

DATA SYSTEMS NEWSLETTER

HEWLETT  PACKARD

Vol. 3, No. 12
May 1, 1976

For HP Field Sales Personnel

9600 PRICES REDUCED

• Competitive Library Announced

• RTE-II Vs. IBM 11/30 — “Stress”

• Hotel Management — A New OEM

• Interautomation — Digital Control Systems to Automotive Industry — A New OEM

• Phelps Dodge — RTE III for Inventory Analysis

• Army Tests Viper Missile with RTE-III

• Win with Benchmarks on RTE

• System Add-Ons — \$\$\$

• Dave Head Still Number One

• New OEM Business on the Rise

• New District Managers — Hilliard, Matlock, Rappath

• DOS 7905 Software Released

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OEM SEMINAR GENERATES LEADS

By: *Stu Kagan*

In mid-March, the Paramus District/ESR had prepared and implemented a three-day seminar directed at the OEM buyer.

The seminar took on the following format:

8:30 AM	Coffee and Danish
9:00 AM	Introduction
9:15 AM	CRT Terminal
10:00 AM	Semi-Conductor Memory/21MX
10:30 AM	Break
10:45 AM	Disc Computer/MX 65
11:15 AM	Microprogramming
11:45 AM	OEM and END User Purchase Agreements

Invitations were sent to local mailing lists purchased from both Computer Design and Modern Data Magazines. If you would like a copy of the invite, just let me know.

The results of the presentations are as follows:

SEMINAR Attendance Results

	Paramus	Woodbury	New Haven	TOTAL:
Number Attending Seminar	98	82	48	228
Number Questionnaires Returned	86	53	44	183
"Application HP Might Fit?"				
Yes	11	10	13	34
No	37	11	12	60
Maybe	30	25	15	70

People from both the factory and the field took part in the presentations and the general consensus of opinion was that the seminars were very well received by the potential customers.

If you're considering a similar series of seminars in the near future and would like to get some help from the factory, call me at DSD (Ext 3227); or, if you'd like to get a handle on the problems and procedures that the people in the field discovered/invented, call *Ralph Mele* in Paramus or *Sandy Effron* in the Woodbury office.

There are many means to an end and seminars are just another way to **SELL OEM!**



We have the lead! Let's run with it and SELL OEM!

INVITATIONAL COMPUTER CONFERENCES

By: *Bill Burger*

We've just completed this year's series of ICC OEM shows at Cleveland. Other locations included:

Cherry Hill, New Jersey
 Long Island, New York
 Palo Alto, California
 Houston, Texas
 Ft. Lauderdale, Florida
 Newport Beach, California

At each Conference we showed the MX/65 discomputer with a plexiglas cover for the disc and our 2640 product line. In addition, HP presented a seminar entitled "New Concepts in Disk Computer Technology," which highlighted the technological performance and price leadership of the MX/65.

If you are now planning or would like to plan your own OEM Show, we want to help. Give me or *Stu Kagan* a call to discuss your plans and needs.



INTERAUTOMATION SIGNS UP

By: *Bill Burger*

Congratulations to *Ray Drost*/Farmington on the recent signing of Interautomation, Inc. of Ann Arbor, Michigan. Interautomation is an international systems company supplying computer based automation and testing systems to their industrial markets. Their headquarters are located in Toronto, Canada.

The Ann Arbor division supplies digital control systems to the automotive industry, specializing in emission testing, torque monitoring and engine testing. They acquired this business from PCS of Ann Arbor, who were using HP mini's.

Interautomation was considering switching to DG - their other divisions are currently using them. Then *Ray* stepped in with a well-coordinated combination of persuasive selling and a timely factory visit to convince them that HP was the best bet.

His efforts have been rewarded with orders for four systems. I'm sure *Ray* agrees that it pays to SELL OEM!



NEW OEM BUSINESS IS ON THE RISE

By: *Stu Kagan*

Spring seems to be bringing other things into bloom besides the plant world this year. New OEM accounts are blossoming all over.

