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data systems newsletter

For HP Field Sales Personnel

Vol 2
No. 21
Aug. 8
1975

DIVISION NEWS

COMPUTER SYSTEMS GROUP ORGANIZATION

by Paul Ely/Dick Anderson

Over the next several months we will be working to establish two new divisions within the Computer Systems Group. These new divisions will evolve out of the existing Data Systems Division. We feel these new divisions will aid in keeping the positive momentum we have gained and will better achieve profitable growth for HP. Each division has major opportunities to pursue which need the full attention of an integrated management team and a general manager.

These new divisions will initially start to establish their organizations within the Data Systems Division and will gradually move to independent status over the coming months. Here is an outline of the role and key managers for each division:

Terminal Products Division — This division will have responsibility for the 2640 and 2644 intelligent CRT terminals and the follow-on products in this area. This product line has grown very rapidly — it was only started midway through the first quarter of FY1975. This division will also have responsibility for the terminal related I/O devices such as the 3M minicartridge.

The management team will consist of General Manager —*Jim Arthur;* Engineering Manager —*Jim Doub;* Marketing Manager — *Ed Hayes;* and Manufacturing Manager — *Larry Mitchell.* These assignments are consistent with the roles *Doub, Hayes,* and *Mitchell* are currently filling in the Data Systems organization.

General Systems Division — This division will have responsibility for the 3000 systems and 2000 Access systems. These are the general purpose systems in our product line. They are also the heart of our thrust into business application which helps us to concentrate and specialize our marketing efforts.

The key managers in this division will be General Manager — *Ed McCracken;* Engineering Manager — *Bill Foster;* Marketing Manager — *Bill Krause;* and Manufacturing Manager — *Matt Schmutz.*

In This Issue . . .

It is our intent to promote the 2000 Access systems as extensions of the 3000 and as data entry front ends for it. The Access systems and the 3000 are the basis for our educational marketing effort which fits the form of organization nicely.

The primary task for the General Systems Division management team will be to expand the initial momentum of the 3000 in business applications. This is an area of very rapid growth and competitors are spending heavily to duplicate the capabilities of the 3000. We feel that giving this challenge and opportunity to an integrated management team will produce the best results for HP.

(Continued on page 2)

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

COMPUTER SYSTEMS GROUP ORGANIZATION-
(Continued from page 1)

Data Systems Division — This division will concentrate on our industrial and OEM businesses. This includes the 21MX, CPU, 79XX Discs, DOS, RTE, and 9600 Systems. In addition, Data Systems will continue to carry out our advanced technology programs — AMIGO, microcomputers, and the LSI activities. Even after spawning these two new divisions, Data Systems will remain the largest division in the Group.

Dick Anderson will continue as Data Systems General Manager with *Dick Hackborn* as Engineering Manager and *Dick Monnier* as Engineering Manager for Discs and *Dick Love* as Manufacturing Manager. *Ted Doyle* will replace *Ed McCracken* as Marketing Manager.

This division has the task of building up our shipment capability and profitability on the existing product lines and carrying through the CPU, Disc, and operating system R&D projects under way to enhance our competitive posture. In parallel, they are implementing our technology based programs on microcomputers and the next generation distributed function minicomputer system ("AMIGO"). The microcomputer program is in an area of explosive growth and is necessary if we are to have a significant position in the OEM market. AMIGO is intended to give product leadership in the center of our product line.

Data Systems Division will expend over half of the total Group R&D during FY1976. *Dick Hackborn* will continue in his dual role as Group Engineering Manager in addition to his assignment in Data Systems.

The General Systems Division will move to the Santa Clara facility as soon as practical where we have made arrangements for space. This will provide needed space at Cupertino to expand and re-align the 21MX production line and systems integration area. The Terminal Products Division will remain at Cupertino for the time being along with the Data Systems Division.

First attention will be given to organizing the General Systems Division as a stand alone entity with its own materials, finance, etc. since this will provide the most help for Data Systems. We would hope by November 1 to have this sufficiently underway so that the General Systems Division could be formally recognized. The Terminal Products Division will follow along this organizational process as rapidly as possible, but we felt it would be inefficient to try to "break-out" the support organizations for two divisions simultaneously.

We have been searching for some time to find ways to strengthen our organization at Data Systems and to get more individuals helping to manage our business. The approach we have settled on has many pleasing features. A significant number of HP people get new opportunities to contribute at a higher level. For the most part, we have been able to fill these opportunities with individuals from Data Systems and provide logical career steps. The role of each of the divisions gives us a full, integrated management team to pursue three primary business objectives — General Systems Division builds our success in the business area; Data Systems concentrates on the industrial area for both OEM products and end user systems; and the Terminal Products Division expands the early success we have had in intelligent CRT terminals.

Furthermore, we have retained a single management responsibility for next generation systems and technology programs which at this point is essential to their success. For these reasons I look forward to the enthusiastic support of our people in implementing this program.

HEWLETT PACKARD

PRODUCT NEWS

2640's ON 9600MX SYSTEMS

by Dave Sanders

In response to many requests (and many incorrect orders) we are adding a special console option. This option incorporates the 2640A-001 (128 Roman [ASCII] character set — adds lower case and control characters). This new special option is 9600MX/9700-442 ($3550) and includes 2640A-001, 006, 12880A, integration and installation.

This option is being implemented as a special because lower case character command inputs will *not* be fully supported by RTE-B, C II, or III. Input of lower case terminal commands will be rejected by RTE with "opcode err", "no such prog", etc. However, all 128 characters will pass in and out through DVR00 as data. Because of the limited support which the operating system affords, this option will not be added to our configuring guides, price lists, or GSA discount schedules. It will be available only as a special option.

All other 2640A options (memory, modem connection, display enhancements, etc.) must be ordered as line items by their component product number (13xxxx). These components will not be integrated or installed with the system, but will be shipped as components.

HEWLETT PACKARD

9600 SANS SYSTEM CONSOLE

by Dave Sanders

Occasionally customers desire to order a 9600 system without a system console. Although the justification for these requests is usually very reasonable, it does result in extra costs and effort in our system integration area to borrow terminals necessary for the integration process, then return them later. In order to cover these extra costs and provide a convenient way to handle these situations, we have established another special option, 9600MX/9700A-444 to fill this need. This option costs $400.

All 9600 systems *must* be ordered either with a standard console device from the configuring guide, with some other special terminal, or this special option.

HEWLETT PACKARD

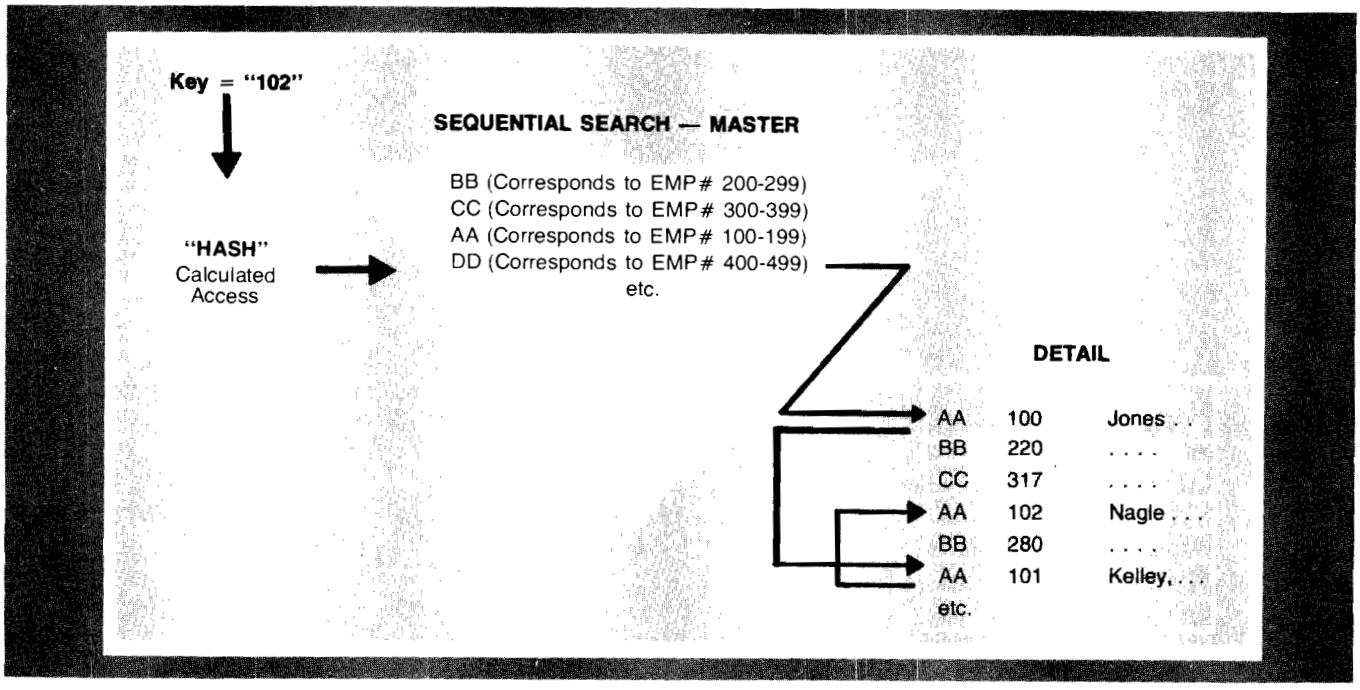
SIMULATING "ISAM" ON IMAGE/3000

by Jean Toth Kelley

If you understand how simply ISAM can be implemented on an IMAGE/3000 data base and appreciate the extra power IMAGE offers to ISAM users, those SYSTEM 3/360 users will be pursuing the 3000CX with vigor. Tell the IBM Users Groups about Minidatacenters.

