P. of North American Sales, the new products, priced from 30 to 40 percent below competitive offerings, are the "second stage of a long-term plan to make Wang a principal supplier to the small standalone and dispersed processing markets through multiple, low-cost product offering."

The new products include:

The **System 2200 PCS**, a small, portable desktop computer, directly aimed at the IBM 5100 (see story on page 3).

The **System 2200WS** series of workstations, priced at \$4,900 each, which enable three separate workstations to connect to a WCS/30 disk-based processor to form a powerful multiprocessing system. For more information, circle 2200WS on the Reader Response Coupon.

The **Model 2227B**, a buffered asynchronous telecommunications controller, and the **Model 2228**, a new Intel 8080 microprocessor-based binary synchronous controller. Circle either 2227B or 2228.

The **Model 2231W**, a Wang designed and manufactured 120 cps printer, priced at \$2,900. Circle 2231W.

The **Model 2272** virtual drum plotter, also selling for \$2,900, and again designed and manufactured by Wang. Circle 2272.

**MPS**, Wang's Management Planning System software package, priced at \$200, which produces sales, cash flow, inventory and profit forecasts. Circle MPS.

And finally, **Wang/CASH**, a turnkey system including both hardware and software for \$25,300, designed for client write up functions performed by public accountants. Circle CASH.

## What's in a move?

### When it adds 81,000 square feet, the answer is progress

Wang Laboratories increased its total domestic plant space by 35 per cent in December when it began occupying a new 81,000 square-foot plant on Route 128 in Burlington, Massachusetts.

The plant, and six acres of adjacent land, purchased for \$1.8 million from Technical Operations, Inc., will house the expanded programming and administrative staffs of Wang Computer Services, the on-line timesharing and software package subsidiary formerly headquartered in Arlington, Mass.

In addition, the new facility will be home for the company's U.S. Customer Engineering Services, which now numbers more than 60 persons.

A large commercial data center and office space for several hundred personnel have been incorporated during renovations that took place during the Fall.

The new facility, about 12 minutes from downtown Boston, is located at the busy intersection of Rtes. 3 and 128 in the Northwest Industrial Park.

A move is always a good sign when it is part of a company's expansion.

### Wang: One of the top ten growth companies of the past decade

The prestigious *Financial World* magazine recently reported that Wang Laboratories placed sixth among the top ten growth companies in the United States during the decade.

In the article, *Financial World* said of Wang "while giants IBM, Xerox and lately Burroughs dominate the terrain, the small-fry of the group, with its flair for technology and strong marketing skills, has managed to come up with innovative and profitable products. So profitable over the last ten years, earnings for the No. 6 growth-winner last year have increased at a compound average annual rate of 39%.

## Canadian bank speeds translations with System 1200 TC

How does a bank send company circulars from Toronto to Montreal for translation from English to French, deliver the translations back to Toronto for printing, then re-deliver the final copies to Montreal . . . and do so in a fast, efficient and economical manner?

By adding a Wang System 1200 Word Processing Typewriter with a Telecommunications Option.

When the Quebec Provincial Government passed Bill 22 to establish French as the official working language in that province, the Toronto Dominion Bank already had been examining how to produce circulars in the French language which could be issued simultaneously with the English circulars to branches in Quebec.

Two problems existed. The translation staff was in Montreal while the printing facilities were in Toronto. The solution ... install facsimile equipment and automated communicating typewriters in both locations.

Now, the Publications Department transmits each approved circular to Montreal via the facsimile equipment. In Montreal, the Translation Department translates the circular into French and types the French version on a Wang System 1200. The operator can correct any typing errors either immediately while recording, or after initial draft.

Once the final text is recorded on tape, the Montreal operator transmits it directly back to Toronto via the Wang Telecommunications Option link between the two System 1200's. The Publications Department then automatically plays back the French circular on this System 1200 at 175 words per minute, producing print-ready copy.

The next step is to run off both language versions of the circular in the Head Office Print Shop on an offset press. The printed English circulars are then distributed to all branches, together with an additional French version to branches in the Province of Quebec.



SWAP Executive Director Jason Taylor

## Software users group exceeds 1,400 members

The Society for Wang Applications and Programs, better known as SWAP to Wang's computer users, entered the new year with more than 1,400 members and a projected membership of 2,000 by the end of the fiscal year -- the highest level in the five years since the users' software association was established.

