

# data systems newsletter

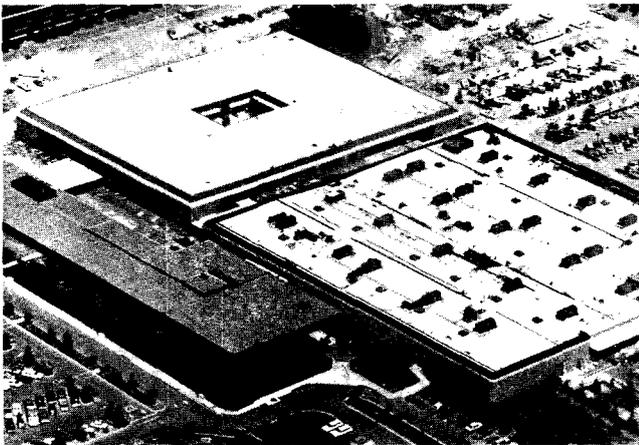
For HP Field Sales Personnel

FRANKFURT  
REINHARDT HEIMUT  
HEWLETT  PACKARD



Volume 1  
No. 2  
October  
1973

## We Expand



Here's an aerial shot of the new building at our Cupertino facility.

The new building (42) is shown at top center in the photo. There are two floors, each totaling 80,000 square feet. Connecting extensions join building 40, on the left, and building 41, on the right. The open area in the center of the second floor roof of the new building is an attractive atrium (or patio). It not only provides an outdoor area for lunch and coffee breaks, but also permits daylight to brighten the center area of the building.

With all this new space available, everyone now has more elbow room, and production is at a new high. Next time you're in town, stop and see our new quarters.

## Training Unbundled

by Bill Nilsson

Effective November 1, 1974, we will charge for all training on Data Systems products. This means that the 2-week software course will no longer be free; customers desiring to take this course will be asked to pay the \$400 for the course. Training commitments on existing OEM contracts will be honored for the duration of the contract; however, new OEM agreements will not include free training.

A new, updated basic computer programming course is being planned but no firm date has been set. When the new course is ready we will notify you.

## Oakland Police System

by Ted Doyle

Since the dissolution of Hank Doust's Custom Products Group, we are no longer in a position to properly support inquiries on the Oakland Police System. Because we do have a fair amount of interest in this system, we are currently negotiating with several systems houses for a joint marketing effort on this system where the specialized system support would be provided by that systems house. Until these negotiations are completed, we would like to keep customer interest in the Police System on the back burner.

## Manager's Report

by Paul Ely

*The following article appeared in the September issue of the Data Systems internal newsletter. — Ed.*

This is the first of what I hope will become a continuing series of reports to you as part of *our internal Newsletter*. These reports will give me the opportunity to tell you about our objectives, plans, progress and problems. I believe that in a company such as ours this information should be available to everyone, not just a few of the managers, since each of you has the opportunity and the responsibility to use your own initiative to contribute to our success.

We have been going through a period of re-adjustment and consolidation in Data Systems for the past several months. This has occurred for a number of reasons. With the benefit of hindsight, we can now see that our plans for the 3000 were over-ambitious — we tried to do too much too soon. It has also become clear that our heavy investment in marketing has tended to emphasize growth, putting off making a profit until tomorrow. The marketing program has also been out of balance with our product development investment. HP's basic strategy has been to base its growth and profitability on "a better product" — I think this strategy is just as appropriate for Data Systems as it is for other HP divisions.

These have been underlying factors in much of the recent change at Data Systems. However, I think it is important to recognize that the dynamic, high-growth character of the computer business (which makes it a challenging opportunity) also brings with it the need to adjust and change.

*Continued on page 2*

### Manager's Report . . .

We have grown very rapidly, and as we have grown, our strategy and organization have had to adapt. In the past, we have tended to pattern ourselves after other successful companies in the computer business — our competitors. I feel that the time has come for us to set our own pattern and that this should be based on the principles that have made HP successful in a number of other businesses. Certainly, if we want to be a leader, we can't do it by following the style and approach of our competitors. Moving ahead on our own has been and will continue to be a source of challenge and change to our organization.

Even through this period of significant change, we have been making important progress. The 3000 software team has finished MPE version B and I think we can now say we do indeed have a "better product". I look to a very successful year ahead with the 3000.

Shipments have been improving steadily and the profit picture is brightening. Marketing has been developing a program for next year which builds on the existing contributors in our product line and engineering has set some very aggressive goals for introducing new and better products. We have an excellent start, but we still have a long way to go to achieve the kind of performance that this dynamic business can provide — the kind of performance that has typified HP as a corporation. We are in the midst of planning for the new fiscal year which starts November 1. Our preliminary plans indicate that we have plenty of opportunity to make major improvements in performance during 1974.

## Another Education Success

by Bob Ingols

Washtenaw Intermediate School District of Ann Arbor, Michigan, has just received its first HP computer system, a 2000F. It is being used this fall by about nine school districts, half for problem solving and half for CAI, including the Math Drill and Practice and CCC packages.

Presently, Washtenaw has an IBM 370/145 for administrative use and was considering the addition of TSO for instructional applications. We won the order for several reasons, among which were (1) cost/performance ratio, (2) quality of Math Drill and Practice, and (3) the ability to install a working system at summer's end.

The salesman responsible for this success? John Knopp, of Farmington. Congratulations, John.

## Ending The Season Right!

by Don Lund

The elementary and secondary school buying cycle for FY '73 hasn't ended yet. All the more reason to compliment the following Sales Engineers on their persistence in getting orders from August 25 to September 20.

Don Thomson, HPCL, a 2000F  
Ed Love, Paramus, a 2000E  
Jim Banisch, Rockville, a 2000E-DOS  
Dennis Ferland, Skokie, a 2000E  
Stan Segal, Atlanta, three 2000F's

Let's finish FY '73 with a burst and be chompin' at the bit when the gate opens in '74.

## The Boise Operation Grows

by Editor

Effective September 4, 1973, Boise Data Systems was in operation in an 1800-square-foot office space that is leased month-to-month. The address is:

Eastman Building, Room 210  
105 N. 8th Street  
Boise, Idaho 83701  
Tel: (208) 345-6331

These offices will be used for interviewing and training and for engineering the 12987A Dot Matrix Line Printer (Tally) into the HP manufacturing system.

The Boise operation is managed by Ray Smelek (formerly at Mt. View Division). During September and October, the following people moved to Boise.

Don Bowman	—	Electrical Engineer
Mel Byrns	—	Production Section Manager
Gary Ferguson	—	Production Supervisor
Bill Gibson	—	Mechanical Engineer
Lyle Loeser	—	Tool Engineer
Wayne Stewart	—	Production Engineer

On November 1, 1973, the Boise operation will move into a leased 26,000-square-foot building. At that time, production will start on the punched paper tape reader.