I Sequential Access

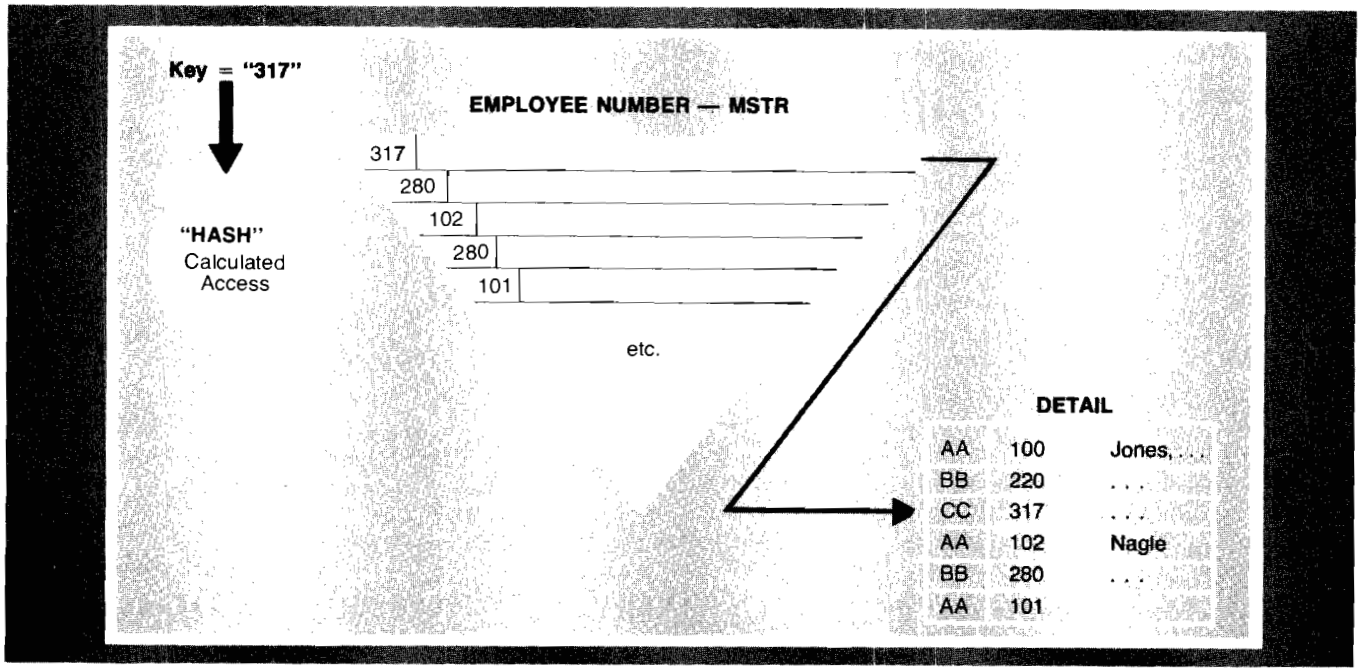
There are times when a user will want to access a file sequentially, like when payroll checks are to be printed. If more than 20% of the records in a file are to be accessed at one time, a sequential search is the most efficient method. To implement a sequential search using IMAGE/3000 in an ISAM organization, an Automatic master with dummy search keys achieves the following:



What's important here is that the dummy keys AA, BB, etc. will be indexes to sequentially sorted chains of employees by employee number. This technique is very efficient for sequential retrievals, sequential updates, or sequential adds.

II Direct Access

For direct access, i.e. the user wants a particular record with a known key such as employee number, formulate an employee number master.



(Continued on page 4)

SIMULATING "ISAM' ON IMAGE/3000 -
(Continued from page 3)

Since masters are "hashed" into, and point directly to their related detail records, IMAGE "direct" retrievals are very fast.

The reason for needing two distinct master data sets, one for sequential retrieval and one for direct retrieval, is that a key item cannot simultaneously be its own sort item.

Besides the master and detail data sets which I've already described, the programmer would also need to create a table lookup to relate employee numbers to the dummy indexes. This table would be maintained by the user program in sequential dummy index order.

AA	100	199
BB	200	299
CC	300	399
	etc.	

There are two reasons for this table:

1. Compatibility with ISAM techniques to satisfy the request: "Give me the whole file in sequential order." The program would now step through this table sequentially feeding AA, BB, etc. to the IMAGE calls in logically ascending sequence (ISAM "is" in physical order).
2. Speed during a record ADD. Suppose you wanted to add a record with employee #1256. (The first IMAGE problem would be to determine which dummy index chain it should be placed on, i.e., KK, PP?? Rather than IMAGE stepping through the file logically sequentially and "comparing" (which is a slow process) to find the right place to add one record, the user program would step through the lookup table sequentially. Once the right dummy index is found, hash into it using IMAGE, and let IMAGE step sequentially through its sorted chain (which is a much shorter subset of the total file) to the right place to add employee #1256. This process is a lot faster than living without a lookup table.

   Let's look at a few of the benefits of IMAGE over and above simulating ISAM.

A. Security: There's no security on ISAM. With IMAGE there's separate read/write levels for every data item.

B. Four Access Methods: Only two on ISAM, direct and sequential. With IMAGE, direct, sequential, key/hashing/calculated, and chaining.

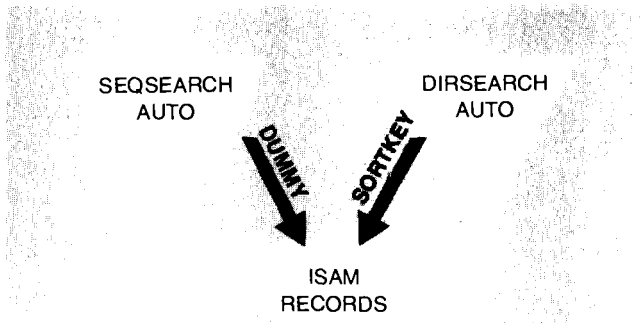
C. Restructuring Utilities: No such capability on ISAM. With IMAGE add fields to a record, add new key values, add record capacity to a file through a "schema" which is independent of user data and independent of user-written applications programs.

D. Multiterminal Access with IMAGE/3000

E. Job Accounting with IMAGE/3000.

In short, IMAGE is a true Data Base Management System!!!