Wang users now have access through SWAP to approximately 1,000 software routines in the SWAP Program Library, and an additional 2,000 through a Joint Users Group of which SWAP is a member. SWAP participants are prolific in software development as evidenced by SWAP's top standing in the number of programs among the eleven major hardware user groups.

The organization is administered from Tewksbury by executive director Jason Taylor. In addition to building the library of free software routines, the society also holds annual seminars, oversees the operation of 17 special interest subgroups, publishes a quarterly magazine called **The Programmer**, and provides advice on software development to Wang customers, prospects, consultants and software development firms.

For more information, circle SWAP on Reader Response Coupon.

### Priced one third lower

## Wang's new Portable Computer attacks IBM 5100 head on

At a recent major press conference in New York City, Wang Laboratories introduced a new line of portable computing systems priced more than one third below IBM Model 5100 computers.

According to John Cunningham, Wang's new 2200 PCS "plug in" computers will be sold to large corporations, for use in distributed processing environments, as well as to first-time computer users.

"The new PCS systems are priced from \$5,400\*, which makes them inexpensive enough to be justified for a single application," Cunningham said. "They can be a lower-cost alternative to time-sharing services, or they can handle jobs that currently tie up some of the capability of a large corporate mainframe.

The 2200 PCS series are full mini-computers completely contained within a 55-pound, desktop console that can plug directly into a wall socket. The PCS consists of a 2200 central processor with 8K bytes of semiconductor Random Access Memory (ROM); a 9" CRT display with full alphanumeric (upper and lower case) keyboard plus a tape cassette for data storage or program loading. That 8K system will sell for \$5,400\*, but the PCS line is expandable to 32K bytes of RAM.



A 32K system will sell for \$9,800\*.

Either of the two new peripherals Wang also introduced (see story, page 2), the new Model 2272, microprocessor-based drum plotter or Model 2231W, 120 characters-per-second printer, each priced at \$2,900\*, can be interfaced to the system.

Cunningham pointed out that a 2200 PCS with 120 CPS printer will sell for \$8,300\*. A minimal IBM Model 5100, equipped with a printer to make a comparable system, is priced at about \$12,600.

"The PCS offers a lot of computing power, and a lot of flexibility for the money," he concluded.

*\*Domestic U.S. prices only.*

#### COMPARATIVE PRODUCT FEATURES: WANG 2200 PCS VS. IBM 5100

Feature	2200 PCS	5100	Comment
Software memory overhead	700 bytes	4400 bytes	2200 uses 75% less
Peripheral options	35	8	2200 has 4.5% more
CRT display screen	1024 characters 9"	1024 characters 5" diag.	2200 is 2X the size
Software language	Interactive BASIC	Interactive BASIC and APL	5100 has APL
Special function keys	32	10	2200 has 3X as many
Communications rate	4800 bps	1200 baud	2200 is 4X faster
Price	\$5,400 + Purchase, lease or rent	\$8,975 + Purchase or lease	2200 is 40% less

**Quick Delivery, Quick Benefits**

# WCS/30 routes trucks, improves cash and oil flow for New Jersey fuel dealer

A minicomputer system that was up and running two months after order is helping Reel-Strong Fuel Company (Cranford, N.J.) reduce costs, boost profits, improve customer service and increase cash flow.

Clint Crane, president of the 1600-account business in the Central Union County N.J. area, said the recently installed system "is already proving itself in a fast-moving business that has an extremely high number of daily variables."

Reel-Strong switched from using a service bureau for its accounts receivables to a Wang WCS/30 minicomputer system that now processes -- in addition to accounts receivables -- invoicing, aged receivables, accounts payable, sales analysis, daily transactions and all general accounting applications. The daily computation of carrying charges alone is helping to recover the cost of the system.

Crane explained that he now has a full time System, as opposed to the part time service bureau, and that the system does all the necessary functions, plus it provides him with an equity build-up.

The System consists of a Wang WCS/30 minicomputer, a 200-character-per-second printer and one CRT terminal that is totally tutorial -- an operator gets instructions right from the TV screen on the terminal.

The system performs virtually all the administrative functions that were previously done manually -- and does them approximately 30 percent faster and more efficiently.

### Routes Delivery Trucks

Each day, delivery tickets are printed and coded into geographical zones; fuel "runout" suspects are predicted based upon past consumption, and K factor calculations are keyed to degree-day information. Account information is tailored to credit limits, carrying charges, and special handling and delivery instructions.