March saw the consummation of seven new OEM contracts with companies that had never purchased computers for resale from HP before. Another eight organizations decided to continue their OEM arrangement with HP by signing a new agreement as their older one had expired.

The new members of our OEM purchasing public are:

The average commitment per agreement is 12.5 computers; that beats selling 'em one at a time.

Kudos to the F.E.'s that have brought in the newcomers! If asked, I'm sure that they would agree that it makes sense to **SELL OEMS!**

Company	Field Engineer	Applications
R. Shivers Associates	Ange Colucci/ESR	Business Systems
Conrac Corporation	Walt Benedetto/ESR	Aircraft Maintenance Data Reformatting
Rothe Development	Paul Lambert/SSR	Federal Contract Systems
Computer Assistance	Jim VanSlambrook/MSR	Commercial Applications
Interautomation Inc.	Ray Drost/MSR	Exhaust Emission Monitoring
Benetech	Ron Marquart/NSR	Text Editing Systems
Jones Computer Systems	Bubber Smith/SSR	Small Business Systems

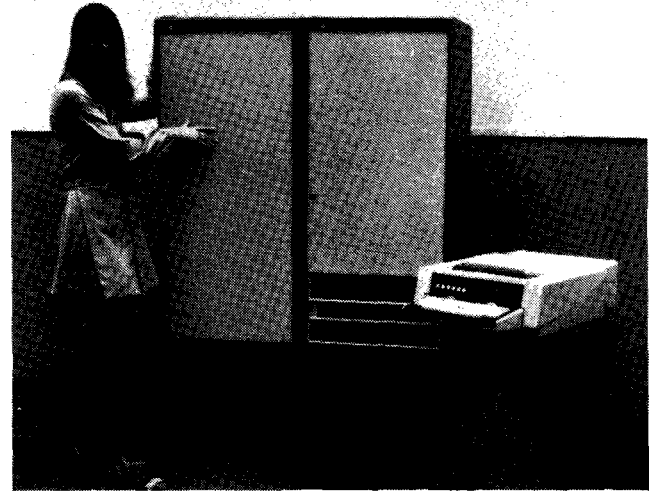


Product News

NEW LOOK FOR SYSTEMS

By: Dave Borton

Sylvia Cohen (Product Management Secretary) is pointing out the new look in many of our packaged systems. Doors have been added to the 9640, 9700, and to all systems ordered with the 93723A Factory Checkout Service. We think you will agree that our systems have a fresh, clean look with the CPU, extenders, and paper tape equipment covered by the doors. Your customers will agree, too, because there is no extra charge for these doors. The 9640A, 9700A, and 93723A systems will get doors added to shipments starting about May 15. With new lower prices and with more attractive systems, you can win more often!



DISTRIBUTED SYSTEMS UPDATED

By: Fred Gibbons

This new Software is being brought to you by

. . . . Bob Shatzer and his gang: making a Great Product GREATER.

Distributed System products (91700, 91703, 91704 and 91705) have undergone significant internal changes to correct bugs, improve error handling capabilities, and reorganize the communications resource management. The new software is really super! No changes have been made in the user interfaces (subroutine calls or operator commands) of Distributed Systems, with the exception of certain operator options in "LSTEN".

Current DS application programs should work with this new revision without any changes.

Four long-awaited items have been added. They are:

- a) It all works as advertised Sell with confidence
- b) Operation with RTE-III and 7905 The speed of the 7905 plus the features of RTE-III
- c) 21MX ROM BOOT for SCE 1 Push Button Bootstrapping
- d) Current page linking in SCECN More efficient utilization of memory.

Here's a quick review of what HP Distributed Systems Software can do today. Ask your friendly DEC & DG salesman if his software can do as much no way!!