## Need A Special?

by John Krapf

Thanks to Michel Naggiar of Montreal for adding the name of "Canadian Marconi Company", Montreal, to the list of outstanding OEM's who will "bug HP systems anywhere, anytime". They specialize in the communications switching field.

Mike asks, "How can I spread the news to other regions?" It's easy, Mike. Just keep up the good work and send us the info so we can put it in *DATA SYSTEMS NEWSLETTER*.

## OEM Agreements Signed

by George Fernandez

AUGUST:

Customer	Field Engineer	Qty (Equipment)
Sparling	John Tourkolias	5 (systems)
Collins Radio	Bill Yasdick	10 (tapes)
Boeing	Al Wood	10 (systems)
ITT Aerospace	Mike Naughton	2 (systems)
Dames & Moore	Mike Casey	6 (systems)

SEPTEMBER:

Customer	Field Engineer	Qty (Equipment)
Western Geophysical	Ron Guyote	5 (systems)
Giddings & Lewis	Jack Lazenga	25 (systems)
Canadian Marconi	Mike Naggiar	66 (systems)

Congratulations for a job well done. Let's report a record for October and wind up the year with a boom.

**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

**For research and education purposes only.**

## Another 2000C Installed

by Bob Ingols

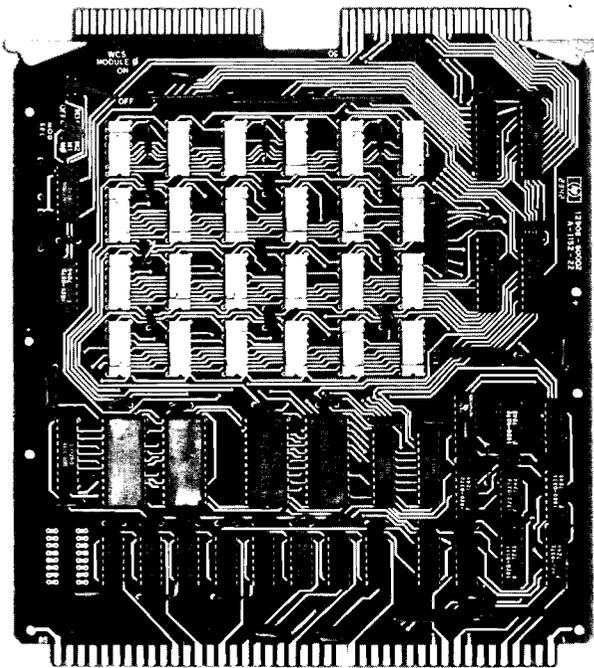
We've just installed another 2000C high-speed educational timesharing system, thanks to John Knopp, of Farmington, Michigan. The customer is the Intermediate School District of Macomb Count, Mt. Clemens, Michigan.

This past summer we delivered a 2000F to them. This means Macomb now has two 2000F's and two 2000C's (high-speed). Coverage is grades K through 12 for 21 school districts, plus 1 community college.

Their first three systems are used for general problem solving; the last 2000C is used for CAI and Math Drill and Practice, including research on student progress.

These systems are also used during the summer for teaching BASIC and for instructional use of computers to teachers from all over the country who plan to begin using a time-sharing system in the near future. This is NSF funded.

This installation is an excellent example of a school district getting much usage and recognition out of their systems. And this kind of publicity about HP computer systems will not hurt our sales. Congratulations, John (again!!).



## Floating Point Price Break

by Editor

Effective November 1, 1973, floating point can be added to 2100A/S computer systems for only \$500, an 80% reduction. The low price gives us a true competitive advantage, and we should exploit this in FY '74.

Floating point in core memory requires hundreds of words. As a firmware microprogram it conserves memory and programs run 5 to 20 times faster. The 2100A/S floating point firmware has microcode to add, subtract, multiply, and divide numbers in scientific notation, and to convert from fixed to floating point and vice versa.

HP Floating Point Hardware (HP 12901A) is field installable and includes software for use with FORTRAN, ALGOL, and Assembly Language. The message: SELL FLOATING POINT!

## 2000F Front End Computers

by Don Pantle

A recent Data Systems decision updates and clarifies an item in last month's newsletter. That item stated that only 2000F systems with two 2100 computers were supported. The *new* policy states that no future revisions to the 2000F software will preclude the use of any HP computer (2100, 2114, 2115, or 2116) as a front end processor. (New 2000 systems - G, H, whatever - may very well preclude use of an early model CPU. However, revision C of the 2000F and the present 2000F-200, 205, 210, and 215 can be configured with any 2100 front end.) This clears the way for Tom Winker's people to continue support for 2000F's with 2114/15/16 front ends. There are presently at least six 2000F installations of this type.

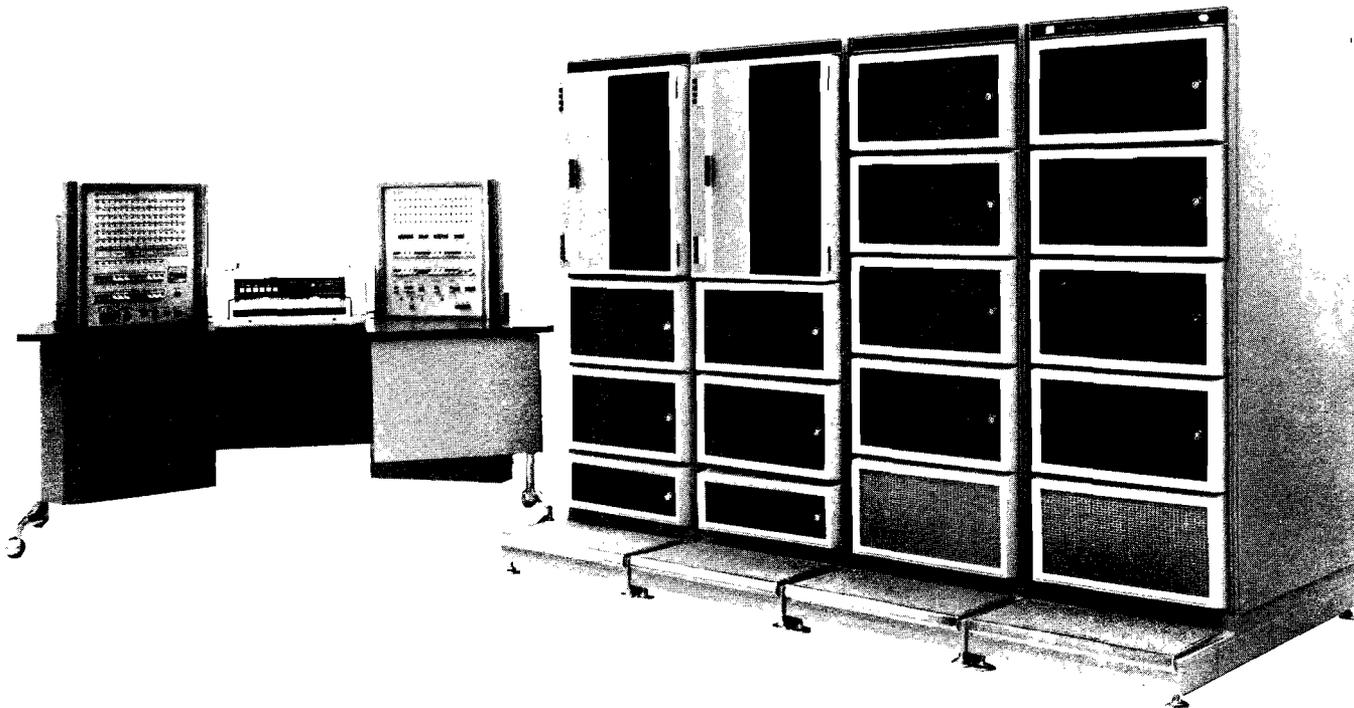
Of course, new 2000F's always have been and will continue to be shipped with two 2100's.

