

REINHARDT, HELMUT
FRANKFURT
HPSA

COMPUTER SYSTEMS NEWSLETTER

For HP Field Sales Personnel



Vol. 2, No. 3
Dec. 1, 1976

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HP Computer Museum
www.hpmuseum.net

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AMD DIVISION NEWS

NEW TRAINING REGISTRAR!

By: Dick Lovlien/AMD

Much to our regret, and after about 10 years at Dymec/AMD, our training registrar *Edie Pare* has decided to join the Corporate Employee Development Group. *Edie* did a super job for us and will be sorely missed; we wish her the best of luck!

But we do have someone to take over the registrar's job. *Pat Lemmon*, coming to us from APD, will be answering your calls on the same AMD extension: #2519. So if you have any questions about AMD training or want to enroll students, have reservations made, etc., *Pat's* the one to call!

PARTY TIME, FUN & GAMES!!

By: Dick Lovlien/AMD

Party time, fun and games is certainly not the situation for our three Product Specialists from Europe! *John Taylor* (U.K.), *Tony Strahl* (Germany), and *Mark Chovet* (France) face a 6-week schedule of training at AMD.



Packed into the 6 weeks is an advanced 8580B Spectrum Analyzer maintenance course, plus courses on ATLAS software, the DTS-70 Digital Test System, and TESTAID and FASTRACE software. They'll also receive inputs on field add-ons and RTE and Distributed System software.

John, Tony, and Mark will be the AMD support champions in Europe when they leave here. As such, they will be the technical back-up for CE's throughout Europe on AMD system repair problems, and the primary interface with the factory for implementation of overall support strategy. Three key people in Europe? We have them in training right now at AMD!

ATLAS COMMITTEE ATTENDEES VISIT AMD

By: Herb Pardula/AMD

The ARINC ATLAS Committee had its tenth anniversary meeting in San Francisco from November 1 through November 5.

Having its largest number of attendees ever, over 100 from all over the globe, the committee made its transition from an ARINC Subcommittee to an IEEE Standards Committee. While this change promises an even wider acceptance of the ATLAS language, it even more importantly is proof that ATLAS has become accepted as an important standard for test reference specifications in the electronic community. This is also born out by the recent announcement of the U.S. Defense Department that ATLAS has been designated as an interim standard for automatic test equipment. Equally, the use of ATLAS as a standard is spreading rapidly in the West European defense community.

The ATLAS committee attendees were invited to visit AMD on Monday evening, November 1. The response far outweighed our estimates. Over 65 visitors were treated to supper, a plant tour, DTS-70 and ATLAS Compiler presentations and demonstrations.

The comments about our products from the visitors which included a mix from the industry and military sectors, users and suppliers of ATLAS test specifications and associated ATE's were gratifying.

The HP ATLAS Compiling System is considered the prime example of how ATLAS should be automated. It is also the only compiler commercially available as a standard product.

NOTE:

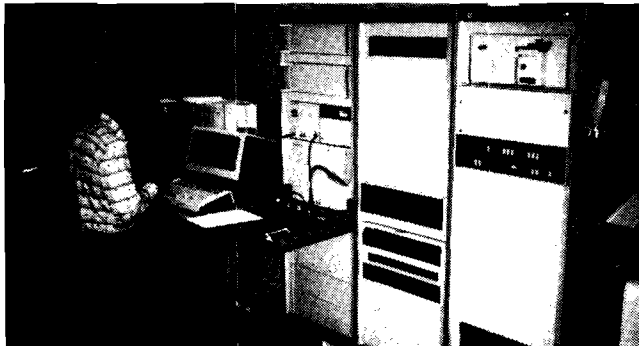
- A list of the ATLAS Committee attendees having visited AMD is being sent to the AMD Sales Force.
- The ATLAS language specification, formerly ARINC 416-13A Vol. II, is now available as IEEE Standard 416-1976 for \$15 from the following address:

**IEEE Standard Office
345 East 47th Street
New York City, New York 10017**

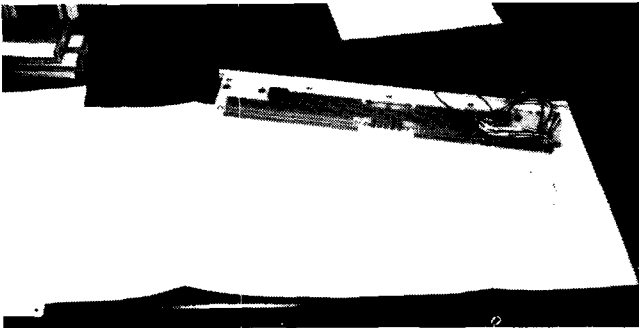
Product News

SOUTHERN SUCCEEDS WITH THE DTS-70!!

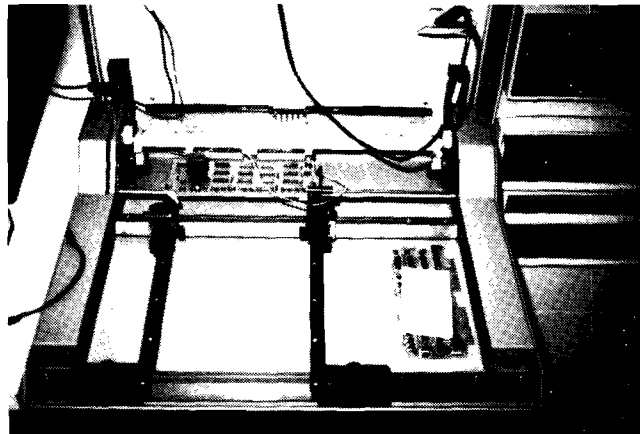
By: Ken Posse/SSR Orlando



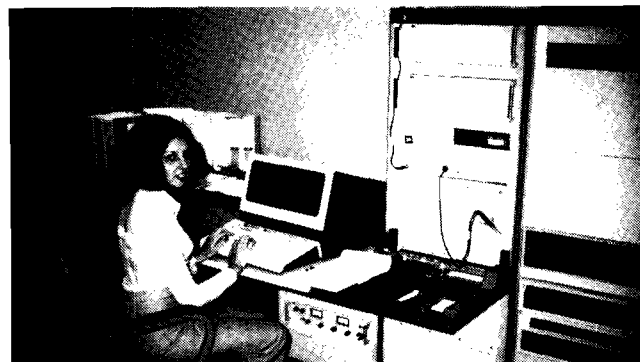
Bubber Smith, your ambitious salesman, feigning knowledge of our DTS-70. To everyone's surprise, he managed to follow an entire procedure from coding to testing without screwing up the system.



This is the circuit diagram for the 7900 cylinder address board and our second adapter. Note the use of yellow Magic Marker on the circuit diagram marks the signals as they were coded into the circuit description. In this way, we prevented re-tracing steps. The adapter is our "MODEL VERIFICATION ADAPTER" used to test library models to ensure they perform like the real-world device. It is two IC sockets inserted into the adapter pc board and wired as needed by pushing communications cable through the proper holes in the board. In this way, we don't have to solder, and can re-use the board.



*Our first test adapter wired and testing. This is the 7900 cylinder address board. Note the use of the logic clip and the failed board with printout in the lower right of the picture. I used this board because of the prolific number available in the trash cans in service. Note, we can test *NF to 95%, yet 2 of the first 5 boards dug out of the trash passed the verification test. Does CSC know we are throwing away good boards? Our next test was to put some of the repaired boards back into the service kit to see if they work. They did!!*



Our receptionist, Sherry Pew, showing off our machine.

DTS-70 CUTS CSD'S REPAIR TIME FROM HOURS TO MINUTES!

By: George Low/AMD

Larry Turner, Computer Service Division (CSD) Blue Stripe Production Engineer (see Figure 1), has lots to smile about. Since taking delivery of his DTS-70 system in September '76 he has cut his PC board repair time from more than 3-1/2 hours to 20 minutes average — with some boards going as fast as 10 minutes from fault location to repair. Larry states that his average probe time, guided by FASTTRACE files, is only one to four minutes! Larry uses his DTS-70 for test program generation and testing concurrently, stating "that's what makes the DTS-70 so economical".

CSD plans to get another 9571A Digital Test Station, giving them multiple test station capability on the same controller. "We'll need more testing capability for Product Type 2 new products coming up," says Larry, "of course we will be getting canned TESTAID-III test programs because other HP divisions also will be using the DTS-70 for production testing".