The following SE Note #166 by Bob Johnson describes the solution in the general case.




```
PAGE 1      HEWLETT-PACKARD 32215A.00    IMAGE/3000  THU, JUN 13, 1974, 11:25 A

$CONTROL NOHOOT
BEGIN DATA BASE ISAM;  << THE NAME OF THE RESULTING DATA BASE
                          WILL BE "ISAM". >>

LEVELS:                << HERE I AM TAKING THE DEFAULTS FOR
                          SECURITY, HOWEVER IT SHOULD BE NOTED
                          TO THE CUSTOMER THAT HIS ISAM FILE
                          COULD HAVE ALL THE SECURITY OF A FULL
                          DATA BASE (I.E. IMAGE). >>

ITEMS:
      DUMMY, X2;       << THIS DUMMY ITEM WILL ALWAYS HAVE
                          THE SAME VALUE FOR EVERY RECORD IN
                          THE DETAIL, EXCEPT FOR LARGE FILES.
                          IT WILL FORM THE DUMMY CHAIN
                          UPON WHICH THE DESIRED KEY WILL BE
                          SORTED.  HOWEVER, IT DOES OCCUPY ONE
                          WORD AND WITH ITS POINTER MEANS THAT
                          EVERY RECORD WILL HAVE AN OVERHEAD
                          OF FIVE EXTRA WORDS.  IN THE EVENT OF
                          A LARGE FILE, IT MAY BE DESIREOUS TO
                          HAVE INTERVAL VALUES FOR THE DUMMEY
                          ITEM SO THAT THE DUMMY CHAIN CAN BE
                          BROKEN UP INTO SECTIONS FOR FASTER
                          ACCESS AND MAINTENANCE.  AGAIN THIS
                          CURRESPONDS TO A NORMAL  SEPARATE
                          INDEX IN ISAM. >>

      SORTKEY, X8;     <<  THIS WILL BE THE ITEM, UPON WHOSE VALUES
                           THE ENTRIES IN THE DETAIL DATA
                           SET WILL BE SEQUENCED (SORTED) IN
                           ASCENDING ORDER.  FOR DESCENDING SORT
                           ACCESS, FOLLOW THE BACKWARD POINTER. >>

      EXTRAITEM1, R10;
      EXTRAITEM2, 2J5;
      EXTRAITEM3, 5K6;
      << ETC.,, ETC. >>
SETS:
      NAME: SEQSEARCH, AUTOMATIC; << THIS DATA SET WILL CONTAIN
                                     THE SINGLE DUMMY ITEM UPON
                                     WHICH A DBFIND WILL BE PER-
                                     FORMED, FOLLOWED BY SUCCESSIVE
                                     CHAINED GETS (FORWARD  OR
                                     BACKWARD) FOR THE ISAM SEQ.
                                     SEARCH. >>

      ENTRY: DUMMY(1);
      CAPACITY: 1;

      NAME: DIRSEARCH, AUTOMATIC; << THIS DATA SET WILL CONTAIN
                                     AN ENTRY FOR EVERY ENTRY IN
                                     THE DETAIL SET.  A DBFIND
                                     FOLLOWED BY A DBGET WILL
                                     PERFORM THE ISAM DIRECTED
                                     SEARCH. >>

      ENTRY: SORTKEY(1);



PAGE 2      ISAM

      CAPACITY: 100;           << THE CAPACITY SHOULD BE
                                  APPROXIMATELY 20% GREATER
                                  THAN THE NUMBER OF EX-
                                  PECTED RECORDS. >>

      NAME: ISAMRECORDS, DETAIL; << THIS DATA SET WILL CONTAIN
                                    THE ACTUAL RECORDS PLUS THE
                                    DUMMY KEY AND CHAIN LINKS,>>
      ENTRY: DUMMY(SEQSEARCH(SORTKEY)),SORTKEY(DIRSEARCH),
             EXTRAITEM1,EXTRAITEM2,EXTRAITEM3;
      CAPACITY: 100;
                                << KEEP IN MIND THAT AFTER MANY
                                   UPDATES THE CHAINS MAY BECOME
                                   EXCESSIVELY LONG AND IT MAY
                                   BE DESIRABLE  TO PERFORM
                                   A CHAIN UNLOAD/LOAD TO GET
                                   THE CHAIN-MEMBERS PHYSICALLY
                                   CLOSER TO EACH OTHER. >>
      END.

 DATA SET      TYPE  LEVEL  FLD  PT  ENTR  REC  CAPACITY  BLK  BLK   DISC
   NAME              R  W   CNT  CT  LGTH  SEC            FAC  LGTH  SPACE

SEQSEARCH        A  0  15   1    1   1     11    1         1    12     3
DIRSEARCH        A  0  15   2    1   4     14    10        10   141    4
ISAMRECORDS      D  0  15   5    2   55    63    12        6    379    9
                                  TOTAL DISC SECTORS INCLUDING ROOT: 21

NUMBER OF ERROR MESSAGES: 0
HIGHEST LEVEL WORD: 0       ITEM NAME COUNT: 5       DATA SET COUNT: 3
ROOT LENGTH: 334      BUFFER LENGTH: 379      TRAILER LENGTH: 256
```

2000/ACCESS VIDEO MEMO

by John Wynbeek

THE ACCENT'S ON ACCESS: Technical editors witnessed this recent demonstration of the new 2000 Access Systems at Data Systems Division. Consisting of two beefed-up 21MX minicomputers plus peripherals, 2000 Access is a 32-terminal timeshare system that is also, at the same time, a remote work station in a network of small computers functioning compatibly with the largest IBM or CDC equipment. With no loss of local computing ability, it adds functions once available only at much higher cost. Any existing HP 2000 system can be upgraded to a 2000 Access System. The battery of HP 2640A terminals shown here was used for the demonstration.

During the last week in May we invited a number of editors to come to Cupertino for the official announcement of the HP 2000 Access Systems. Included was a thorough briefing and a personal one-hour demonstration of the capabilities of the system.

The demonstration included data entry at 2640 terminals, remote job entry to an IBM 370, a multiple peripherals demonstration, and a demonstration of operator control capabilities. Customer-oriented highlights have been documented on video tape. Specifically, the tape includes:

- An expertly presented overview of 2000 Access features and capabilities (*Bob Brannon* — 10 minutes).
- An overview and thorough demonstration of the new Terminal Data Entry package TDE/2000 (*Dan Jorgenson, Gary Thorburn* — 15 minutes).
- An overview and a real, live demonstration of concurrent RJE using the TSP/2000-HASP package (*John Wynbeek, John Alderette* — 10 minutes).
- And, an inspirational wrap-up (*Bob Brannon*).

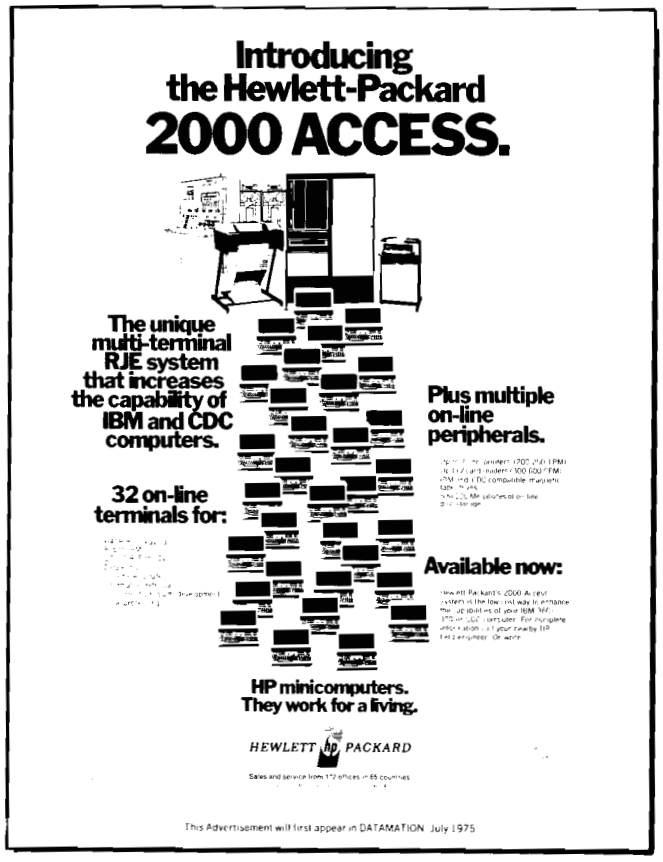
We couldn t invite all of you to our show but we sure can invite you to see our video memo. It will be distributed to all domestic regional offices, c/o regional managers: *John Sundry, Bob Sudkamp, Bob Stringer, Bill Richion,* and *Russ Stewart*. Copies have also been sent to *Bob Bond* in Europe, and *Matsuji Tezuka* in Japan.

Order additional copies from Corporate video distribution center using tape number 90271.

As a result of our press presentations we've already received excellent coverage in the June 11 issue of Computerworld; the May/June issue of Data Communications; and the May 26, Electronic News. Now watch for our ads beginning with the July 16 issue of Computerworld. Others will appear as follows:

Publication	Issue(s)
Computerworld	July 30, August 20
Datamation	July, August
Computer Decision	July, September
Info Systems	August
Datacommunications	August/September

Judging by the number of orders through June, 9 firm and 13 APO, you guys have really been hustling. It looks like 2000 Access is going to be a BIG WINNER!



JOIN A WINNING TEAM — SELL 2000 ACCESS.

HEWLETT PACKARD

2640A TERMINAL INSTALLATION POLICY

by Tom Anderson

Now that orders and shipments for the 2640A CRT Terminal are in the thousands, it's an appropriate,time to restate our installation policy. Installation is *not* included in the price of a 2640A terminal. There is a simple installation procedure in the 2640A Owner's Manual which is shipped with each terminal.

We do install terminals ordered with systems that include installation. Other customers who desire HP installation should contact the local service office for installation at $37/hour, door-to-door.

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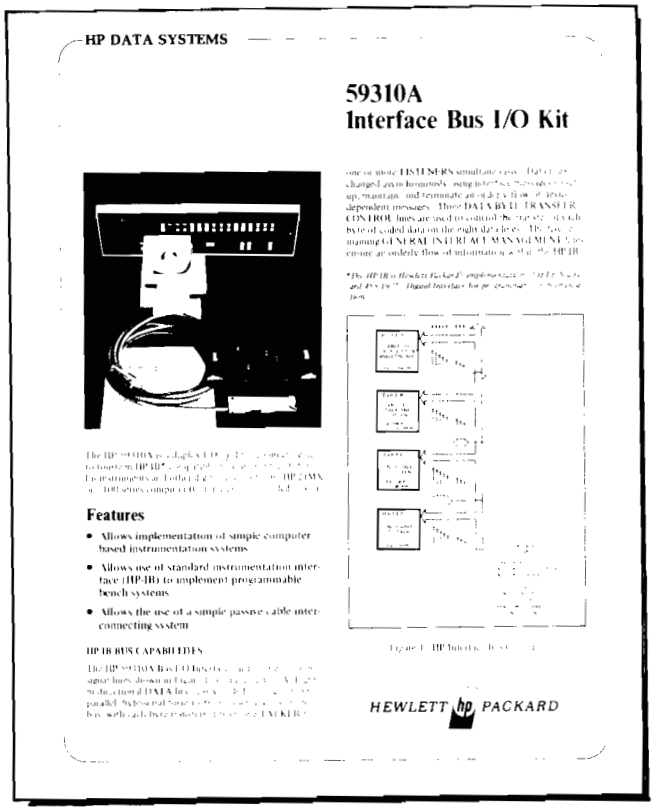
59310A — (HPIB Interface Card) Data Sheet/Manual

by Charles Dixon

The new operating and service manual (59310-90001) is now available for the 59310A/HP-IB Interface Card. Customers that have purchased the card will automatically receive the new manual to replace the preliminary manual they received with their card.