	AT RTE-II/III CENTRAL	# AT RTE-C SATELLITE
PROGRAM DEVELOPMENT	Satellite Program Preparation Satellite Program Storage Satellite Program Test-Execute Satellite System Generation Satellite System Download	Program Preparation on Central Program Storage on Central Program Test-Execute on Central System Download From Central
PROGRAM SCHEDULING	Satellite Program Scheduling Forced Satellite Program Load RJE to IBM (RTE-II only)	Central Program Scheduling RJE to IBM
DATA TRANSFER	Remote File Access Satellite Shared Peripherals Central Initiated Communications	Central File Access Central Shared Peripherals Satellite Initiated Communications

GLOBE PROGRAM TO PROGRAM COMMUNICATIONS

RTE-B & BCS SATELLITES HAVE A SUBSET OF THESE FEATURES

HP IS THE LEADER IN DISTRIBUTED SYSTEMS and the world is going to hear about it starting next month. Watch for our ads.

ORDERING INFO

To get the new DS software you must order one or more of the update kits listed below. All kits are free of charge to existing RTE-II Distributed Systems customers only. They are available to RTE-I/91701 customers using the standard upgrade products: 91700A-200, 91703A-200, 91704A-200 and 91705A-200.

UPDATE KIT CHART

KIT #	DESCRIPTION	CONTENTS
91700-14001	CCE Central Kit	Central Software
91703-14001	SCE 3 BCS Kit	# SCE1 ROM, SCE1 Software, SCE2 Software, SCE3 Software
91704-14001	SCE 4 RTE-B Kit	# SCE1 ROM, SCE1 Software, SCE2 Software, SCE4 Software
91705-14001	SCE 5 RTE-C Kit	# SCE1 ROM, SCE1 Software, SCE2 Software, SCE5 Software

NOTE: The SCE1 ROM is for use in 21MX based Satellites only.

All of the above kits also include manual updates and installation procedures. The manual changes are significant. Read them carefully. You should order one satellite kit for each satellite in the system and one central kit for the central. You can not update only part of the distributed system. You must update the central and every satellite. These kits should be ordered from the Customer Parts Center and charge against warranty. To charge it against warranty, fill out a Customer Service Order for product 91700A, fail code 43 and type 02F. NOTE: NO FREE INSTALLATION IS INCLUDED WITH THESE KITS. If the customer wants it installed, it is on a time and materials basis.

HP Distributed System just got a whole lot better so sell DS with confidence.



DISTRIBUTED SYSTEMS UPDATES AFFECTS 8500/9500 SYSTEMS AND SANTA CLARA'S OPTION X87 TO THE 5451B FOURIER ANALYZER

By: Fred Gibbons

AMD had received the New Distributed Systems software. They are testing it out with SCE 6, 7 & 8 DS software. At present, if your customer updates his central with the CCE update kit his 8500/9500 satellite will not work. As soon as this incompatibility is resolved, Ron Corelli and Linda Sunseri of AMD will let you know the procedures for updating your 8500/9500 satellite.

This same incompatibility exists for SCE 9, Option X87, to Santa Clara's 5451B Fourier Analyzer. Contact the Santa Clara support group for more information.



THE NEW (SPEEDY!) RTE/DOS LIBRARY IS RELEASED!

By: Van Diehl

The new, fast, RTE/DOS Library is now released. This Library is automatically included on all new orders of RTE-II or RTE-III software. If you want to order this Library separately, it's kit part number is: 24998-14001. (This includes the new relocatable Library, the two formatters, and the manual.)

The increase in speed was achieved mainly by eliminating the system overhead for re-entrant or privileged execution. When these libraries are loaded with the program re-entrant or privileged execution is not required and speed is greatly improved.

An example of this is shown by the following benchmark:

Iteration (10000 each) of SIN, ARCTANGENT, SQUARE ROOT, EXPONENTIAL, FLT.PT ADD, SUBTRACT, MULTIPLY AND DIVIDE, DOUBLE PRECISION ADD, SUBTRACT, MULTIPLY AND DIVIDE.