## New Price & Number for WCS

by Han Park

Writable Control Store has been reduced in price from \$3500 to \$1500 and the product number has been changed to 12908B. The 12908A WCS is now obsolete. The following table summarizes the differences between the 12908B and 12908A.

	12908A	12908B
Noise Problem	Noise coupling problem	Resolved the noise problem by inserting resistor network RAR lines.
WCS Jumper Board	Standard configured for 3 WCS modules	Standard configured for 1 WCS module. Option 001 configured for 3 WCS modules.
Selecting Module Number Position	4	14 pin numbers
Operating and Service Manual	12908-90001	12908-90011



## HP 3000 Stars at Symposium

by Nev Griffin

At the "Symposium on High-Level-Language Computer Architecture", November 7-8, Joel Bartlett, a Development Engineer from HP's Data Systems Division, will present a paper on the HP 3000 Computer System. The objective of the symposium is to identify and explore new kinds of computer architecture designed for accepting high-level or direct-user languages.

Joel's paper deals with the contribution made by implementing a multiprogramming 16-bit computer and the

Systems Programming Language (SPL) on the HP 3000. The paper points out how the HP 3000 architecture was designed with both of these concepts in mind, and how the result was a systems computer that combined the best concepts of a one address machine like the HP 2100 and the classical stack architecture of a machine like the Burroughs 35500 to produce an excellent multiprogramming machine.

Location of the symposium is the University of Maryland in College Park (near Washington, D.C.).

## More about Discounts

by Chuck Silberstein

Last month you read an article about discounts on OEM spare parts. Since then there have been a few questions about terminology. This should clear up any questions.

*Functional discounts* reflect the need to compensate original equipment manufacturers (OEM's) for distributive functions. In other words, functional discounts are upheld to the extent that the OEM resells to end-users the goods that he purchased from a supplier.

*Quantity discounts* are granted based on savings in the manufacturer's sale or delivery costs. They are based on the number of articles purchased.

*Dollar volume discounts* are granted based on dollar volume. Last month's article dealt with this type of discount.

If you have doubts or special requirements, check first with Sales Development at Cupertino.

## HP Lease has Option to Terminate

by Bill Senske

HP has announced a new sales financing tool that allows Data Systems' customers to try our equipment without committing to buy it. The plan consists of our standard equipment lease amended by the new "Option to Terminate."

The three basic elements of the new option are:

1. It allows the customer to terminate his full payout lease during its 9th month.
2. In addition to the lease payments, the customer pays 1.25% of the sales price per month for the 9 months. At any time, he may cancel the "Option to Terminate."
3. Thirty percent of the payments made toward the option are applicable toward a cash purchase if the purchase option is exercised within 12 months of delivery.

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### HP Lease has Option to Terminate . . .

This plan gives you the most liberal lease terms in the industry and expresses complete confidence in HP's ability to solve your customer's data processing problems. Any customer who asks you to "show me" is now a customer you can close.

The customer who wants to buy or lease equipment, but wants to try it first, is a prospect for the termination option. To use this plan, he must sign the Equipment Lease Agreement (2-510201 Rev. 7-73), the Option to Terminate (0-510264), and the Purchase Option (optional) (2-510201-A).

Note: Sales Financing division is considering ways to avoid so many signatures. Forward any ideas to Ed Collison, Bldg. 3U, 1501 Page Mill Road, Palo Alto, California 94304.

Limitations to the lease termination option are:

1. May not cancel lease until 9th month.
2. May cancel the *option* at any time.
3. May use the option to add on peripherals to a system if the entire system is in the first 9 months of the lease. Additional termination options must be coterminous with the original termination option.
4. May not use termination option on individual add-ons after the 9th month of the lease. Only data systems are presently available on the termination option.
5. May not add the termination option *after equipment has been shipped!* Prior to that date the lease theoretically could be rewritten to include the termination option.
6. May not use the termination option on discounted systems.

More information about the plans and forms will be circulated in the near future through the regional sales financing managers. Questions should be addressed to them.

This new sales tool will eliminate a lot of the resistance you've met on past sales calls. Now, armed with a complete financing plan that will satisfy almost any need, and with products second to none, you can approach nearly every prospect with the comforting thought that you *will* close the sale.

## Watch Disc Part Numbers

by John Hill

The part numbers for the single-disc cartridge for the 7900A/7901A and for the 11-high disc pack for the 2888A are sometimes reversed. For instance, they are reversed on some older data sheets that are still in circulation.

Be careful when you order these parts. The correct number for an 11-high disc *pack* for the 2888A is 30333A. The correct number for the disc *cartridge* for the 7900A/7901A is 30334A.

These numbers are correctly called out and priced in the price list. So be careful what you order; there's a considerable difference in price.

## Clarifying 2000-Series Upgrade Kits



by Don Pantle

Starting November 1, timesharing upgrade kits will have a new look. In the past, each kit was defined as the complete set of boxes necessary to take a customer from System A to System B. Unfortunately, configurations of these System A's and System B's often changed and this made the kit configurations difficult to control. Consequently, very few of the kits were ever released to manufacturing or were shippable.

The new upgrade kits eliminate those problems. Instead of configuring a kit for each A to B upgrade path, each kit after November 1 is configured for a particular System B, allowing System A to be any 2100-based system. Thus, November 1, there are only four 2000 timesharing upgrade kits, each with very few options. These kits and their contents are described below.

MODEL #	DESCRIPTION
12910M	Upgrade Kit to 2000F  Includes the 12920A Multiplexer, the 12875B Interconnect Kit, and one set of 2000F software.  Option 200, 205, 210, or 215 specifies which 2000F software should be included.
12914M	Upgrade Kit from 2000C to Multispeed 2000C.  The standard kit includes a 12920A Multiplexer, a required 12539C Time Base Generator, and the 2000C software.  Option 001 specifies upgrade for the second 16 terminals and contains only a 12920A Multiplexer.
12915M	Upgrade Kit to a 2000E.  Contains 2000E software and a 12920A Multiplexer.
12918M	Upgrade Kit — Second 16 Terminals on a 2000F.  Contains only a 12920A Multiplexer.