Also the new 59310A Data Sheet (5952-5521) is also available and should be in your literature rack.

Good Selling!



HP DATA SYSTEMS

59310A
Interface Bus I/O Kit

Features

- Allows implementation of simple computer based instrumentation systems
- Allows use of standard instrumentation interface (HP-IB) to implement programmable bench systems
- Allows the use of a simple passive cable interconnecting system

HP IB BUS CAPABILITIES

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HEWLETT hp PACKARD

SALES AIDS

3000 USER GROUP EXCHANGED SOFTWARE

by Alan Mitchell

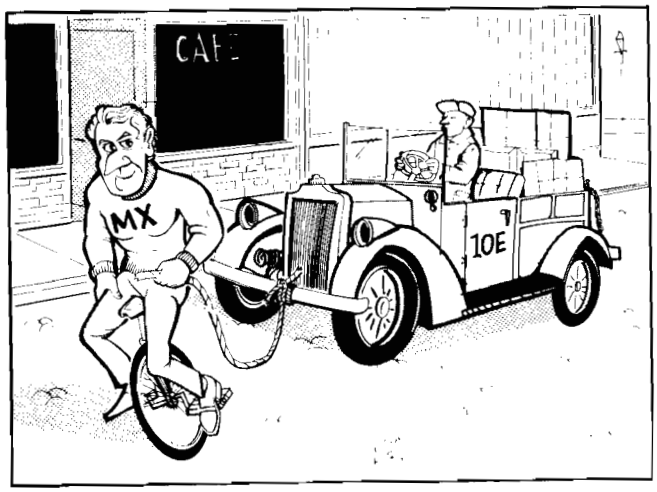
A summary of HP 3000 software exchanged between users at three prior HP 3000 Users Group meetings has been sent to all group members and our HP 3000 Systems Engineers. This summary includes any documentation provided with the "swapped" software.

This summary, sent out under Users Group auspices, is a temporary measure at getting information to you while we get our formal,fully documented, HP 3000 Contributed Library in gear. See the related article on the HP 3000 Contributed Software contest.

We have about 20 copies of the summary in stock for those of you who are interested. With this limited supply, please be sure you really want one before you ask. Perhaps you can see your HP 3000 SE's copy first.

HEWLETT hp PACKARD

WHO NEEDS MORE POWER?



by Eric Grandjean

The 21MX mainframe currently available for I/O, assuming 32K memory, DCPC, maximum CPU control store and memory protect (m/20 and m/30) are the following:

	Total Current (Amperes)		
Supply (Volts DS)	M/10	M/20	M/30
+5	6	13	28
−2	2	4	8
+12	1	2	3
−12	1	2	3
I/O Slots (CPU)	4	9	14

(Continued on page 7)

WHO NEEDS MORE POWER ? - (Continued from page 6)

It is possible to exceed the +5VDC current capacity on fully loaded systems when you include items beyond the standard system options i.e.: WCS, magnetic tapes, etc. In other words, you may exceed the I/O +5 VDC current capacity of the CPU before you run out of I/O slots. Power overloads will cause the protection circuits of the power supply to cut power off. (OOPS)

When you are adding up your currents (you can find them in the product specifications, interface specifications, etc.) and you discover that the +5 VDC CPU supply will be exceeded, you have a choice . . . : Go to the next size CPU, or order an I/O extender. The 12979A will give you plenty of additional power, and ready room for expansion. Your CE's will thank you for it!

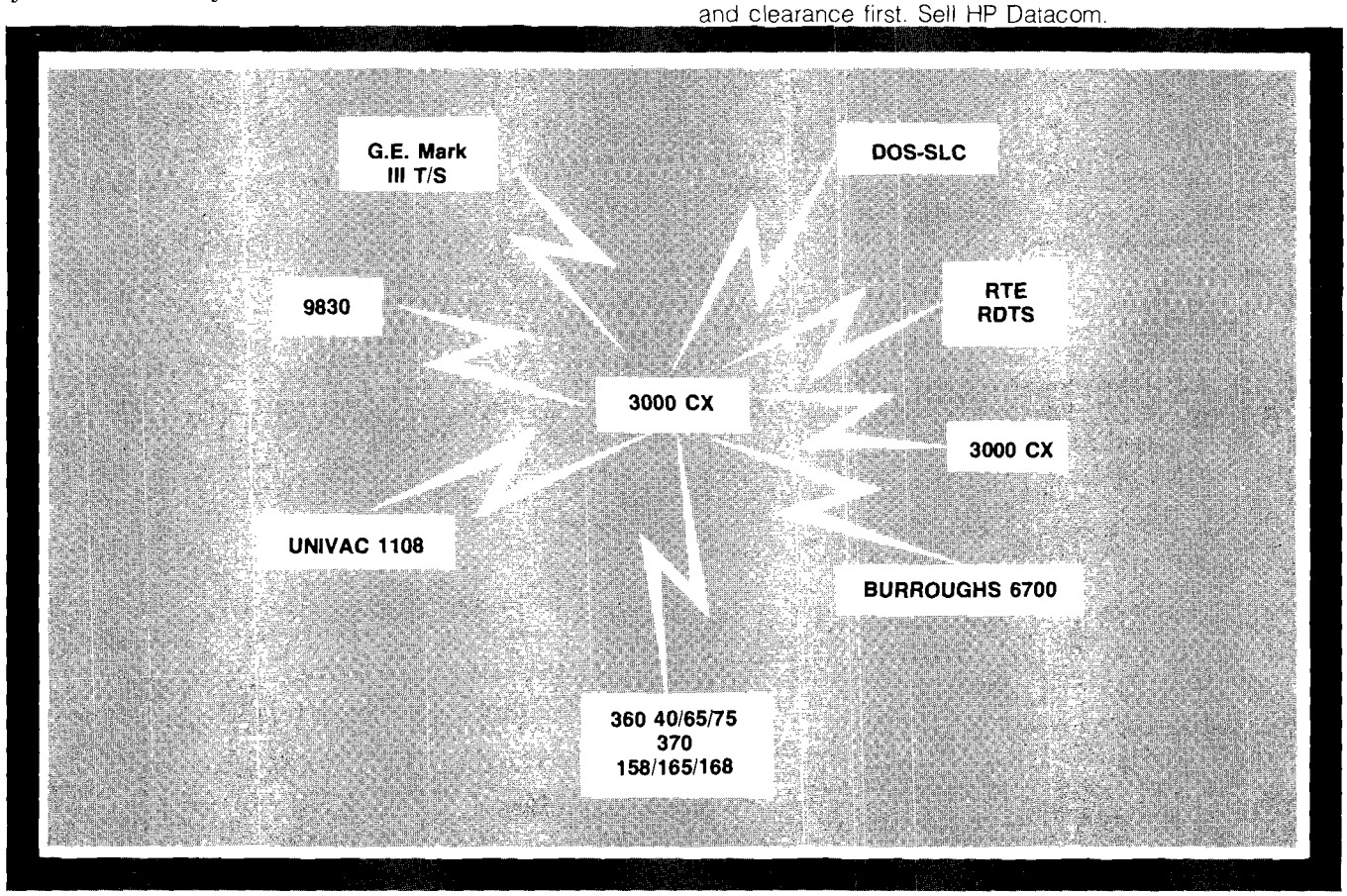
So next time you process a fully loaded system, and just in case you have not *yet* made it a habit, do like good sailors do, check your currents!!

HEWLETT PACKARD

HP DATACOM THAT'S HERE TODAY!

by Jean Toth Kelley

The enclosed S.E.Note #214 by *Jim Willits* documents what's been demonstrated in 2780 capability to date. Use it for reference selling. Call field engineer for account status and clearance first. Sell HP Datacom.