OLD Library	22 min 8 sec
NEW Library	04 min 48 sec



"R" OPTIONS NO LONGER NECESSARY

By: Hugh Amick

More good news from DSD! System consoles on 96XX/9700 systems are no longer mandatory. That's right, no more hassel and long delays because you didn't order a terminal

with your system. While we'd like to keep ordering terminals with systems, it's no longer mandatory but please remember THREE things:

- If the terminal your customer chooses is not DSD supported as a system console, *he's on his own!* (Give Sales Development a call, we'll help if we can.)
- Do not order Option #444 (\$400 delete system console) with quote adjustment, just leave off the "R" option.
- "R" options are still encouraged and in most cases are your best buy. They offer the assurance of complete system integration. They are, of course, discountable along with the 96XX/9700 system.



DATA SYSTEMS DIVISION PRICE LIST

By: Bob Stephenson

The DSD Price List dated May 1, 1976 will reflect a large number of changes. Most of the changes will be in pricing. In addition, all products which are discountable on purchase agreements will be identified with the statement "Purchase Agreement Discountable."

NEW PRODUCTS

13187A 16K Memory
 22940A Training Course
 22941A Training Course
 22942A Training Course
 22950A Training Course
 22952B Training Course
 22953A Training Course
 22960A Training Course
 22965B Training Course
 22968A Training Course
 22969A Training Course
 22978A Training Course
 22979A Training Course
 24307C DOS-III/7905 Software
 59310B HP-IB

NEW OPTIONS

2102A-016 16K Memory
 2124B-016 Replace 8K Memory with 16K
 2124B-216 Add 16K Memory
 2125A-016 Replace 8K Memory with 16K
 2125A-216 Add 16K Memory
 12966A-422 2640 and 2644 Driver
 12996A-001 Delete Printer

PRICE CHANGES	OLD PRICE	NEW PRICE
12556B	\$ 1,135	\$ 650
12556B-001	105	210
12751A	700	800
12920B	2,200	2,500
12979A	3,500	4,500
2100A	9,200	10,000
2100A-004	1,800	2,000
2100A-008	2,200	2,500
2100A-012	4,400	4,500
2100A-016	4,400	5,000
2100A-024	6,600	7,500
2100A-032	8,800	10,000
2100S	14,400	15,300
2100S-024	2,200	2,500
2100S-032	4,400	5,000
2102A	500	600
2155A	5,150	6,500
9602A-K00	1,135	650
9602A-K01	1,240	860
9602A-K02	1,135	650
9602A-Q40	12,400	14,250
9602A-Q41	6,900	8,750
9602A-R00	2,550	2,850
9602A-R01	2,760	3,060
9602A-T00	4,000	5,000
9602A-T01	4,000	5,000
9603A-K00	1,135	650
9603A-K01	1,240	860
9603A-K02	1,135	650
9603A-Q40	12,400	14,250
9603A-Q41	6,900	8,750
9603A-R00	2,550	2,850
9603A-R01	2,760	3,060
9603A-T00	4,000	5,000
9603A-T01	4,000	5,000
9603A-008	700	800
9603R-008	700	800
9604A-K00	1,135	650
9604A-K01	1,240	860
9604A-K02	1,135	650
9604A-Q40	12,400	14,250
9604A-Q41	6,900	8,750
9604A-R00	2,550	2,850
9604A-R01	2,760	3,060
9604A-T00	4,000	5,000
9604A-T01	4,000	5,000
9604A-008	700	800
9611A-Q40	12,400	14,250
9611A-Q41	6,900	8,750
9611A-R00	2,550	2,850
9611A-R01	2,760	3,060
9611A-T00	4,000	5,000
9611A-T01	4,000	5,000
9640A-A00	-0-	500
9640A-R00	2,550	2,850
9640A-R01	2,760	3,060
9640A-Q40	12,400	14,250
9640A-T00	4,000	5,000
9640A-Q41	6,900	8,750
9640A-T01	4,000	5,000
9700A-R00	2,550	2,850
9700A-R01	2,760	3,060
9700A-T00	4,000	5,000
9700A-T01	4,000	5,000
91000A-005	125	340