# It's Here: Multiterminal DOS

by Dan Jorgenson



*They can't keep their hands off of the TCS/DOS! Dan Jorgenson at a CRT on the left; Robin Jeffries at a card reader, CRT, and TTY in the center; and Barry Klaas at a CRT. At far right, Sherry Washing is changing a tape on the mag tape drive. To the right of Sherry is a line printer.*

We are pleased to announce a new arrival to the Data Systems family. The Terminal Control System (TCS) represents a major addition to our Disc Operating System (DOS-III). No other minicomputer vendor offers a similar "off the shelf" product!

TCS is a control program that schedules and dispatches multiterminal, multitasking operations on DOS. It consists of a set of routines that are callable by the user's FORTRAN or Assembly Language application program.

TCS is useful in any application environment where the customer wants to tie multiple terminals to the disc file, log terminal transactions on mag tape, spool output, or perform other scheduler-dependent tasks. In the commercial market, any customer trying to implement a dedicated multiterminal data entry or data retrieval application such as order entry, inventory control, or other business transactions management, will find TCS makes DOS-III an attractive vehicle for his applications programmers to use.

Documentation available on TCS consists of:

- SALES AMPLIFIER - field sales guide (HP Private)
- DATA SHEET - Pub. No. 5952-5500
- USERS GUIDE - Pub. No. 5951-7307. Tells you how to use TCS routines.
- APPLICATIONS MANUAL - Pub. No. 5951-7310. Tells you how to apply TCS/DOS to several typical applications.

A set of this documentation has been sent to each Sales and Systems Engineer.

Sales training will be offered in the October 1973, Data Systems Product Tour. Also, System Engineering training courses are scheduled for October and November at Cupertino.

TCS is product number 24342A and is priced at \$2000 for the first copy.

## Version B is Out The Door



by Hank Cureton

Thanks to a lot of hard work on the part of the whole 3000 team - in development, manufacturing, and marketing - Data Systems was able to meet its commitment to release Version B of MPE in September. The first installation of the new version was made on ESL's HP 3000 on September 28, 1973. Thirteen additional installations were completed by October 8, 1973.

Some of the comments that have been received are:

"We are quite impressed with Series B software . . ."

" . . . believe it or not, we have not had a crash in over two weeks!"

"The I/O is much faster."

"The system seems to be much more reliable."

"We have observed a 15 to 20% improvement . . ."

## The Demise of Snoopy

by Ginny Loyola

SNOOPY has been eliminated from the public library. A letter was received from the attorneys for United Feature Syndicate, Inc. which owns all of the copyrights relating to the "Peanuts" comic strip characters. We were notified that, although our computer printout of "Snoopy" is an interesting one, and may appear to be authorized because of its casual and non-commercial nature, it clearly constitutes an infringement of copyrights.

All users should remove "SNOOPY" from their libraries - the next addenda to the BASIC contributed library will not include this program . . . sorry.



## 2000F-200 Put to Test

by Gary Stump

On Tuesday, 28 August, the College and University Marketing Groups conducted a demonstration of a 2000F-200 for the California State Universities and Colleges. This group represents 19 campuses with a total enrollment of 250,000 students. Needless to say, this was a very critical moment.

The demo consisted of a 2000F-200 with 32 terminals hardwired to it. A variety of terminals were used: 5 Teletypes, 3 Bendix 3001's, 1 Tektronix 2600, and 21 Data Point Terminals. (That's only 30!) In addition, we demonstrated the HP 7202A Plotter and the HP 7260A Card Reader. Only one terminal ran at 2400 baud, five ran at 300 baud, and the 110-baud remaining terminals were set at 10 cps.

Several kinds of programs were demonstrated, ranging from sophisticated graphic programs to very simple user-written BASIC programs, and even demo programs for the plotter and card reader.

Probably the most significant demonstration was one not conducted for the customer, but for interested HP personnel. We decided to put a CAI program on each terminal and then test the response time. For this test we chose the Math Drill and Practice program and logged onto the computer under the same ID code. The average response time was instantaneous; there was no sign of degradation. However, we did not try logging on under 32 different ID codes, nor did we run a mix of CAI, we ran only the Math Drill and Practice program. This may have some bearing on performance; how much, we are not sure.

In summary, we are very pleased with the performance of the 2000F-200. The demonstration went quite well. If you have questions, the following people cooperated in the test:

Robin Jeffries . . . . . Sales Development  
 Jutta Kernke . . . . . Development  
 Don Pantle . . . . . Product Management  
 Hal Peters . . . . . Development  
 Peter Rosenblatt . . . . . Development  
 Gary Stump . . . . . Education Marketing

Bruce Templeton was the software support person who made the whole demo successful.

## Medical Pulse-Line

by Peter Palm

"LAB-PACK" is here! This sales notebook "tool kit" will help Field Sales Engineers to confidently take that first big step into the medical community. It contains information on who are the prospects, what to sell, reference accounts, justification, and medical glossaries.

## New A4 Board for FFP

by Han Park

Because of a functional field decode logic error of handling CJMP microcode in the existing A4 board (02100-00022) in 2100A/S computers, a new A4 board (02100-60112) is required for the Fast Fortran Processor (FFP). If FFP or microcode is not used in a computer, it is not necessary to have a new board.

The new A4 board will be incorporated in 2100A/S computers in future production. We'll let you know when the changeover takes place.

## Educational Application Software

by Don Lund

Each regional sales office has been supplied with copies of Version D of IMF-I, IDF-I, and the Math Drill and Practice program. Check your accounts to make sure all users of 2000C high-speed and 2000F systems with these applications have Version D installed.

Version D eliminates all known past problems and includes new features to ease proctor tasks. See the *HP Educational Users Group Newsletter*, Volume 4, Number 1, page 11, for information on features. Read the September 1973 Proctor's Manuals and the Operator Instructions Manual for Version D details.

To order the educational application software, contact your Sales Development Engineer in Cupertino.

## The SIB Bows Out

by Editor

Many customers have asked you what happened to the *SOFTWARE INFORMATION BULLETIN (SIB)*. The truth is: it hasn't been distributed since April 1973. However, by October 26, the first issue of the SIB's replacement, *HEWLETT-PACKARD COMPUTERNEWS* is being sent to all customers on the SIB mailing list. Also, all recipients of *DATA SYSTEMS NEWSLETTER* will get a copy.

The new customer newsletter will include not only software information but also news about new products, new applications of HP computers, new and revised manuals, general news, etc. The stress will be more on sales information and communication with the customer, in an effort to get sales leads and prospects for you. Let us know what you think of the new newsletter.

# Prepare Proposals that Sell

by John Koskinen

A number of very good sales opportunities are available from the EPG systems and DPG OEM accounts in the end-user area. These customers have administrative/management data processing problems just like any other company. An account has a very good potential for an HP end-user sale if it meets the following qualifications.