Larry also has a unique way of using his DTS-70 to store his test setup configurations for later recall. When the test setup is first configured (see Figure 2), he develops it on the 2644 minicartridge using ASCII files developed off-line, then loads it in the DTS-70

system disc using the RTE "STORE" command. Thus any time the same board is tested *Larry* can recall the test setup configuration on the CRT (see Figure 3), showing IC clip location, jumper locations, PCB switch positions, etc. Samples of more CRT test setup recalls are also shown in Figures 4 and 5.

Larry Turner's successful DTS-70 operation can be your customer's success story. SELL DTS-70's!



Figure 1

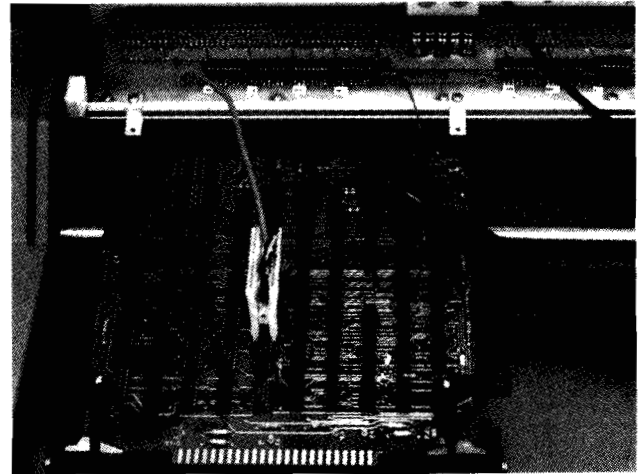


Figure 2

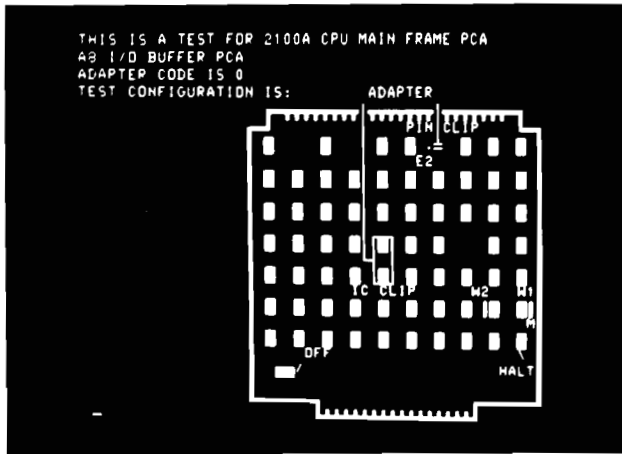


Figure 3

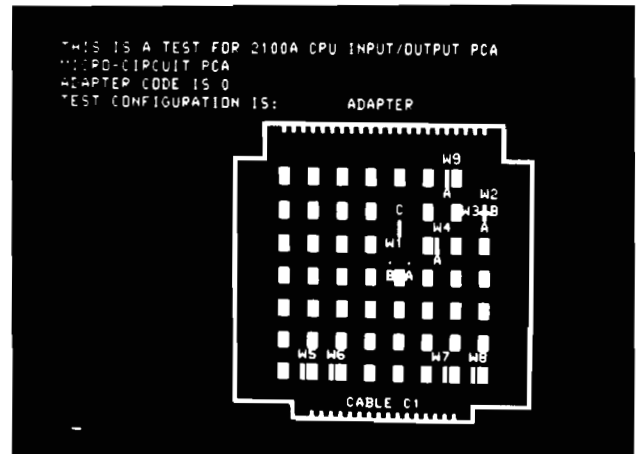


Figure 4

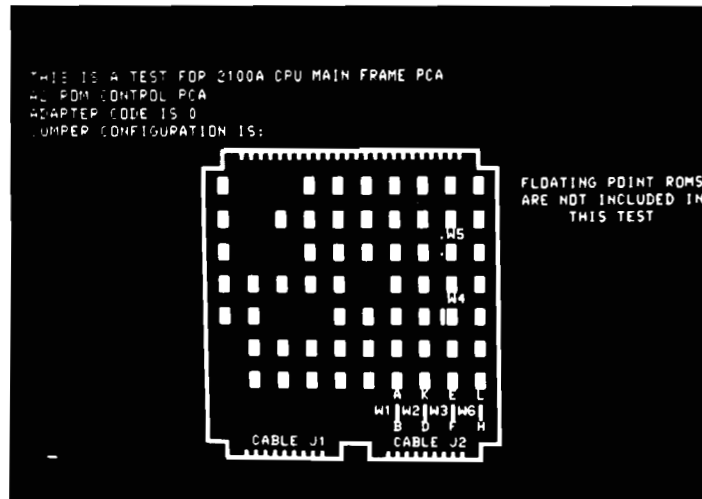


Figure 5

8500 SERIES SYSTEMS SOFTWARE SUBSCRIPTION SERVICE

By: Ron Carelli/AMD

In order to provide customers a means of getting the latest software updates, system analyst notes, service notes, and manual updates, etc., we have developed a Software Subscription Service. The number for this service is Model 92821A. The first year's subscription can be ordered as HP 92821A Opt. 076 at a price of \$600. (The price of future options may vary from year to year according to the content.) For a data sheet and a catalog of the Contributed Library software available with the Option 070, please contact *Ralph Kenton* at AMD X2410.

DISTRIBUTED SYSTEMS UPDATES — 8500/9500 SATELLITES

By: Ron Carelli/AMD

In the September 1, 1976 issue (Volume 1, No. 10) we announced the release of the update kits for 8500/9500 Distributed System Satellites which provide the software to change the software on the Satellite to be compatible with the new central software. We are now taking orders for these update kits. Delivery is 3 weeks ARO.

In order to provide efficient updates while we're geared up to do this, we have set a time period of 2 months from November 15 to order the updates. This gives you until January 15, 1977. No orders will be accepted after this period.

NOTE: There was an error in the previous announcement which had one of the updates on the 8580B as 93215A Opt. A17; it should read 93251A Opt. A17. Also, for the 9500D, the number was deleted inadvertently and should be 93252A Opt. A92.

AMD RECEIVES SYSTEM 1000

By: Larry Amsden/AMD

Clarence Parker (on the right), of AMD receiving department, wheels in AMD's first System 1000. The Lab will now begin checking out the System 1000 as a controller for the DTS-70 and the 9580. In order to run TESTAID or FASTRACE on the System 1000 new microcode must be generated; but the project has the highest priority at AMD, and barring unforeseen problems, the System 1000 should be announced as an available controller for the DTS-70 by the end of December. In the meantime, sell the 9640 option 542 as the DTS-70 controller, or ask your Regional Sales Engineer for a special quote on a 9571 for interface to existing 2100/7900's.

8500 SERIES SYSTEMS CONTRIBUTED LIBRARY

By: Ron Carelli/AMD

Yes, there really is a 8500 Contributed Library, and it is alive and well in Sunnyvale!! In fact, the first release of the subscription service contains a set of software from this Contributed Library mentioned in the previous article. This particular set of software was contributed by *Rich Irwin* of our Application Engineering group. The software extends the standard 8500 graphics software, and the standard math package supplied with the 8580B/8500A. It also expands the interactive graphics statements. Also included in this set of software is a set of subroutines which extend the standard tune and measure software of the 8580B. These routines provide high speed tuning, auto-range routines, special frequency stepping routines, and other routines useful for both surveillance and component test applications. Releases of the contributed software will be made as part of the periodic releases of the software subscription service.

Contributions to the library from customers is encouraged. If you have a customer who wishes to contribute any programs, please have him submit them along with listings to *Rich Irwin* at AMD. Also, ask him to supply the information contained in the headers on the present library listings.

STABILIZED MICROWAVE SOURCE SUBSYSTEM OBSOLESCENCE

By: Ron Carelli/AMD

The stabilized microwave source subsystem, HP Model 85835A, is currently being obsoleted. This subsystem was primarily used on 8580B and 9500 series Automatic Test Systems, and the subsystem is being replaced with special source subsystems comprised of 8660A and 8672A instruments and appropriate interfaces. These special subsystems generally provide equivalent performance to the 85835A at a lower price. For a quote on your specific requirements, please contact *Ralph Kenton* at AMD X2410.



DISC MEMORY NEWS

Competition

DEC RK06 vs. HP 7905A

By: Bob Hoke/DMD

DEC has just announced the RK06, a new dual-disc cartridge drive for the PDP-11 line. I thought you might be interested in a point-by-point comparison between this new drive, the DG 4234,5,6, drives and the 7905A.