DELETIONS

12592A
19657B options 200-201-202-203-205-216-218-307



7905 IS ALIVE AND WELL

By: Vijay Kapoor

Despite its past problems, the 7905 is living up to its promise. Judge for yourself. Heat and contamination problems are now solved (the new and retrofitted drives have shown a dramatically improved contamination level). Racking of up to 3 discs or disc with other equipment is now available. Software support exists on RTE, DOS, Access and 3000. Availability is down from 23 weeks to 12 weeks (as of 4/22). This week we plan shipping the 1000th unit (watch for PR). Finally, are you ready for this? Thanks to all of you, disc shipment rate from Cupertino is 130% (!) more than a year ago.

Thanks for sticking through some rough days. It should be smooth sailing ahead (and lots of \$\$). Good Luck.



HOW TO UPGRADE 7900 RTE-II/III SYSTEM TO 7905 — A REMINDER

By: Van Diehl

All RTE-II/III software packages — 92001A and 92060A — and RTE-II/III based systems include the 7905 driver (DVR 32) and generator. Therefore, for the customers that got their RTE's after January, you have to order the disc hardware only.

For the customers that got RTE-II or -III prior to January, we created two handy kits for upgrade purposes; they are:

92001-14008 for 92001A (RTE-II)

and

92060-14003 for 92060A (RTE-III)

Each kit contains the 7905 driver (92060-16031), the RTE-II generator (92001-16032A) and the appropriate manual.



NEW FLEXIBILITY IN ORDERING DOS SYSTEMS

By: Jerry Kleinberg

In a TWX sent out in late March, we alerted all areas that the 19655B (M260) and 19662B (M230) DOS systems would be deleted from the Corp. Price List. Maintaining these systems would have meant probable price increases, plus, the systems do not offer choice of 2112A processor as well as the new 16K memory.

Now that the DOS-III/7905 software and the 93723A Factory Racking/Checkout Service are available, we have the ingredients for new flexibility in ordering DOS systems. By using the Discomputer and other components, Software, and the 93723A, a factory integrated system can be ordered. This applies to DOS-III/7900 systems as well. While the 19657B (M210) system remains on the Price List for the present time, an M210 configuration can be ordered, however employing the 2112A and new 16K memory by ordering via the 93723A.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Below are examples of how an M210 DOS-III/7900 Base system and an M220 DOS-III/7905 Base system can be ordered, both with 2112A processors and the new 16K memory:

**M210
DOS-III/7900 SYSTEM**

2124B	MX/55	\$18,250
-012	M/30	900
-016	16K Memory	600
*12944A	Power Fail Int.	475
12992A	Disc Loader ROM	100
*12539C	TBG	550
*12892A	Memory Protect	500
2752A	TTY	2,500
12531C	TTY Interface	350
12925A	Tape Reader	2,605
29402B	Cabinet	1,290
-002	Extended Legs	70
-003	Removable Sides	20
-120	Power Control	550
24307B	DOS-III/7900 S/W	2,500
93723A	Rack Service	-0-
-001	TR/7900/CPU	500
M210	Total	\$31,760

**M220
DOS-III/7905 SYSTEM**

2125B	MX/65	\$22,250
-012	MX/30	900
-016	16K Memory	600
*12944A	Power Fail Int.	475
12992A	Disc Loader ROM	100
*12539C	TBG	550
*12892A	Memory Protect	500
2752A	TTY	2,500
12531C	TTY Interface	350
12925A	Tape Reader	2,605
29402B	Cabinet	1,290
-002	Extended Legs	70
-120	Power Control	550
-K05	DISC-MOD	250
24307C	DOS-III/7905 S/W	2,500
93723A	Rack Service	-0-
-004	TR/7905/CPU	500
M220	Total	\$35,990

***OPTIONAL SYSTEM FEATURES**

In either of the above systems a 2762A/B terminal and 12531D -001 interface or 2640A and 12880A interface could be substituted for the 2752A and 12531C.