A typical day starts with the first arrival, usually Crane, turning on the WCS/30 and keying in a request for a



*MARY WHEELER OF REEL-STRONG FUEL COMPANY requests customer information via the keyboard/video terminal of the Wang WCS/30.*

delivery forecast predicted upon degree-day information. The forecast is complete within 10 to 15 minutes and then he requests all delivery tickets for customers the system has pinpointed as requiring deliveries. This can be done by geographical zones. Again, this operation takes 10 to 15 minutes and the day's tickets and routing is complete.

### Credit Limits Built In

An important feature of the daily delivery forecast is that it is alerted in advance when an account has reached or will exceed his credit limit with the predicted oil delivery. On each forecast it gives the customer's current balance as of the day before, and his established credit limit. Also, this same information is printed on each delivery ticket.

The system is then used to put in all deposits from the previous day, and it automatically updates all accounts, and he has a current balance by 10 a.m. An operator will then enter all oil delivery charges from the previous day, and the system again updates the accounts and prints invoices. At any time during the day, anyone can enter any kind of information, such as service charges, both billable and non-billable, and the computer will automatically update each

account. Reports can be generated in minutes.

## Unique interface turns calculators into terminals

An unusual microcomputer interface developed by Digital Laboratories, Inc. can be used to turn any Wang 600 or 700 calculator into a powerful on-line control tool.

The WU-7 interface translates output signals from any Series 600/700 device into ASCII codes that can control a variety of instruments, sensors and even CRT devices that use Teletype compatible plugs. A series of preprogrammed instructions enables the WU-7 to accommodate a variety of on-line transmission and reception tasks that would otherwise take thousands of dollars of programming to accomplish.

Thus, it permits users of Series 600 and 700 calculators to adapt their devices quickly to many common on-line control tasks.

For more information, circle WU-7 on Reader Response Coupon.

## Cutting software costs is easier than you think

*(Continued from page 1)*

that have given "software" the reputation of being an arcane, frightening and uncontrollable art form. And a high-cost art form at that.

Here, from the experts whose livelihoods depend upon delivering finished software on time within a fixed budget, are some tips that can help you cut your costs in half:

*At the beginning, agree on what constitutes the end.*

When is a program, or application system, really finished? The designer will think one thing, the user another, unless you specify clearly, at the very earliest discussion stages, what specifications, functions and performance criteria are acceptable in the finished product. You'll be amazed how this simple step will clarify every other during the course of the development. It is a very subtle but real form of early goal-setting in which both parties are forced to accept realistic results.

*Expecting the unexpected is a reasonable expectation.*

Almost no systems design or specification remains unchanged during the life of a development. And the larger the project, the greater number of changes. That is the human condition -- to add a last detail, remember a forgotten requirement, adjust to a new set of circumstances.

"Locked-in" developments are the source of major redesigns or short-lived program utilizations. Approach your systems projects in discrete stages, finalizing details only a stage at a time, and accumulating changes for incorporation only when the next major stage is ready to develop in detail. That way, you avoid the interruptions, compromises and ensuing discussions that not only slow your efforts down, but cause them to change direction in negative ways. *"Pin the tail on the donkey."*

That is one software vendor's term for insisting that responsibilities for every step of an assignment are clearly spelled out and understood before a project is

## Your computer room needs help if...

Here are the telltales that you have a problem in your operations, according to the experts:

- If there are regular delays in completing scheduled production.
- If there is a high level of reruns.
- If there is a high level of extra-shift usage.
- If there are continuing complaints about hardware inadequacies.
- If your "eyeball" appraisal of your computer center suggests sloppiness.
- If you have a high level of data entry errors.
- If you have production delays due to missing or poorly labeled forms, storage media and equipment.
- If you have hardware downtime problems that regularly interfere with productivity.

These are the symptoms of a poorly run operations group, and can be costing you as much as 30 per cent of your annual budget.

initiated.

A development effort involves much more than just analysts and programmers. It involves management, user departments, operators, often outside vendors (such as the telephone company), machine time availability, forms suppliers.

Each party must be made aware of, and commit to, schedules and participation if the project is to keep a reasonable well-scheduled momentum. And lost time, in every software effort, is lost money.

*Measure on a 2-4 per cent rule.*

One of the hoariest axioms in the software business is the "90% Syndrome," which says that 90% of the effort goes into completing the last 10% of the job. That implies big cost overruns, because the other 90% of the job that's done has often already accounted for 100% of budget.

Avoid this syndrome by following a simple measurement technique. Review every job at intervals no longer than 2-4% of both time and budget. If something is lagging or heading off-course, it gains visibility and the fix can be made before major efforts have been expanded, or time lost.