	7905A	RK611/RK06	DG (DIABLO) 4234,5,6
DRIVE TYPE	2315 TYPE CARTRIDGE PLUS FIXED	DEC MEG CARTRIDGE REMOVABLE ONLY	5440 TYPE CARTRIDGE PLUS FIXED
CAPACITY	14.8 MBYTES	14 MBYTES	10 MBYTES
DRIVES PER CONTROLLER	8	8	4
ACCESS TIME TRACK-TO- TRACK	5 ms	8 ms	8 ms
AVERAGE	25 ms	31 ms	38 ms
MAXIMUM	45 ms	71 ms	70 ms
LATENCY TIME	8.3 ms	12.5 ms	12.5 ms
AVG DATA ACCESS	33.3 ms	50.5 ms	50.5 ms
TRANSFER RATE	937.5 KBYTES/SEC	538 KBYTES/SEC	312 KBYTES/SEC
PRICING SUBSYSTEM	\$15K	\$15.5K	\$12.5K
ADD-ON	\$10.5K	\$9.5K	\$9.5K
OPERATING TEMP	50°F-104°F	50°F-104°F	60°F-90°F
MEDIA PRICE	\$180	\$249	\$200
AVAILABILITY	4 WEEKS (over 2000 shipped)	3RD QTR 1977	CURRENTLY AVAILABLE

Positive points on DEC's RK06:

- The cabinet is included in the price.
- The cartridge appears to be environmentally sealed.
- DEC has announced a "dual access option" available 4th quarter 1977.

Positive points for 7905A:

- The 7905 is available as stand-alone or in rack-mount multi-drive per cabinet configurations.
- The 7905A cartridge is proven design and cheaper. It's also available from more than one vendor.
- The multi-CPU capability for up to eight CPUs, not just two, is available now from HP. To get "dual access" on DEC is *EXPENSIVE*.

	MULTI-CPU	MULTI-CPU WITH STAND-ALONE MINI-RACK	DUAL ACCESS
Subsystem	15K	16.2K	15.5K
(Multi-CPU)	1.2K	1.2K	9.5K
Dual Access Option			
Dual Access Need for Drive	Not Needed	Not Needed	3.5K
Total for Dual Access	16.2K	17.4K	28.5K

And we can go up to eight by just adding the multi-CPU kit. DEC will **not** have operating system support of dual access while we have support under RTE-II/III (see RTE Manual).

- The RK06 will be supported on the 11/04, 11/34, 11/35, 11/40, 11/45, 11/50 and 11/55 processor and **not** on the 11/05, 11/10, 11/15, or 11/20 processor. Support on 11/70 will probably come, but it has not yet been announced.
- You cannot back up a RK06 system without either another drive or a mag tape, while on the 7905A with the fixed storage, you can back up with a cartridge.
- A KW11-P or KW11-L clock for \$700 or \$350, respectively, is required for operation of the RK06. The M9301-YB ROM Loader for \$800 is required for operation under PDP-11 software.

In summary, it seems DEC is sending a lightweight up against the heavyweight champ 7905A. The 7905A has the 50%-75% performance advantage for the slightly less money (when you add DEC's *requirements* for a system clock and ROM Loader). When you want to talk multi-CPU, then you almost double DEC's prices.

Do your customers a favor — sell them *the* high performance disc, the 7905A. Also, remember what a knock-off spec multi-CPU can be.

Good Hunting!

Division News

ORGANIZATIONAL TEAM SHAPING UP

By: Dick Hackborn/DMD

As I stated earlier, we have been working hard and long to form the Disc Memory Divisional organization. I'm happy to say we have formed the working team that will wind down our operation in Cupertino, while providing a smooth start-up of our Boise facility.

I have asked *Doug Spreng* (formerly Production Manager of Santa Rosa) to be our Manufacturing Manager in Boise. *Tom Ashburn*, who has done an outstanding job for us in Disc Manufacturing here in Cupertino, will be handling the Manufacturing from this location. With two such strong people handling each location, I feel confident that transfer of production will go smoothly.

I am also happy to announce that *John Stedman*, formerly an Engineering Section Manager in Cupertino, will be our new Engineering (Lab) Manager. *John's* main emphasis will be on completing current projects on schedule. Because of the importance of the 7920, I have asked *Dick Monnier* to continue to report to me. *Dick's* primary focus will be the introduction of a solid 7920A.

Currently our Marketing Department is running "lean and mean." *Fred Reynolds* is heading up Technical Support, and *Ray Ahrens* is handling our Technical Publications. *Bob Hoke* will be handling all phases of our Product Management responsibilities as well as generally coordinating our Marketing activities.

We are also relying heavily on *Lee Pekary* (Financial Coordinator) and *Joe Shepela* (Personnel Move Coordinator).

Understandably, we are in an evolutionary process. We have received excellent cooperation from both the Boise Division and from Data Systems Division, and we are looking forward to meeting our division's objectives for next year.

SALES DEVELOPMENT

By: Bob Hoke/DMD

While DMD remains in the Data Systems facility, we will continue to rely on the excellent support of *Joe Schoendorf's* Sales Development group. They will continue to handle all of the normal field-factory communication.

DATA SYSTEMS NEWS

SYSTEM 1000 PERSPECTIVE

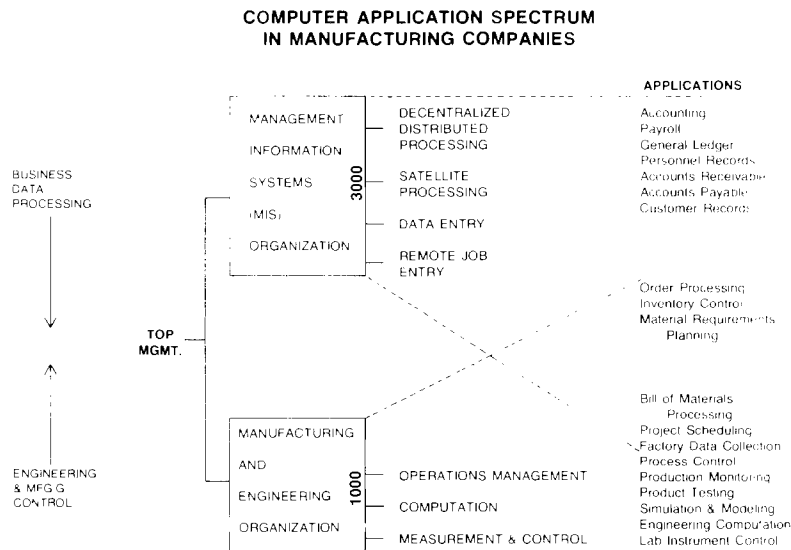
SYSTEM 1000 PERSPECTIVE

By: Jim Eckford/DSD

Now that the System 1000 NPT is over and we are getting into high gear producing and shipping the critters, it probably would make sense to stand back and reflect on how we got here and where we are headed.

The 1000 System is an outgrowth of the well accepted 9600 Measurement and Control System which earned its reputation making lab measurements and doing product testing. Thanks to innovations on the part of field people, DSD engineers and customers we now see its usefulness extending into areas outside the world of physical measurement and control.

One way to look at the broad spectrum of applications in a typical manufacturing company is shown below:



As you can see it represents an organization chart by function, with the "1000 type" applications beginning at the bottom and the "3000 type" coming down from some point at the top. Unquestionably, the greatest strengths in the System 1000, and the users with the most know how, lie closer to the bottom. This indicates why we are being very cautious about trying to extend its use too high on the spectrum, too fast, without considering each potential user abilities.

One of the things that we feel will be helpful is to provide you with as much information as we can relating to sales opportunities for the System 1000.

The press release and brochures all identify the areas of measurement, computation and operations management as the needs the 1000 is intended to fill. Jointly, we recognize that these vague categories require more clarification in terms of customer applications, product capabilities, and our product strategies.

In an attempt to meet this need we will be addressing each of these three areas in the next few newsletters. The objective being to share ideas relating to how we can come up with good combinations in terms of the customer, his application and the tools for the solution.

This time we will address the area of operations management because it is the one where we are known the least, and information is needed most.