1. Uses HP instrumentation or equipment
2. Is a sophisticated mini-user
3. Has FORTRAN experience
4. Has a small- to medium-scale distributed data processing need (multiterminal, data base, or transaction oriented)

These qualifications point the EPG systems and DPG OEM end-user sales directly at applications in order entry and inventory control. As these applications develop in your accounts, the sales situation should be analyzed to determine how much the customer knows about his own problem (occasionally it is very little).

As an aid to help find out how much the customer knows about his problem, the guide in this article may be used. While the guide is not all-inclusive, it provides a framework for technical discussions, along with some buzz words and possible answers.

The guide is divided into two areas for discussion: (1) the structure and content of the data in the application and (2) the operations that apply to the data base. The direction of discussion and the customer's answers indicate what equipment and software can solve his problem.

## STRUCTURE AND CONTENT

1. What is the source of information?
  - Sales orders
  - Purchase requests
  - Inventory control cards
  - Employee "cardex" file
  - Material transfer requests
  - Invoices or billing papers
  - Customer return document
2. How is the data accessed, stored on retrieval (master file control #)?
  - Part number
  - Customer name & address
  - Order number
  - Invoice number
  - Sales district
  - Location code/bin number

3. What other ways is the data stored, sorted, or reported (other sort keys, or file search criteria)?
  - Size
  - Color
  - Material content
  - Due date
  - Shelf life
  - Sales volume
  - Age/sex
4. What are the storage requirements for the data base?
  - Record size in bytes, characters, or numbers (watch out for packed decimal)
  - File size in number of records
  - Cross-reference index requirements, tables, and pointers
5. If the data is currently in a manual system, how will it be converted and in what time-frame?
  - Key punch
  - Key to disc or tape
  - OCR/MICR

## DATA BASE OPERATIONS

All data processing operations have three distinctive phases or cycles: Input, Update, and Report. In a batch system, these cycles occur for the whole file; i.e., the whole file goes through input, update, and report for each processing time-period. With on-line data base systems, the three cycles relate to program modules called to operate on the particularly selected record, not the whole file, at a given time. Thus, while there is a difference in timing and program execution, the design philosophy is essentially the same.

## INPUT

1. How is data captured (put into machine accessible form)?
  - Key punch
  - Key to disc/tape
  - OCR/MICR
  - Badge/credit card reader
  - Magnetic/optical wand
2. How is data edited?
  - FORMAT (ALPHA, NUMERIC, BLANK, etc.)
  - SYNTAX (How Field 1 relates to Field 2)
  - Range (A to Z only, no special characters, less than 1000, greater than zero, later than January 1972, etc.)
3. What is extent of data validation?
  - Name and address/ZIP code
  - Current part number/product
  - Present employee/former employee

### *Prepare Proposals that Sell . . .*

- Partial/full delivery or payment
  - Late payment
  - Discount applies
  - Corresponding sales/purchase order
4. How is transaction data keyed if on CRT?
- Free form (comma/blank field separators)
  - Generated form (fill in the blanks)
  - Overlay (printed plastic-see thru)

### UPDATE

1. What fields can be changed?
- Sort keys
  - Name & address
  - Dollar amounts
  - Due dates
  - Quantities
2. How are changes to files handled?
- Do records have to be added in sequence?
  - Are deleted records passed to a history file?
  - Are overflow areas allocated for additional records?
3. What is transaction volume?
- Per day, week, month, etc.
  - What is activity distribution on the file (A-J more active than K-Z)?
  - Is update activity mainly field value change or record add/delete?
4. Are transactions logged?
- Mag Tape
  - Disc
  - Off-line (cards)

### REPORT (Or Retrieve)

1. What is response time requirement for reports after update?
- Sec, min, hr, day, week, etc.
2. Are audit trails required from update cycle?
- Balancing dollar amounts
  - Reporting deleted items
  - Error messages generated
3. What is extent of report generation?
- Exceptions and summary only
  - Full file
  - Additional sorts on standard report
  - Sort field flexibility
  - Report format flexibility

Once the majority of the above questions have been answered, you should have enough information to prepare an impressive, customer-oriented proposal. Next month's newsletter will contain an article on how to use the answers to develop a proposal for an end-user HP solution. In the meantime, feel free to call your Sales Development team for responses to end-user sales situations.

## Teletype-Compatible Terminals

*by Tom Anderson*

The market is being flooded with inexpensive "TTY-compatible" video terminals. The 12531C-001, 12531D-001, or 12587B interface cards will interface with terminals that conform to EIA RS-232C standards and will transmit and receive ASCII code asynchronously. However, we do not have a mechanism for verifying that these devices will work with our software. Potential problems include code compatibility, fill character requirements, and reader/punch options. Because of these things, we should encourage the use of supported terminals.

CAI has additional requirements. For example, with a TTY, the system can output a line of text with blanks left for student-entered data. The system then outputs a carriage return and spaces to the blank areas. With a video terminal, the space is destructive and destroys the previously displayed character. The 2600A has a feature that makes the space nondestructive after a carriage return until a line feed is received. This is a feature not found on most terminals. At our request, the Bendix terminal has this capability and is the preferred video terminal for CAI.

In sales situations where our product line does not satisfy a customer's requirements, encourage the use of Western Union Data Services for ASR 33/35's and Bendix for CAI terminals.

## SDC Text II Microcode Benchmark

*by Jim Schmidt*

Here's a practical example of why we favor Writable Control Store (WCS) as a nearly indispensable option for a 2100 series computer. (Thank you, Gary Leight of Neely Los Angeles, for a really good story. We need more like this.)

Systems Development Corporation (SDC) produces Text II, a turnkey text editing system for newspapers and other publishers. Their systems use an HP DOS-M, Revision C, Disc Operating System which they have modified to run as many as 44 high-speed terminals. Because of the modifications, and under very heavy loading, system response time occasionally was not up to par. As a result, we decided to demonstrate to SDC how microprogramming could significantly increase the execution speed of their programs.

Four character-manipulation subroutines were chosen by SDC as representative of those used in Text II. HP then wrote the microcode necessary to implement these as FORTRAN callable subroutines, and SDC wrote the FORTRAN test program.

*Continued on page 10*

### SDC Text II Microcode Benchmark . . .

To make the test as accurate as possible (and because of system modifications), the SDC system was regenerated with the WCS driver. On execution, DOS-M was detecting a memory-protect violation at the first call to the micro-processor. To overcome this, the computer was stopped and then restarted at the address pointed-to at the location of the memory-protect violation. This effectively bypassed the memory-protect check.

The results were very encouraging. The programs using microcoded subroutines were running 7 to 10 times faster than those using the equivalent software subroutines. As a result of this demonstration, SDC is currently investigating the frequency and distribution of calls to their key subroutines. If, as we expect, Text II does, indeed, make frequent calls to a few relatively short subroutines, there will be a dramatic improvement in the overall performance of the SDC system, and with a minimum of time and expense.