ORIGINATOR: Jim Willits, DSD
CONTACT: Jim Willits, DSD
ABSTRACT: List of 2780/3780 Emulator Tests and Installations
DESCRIPTION: *The following list includes active installations as well as compatibility tests of the 2780/3780 Emulator. This note should provide possible references as well as contacts for similar applications. It is intended to add to the list as additional tests or installations happen. The list is broken down into remote job entry applications and file transfer applications. (See SE note #214 for clarification.)*

HP 3000 2780/3780 Emulator Applications

REMOTE JOB ENTRY

1. **2780 Emulator:** HP 3000 Data Systems
   Contact: Jim Willits, DSD
   Host Description: Greyhound Comp. Corp.,San Francisco
   Mainframe: IBM 360/75
   Comm. Controller: Memorex 1270
   Operating System: OS-MVT, HASP, Executor
   Modem: Bell 201

(Continued on page 8)

HP DATACOM THAT'S HERE TODAY! - (Continued from page 7)

HP 3000 2780/3780 Emulator Applications

2. **2780 Emulator:** HP 3000 HPA
   Contact: Bob Lewin,HPA or Jim Willits,DSD
   Host Description: HP Corporate Div. Data Center
   Mainframe: IBM 370/158
   Comm. Controller: IBM 3705 Emulating a 270X
   Operating System: OS-VS2, HASP
   Modem: Paradyne — 4800 bits/sec full duplex

3. **2780 Emulator:** HP 3000 Data Systems
   Contact: Madeline Lombaerde, DSD
   Host Description: Chi Corp., Cleveland
   Mainframe: Univac 1108
   Comm. Controller: Chi Comm. Processor
   Operating System: Exec 8
   Modem: Bell 201

4. **2780 Emulator:** HP 3000 at Itel,San Francisco
   Contact: Bill Gard, DSD
   Host Description: Worldwide G.E. Mark III Timeshare High Speed Service
   Modem: Bell 201

5. **2780 Emulator:** HP 3000 Data Systems
   Contact: Hank Cureton, DSD
   Host Description: Anaconda
   Mainframe: IBM 360-40
   Operating System: DOS, GRASP
   Modem: Bell 201

6. **2780 Emulator:** HP 3000 ESR, Rockville
   Contact: Bob Chaffin, ESR
   Host Description: American Mgt. System
   Mainframe: IBM 360-65
   Operating System: OS-MVT, HASP II
   Modem: Bell 201

7. **2780 Emulator:** HP 3000 Neely Fullerton
   Contact: Ben Menold, NSR
   Host Description: Hughes Aircraft
   Mainframe: IBM 370/165
   Operating System: ASP
   Comm. Controller: Com 10
   Modem: Bell 201

8. **3780 Emulator:** HP 3000 at Nooter Corp.,St. Louis
   Contact: Jim Willits, DSD
   Host Description: McDonnell Douglas
   Mainframe: IBM 370-168
   Operating System: ASP
   Modem: Bell 201

9. **2780 Emulator:** HP 3000 Data Systems
   Contact: Jim Willits, DSD
   Host Description: Remote Computing,Palo Alto,CA.
   Mainframe: Burroughs 6700
   Operating System: MCP patched for 2780 RJE
   Comm. Controller: DCP
   Modem: Bell 201

File Transfer

HP 3000 2780/3780 Emulator Applications

1. **3000 to 3000 using 2780 or 3780 Emulator**
   Contact: Jim Willits, DSD
   Comments: Can be used to transfer source files, USL and program files, dump tapes,etc. Currently the limitation is in record size of about 500 characters. We have sent new RPG Compilers to Rockville using this capability.

2. **RDTS to 3000 using 2780 Emulator**
   Contact: Jim Willits and Larry Smith,DSD
   Comments: Have demonstrated an RTE collecting data to disc file and periodically transmitting to a 3000 disc file. Demonstrations were for American Color Press and American Cynamid.

3. **9830 to 3000 using 2780 Emulator**
   Contact: Jim Willits, DSD, Jim Carlson, Loveland
   Comments: 9830's used for order entry and periodically transfer data to the 3000. Demonstrated for Rainier National Bank, Seattle.

4. **DOS-SLC to 3000 2780 Emulator**
   Contact: Jim Willits, DSD
   Comments: A program must be writtten for DOS in order to communicate with the 3000. A 100 line FORTRAN program was written for file transfer to demonstrate the capability to HP Guatamala.

5. **HPRJE (BCS) to 3000 2780 Emulator**
   Contact: Jim Willits, DSD
   Comments: This package could be used to transmit cards to the 3000 and print lines received from the 3000. HPRJE must be modified to ignore keying on ESC CCTL on records received from 3000. This was demonstrated to Hughes Aircraft.

HEWLETT PACKARD

THE HP SEMINARS AT NCC — A VALUABLE EXPERIENCE FOR THE ATTENDEES

by Larry Hartge

The HP seminars at NCC were a great success with over 150 people in attendance. The HP 3000 was "introduced" via three topical seminars at the conference in Anaheim. As potential customers passed through the booths in the Exhibition Hall, the persons working there distributed seminar invitations. Thanks to the distribution of the invitations at the show and the invitations distributed before the show by the local Neely Sales personnel, the seminars were well attended, especially when considering the NCC seminars were competition.

(Continued on page 9)

THE HP SEMINARS AT NCC - (Continued from page 8)

As can be seen on the invitation below, there were seminars given on the TECHNICAL aspects of the 3000, its COMMERCIAL features, and its use for MANUFACTURING systems. The content of each of these seminars is outlined in the next three paragraphs.

The TECHNICAL presentation emphasized the flexibility of the Minidatacenter with respect to the user interface by demonstrating the capability of the operating system. The seminar was given by *Russ Blake* and included:

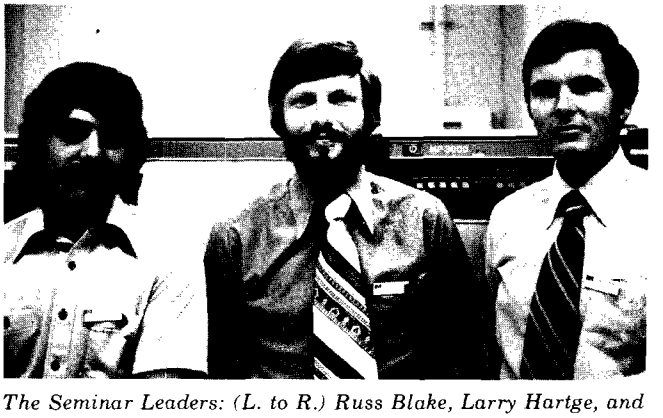
How easy it is for the user to take advantage of the systems general flexibility; and more specifically — flexibility in the choice and use of the various languages; the flexibility in file access; flexibility in peripheral access, including examples using spooling; and the flexibility in system access showing streaming.

The COMMERCIAL presentation given by *Carl Flock* stressed the positioning of the 3000CX in the world of Data Processing. An effective analogy made, was to compare the computer industry of the 70's to the transportation industry of the early 1900's. The Mega systems are the trains, the mini's are the cars, while the Minidatacenter is the semi-truck and trailer rigs. The Minidatacenter (Truck) has the flexibility of the "car" to bring the solutions to the user but most of the load carrying capability of the "train". After clarifying where the 3000CX fits in the Data Processing picture, the feature/benefits that provide solutions in commercial applications were discussed. COBOL, RPG, on-line ACCESS were covered by IMAGE/Query was the star feature. Many were amazed that every product, feature and benefit was here today. No questions arose that couldn't be solved with the current 3000CX hardware and software.

The title of the MANUFACTURING seminar was "A New Tool For Manufacturing Management" and had an underlying theme of showing what features of the HP 3000 Minidatacenter provide the proper tools for the various functions of manufacturing management. The seminar was given by *Larry Hartge* and included:

How the HP 3000 can provide a dynamic solution to the most vital manufacturing activity: the real value of accurate manufacturing data and how the accuracy can be assured with a minidatacenter; minidatacenter first — the value of the product contribution made by the HP 3000; where and how the HP 3000 is assisting Hewlett-Packard's manufacturing management; and why the HP 3000 is the right tool for making manufacturing successful in light of the elements of a successful manufacturing system.

At the conclus on of each session the attendees were asked to fill out a card which would be used in a drawing for an HP21 calculator. One card was drawn from each session, and from these cards (6), a final winner was drawn at the end of the last seminar. The winner of the HP21 was *Henry W. Swanson*, the Director of System Software Development, Datapoint Corporation in San Antonio, Texas.