Sales Aids

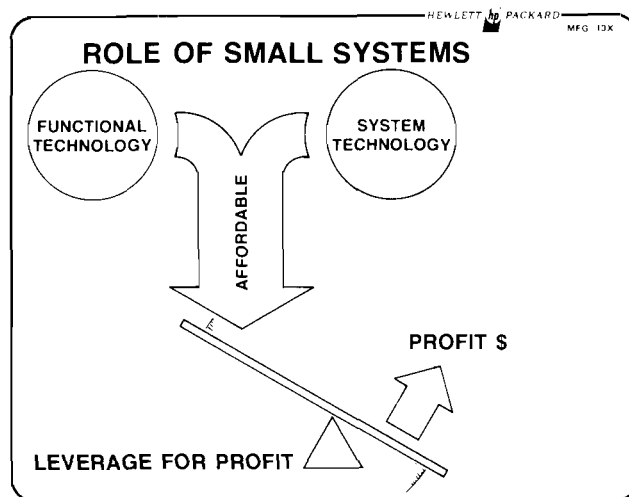
OPERATIONS MANAGEMENT — AND HOW THE hp 1000 FITS

By: David Bylund/DSD

The hp 1000 offers *affordable* system technology that can be combined with the functional technology of operations management in Manufacturing Information Control to provide significant leverage for profit improvement.

KEY ADVANTAGES OF THE hp 1000 IN OPERATIONS MANAGEMENT APPLICATIONS

- On-line, multi-user capability
- Data Base Management (IMAGE 1000)
- Factory Data Collection (3070A Terminal)
- Dedicatable to specific application needs
- Price/Performance



NOTES

These desirable system features are now placed within the economic reach of many users who would have previously found them to be unaffordable or unavailable in a system which also has the power in many cases to handle even the most difficult manufacturing information control tasks.

George W. Plossl, a noted industry expert, states that "it is now recognized clearly that improved control of manufacturing is the most fertile field for profit improvement" and calls the application area of manufacturing control "the last frontier for profits". Improvements in productivity and product delivery performance along with a reduction in inventory investment are the results that can be achieved by effectively applying computer resources to mainstream manufacturing business problems. The use of computers in manufacturing control is not new but has often been an application area reserved for large scale computer systems.

George Plossl, states that "big central computer installations in most companies can best be characterized as 5,000 horse-power to blow the horn". "We don't need more horse-power; mini-computers have all the power needed to do the bulk of the job and can be hitched to big machines when they are needed."

TOUGH, SOFTWARE PROBLEMS

There must be a catch somewhere, and you're right! Some application SOFTWARE problems are tough! Manufacturing Information Control applications in many cases are complex and require significant investments of time, money and talented people for development. Yet it is this application software which is essential in order to put the talents of the **hp 1000** to work.

Many experienced computer users will have the know-how and desire to develop their own application software. For others this task may not be practical and in these cases the use of the talents of a software house in the form of a "standard" package or for custom programming will be the practical solution.

In future Newsletters we will identify some software sources and also cover topics on the manufacturing market, specific applications, competition, and reference installations. We will also try to keep you up to date on any new hp literature in this topic area as it is made available.

AND IT JUST SO HAPPENS. . .

A new application note on the use of IMAGE 1000 to create an Inventory Control Data Base is now available. The content of this note is briefly described below. A second note covering order processing is in process and will be made available soon.

It may be of interest to note that the first recorded sale of the hp 1000 was to an OEM systems house for an inventory control application (see Computer Systems Newsletter, Oct. 15, 1976, page 26)

Building an Inventory Control Data Base Application Note 212-1

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Application Example: Inventory Control

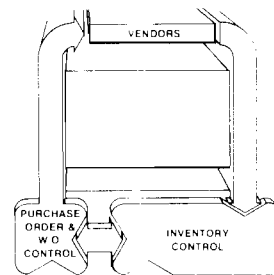
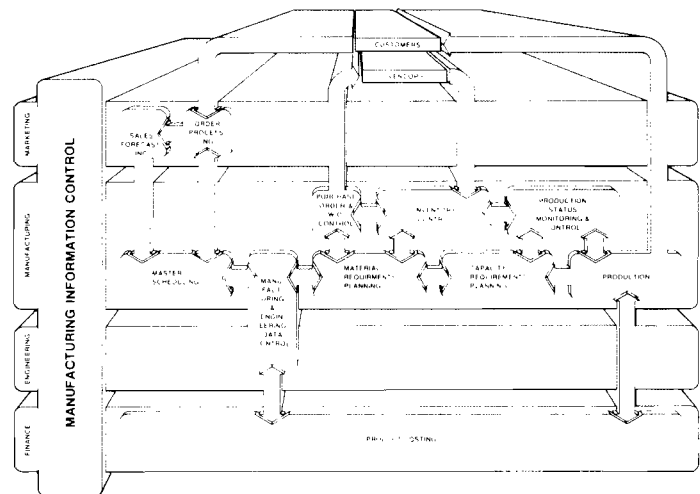
1. Define Data Schema
2. Load Data Base
3. Accessing the Data Base: Query Language
4. Application Program Access to Data Base
5. Back-up Data Base

Guide to Reference Material

INTRODUCTION

The task of controlling manufacturing information involves data from each of the functional organizations in a manufacturing operation. In order to balance the needs and objectives of a particular function, information from several of the functional areas is required. Since much of the information is needed by all areas, utilizing a common data base has advantages. Typical information flow in a total manufacturing control system is represented by the figure on the right.

This note will address only a part of the total manufacturing information control system: inventory and purchase order control. This application involves data common to the whole system and also should be of interest to those who have particular needs in inventory control.



ANOTHER SELLING TOOL FOR IMAGE/1000

By: Linda Siener/DSD

Here's another tool to help you sell IMAGE/1000. It's an application note that describes how to use IMAGE/1000 to control inventory in a manufacturing company. The note (5952-5522) is very complete, beginning with a discussion of typical inventory problems, and steps you through a solution process using an HP 1000, IMAGE and QUERY.

Another HP 1000 and IMAGE/1000 application brief is coming next month so stay tuned.

HP 1000 Computer Systems



For computation, instrumentation and operations management applications that demand high performance.

Building an Inventory Control Data Base
Application Note 212-1



ANNOUNCING

RJE/1000

Hewlett-Packard's IBM 2780 Remote Job Entry (RJE) Emulator for
HP 1000 Computer Systems

**RJE
1000**

RJE/1000 IS RELEASED

By: Fred Gibbons/DSD

RJE/1000 (Formerly RDTS) is HP's IBM 2780 Remote Job Entry (RJE) Emulator for HP 1000 systems. It has just been released and has several improvements over the previous RDTS product.

RJE/1000 is supported in the HP 1000 and RTE-III/II & C

RJE/1000 is swappable under RTE-III/II

RJE/1000 is compatible with the 7905 Disc

RJE/1000 can be reconfigured interactively from the operator's console. Configurable parameters include: time outs, ASCII or EBCDIC, half or full duplex, fill or no fill characters.

RJE/1000 is available under the same product number as RDTS (#91780A) and the price remains the same (\$4500) with option 20 available (no charge) to get you the software on cassette.

All FE's and SE's will be receiving a data sheet and field training manual on RJE/1000 around December 15th.

We have been working closely with *Guenter Kloepper* who has a copy of the RJE/1000 relocatable and source tapes so delivery should be very short in Europe.

Those RDTS users who have been waiting to take advantage of the 7900 to 7905 upgrade program can now do so because RJE/1000 is compatible with the 7905 disc. RDTS users who are on the software subscription service will be shipped RJE/1000 automatically. Those who are not should order the RJE/1000 upgrade kit via HEART override. A sample order is shown below. Each kit includes paper tape software and a manual and is priced at \$100.00.

GOOD SELLING.

CUSTOMER NO.										TAX LOC										CT										CREDIT <input type="checkbox"/> RESALE CERT <input type="checkbox"/> KARDEX <input type="checkbox"/>																																																																																																																							
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Product News

HP 1000 DATA BOOK AND HP 1000 CONFIGURATION GUIDE ERRORS

By: Ted Proske/DSD

Try as we may to make our literature perfect, it seems a few errors always slip through. The following errors have been discovered in the HP 1000 Data Book (5953-0800):

- Page 3-7, lower right: Part number of the RTE-III Programming and Operating Manual should be shown as 92060-90004.

In the HP 1000 Configuration Guide:

- Page 15: The 12972A-010 price should be shown as \$7,530 and the 13180A price should be shown as \$10,500.
- Page 16: the 91700A price should be shown as \$3,500 and the price of option 002 for both 91720A and 91721A should be shown as \$1,150.
- Page 18: the 40021A price should be shown as \$425.

These and any other errors you tell us about will be corrected at the next printing. Don't be bashful; please tell me if you find any other goofs so the next HP 1000 data and configuration information can be letter perfect. Thanks for your help.

CORE MEMORY SALE

By: Wendi Brubaker/DSD

Do you have any 2100 customers? If your answer is yes, we have some good news for you. HP is having a holiday core memory sale. Instead of \$4,000, 8K core is now going for an all time low of \$3200. Be a good guy and give your 2100 customers a call, let them in on this super offer.