If you have a customer with a similar system problem and you need help, give us a call.

## More About The Survey

by Wayne Gartin

In June 1973, the 2100 product management decided to survey our customer base to find out exactly how our computers and peripherals were being used, and how they would be used in the future. The information was sought so it could be used as a guide for the development of new or improved products. Actually, we learned a lot more than that.

In an effort to maximize the return of questionnaires, five new HP 45's were offered as incentives to the 2352 customers surveyed. Five names were drawn from the list of over 900 responses received by the 5 September deadline.

The results of the survey are still being tabulated and are being put on IMAGE. As the results become available, they will be published in this newsletter for your use in determining where your most promising sales environments are.

Oh, yes! The lucky calculator winners were:

L. Denning  
Trans Australia Airlines  
Essendon, Australia

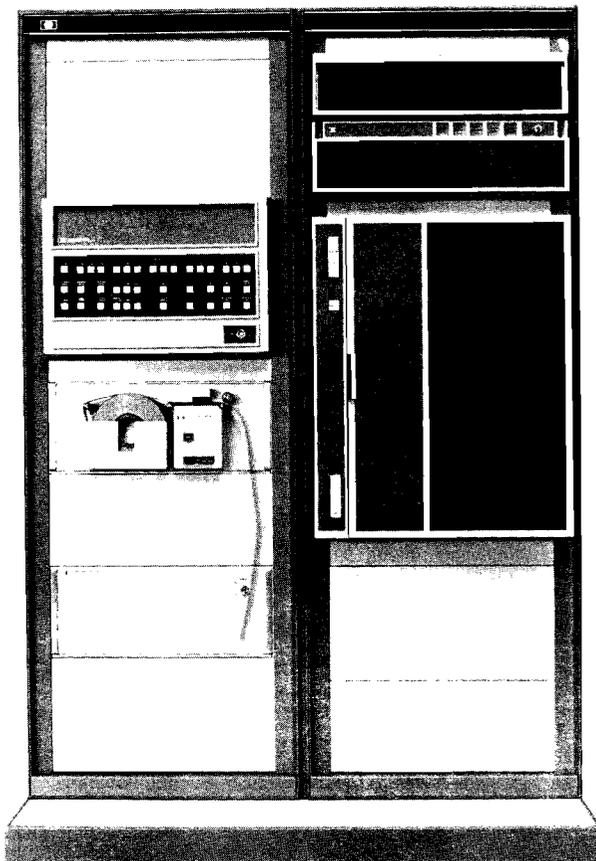
Kenneth Bunce  
General Electric Company  
Pittsfield, Massachusetts

William Woodruff  
Princeton University  
Princeton, New Jersey

Val Shraner  
Issaquah,  
Washington

Ing. Jonas Paivk  
Delmine Siderca  
Buenos Aires, Argentina

## New DOS-III is Here



2121 DOS with Tape System

by Wayne Gartin

DOS-III, the long awaited successor to DOS-M, has been released by HP. The disc operating system software is available as HP 24307A for \$1,500, is standard in the 2121A hardware/software package at no charge, and is available as Option 025 in the disc subsystems at no charge.

With over 1000 DOS-M systems in use worldwide, HP has found itself in a new user environment. Users are more sophisticated, have greater memory requirements, and need more control over the system. To satisfy this new environment, DOS-III was developed. DOS-III provides all the functional capabilities of DOS-M, and the user also has the option to exercise more control over the system. Some of the extended capabilities available in DOS-III are:

- The user can programmatically disable the memory protect fence and perform direct input/output.
- The operator has more control over peripherals – rewind a mag tape, page eject on line printer, etc.
- The user can process his own I/O errors.

Included in DOS-III is a new Relocating Loader which has been developed to solve some problems which have been associated with large programs and large memory requirements. The new loader can:

*Continued on page 11*

### *New DOS III is Here . . .*

- Speed up Loader Execution (the loader uses disc I/O without wait)
- Load large compiler-generated programs (the loader uses current page linking)
- Specify where the resulting absolute program will reside in memory.

The DOS-III package of software modules and a new manual were released 8 October.

## 3000 Should Be 300

*by Editor*

Last month we ran an article on the new 2762A Terminal Printer. There are two errors in the article. "TermiNet 3000" should be "TermiNet 300". (This is also a trademark of General Electric Co.)

The fourth line started: "Interface to any HP computer . . .". This should have read: "Interface to any 2100-based computer . . .". This model is NOT for the 3000 computer. Do not order it for that system. An option will be released later.

## 2120 Ordering Information

*by Wayne Gartin*

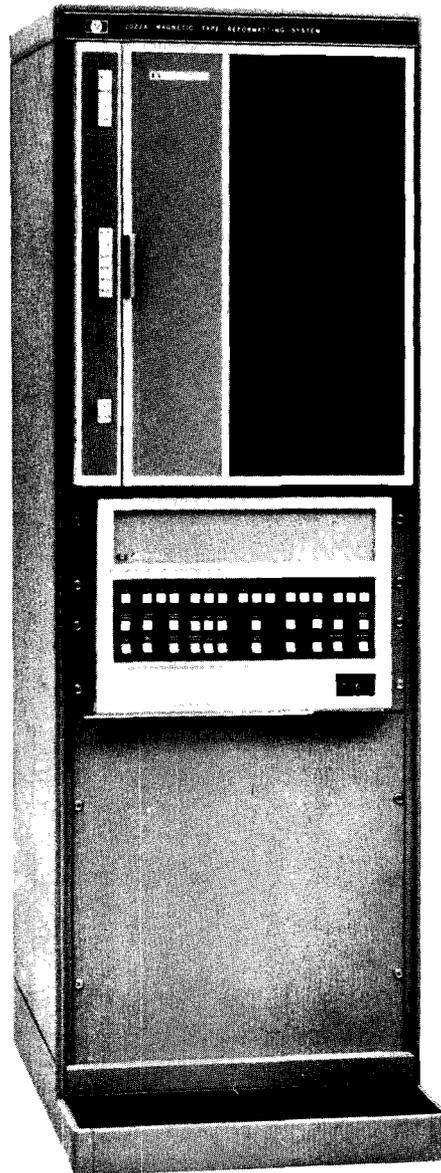
The 2120B Disc Operating System (DOS-M) was released to manufacturing on 22 August 1973. This is the low-priced system that includes a 2100S with 8K of memory (less time base) and a 7901A (12961A) disc drive with 2.5-megabyte capacity.

Every effort has been made to make this a versatile system to sell. For instance, if 8K of memory is not enough for your customer, simply order Option 012 for 12K, 016 for 16K, 024 for 24K, or 032 for 32K. (How's that for convenience?) If the 12961A disc is not large enough, order Option 060 and get the 5-megabyte 12960A disc drive. Want more? Order Option 065 and get the 23.5-megabyte 12965A disc file subsystem. (Note that Options 060 and 065 delete the 2.5-megabyte disc drive.) To expand the system beyond a single disc drive, the appropriate subsystems should be ordered as separate line items.