2K USER CONTROL STORE ANNOUNCED

By: LeRoy Nelson

Another new microprogramming accessory available for the 21MX is a ROM control store card with a capacity of 8 - 256 word modules. This allows the user to implement the full 4K word microcode. This card uses the same PROM chips as the 12945A card which can be programmed or "burned" with the 12909B Prom Writer.

The 2K user control store board, 13047A, mounts in the I/O section of the processor. The card has sockets for the customers PROM chips, and has switches which individually address each module. An optional part (-001) of this product is 6 PROM chips used by the customer to verify the card's operation in case of difficulty.

13047A	User Control Store board	\$450
	2048 words of ROM Micro-code Storage	
-001	ROM chips for verification of board operation	\$ 80

The 13047A uses 1.15A of +5 volts supply plus .78 Amps for each module of ROM storage. A fully loaded board uses 7.39 Amps of +5 volts.

Other Micro Code Sales Aids



PROCESSOR ENHANCEMENTS

The contributed microcode library has several routines available to help your customer speed up or simplify his data processing.

1. Trig. functions which calculate sine, cosine and tangent functions in 1/3rd to 1/6th time a software requires.
2. Sort routine which sorts signed integers in ascending or descending sequence.
3. Prom conversion generator from assembly object to mask tape for Prom burning.
4. Fast fourier transform for 1000 data points.
5. Activity Profile Program which generates a profile of time spent by the CPU in each routine. It gives the customer an idea of which routines he should microcode to get the greatest time savings.

MICROCODING TOOLS

Operating Systems Support

DOS supports the microassembler, Debug Editor and driver DVR 36. The microassembler and editor operate on 256 words of code at a time. To use these for a larger program one must assemble 1 module at a time until the entire microprogram is completed.

BCS uses the microassembler and editor with D33 driver.

For assembly and debugging of microcode the Writable Control store board 12978A will accept 256 word modules of code. The WCS card can be used if several different programs are used at different times during a job. These can be loaded from disc or tape, or main memory as needed.

In the RTE area the Microassembler, Editor and driver are currently being developed. When released these will work with the new 1024 word Writable Control store board.



A-O.K. ON MULTIPLE 7905's IN SINGLE BAY

BY: Vijay Kapoor

Good news! Effective immediately, we can now deliver up to three 7905's in one 56" bay. This means reduced cabinet costs for your customers that want multiple discs in a system. Furthermore, to make your ordering and configuration job easier, we have defined an additional option to the recently announced factory checkout service that has proven so popular with you (and which, incidentally, is available to both OEM's and E.U.'s).

Here is the way to order multiple 7905's with any system from the Data Systems Division. These include: 1. RTE Systems,