HP is having this sale in hopes of filling a large percentage of the future core needs at this time. Since 2100 production has slowed in the last few months, the cost of 12885's will go up. This sale will make it possible to pass on volume pricing to our customers and to take advantage of our complete staff of experienced core manufacturing people.

Let's make this sale a success. Bring in your customers' orders today!

THE MUX IS SELLING ON HP 1000 SYSTEMS

By: Bill Burger/DSD

We've been receiving quite a few orders for HP 1000 systems with the 12920B multiplexer and new RTE mux drive (Opt A02).

On some orders the privileged interrupt card (12620A) was missing from the order. Just a reminder. The 12620A is

required for operation of the 12920B multiplexer under RTE II/III.

There were also several orders for 12920B's on Model 30 and 80 desk style systems. These should be handled as specials through Sales Development (see "Don't Get Mixed Up" by Chuck Wain - CS Newsletter Vol. 2, No. 2).

The new supported RTE multiplexer is a powerful tool to help you sell HP 1000 Systems.

SIMPLIFIED SOFTWARE ORDERING

By: Bill Burger/DSD

Just a reminder, Multi-User Real-Time Basic (MURB), 92101, is now always ordered as a line item and at a new *low* price of \$1000. With the introduction of the HP 1000 System, MURB is not sold as an option to RTE-II/III or to systems.

In addition, RTE-II (92001B) now has the Batch Spool Monitor (BSM) included at a standard part of RTE-II. This means that you no longer need to order BSM separately. The price of RTE-II (92001B) has been raised to \$5000 to cover the inclusion of BSM (the same total price as RTE-II and BSM together).

These changes were made to simplify the ordering procedures for these two popular products.

Training News

TRAINING MATERIAL HOT LINE

By: Jane Seligson/DSD

If anyone has an emergency and finds he simply has to have a certain DSD or CSD training manual immediately, please *DO NOT* have your secretary order it on a hot line. When you do that the order goes into Customer Parts Center, it is telephoned over to me and a reverse IO must be made out. Lots of people have to get involved, and there is additional paper work. There are legitimate reasons for a hot line, but we have found in the past, that most people ordering training material on a "downed instrument" basis simply don't want to bother with normal channels.

There is a happy solution to all this. Save the hot line for its proper use. Either TWX or call me direct at DSD (408) 257-7000, EXT. 3471, tell me what you need, give me an Account Number and Location Code to bill it on, and if I have the item, I will see that it is shipped within 24 hours or less.

Please use normal channels for ordering unless you have a real need.

DATA TERMINALS NEWS

Division News

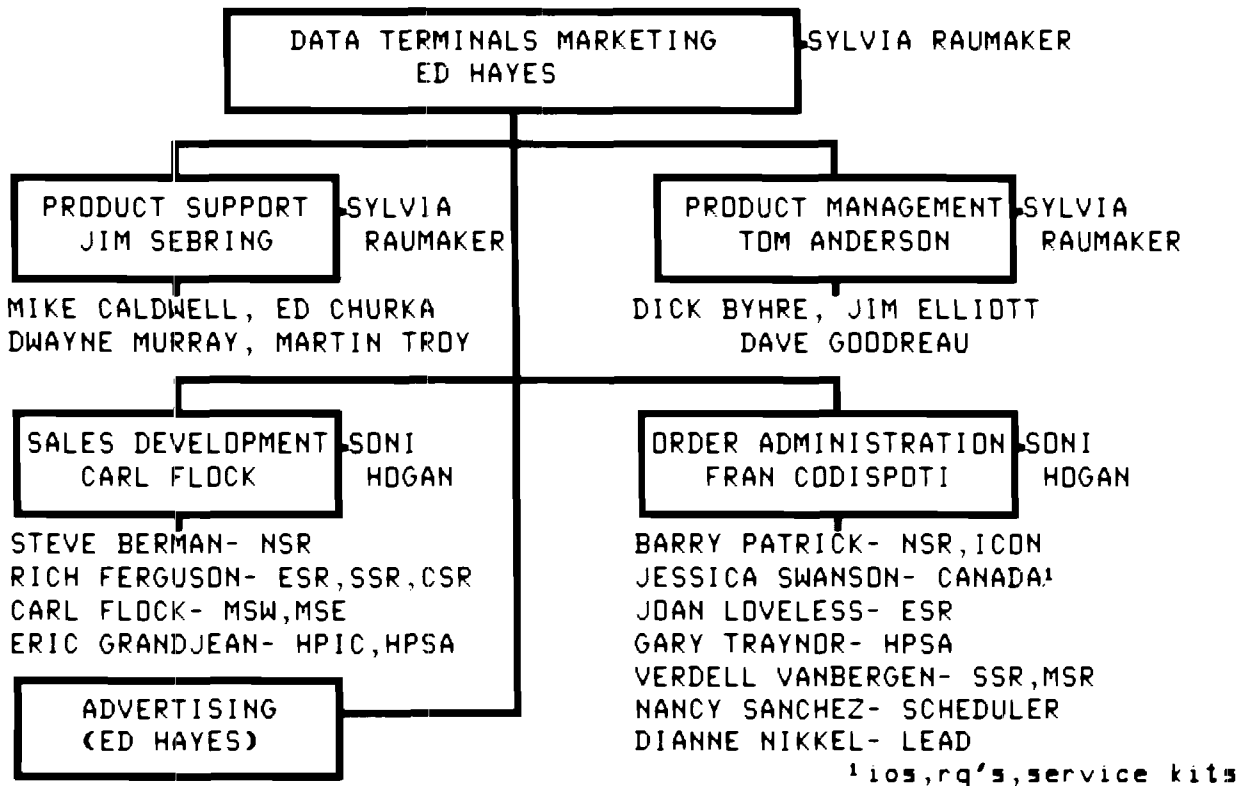
DTD's MARKETING ORGANIZATION

By: Ed Hayes/DTD

Here's the team, guys. You gave us a great year in 1976 and 1977 should be the best yet! We've gone from 2 to 8 prod-

ucts; all are on the Corporate Price List. We're shipping; literature is out and the Data Terminals tigers are ready to back you up.

Let us know how we can help you.



YOU WANT IT — YOU GOT IT! DTD DELIVERS!

WIN WITH DTD (DTD DISCOUNT SUMMARY)

By: Ed Hayes/DTD

HERE IS A SUMMARY OF DTD DISCOUNT POLICY:

END USER

All DTD products, accessories and options are dis-

counted according to discount Schedule E. A contract or a purchase order for a specific quantity will earn the buyer their discount.

OEM

OEM's who purchase DTD OEM products (currently, the 2649A/13290A) accessories and options will receive a discount based on the discount Schedule F. All other

products an OEM may buy are discounted on Schedule E.

Any OEM buying HP computers will receive a 15% discount on all discountable DTD products, accessories and options. (If the CPU OEM is buying fifty or more 2640 series terminals, it is to his advantage to switch to the terminal schedule. ≤ 49 terminals 14%; ≤ 50 terminals 18%).

EXCEPTIONS

Exceptions are printers subsystems which are dis-

counted only on Schedule E or Customer Training Courses which are not discounted.

In 1976, DTD changed its discount schedule. All volume purchasers were given the option to sign a simple amendment to receive what, for many, would be a higher discount. However, some didn't and their orders will reflect the old schedule until their contracts are renewed.

Our goal is to have a simple, fair, consistent and easy to understand discount program at DTD. I believe we have achieved this during FY76. Your continued support and sales are needed. Let us know how we can help.

ALL YOU WANTED TO KNOW ABOUT DTD BUT ARE SORRY YOU FOUND OUT!

By: Rich Ferguson/DTD

Psychologists have noted in the past that in times of triumph, stress and other periods of great emotional involvement, the participants have been noted to revert to hidden personalities, tucked neatly away in the corner of one's cranium.

As you may have noticed by the pictures on this page, such was the case with the DTD team.

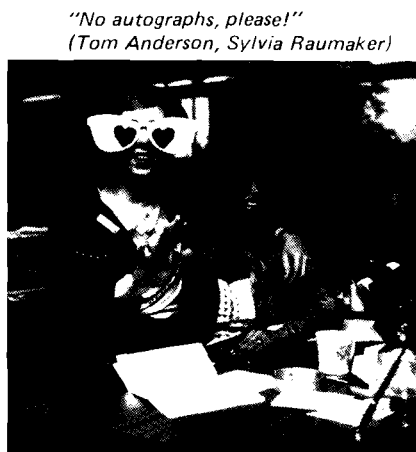
As the climax to a most outstanding year for the Data Terminal Division, the DTD team hosted itself a coming-out party. We thought you would be interested to note the true personalities of those people on the other end of the phone. Keep in mind these people are the ones that you entrust your customers to when you send them out here alone, for factory visits!