The Seminar Leaders: (L. to R.) Russ Blake, Larry Hartge, and Carl Flock

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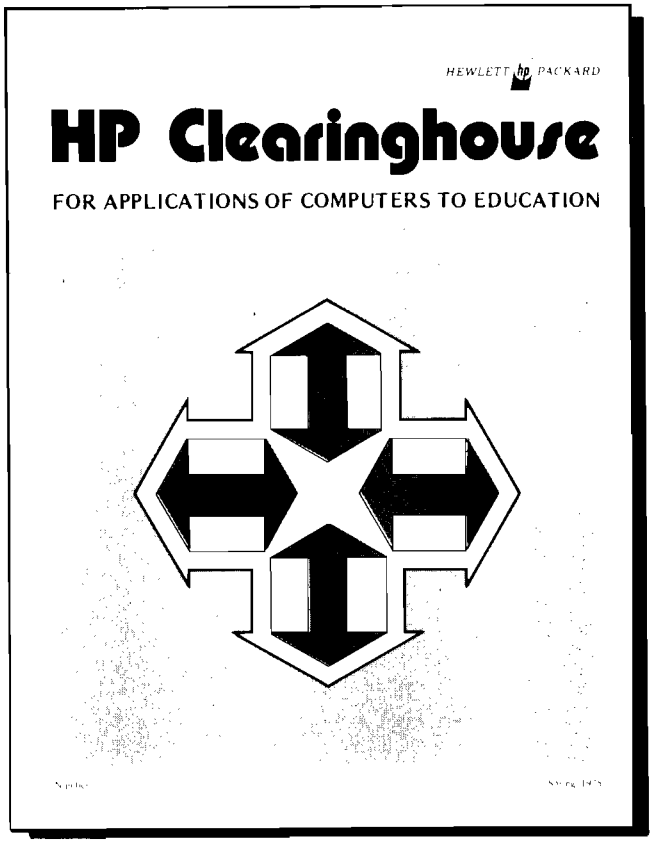
HP CLEARINGHOUSE CATALOG AVAILABLE

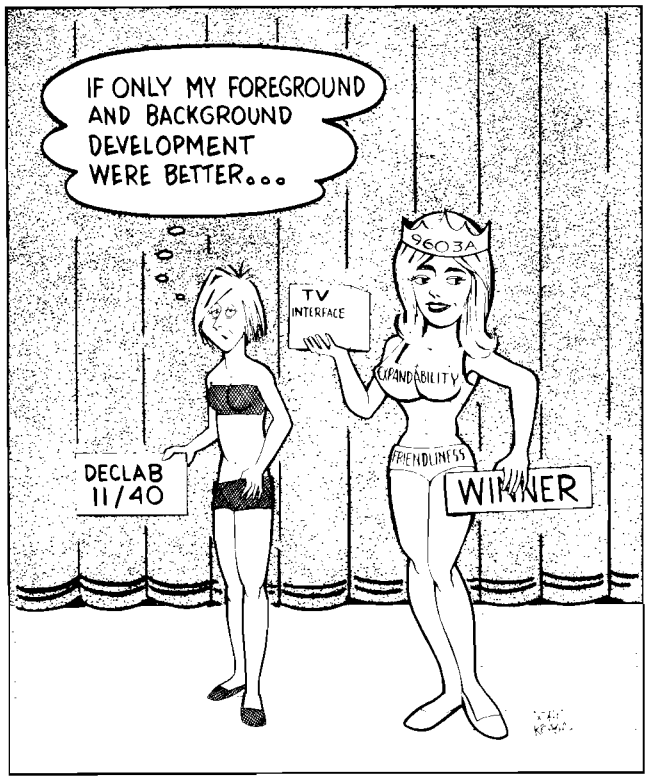
by Hal Peters

The first catalog issued by the HP Clearinghouse for Applications of Computers to Education is now available. The catalog lists over 200 items of educational applications software and includes six cross reference indexes. Nearly half of the entries are educational programs from the HP Contributed Program Library or are HP supported software products. Over 100 entries are software applications developed by and available directly from HP educational users or other sources. In addition to software, per se, numerous books and other reference materials are also listed in the catalog.

We think the catalog is potentially a valuable sales tool. To get your free copy, just call us at (408) 257-7000 X3139, or send a memo to *Hal Peters* at Cupertino.



9603A WITH TV CARD WINS OVER DECLAB 11/40



by Peter Palm

In a recent competition with DECLAB 11/40 we discovered that we were within 6% of DEC in price but that the 9603A with RTE-II had many operational advantages over DECLAB 11/40 with RT-11. LESSON # 369: "Expandability and multiple user access to the lab computer in a friendly way is more important than higher resolution graphics and signal processing software (Fast Fourier, smoothing etc.)."

The weaknesses in the DECLAB 11/40 are:

1. The RT-11 F/B (foreground/background) operating system is separate from the RT-11 single-user operating system. The user must *stop* one to load and use the other. This is not good, but to make matters worse the DEC Laboratory software brochure (p. 36-37) shows that the LAB 11/40 LPS-11 peripheral is *not* supported under RT-11 F/B, only under single user RT-11 in Fortran. Thus it would appear that the user can't develop in background while capturing data via LPS-11 in foreground. HP's RTE-II has no such restriction plus it has batch-spooling.

2. RT-11 does not support memory protection (KT-11 on PDP 11/40). Thus even if LPS-11 was supported in foreground, background program development could irretrievably zap foreground data and programs. Typical labs *must* develop while safely using the foreground for data capture. HP's RTE-II provides this.

(Continued on page 11)

9603A WITH TV CARD WINS OVER DECLAB 11/40 - (Continued from page 10)

3. RT-11 does not support KE-11 memory relocation! Thus memory expansion is limited to 28K of RT-11 and user program area (4K more dedicated to device addresses). Upgrading to RSX-11 M/D for >32K requires rewriting programs and drivers. HP's RTE-II is directly upgradable to RTE-III.

4. RT-11 does not support KE-11A extended arithmetic or KE-11E floating point hardware. 9600's With RTE-II provide these as standard

5. Multiuser Basic on RT-11 does *not* support the LPS-11 Lab peripheral. Thus it is *not* Real Time Basic like the HP RTE-II version. RT-11 Mu-Basic also is an "optional" operating system. That is, you must stop RT-11 F/B or RT-11 to run RT-11 Mu-Basic. HP RTE-II allows multiple inexperienced Lab users to easily get on and get going with Real Time Basic, and concurrently with FORTRAN, ALGOL, Assembly users.

6. DECLAB 11/40 cannot expand to color graphics. Add two 91200A TV cards ($6240) to 9603A and approximately $500 more for color monitor and HP customer can get color graphics.

DEC's LA-11 Lab Applications package offers signal processing software which some labs find useful. The January '75 Laboratory Software brochure, however, has 17 references to "Planned for future releases" of LA-11, including "magtape, digital I/O; Fortran & Basic extensions, greater than 8 analog channels, A/D with DMA, light pen support", etc. Our contributed library may be just as complete.

The following prices are taken from DEC's recent price list.

NOTE: In desperation DEC will try to "lowball" with DECLAB 11/10E which includes *single* cartridge disc, no paper tape, 10-bit A/D (No DMA avail.), no digital I/O and a completely software refreshed CRT control (AR11). With $3400 VR14L CRT, it lists at $32,950. Put in required papertape and 2nd disc and price is $40,650 compared with HP 9603A ($42,460).

REAL TIME LABORATORY MEASUREMENT & DISPLAY SYSTEM

	DECLAB 11/40 RT-11		HP 9603A RTE-II	
CPU	$37,500	Includes DMA, P/F, ROM boot	$22,900	Includes DMA, P/F ROM
16K Memory	Incl.	980 ns core	Incl.	650 ns Mos
Memory protect	–	KT11 not supported RT11 F/B (+$2600)	Incl.	And supported
Memory parity	–	MF11UP memory is extra (+$1400)	Incl.	And supported
EAE	–	KE11-E not supported RT11 F/B (+$1470)	Incl.	And supported
Floating Point	–	KE11-F not supported RT11 F/B (+$1600)	Incl.	And supported
Console	Incl.	30 cps LA30 DECwriter	$ 5,325	R10 30 cps Terminet
Paper Tape	$ 2,600	PR11 is RT11 minimun requirement	Incl.	
Cabinet	Incl.	(2)47" cabinets + table	Incl.	Single 56" (no table)
5mb disc and Real Time SW	Incl.	(2) RK-11 70 ms disc (max 10 M-byte)	$14,000	35 ms disc (max 20 mb)
	Incl.	and RT-11 Foreground/background*	Incl.	and RTE-II (option A13)
Lab Peripheral — ADC (LPS-11) and multiplexer	Incl.	12-bit, 8 diff. channels (4 with pots)	$-4,175	91000A 12-bit, 16 ch. diff.
	–	35 kHz for program I/O (LPSAD-12)	–	20 kHz. (no potentiometer)
• DMA for ADC	$ 1,100	47 kHz for DMA I/O (LPSAD-NP)	Incl.	20 kHz.
• Real Time Clock	Incl.	Includes 2 Schmidt Triggers	Incl.	No Schmidt Triggers
• Digital I/O	Incl.	16-bit in and out TTL plus 2 relays	$ 500	12566B 16 in & out TTL (no relays)
Display Controller	Incl.	LPSVC	$ 3,120	91200A TV Interface
	Incl.	• hardware character generation	Incl.	• software char. generation
	Incl.	• refresh via DMA from core	Incl.	• refresh from card MOS
	Incl.	• hardware vector generation	Incl.	• software vector generation
	Incl.	• eight intensity levels	Incl.	• 8 levels with 3 cards ($6240)
	Incl.	• 1024 x 1024 resolution	Incl.	• 256 x 256 resolution
Graphics CRT	Incl.	VR14L 12" diagonal CRT ($3400)	$ 1,290	HP 5671B 17" diagonal
Light Pen	Incl.	But not software supported in LA11	–	See note below
Training (2 weeks)	Incl.		$ 800	
	$41,200		$43,760	
Add Memory protect, memory parity, EAE & Floating Point.	$ 7,070	If all were even supported in RT11 software.	$ 2,500 Incl.	Light Pen — Customer must interface with 12566B and HP recommended light pen.
	$48,270		$46,260	
Signal Processing & Display SW	Incl.	LA11 Data Capture, Process & Display SW.	?	Contributed library only.