## RPL: It's Wang's new Report Generator Package

Getting printed reports from your computer -- fast, and in a variety of formats -- would probably rank as one of your highest data processing priorities.

Wang has just introduced a report generator, called RPL (Report Program Language) that makes the production of printed reports easier and faster than ever.

The package enables users of any diskette-based Wang computer to format, edit, update and produce almost any type of report that can be printed in the 132-column width of any printer offered with the Wang line.

Financial tabular reports, narrative reports, and listings can be defined with fewer than 10 RPL statements, and once defined, can be reused repeatedly.

All reports can be produced at the maximum speed of the attached printer as well.

Even reports that must be derived through accessing multiple files or computing complex deviations are readily definable and produceable with the new RPL package.

For more information, circle RPL on Reader Response Coupon.

## New line of printers being marketed to OEM customers

*(Continued from page 1)*

acter-per-second matrix printer used with Wang computers that has been in production and delivery since March, 1975. Additional models will be added to the OEM line in the near future.

In addition to running faster and costing less than other matrix printers, the Model 200W is also supported by Wang's network of direct service centers, manned by over 350 factory-trained Service Representatives, which represents "the only direct service capability in the OEM printer market," according to Al Falco, manager of OEM printer sales.

For more information, circle OEM on the Reader Response Coupon.

## New advertising campaign pushes product benefits

What does a company do when it thinks it has more product, more capabilities, and more bang for the buck than its competitors? It tries to tell the world about it.

And that is just what Wang set out to do recently, with a new broad-based advertising campaign that is now breaking in more than 25 different business and trade journals.

The result of a six-month planning effort by Wang's marketing group and the Boston agency of Hill, Holliday, Connors and Cosmopolos, the campaign will emphasize initially some of the most dramatic product advantages of Wang computer and word processing systems.

### Target #1: IBM 5100

Using the currently popular technique of "comparative advertising," in which a company names its competitors and their specific products, and then compares selected features to make sales points, the Wang campaign kicked off with an ad headlined "Wang vs. IBM."

The ad then goes on to compare the Wang 2200 to the recently announced IBM 5100 on three of the most important user-benefit features: screen size, peripheral attachments and price.

Other ads in the program will compare

**Wang happens to make a better small computer than IBM.**

The Wang 2200 computer...  
 The Wang 2200...  
 For more information...  
 Wang Laboratories, Inc.  
 225 State Street, Boston, MA 02109  
 Wang Laboratories, Inc.  
 225 State Street, Boston, MA 02109

## From backpacks to ballots:

# Knoxville radio station turns on Explorer Scouts to tabulate votes

If you haven't been following the Boy Scout program lately, better take a closer look. They are into computers, and in a big way.

Many Explorer Scouting posts provide training, professional guidance and assistance in computer careers, including Post 533 in Knoxville, Ky., sponsored by the local Wang Laboratories office.



From Left, Adviser Dendrin, Hudleston, Fred Sliger, Mike Crenshaw, Steve Cole.

the 2200 to the IBM System/32 small business computer, and the Wang 1200 Series word processors to the IBM Mag Card II.

### An Aid To The Consumer

Motivating the Wang campaign — and many other ad programs that compare automobiles, pain relievers, cereals and even pantyhose — is the advertiser's desire to simplify the consumer's selection process by informing him of pertinent and significant product differences among the many choices available to him in a marketplace.

"It is part of the consumerism movement to simplify and clarify messages that are primarily intended to sell products," Elisabeth Boiger, Wang's advertising manager, explains.

### Major Exposure Planned

Wang has committed the major part of its ad budget to the new advertising program.

The campaign has started to appear in general publications such as *The Wall Street Journal*, *Business Week*, *Newsweek* and *Sports Illustrated* as well as in vertical trade publications.

Jo Anderson, a radio announcer at Station WKGN in Knoxville, has been following this development. So last November, just a week before election day, Anderson called Wang Explorer Post #533 and asked if they could help him automate the tabulation of local votes for mayoral, city council, school board and local judge elections.

Wang advisor Steve Dendrin, Jr. put in a quick call to members of the 25-person coed Post, and within a week, the group had developed all of the programming necessary to count votes.

On election day, Explorers stationed at each precinct reported votes by telephone to the Wang computer center, where they were keyboarded into the processor, tabulated for each candidate, and displayed and printed by ranking and percentage of vote returns within 10 minutes after being telephoned in.