*"Uuuugh...which way to Neophyte training?"
(Paul Rasmussen)*



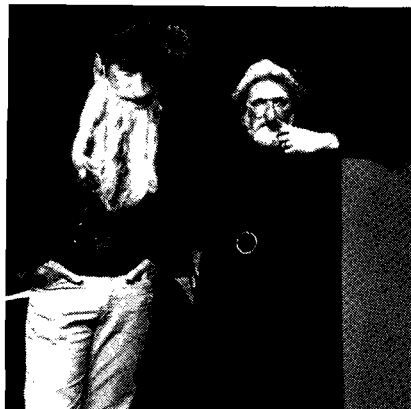
*The Ferg says, "Aaaaaaaaa - Sit on it!"
(Rich Ferguson)*



*"No autographs, please!"
(Tom Anderson, Sylvia Raumaker)*



"So what if he has pointed ears? DTD is an equal opportunity employer!" (Jim Doub, Jim Arthur)



*"Do you think they'll like our new single-character sized CRT?"
(Jim Doub, Peter Dickinson)*



*"I ain't got no BAUD-ie....."
(?)*

*"Send us your customers; we'll take GOOD care of them!"
(Eric Grandjean, Soni Hogan, Carl Flock)*



Product News

MARGIN RESETTING ON THE 2645A SOFT KEY APPLICATION NOTE #7

(or, DTD discovers a new trick for an old dog, er, ah, new terminal . . .)

By: Steve Berman/DTD

Those of you who have wished for a *clean* one-key margin reset (to the leftmost and rightmost screen positions) *without* cursor movement, take heart! There IS a way. Consider the following key sequence (in one soft key):

`Esc [EscW EscX EscP`

For those of you that find this isn't intuitively obvious, recall the "definition" of `EscW`. `EscW` turns on FORMAT mode; part of the turn-on procedure moves the cursor to the start of the *first* unprotected field on the screen. Also, going *through* FORMAT mode (on-off) resets the margins (betcha didn't know that!) So, start an unprotected field at your present position; then cycle through FORMAT mode. Assuming you have no other unprotected fields on the screen in "front" of

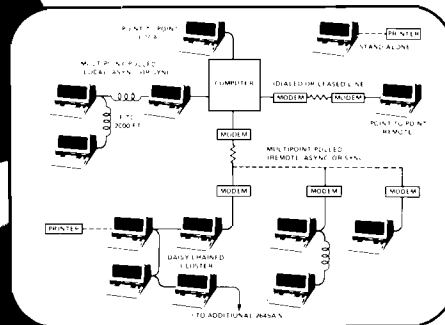
the present cursor position, the cursor stays where it is and the margins are reset. The `EscP` results in deleting the `EscC` you added, and a clean reset is the result. Avoid positioning the cursor on a character (control or otherwise) that you don't wish to delete, and you've got it!

2640A AND 2644A BEING DISCONTINUED

By: Tom Anderson/DTD

Because of the new low price of the 2640B Interactive Display Terminal and the new high performance of the 2645A Display Station, Data Terminals intends to discontinue the 2640A Interactive Display Terminal and 2644A Mini DataStation on February 1, 1977. We need your help in making this transition as smooth as possible. If you have customers who are still buying the 2640A or 2644A, please explain our intentions and encourage them to convert to the 2640B or 2645A or, if absolutely necessary, order any 2640A's or 2644A's they need before February 1, 1977.

The 2640B and 2645A terminals are a better value for your customers. Thanks for your help in this conversion!



Possible 2645 data communications configurations within local and distributed computer networks include: stand-alone, point-to-point local or remote; and multipoint polled, local or remote.

New HP display station: extensive stand-alone capability plus data communications flexibility.

The HP 2645 Display Station is the latest and most powerful addition to Hewlett-Packard's growing family of general-purpose, interactive display terminals. Some of its impressive capabilities are:

- Keyboard use is simplified by eight user-defined soft keys, each of which can be set up to issue a string of up to 80 characters or several control sequences stored in the terminal. Thus, instead of repeatedly keying in frequently used sequences, you can simply press a key to trigger file searches, issue operator or computer instructions, dynamically configure the terminal, or perform other specialized tasks.
- The 2645 is compatible with a wide variety of computer systems. It can operate at selectable speeds of up to 9600 baud, and has the optional capability of asynchronous or synchronous (BISYNC) multipoint polling with up to 32 terminals on the same line. This makes possible the sharing of modems, data lines, and

computer IO channels with significant savings in data transmission costs. Built-in self test ensures proper operation within its network.

- Data handling capabilities include protected fields, numerical/alpha field checking, adjustable margins, character wraparound, off-screen storage up to 12 kilobytes, character/line insert or delete, and rapid cursor positioning.
- Up to four 128-character sets can be viewed concurrently on the high-resolution display. These include a line-drawing set for forms generation, a math set, and an accessory kit for user-defined characters.
- Optional, highly reliable cartridge tape transports provide 220,000 bytes of mass data storage, allowing the 2645 to batch information and to perform many operations on a stand-alone basis that normally require connection to a computer. This reduces on-line time costs, cuts line charges in remote operations, and greatly lessens demands on computer resources.

Base price for the HP 2645 is \$3,500*; when equipped with cartridge tape transports, the price is \$5,100*.

For more information on these products, write to us, Hewlett-Packard, 1504 Page Mill Road, Palo Alto, California 94304.

*Domestic U.S.A. prices only.

GENERAL SYSTEMS NEWS

Product News

NEW TIMESAVER TIPS

By: *Larry Hartge/GSD*

GSD Sales Development is continually striving to provide the Field with timely information in regard to the nitty-gritty problems. Here is a series of timesaver tips to make your life a little easier. If you come up with some of your own, please send them to *Carol Budkowski* in care of General Systems Division-Santa Clara, California.

Timesaver Tips

- Calcomp 565 and 702 Plotters are tested and supported. Others are not tested or supported. Order 30126A Calcomp Plotter Interface for 500 Series Calcomp Plotters, now on CPL.
- Model 5 or 7 to a 9 upgrade does not include Model 9 software. (It's a hardware upgrade only.)
- To order the HP 3000 Contributed Library from GSD, order Part No. 36995-10901, 800 bpi; 36995-11901, 1600 bpi. Price is \$65.00.
- The maximum control cable length for all 7905 discs combined on a 2000 computer system is 75 feet.

RPG ENHANCED FOR FURTHER IBM COMPATIBILITY

By: *Rich Edwards/GSD*

RPG/3000 has just had several enhancements added in the latest release, #3.0, to bring it even closer to IBM's System/3 RPG II. While the details are somewhat technical, the end result is easy to understand: *CONVERSION OF SYSTEM/3 RPG PROGRAMS TO THE 3000 IS* much easier. GSD recently hosted a potential OEM/System House and their programs were converted by 2 non-RPG programmers (GSD marketers) in the course of an afternoon. The system house commented that this was the cleanest and easiest conversion they had ever participated in.

For those technical readers, the following brief comments are the most recent enhancements to RPG. Full details including

examples will be published in UPDATE 2 to the RPG Reference Manual in February 1977.

ENHANCEMENTS:

- Partial Field Translation is now available.

To specify Partial Field Translation (packed and binary fields will not be translated) do the following:

If specifying an EBCDIC File Translation Table include a P in column 60 of the file continuation card. (e.g., col 6=F, col 53=K, col 54-59=EBCDIC and col 60=P).

For a User Supplied File Translation Table specify PARTTR in cols 54-59 of a file continuation card.
- To suppress setting of blank/zero indicators after a blank after operation (the way System/3 does it) enter a "B" or "T" in column 42 of the header card.

A "B" causes just suppression of the setting of blank/zero indicators after a blank after.

A "T" also causes blank/zero indicators to be set on at program load time.
- A seven digit packed input field that is edited for output with a "Y" edit code will print as though it were 6 digits.

Sales Aids

APL INQUIRIES

By: *Jean H. Danver/GSD*

Inquiries about APL/3000 have been arriving at GSD at a regular rate ever since product introduction. These individuals are being sent a copy of the *TOTAL SOLUTION APL* brochure (5952-5596) and a 2641A data sheet (5952-9973). A number of them have returned the inquiry card in the brochure. We are answering these inquiries with data sheets, information on the 3000 and copies of the APL/3000 Pocket Guide (32105-90003).