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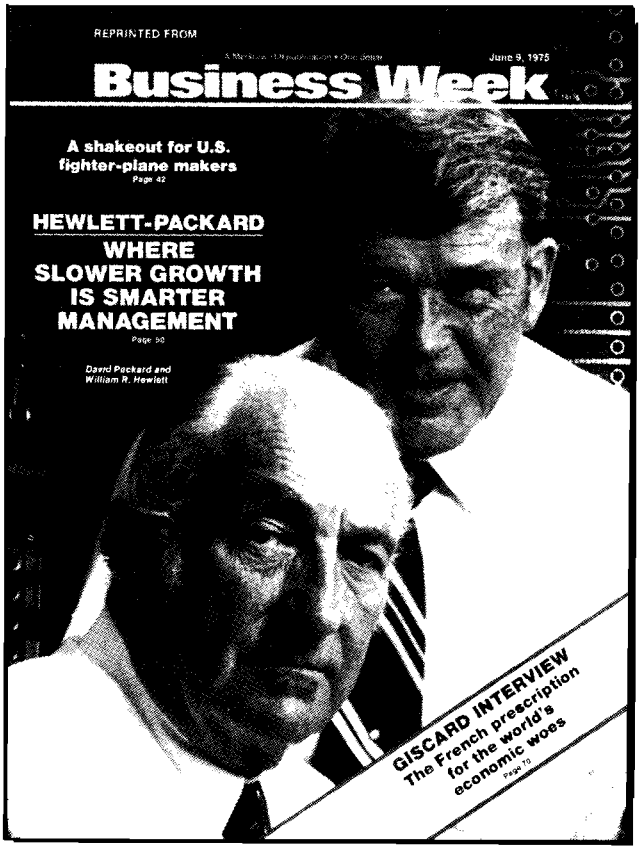
BUSINESS WEEK REPRINTS — SOLD OUT!



by Norm Choy

All requests for the Business Week reprint of the June 9th story on Hewlett-Packard have been sent to the U.S. field offices, to *Bob Bond* in Boeblingen, and to the HPIC sales offices. There are limited quantities still available from Data Systems and we will fill requests on a first-come, first-served basis. There are no plans to order additional reprints. Over 14,000 copies were sent worldwide to the Computer Systems field force.

HEWLETT PACKARD

EDUCATIONAL NEWS

A NEW FACE IN EDUCATION MARKETING

by Jean Danver

Meet *Pat McGrath*, our new manager of University and Professional School Marketing. *Pat* comes to us straight out of Harvard Business School. Before that he was learning EE at the University of New Mexico, painting houses, and doing various other things to get through school. After he spends a couple of weeks learning about HP computers, you can expect to see some exciting things in the University area.

Lft: Paul Myhre, Elementary/Secondary School Marketing Manager.
Rt: Pat McGrath, University & Professional School Marketing Manager.

Just to bring you up to date, here is what the rest of us are doing.

(Please turn to page 13 for Organization Chart)

HEWLETT PACKARD

CUSTOMER TRAINING

HP 3000/CX CUSTOMER TRAINING

by John Page

As you are aware, the old 2-week 3000 system utilization course has been replaced with a sequence of two separate courses. The first week includes how to use the HP 3000/CX from either the commercial/business (COBOL, RPG orientation) or scientific/engineering (FORTRAN, BASIC orientation) viewpoint.

Either one of these courses (or extensive previous HP 3000/CX experience) is a prerequisite to the System Management course.

If you have a customer who needs to attend the System Management course who *has not attended one of the above user courses*, please contact *Dick Sleght*, Customer Engineering, DSD.

For you to have a viable and supportable installation, your customer must send at least one key person to the System Management class.

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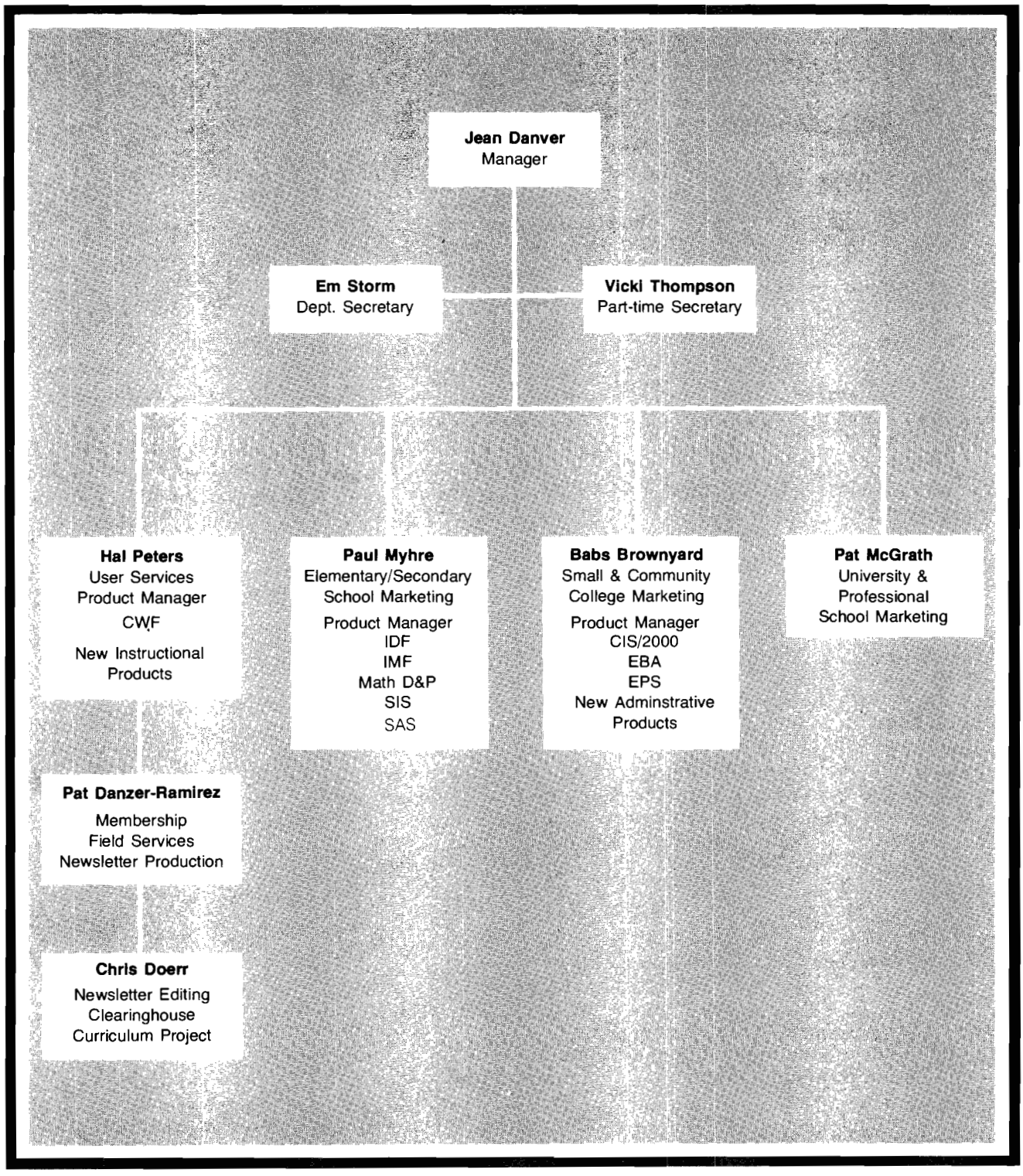
MARKETING - (Continued from page 12)