By the time he got on the air with initial results, announcer Anderson was able to make early predictions of the outcome of several key races.

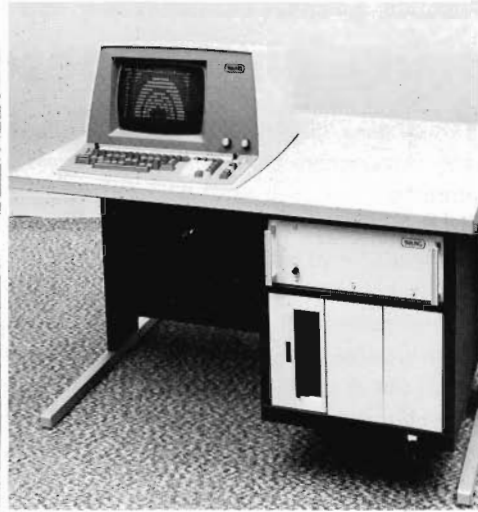
Says Dendrin of the event: "Most people think of Exploring as a bunch of kids tromping through the woods. But the program is far more advanced than that. It provides vocational training -- early exposure -- that lets young people gain experience on a variety of potential career paths at an early age."

The two-year-old Post #533 offers just one form of experience, computers. But it has already performed more than 30 public service functions for the local community.

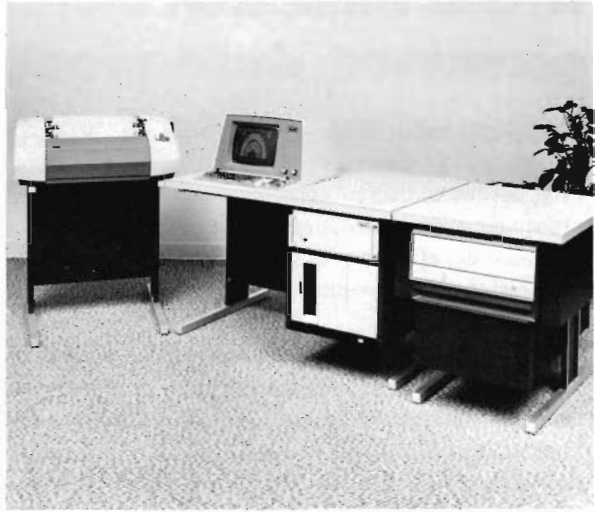
"It's good for everybody in Knoxville, and that's what Exploring is all about," he says.



WCS/10



WCS/20



WCS/30

## Large capacity WCS/30 is the best seller

(Continued from page 1)

The mid-range WCS/20, priced from \$11,200-\$20,000, is expandable up to 32,000 words of main memory and uses diskette storage media. It can also be expanded with a variety of input and output device attachments.

By far the best selling model in the line is the powerful WCS/30 processor, which has a memory up to 32,000 words, and up to 10-million words of disc storage for large applications file storage. Up to 35 different peripheral units can be attached to the WCS/30.

### Many First-Time Users

More than half of all orders and shipments, Dr. Wang disclosed, have been to organizations either obtaining a computer for the first time, or converting from external computer sources -- such as service bureaus or time-sharing systems -- to an in-house capability.

The balance of the orders are from existing Wang customers, or previous users of other small computers or semi-automated systems such as billing and accounting machines.

Major market penetration has included general accounting and business applications, medical and laboratory appli-

cations, engineering applications, and educational systems.

The balance, it was said, spanned more than 40 different applications in 17 additional commercial and scientific market areas.

### A Software Incentive

"Beyond the intrinsic value of the hardware package offered in the WCS line, most users are attracted by the ease and low-cost of developing customized software for Wang processors," John F. Cunningham, senior vice president, explained.

About 200 local-market software firms in the U.S. along, employing nearly 1,000 data processing professionals, comprise a software vendor network that provides modestly priced applications programming for Wang computers. In the three years since the network was established, the vendors have developed more than 30,000 programs for Wang processors, Cunningham said.

"The issue facing users today -- as historically -- is more than simply getting a low-cost computer. It is getting a low-cost solution to one or more specific problems. Without the software, the solutions are not reachable."

"When you combine low-cost software with low-cost hardware, you are in a position to really solve problems. That's the position Wang wants to be in for all its customers."

"The response to the new product line indicates we are getting there fast," Cunningham said.