Individuals who have inquired twice about a product and want to start getting into real details can really only be screened

and handled by the field. We will be sending you their reply cards.

They are in the category of warm, if not hot. Please give them a phone call. I would be interested in hearing of the results.

NEW APL/3000 LITERATURE

By: Jerry Epps/GSD

A new data sheet on APL/3000 has just been published and distributed to all sales regions. The bulletin expands upon the information contained in the APL/3000 flyer and lists specifications for the software. If you need additional copies of the data sheet, use bulletin number 5952-5597 to order it from the literature distribution center in Palo Alto.

The APL/3000 Pocket Guide (#32102-90003) is also available. However, since it is categorized as a part number, it is obtainable in the same manner as a manual. This guide is about \$1.50 and should satisfy most of your manual requests.

HP COMPUTER SYSTEMS

32105A APL\3000 Language Subsystem

Features

- Patterned after APLSV — shared variables, same standard notations and extensions, many enhancements
- Virtual workspaces — size limited only by on-line storage
- Friendly, powerful editor
- APLGOL, a structured, easy-to-maintain language extension to APL
- Full power of the HP 3000 Series II file system
- Interactive or batch operation
- Dynamic incremental compiler
- Extended control functions
- Access through terminals with standard ASCII interface

APL/3000 is a language subsystem for the Hewlett-Packard 3000 Series II computers, consisting of an advanced version of APL (A Programming Language). This language is popular in both business and scientific environments because of its conciseness, power, and exceptional facility for manipulating arrays of data. The APL user works in an environment known as a workspace in which he can place variables (data) and user-defined functions (algorithms). Workspaces can be **SAVED**, **LOADED**, and modified. The user enters APL in a calculator mode. Calculations and function execution can be done directly.

FULL APL PLUS EXTENSIONS
APL/3000 contains the extensions to IBM APL/VS which typically are part of the most recent implementations of the language. These include: format (F), execute (E), scan (S), and matrix (M) continue workspace, system variables, shared variable capability, system functions such as canonical representation (C), name list (NL), and DBR (D) and TRAC (T) functions.

In addition to the extensions commonly found in APL/VS, APL/3000 is substantially enhanced by the addition of several other powerful extensions, as indicated in the chart.

ENVIRONMENT
APL/3000 is accessed through the HP 3000 Series II Multiprogramming Executive (MPE) which gives the user the capability to:

- Program in multiple languages
- Execute in either interactive or batch mode
- Access the MPE file facility

To enhance the applicability of APL, several interesting and useful extensions have been added to APLSV to make APL/3000 extremely powerful.

HEWLETT hp PACKARD

THE BASIC/3000'S EDGE

By: Bob Huffstetter/GSD

Stan Segal, SSR Atlanta, points out an advantage BASIC/3000 users have. If a program must be changed to alter some code, a BASIC/3000 user normally has to invoke the interpreter, get the program, then retype all of each statement to be changed. That's fine if only a few statements are to be done or if each is short.

But if many or several lengthy statements are to be altered, a great deal of time might be needed to search through each of the statements and to retype all of them.

Division News

SYSTEM/3 \$DSORT EMULATED ON HP 3000

By: Rich Edwards/GSD

Thanks to Bruce Campbell, SE in Fullerton, CA., for letting us know about his \$DSORT program written for a community college HP 3000 Series II — System/3 upgrade. Here's his brief description:

IBM SYS 3 \$DSORT REPLACEMENT

SORT3 is a contributed program for the HP 3000 that performs most of the functions that \$DSORT performs on the IBM SYSTEM 3. It can:

- Use multiple logical criteria to select records for inclusion in the sort, both from sequential and RISAM files;
- Build a different type of record using record fields, conditional forces, and unconditional forces;
- Reformat each type of record on output;
- Perform a count-only pass on the input file (added feature);
- Print sort statistics at the end of the run.

Conversion from \$DSORT to SORT3 is straightforward since SORT3 uses the same format for the sort specification control cards.

INCOMPATIBILITIES

SORT3, unlike \$DSORT, does not:

- Allow more than one (1) input file;
- Perform summary sorts;
- Handle data types Z,D,P, or U, in comparison operations;
- Implement any alternate collating sequence support.

Anyone desiring more information or a copy of the program should contact me at GSD. We plan on making the program part of the Contributed Library.

On the HP 3000, one can use the EDIT/3000 commands to do the work in a fraction of the time. Here's a summary of the MPE/3000, BASIC/3000, and EDIT/3000 commands necessary to get the job done:

```
:HELLO YOURNAME , ACCOUNT
:BUILD CARP ; DISC=5000 ; REC=-80 , 1 , F , ASCII
: BASIC
>GET YOURPRGM
>LIST , OUT=CARP , NONAME
>EXIT
:EDITOR
/TEXT CARP , UNN
  (Now give EDIT/3000 commands to make changes to CARP text. For example, give '/CHANGE "AS" TO "DS" IN ALL'
  [EDIT/3000 prints the "/" to prompt the command] to tell EDIT/3000 to search all through CARP and change every
  occurrence of "AS" to "DS").
/ADD      (EDIT/3000 will print a new line number [ e.g. 4567 below] )
4567 SAVE BASICNME
/KEEP CARP , UNN
/END
: BASIC CARP      (BASIC/3000 lists CARP automatically, then aborts)
: BASIC
>GET BASICNME or RUN BASICNME
  (Resume normal BASIC/3000 activities here.)
```

NOTE: The parameters "YOURNAME", "ACCOUNT", "CARP", "YOURPRGM", and "BASICNME" are examples only.

HP REPRESENTED AT SINGAPORE COMPUTER EXHIBITION

By: Rich Phillips/GSD

On September 7, 1976, the honorable *John H. Holdridge*, the U.S. Ambassador to Singapore, announced the opening of the *Computers for Business and Industry Exhibition and Seminar in Singapore*. Hewlett-Packard with twenty other leading US manufacturers of computers and related products were on display with the latest technological advancements in the computer industry. The total cost of the exhibited equipment was estimated to be \$2 million dollars.

The primary purpose of this exhibition was stated as providing a unique opportunity for the region's business professionals to learn about the newest computer technology. However, with a potential of \$50 million market for US suppliers of computers and peripherals, there is little wonder as to why nine of the top 50 computer corporations displayed their goods. *Malcolm Kerr* (Icon Sales Manager) along with HP's regional representatives were present at our booth to greet the Ambassador.