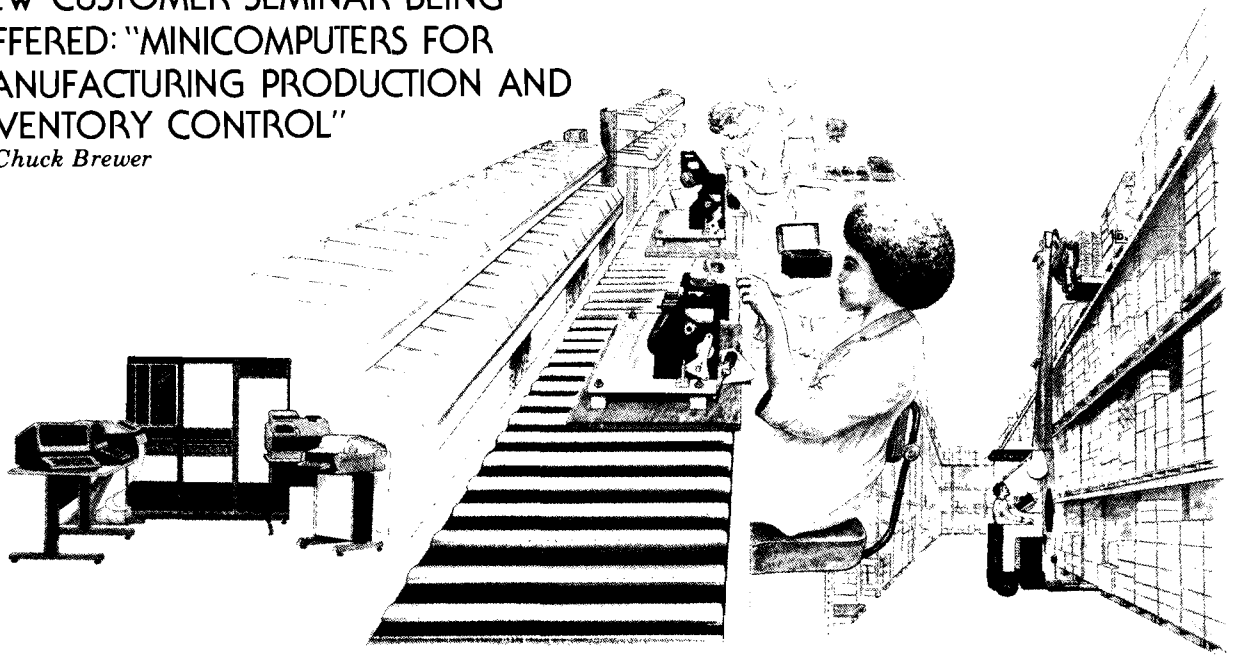
ORGANIZATION CHART



(Continued on page 13)

NEW CUSTOMER SEMINAR BEING OFFERED: "MINICOMPUTERS FOR MANUFACTURING PRODUCTION AND INVENTORY CONTROL"

by Chuck Brewer



The latest customer training schedule lists a new seminar entitled "Minicomputers in Manufacturing," course number 22974A.

Why the interest in minicomputer Production and Inventory control applications?

Applications of minicomputers for manufacturing production and inventory control are increasing at a very rapid rate. This is due to companies realizing that corporate profit can be increased by installing minicomputer systems that produce tangible benefits such as: reduced inventory investment, lower material costs, and increased plant productivity.

About the seminar.

This seminar addresses how today's minicomputer capabilities can effectively be applied to create systems for Engineering Data Control, Forecasting, Master Scheduling, Material Requirements Planning, Inventory Management, Shop Floor Control and Purchasing.

Desirable minicomputer capabilities discussed will be: Data Base Systems and Data Base Query, Data Communications, on-line Program Development and Peripherals subsystems.

The course will discuss information screens or reports for each application area as well as how to design the files and data base necessary for system implementation.

When and where will it be given?

The course will be given at Cupertino, Data Systems Training Center on August 28-29, October 16-17 and November 24-25.

Course Brochure being mailed to the field.

Copies of the course brochure are being mailed to each RSM, DM, SE and FE. If you need additional copies, please contact your District Manager and he will, in turn, contact us with a total count.

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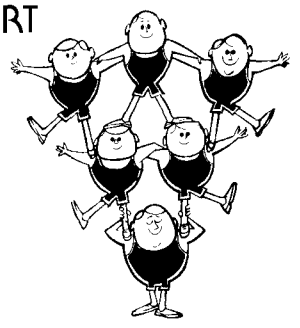
CUSTOMER ENGINEERING CORNER

THE NEW DOS TEAM — DELIVERS ON SUPPORT



by Carolyn Morris

There's a new team for DOS support in Cupertino, and we're making big plans for DOS action.

To pick up the ball for basic DOS questions, *Gary Koerzendorfer* is in training. He'll be the expert in a month or so, and, meanwhile, he'll use the consulting services of *Gary Johnson, Paul McGillicuddy, Anna Holland* or *Dave Bunch*. If you have a DOS question, one of us will get the answer to you.

(Continued on page 15)

THE NEW DOS TEAM - DELIVERS SUPPORT -
(Continued from page 14)

For specific areas like the logical/physical drivers, *George Moore* has all the answers. *Lou DeWitt* will be backing *George*, but his prime responsibility is the new 7905 driver. So, have a question that you think is in the driver area? Call *George*. If you're wrestling with DOS and a 7905, then you should call *Lou*.

As for customer training, we're warming up for that too. November will be scheduled for both DOS and TCS/IMAGE. *Gary Koerzendorfer* and *Lou DeWitt* will conduct the DOS class. *Marilyn Branthwaite* will provide the first regularly scheduled TCS/IMAGE class. We'd like to provide training on a regular basis to keep the DOS customers current and make support a little easier.

Well, that's the game plan. We'll be anxious to hear any comments or inputs you might have. Just give a call to Cupertino and ask for the DOS team.

HEWLETT PACKARD

O. P. CORNER

ORDER PROCESSING REORGANIZATION

by Judy Perdue

Data Systems Order Processing has added several new people and reorganized to provide better support for you. We have not yet filled the foreign IOS position. Temporarily, inquiries should be directed to *Dennis Cain*.

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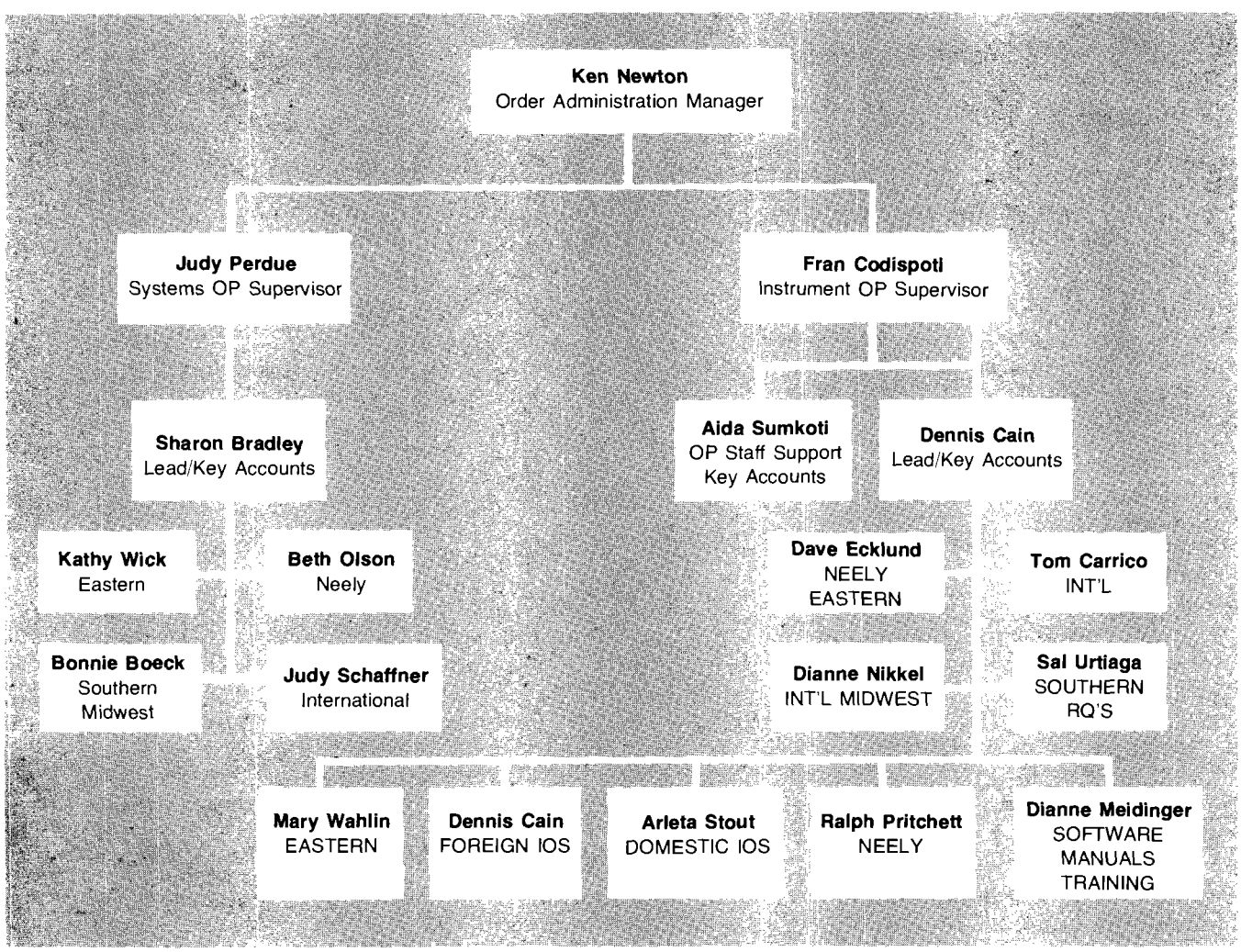

data systems newsletter
For HP Field Sales Personnel

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John Kobis — Art Director * Joe Schoendorf — Technical Editor