Do you want a different cabinet? Order Option 241 to delete the single-bay cabinet and order any HP cabinet you wish — but as a separate line item. The rack slides remain with the system, so you don't have to reorder them.

If you want a different system console, just order Option 252 to delete the teletype, then order whatever HP terminal you want — but as a line item on the order. You must also order the appropriate interface card to go with the terminal you choose.

We've tried to make the 2120B real easy to sell *and order*; the rest is up to you. Good luck with your system sales!



*2022A Magnetic Tape Reformatting System*

## Be A Card Shark

*by Ken Blackford*

When 2022A Magnetic Tape Reformatting Systems are shipped, only 100 to 150 mark-sense cards (HP part #9320-2886) are included with the system. These cards are then used by the customer for training and setup and he is out of cards. No one seems to envision this problem at the time of the sale.

So, when a system is ordered, do your customer a favor and order a box (1000) of cards for him so he can operate after the equipment is set up to go. A box of 1000 cards is a supply for approximately 1 to 2 years.

If you don't order extra cards and they must be ordered from CSC, remember that it could take 1 to 2 weeks to get them. In that case, here's a hint. Calculator cards #9320-2085 or #9320-2088 will work in an emergency. So see your Calculator Sales Engineer; he probably has a stock on hand.

# HP Curriculum Project

## Or, what's going on with Jean Danver

Over the past few years the Education Sales Organization has seen Jean Danver in several roles including Users Group, Sales Training, Customer Training, Loveland Product Marketing, and the Curriculum Project. So she decided to hang her hat on one rack — that of the Curriculum Project. That does not mean that if you have a 9830 question, it won't be answered or that she has forgotten about the Users Group. But it does mean that the Curriculum Project will be bigger and better than ever.

Lots of things are happening. College and University materials are being developed along with Secondary School materials. Even some programming books are under way. We plan a four-color brochure, a new variety of ordering procedures, and lots of new books. The plan is to put Data Systems into the education publishing business.

November 1 is the date of the announcement of the 1973-74 new offerings. You will be getting the brochure and copies of available new books at that time.

In the meantime, we are happy to announce that all of the books on the current Hewlett-Packard Curriculum Project Curriculum Series Order Form (5952-5488(22)) are published. Copies of five of these books have already been distributed to the Education Sales Force and Analysts. (If you are new or have a new responsibility, make yourself known.) A new distribution procedure is being used for the three remaining: *Number Sets*, *Mathematical Systems*, *Linear Systems and Equations*.

By the way, like the others, these materials consist of a Teacher's Advisor and a Student Lab Book and sell for a price of \$1.00 a piece. A classroom set of 30 Lab Books and 1 Teacher's Advisor sells for \$20.00

If you want a copy of the books, please clip or copy the following coupon and mail it to Jean H. Danver.

Send me:

Number Sets

Mathematical Systems

Linear Systems and Equations

\_\_\_\_\_ Copies of:

Hewlett-Packard Curriculum Project  
Curriculum Series Order Form  
(5952-5488(22))

Name: \_\_\_\_\_  
\_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I'll make you an offer you can't refuse!  
(Rick Baker, FJCC, Las Vegas, 1971)

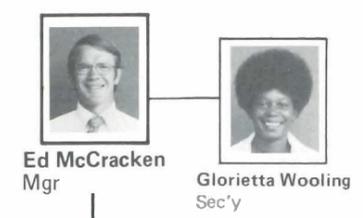


**data  
systems  
newsletter**  
For HP Field Sales Personnel

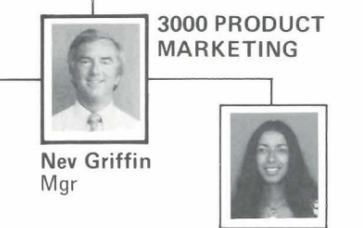
Address inquiries and comments to:

Sales Development - Bldg. 40  
Hewlett-Packard Data Systems

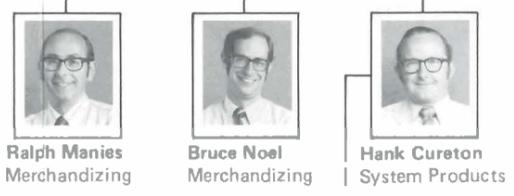
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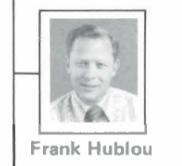
Ed McCracken Mgr  
Glorietta Wooling Sec'y



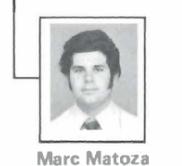
Nev Griffin Mgr  
Adrian Asaro Sec'y



Ralph Manies Merchandizing  
Bruce Noel Merchandizing  
Hank Cureton System Products



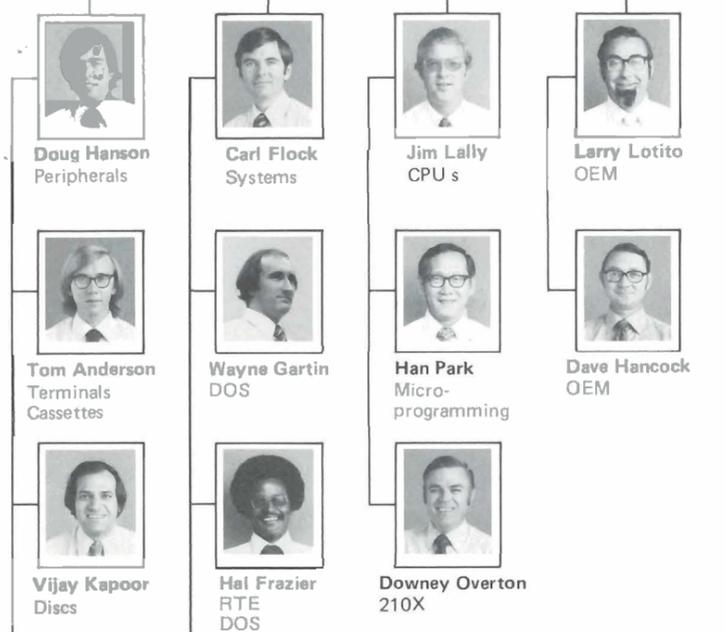
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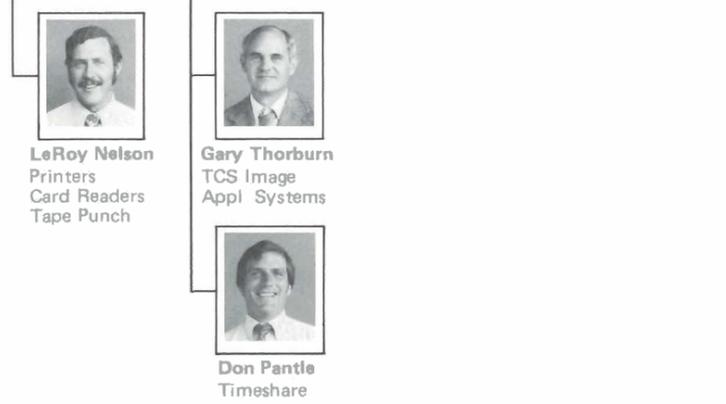
Marc Matoza