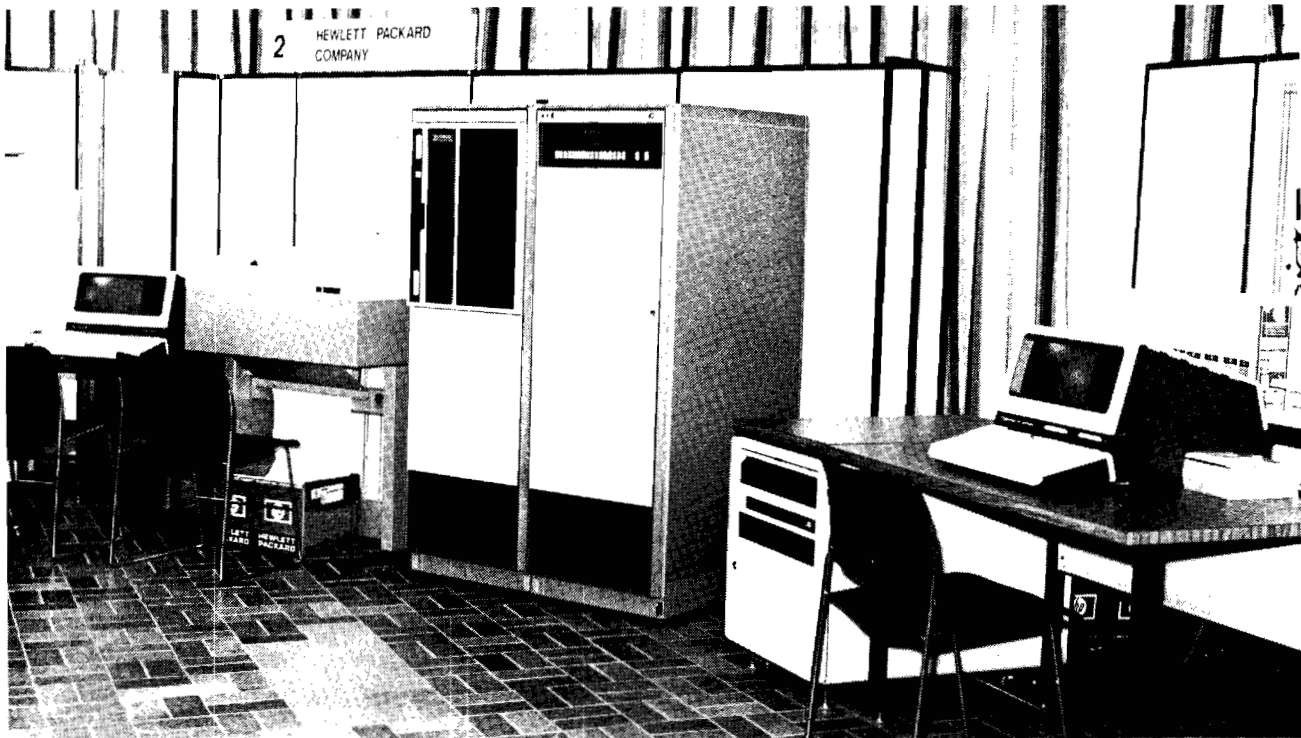


Mr. John H. Holdridge, U.S. Ambassador

Malcolm Kerr, ICON Sales Manager

Herb Rost, Malaysia/Singapore Sales Manager

Lee Chin Hong, Field Engineer



HP's display at the Computers for Business and Industry Exhibition and Seminar, September 1976.

SOUTH AFRICAN HP 3000 SERIES II INTRODUCTION: ANOTHER WINNER

By: Rich Phillips/GSD

Have you ever wondered what product introductions are like in South Africa?

Well, in September 1976, Hewlett-Packard South Africa (HPRSA) launched our 3000 Series II at a press function held at HPRSA's head office in Wendywood. Over sixty-six attendees ensured the 3000's successful introduction.

Here are a few captured moments from this far away, yet very-much-HP happening.



Jack Kollataj (CSG FE), customers and the amazing 2644A hooked to the 3000.



Andrew Penney (CSG DM) with more amazing feats!



Cecil Hoare (CSG SE) illustrating the gentle touch needed to drive the HP 3000's console.

HP GRENOBLE NEWS

Division News

HP 21MX BEATS IBM 370/168!!

By: *Alic Rakhmanoff/HPG*

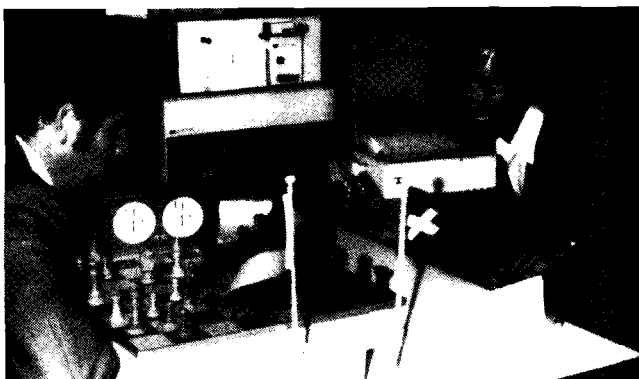
The 1976 European computer chess championship was held on August 9-11, 1976 in Amsterdam.

Competitors were programs running on IBM 370/168, CDC Cyber 73, Univac 1106/2, DEC PDP 10, Siemens 4004, IBM 370/158 and the last but not the least HP 21MX.

HP 21MX was the only computer physically present at the championship, all the other competitors only had terminals connected to their computers.

21MX took the second place before all the other big computers.

21MX Small but clever!



You can see the winning smile of Johann Joss, Zurich, who wrote the program running on 21MX.

OUR OEM'S ARE GOING AHEAD!

By: *Georges Retornaz/HPG*

ELECTROTECNICA MELIA — EMESA — SPAIN —

This customer is selling Hotel Management dedicated systems using our hardware leadership in DisComputers, now 2125, with his own software expertise.

This system, called "KEY SYSTEM", is easy to use and to handle; it is MODULAR, with six basic configurations.

It is a real-time multi-terminal system consisting of:

- Reservation terminal
- Check-in terminal
- Check-out terminal (billing)
- Billing office terminal (imputation)
- Telephone exchange terminal
- Housekeeper terminal
- Manager terminal
- Room terminal, including an electron bar with room terminal microprocessor.

Last month, during the Equip Hotel Exhibition in Paris, they have had a tremendous success and are expecting to get more than twenty orders during the next twelve months.

Congratulations to Jorge Edelmann in Madrid for such a contribution in the European OEM business.

N.B. Other information on this deal in the Data Systems Newsletter issue of May 1st, 1975.

CS GROUP NEWS

RECENT CSG PURCHASE AGREEMENTS

By: Ampy Soriano/CSG

CUSTOMER NAME	EFFECTIVE DATE	AGREEMENT TYPE				AGREEMENT NO.	SALES REGION				
		OEM	COMBO	VEU	TERM		NSR	ESR	SSR	MSR	HPCL
Aeronutronic Ford	Sept. 22/76		X			CS-260	X				
Allied Chemical	Oct. 22/76			X		-244			X		
Alpha-Matics	Sept. 29/76	X				-234	X				
Apollo Information Systems, Inc.	Sept. 30/76	X				-235	X				
Antekna, Inc.	Oct. 18/76	X				-242	X				
Brown & Root	Sept. 15/76				X	-216			X		
Computer Solutions, Inc.	Oct. 26/76	X				-247		X			
Computer Inquiry	Nov. 12/76	X				-262		X			
DEC	Sept. 24/76		X			-229		X			
Drysdale-Heutter Systems, Inc.	Sept. 28/76	X				-231		X			
Dept. of Supply & Services	Apr. 1/76			X		-236					X
E.I. Dupont De Nemours	Oct. 4/76				X	-237		X			
Eastern Systems Management	Oct. 27/76	X				-255		X			
Efficient Computing Company	Oct. 28/76	X				-250				X	
Energy Analysts	Sept. 30/76	X				-241			X		
Epsilon Data Management	Nov. 3/76	X				-259			X		
Futura Systems, Inc.	Nov. 5/76	X				-257			X		
Gov't. of the Northwest Territories	Sept. 30/76				X	-239					X
Gerber Scientific Instruments, Inc.	Oct. 22/76		X			-245		X			
H.L. Markman Associates	Oct. 4/76	X				-238		X			
Interactive Applications, Inc.	Nov. 10/76		X			-254	X				
Martin-Marietta Corporation	Aug. 1/76	X				-240	X				
NCR Corporation	Aug. 1/76		X*			-224				X	
North Electric Company	Sept. 30/76		X*			-225				X	
Northern Telecom	Jul. 27/76		X			-246					X
Noesis Computing Company	Nov. 5/76	X				-258	X				
Quotron Systems, Inc.	Sept. 15/76	X				-232	X				
Scan-Tex Systems, Inc.	Sept. 28/76	X				-228		X			
Std. Pressed Steel Financial Services	Sept. 17/76		X*			-227		X			
SAI Comsystems Corporation	Oct. 15/76		X			-249	X				
Spring Management Systems	Oct. 29/76				X	-253	X				
Spectral Dynamics Corp. of San Diego	Oct. 21/76	X				-243	X				
Tonka Corporation	Sept. 30/76			X		-252				X	
Teledyne Systems	Sept. 19/76		X			-233	X				
Unimart Caldwell, Inc.	Oct. 26/76	X				-24i	X				
Vought Corporation	Jul. 30/76	X				-226				X	
Western Telecomputing Corporation	Nov. 11/76		X			-261	X				
Yondata	Oct. 27/76	X				-256		X			

*MULTI-RELEASE

SEX ♀♂

System Type Code EXplanation

By: Sherry Harvey/CSG

Thanks for your attention. We would like to further clarify the "SYSTEM TYPE" code discussed in the Nov. 1 Newsletter and *required* on all sales force 02 orders:

- **Codes 1 and 3** are for systems and add-ons to existing systems.

- **Code 0** is primarily for OEMs who buy components. For example:

2108, 2112, 2113, etc. computers and accessories

7900 and 7905 discs

7970B and 7970E mag tapes

2607, 2613, 2617, 2618 line printers

2640, 2644, 2645, 2641, 3070, 3071 terminals

Card readers, Plotters, etc.

OEM's who buy "systems" such as 3000's, 9640's, 2000's, 1000's, etc. or peripheral add-ons to their "systems" should be coded with a 1 or a 3 depending on the system. As you remember, Code 1 is for 21XX-based systems and Code 3 is for 3000 systems.

Thanks for your cooperation!



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