### New multiplexer

## Share a Disk Drive four ways with 2230MXA/B

Disk storage units are one of the most expensive elements of any data processing system. With the new Wang Model 2230MXA/B Disk Multiplexer, a user can, in effect, cut the cost of disk storage because the multiplexer allows up to four System 2200 processors to share a single disk drive on which each processor data is stored as part of either a common, or split, data base.

Access to the disk drive is on a "daisy chain" basis, with a master controller polling each processor sequentially on an equal priority basis to see if it is calling for access to the disk. If so, the inquiring processor takes command, and a single disk statement or command can be executed. Multi-sector transfers can be made by a single statement.

Under this technique, all processors sharing the disk have virtually concurrent access at all times, since a single access typically requires from 20 to 80 milliseconds to complete.

In a case of a major on-line update from one processor to disk-resident files, one processor can temporarily gain exclusive access to the disk via a programmable "Hog Mode" feature, which locks out all other systems.

For more information, circle 2230 MXA/B on Reader Response Coupon.

# Argus Research increases publication efficiency with combined word processing, phototypesetting system

Argus Research Corporation, a financial research firm located in New York City, has found that by combining word processing with phototypesetting it has increased the efficiency of its in-house Publications Department by 50 to 75 percent.

The equipment Argus uses to combine phototypesetting with word processing includes five System 1222's, a Wang Photocomposition Input Option, a Compugraphic's Computape II phototypesetter, and a Compugraphic's Uniterm CRT paper tape editor.

Argus Research is an independent economic and investment research and portfolio management organization that provides analytical financial analyses to its clients on broad national and international economic and monetary developments, on economic factors affecting specific industries, and on 350 individual companies.

Of the firm's 60 employees, approximately 25 security analysts, economists and portfolio managers produce 30 to 40 different types of reports, varying in length from two to 40 pages. The reports are sent on a weekly, monthly or quarterly basis to Argus' clients which include

brokerage firms, banks, insurance companies, money management firms and large corporations.

Argus had been using magnetic tape word processing machines with compatible composer typewriters to produce their numerous reports for the past five years. But with growing client services, Vice President John L. Collins, who heads up the publication effort, decided a faster, more efficient method was needed to keep up with the increasing publication workload.

The firm tried out a typesetter with a direct input keyboard, but found that input became a bottleneck because only one operator could type into the system at a time. "We would have needed five direct input phototypesetters, which was prohibitively expensive, or a system where all five operators could input simultaneously into one phototypesetter," Collins explained. The answer for Argus was five Wang word processors, two of which are equipped electronically to feed one PIO.

With the present word processing and phototypesetting equipment, installed six months ago, the analysts send a handwritten rough draft of a report to Janet

Andersen, the publication production supervisor. The hand written copy is recorded on a magnetic tape cassette on one of the five Wang word processors, then sent to Mr. Collins for editorial review. All changes are made with the editing features of the Wang word processor until the copy is error free.

For short reports with limited circulation, the error-free cassette is played back on the System 1222, directly producing copy suitable for use on an in-house Gestetner press. For lengthy reports and those with large circulation, the coding commands used by the Computape II phototypesetter are edited into the Wang cassette containing the text of the report. Since Argus has standardized the report formats, each operator is trained on the phototypesetting commands necessary for each type of report.

The next step is to insert the cassette into a tape holder on one of the two word processors that share the PIO. By just flipping a switch and touching a button on the System 1222, the PIO automatically converts the text and commands to industry standard, six level punched paper tape, ready for direct input into the Computape II. The phototypesetter produces film that quickly is developed into camera-ready copy that is then sent to a contract printer.

Any typographical errors not caught in the original proofreading, along with any last minute editorial changes, are corrected using the Uniterm, which allows editing of the original tape produced by the PIO.

Reader Response Coupon

Wang Laboratories, Inc.  
836 North Street  
Tewksbury, MA. 01876

PLEASE FORWARD  
INFORMATION ON  
THE FOLLOWING:

- SWAP            WU-7
- OEM            RPL
- 2230MXA/B    2227B
- STAR TRAC    2228
- PCS            2231W
- 2200 WS       2272
- MPS            CASH



Name \_\_\_\_\_

Title \_\_\_\_\_ Tel. \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

**MORE POLICE NEWS**

The software for the North Las Vegas Police Department's computer system, featured in the last issue of PRINTOUT, was provided by Joseph W. Larimore & Associates of St. Louis, MO. For more information on this police reporting system, circle STAR TRAK on the reader response coupon.

Wang Laboratories, Inc.  
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Tewksbury, Ma. 01876  
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**BULK RATE  
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