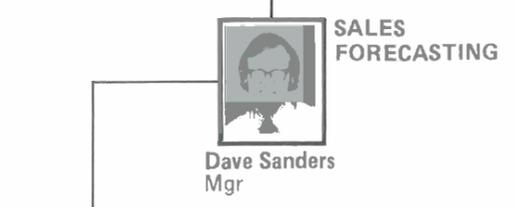
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Mary Edith Meadors Sec'y



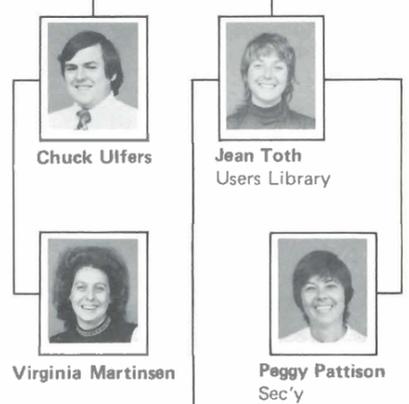
Doug Hanson Peripherals  
Carl Flock Systems  
Jim Lally CPU s  
Larry Lotito OEM  
Tom Anderson Terminals Cassettes  
Wayne Gartin DOS  
Han Park Micro-programming  
Dave Hancock OEM  
Vijay Kapoor Discs  
Hal Frazier RTE DOS  
Downey Overton 210X



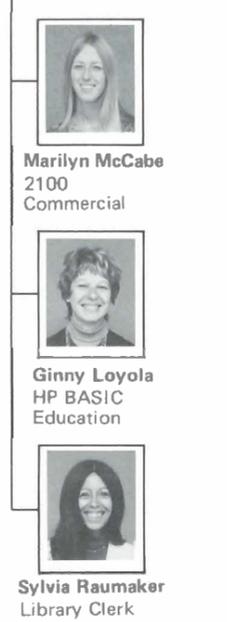
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Gary Thorburn TCS Image Appl Systems  
Don Pantle Timeshare



SALES FORECASTING  
Dave Sanders Mgr



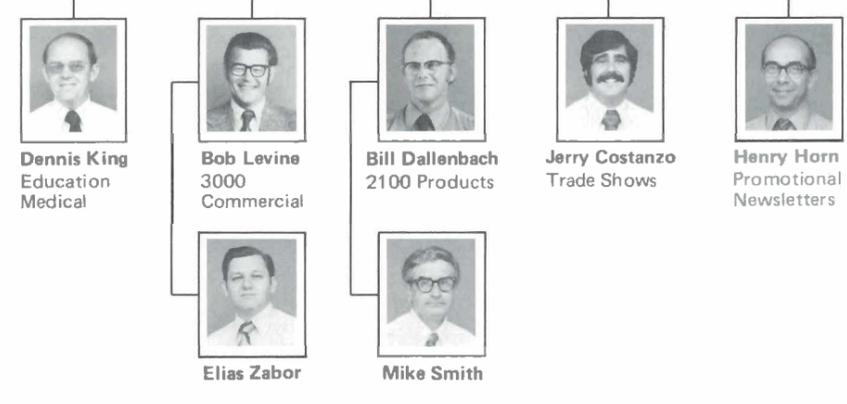
Chuck Ulfers  
Jean Toth Users Library  
Virginia Martinsen  
Peggy Pattison Sec'y



Marilyn McCabe 2100 Commercial  
Ginny Loyola HP BASIC Education  
Sylvia Raumaker Library Clerk



MARKETING COMMUNICATIONS  
Michele Klein Mgr  
Penny Haney Sec'y



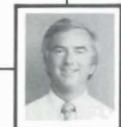
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Bob Levine 3000 Commercial  
Bill Dallenbach 2100 Products  
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Henry Horn Promotional Newsletters  
Elias Zabor  
Mike Smith



Ed McCracken  
Mgr



Glorietta Wooling  
Sec'y

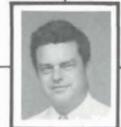


**3000 PRODUCT  
MARKETING**

Nev Griffin  
Mgr



Adrian Asaro  
Sec'y



**SALES  
DEVELOPMENT**

Ted Doyle  
Mgr



Nancy Sanford, Sec'y,  
HPSA/IC  
Neely



Carol Wilkinson, Sec'y,  
ESR, MWSR, Canada, SSR



**APPLIED SYSTEMS  
MARKETING**

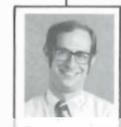
George Schapiro  
Mgr



Carolyn Bolivar  
Sec'y



Ralph Manies  
Merchandizing



Bruce Noel  
Merchandizing



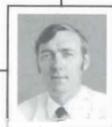
Hank Cureton  
System Products



Frank Hublou



Marc Matoza



John Hill  
ESR



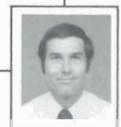
Norm Choy



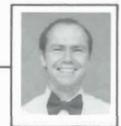
Dick Byhre



Bob Blake



John Whitesell  
MWSR  
Canada



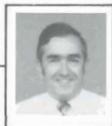
Ron Grace



Bob Ingols



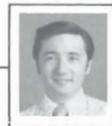
John Kropf  
SSR



Ken Gootgeld



Chuck Brewer  
Neely



Rich Ferguson



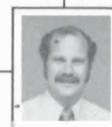
Robin Jeffries



John Koskinen



Gerry Madea



Bob Hoke  
HPIC



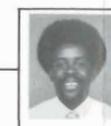
Klaus Dziubek  
HPSA



Bob Bond  
Education



Don Lund  
Elem  
Sec



Babs Brownyard



Paul Myhre



Carol Bell



Don Jacobson



Jeannie Tracy  
Sec'y



Jim Candlin  
College  
Univ



Charles Dixon



Gary Stump



Jean Danver  
Curriculum Dev  
Ed Users Group

Carol Scheifele  
Exec Sec'y  
Ed Users Group

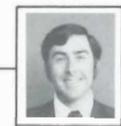
Pat Danzer  
Editorial  
Assistant



Hugh Fields  
Appl  
Development  
  
(group not shown)



Peter Paim  
Medical



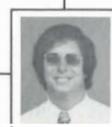
John Price  
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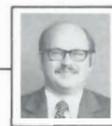
Sherry Washing  
Research  
Clinical



Dan Jorgenson



George Schapiro  
Commercial



Dan Jorgenson



Ken Blackford



Barry Klaas



Kathy Horn  
Sec'y