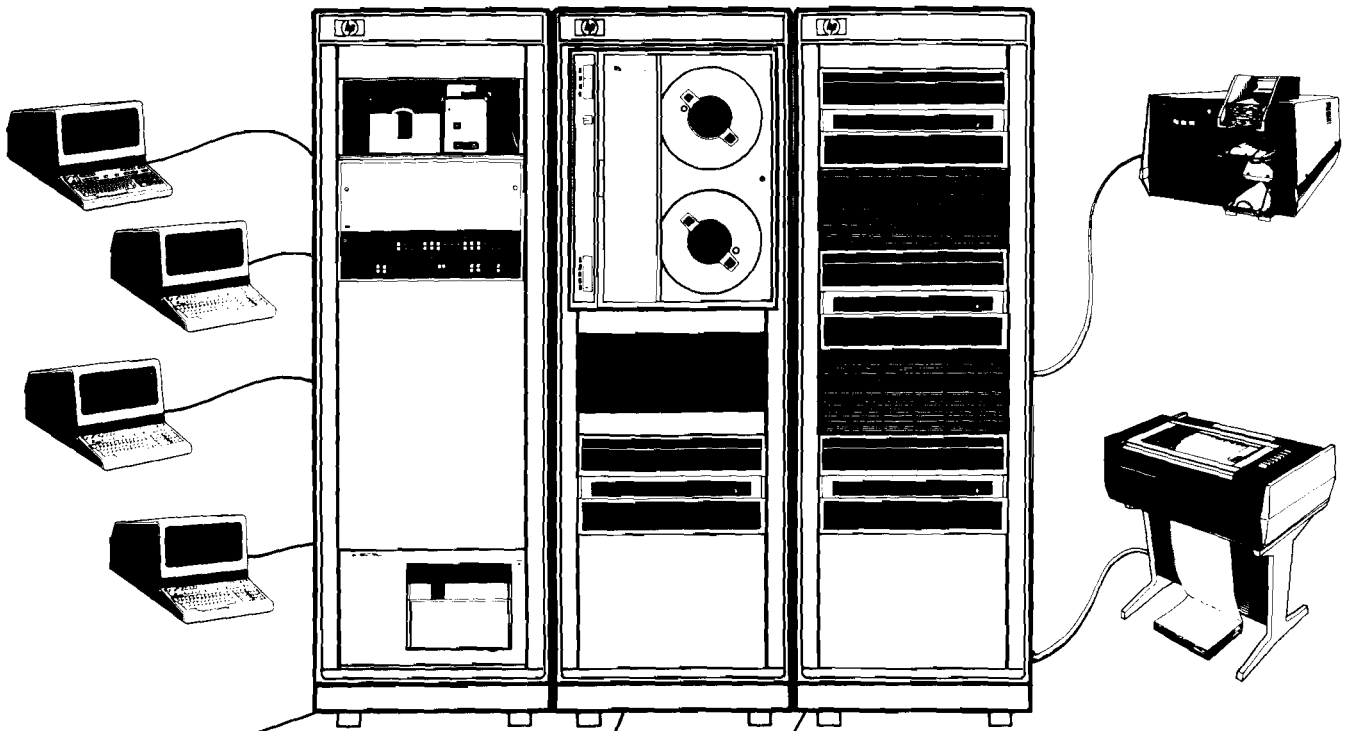
2. DOS Systems, and 3. Systems configured around 2125's. As add-ons to 2000F or Access Systems, contact GSD Sales Development for instructions.

Order Racking as 93723A-007 Price \$900.

Includes the necessary plenums (see note 3), racking, cabling and diagnostic checking *two or three 7905's*. (For a single 7905, 93723A Opt. 003 is cheaper.)

Example:

Consider configuring a system for your customer. He needs RTE-III software, 80K of memory, 60 MBytes of disc storage, mag tape, 4-CRT terminals, card reader and line printer.



29402B
-002
-003
-120

1 Bay 56" Cabinet
Extended legs
Removable Side Panels
Power Control Unit
(60 Amps — 20 Amps/phase available)

93723A-006

CPU-Bay Factory
Racking and Checkout
Includes Blank Panels

29402B
-002
-100
-003
-K06

1 Bay Cabinet
Extended legs
Power Distribution unit. Gets power through PCU of 1
Power Service Strip
Disc Cabinet Mods. Includes weight, vented back door, barrier panel, tie-together kit.

93723A-005

Peripheral-Bay Racking and Checkout. Includes tape cooling unit and blank panels.

29402B
-002
-100
-300
-K06

1 Bay Cabinet
Extended legs
Power Distribution Unit Gets power through CPU of 1
Power Service Strip
Disc Cabinet mods Includes weight, vented back door, barrier panel, tie-together kit.

93723A-005

Disc-Bay Racking and checkout. Includes plenums.

The order for this includes the following line items:

Qty.	Model	Price	Description
1	2125A	\$22,250	MX/65 DISCcomputer. Includes 2108A with 8K memory, DCPC, and 12962A 15M byte disc.
1	-012	900	Replace 2108A with 2112A.
	-016	600	Replace 8K with 16K memory.
4	-216	8,400	Additional 64K memory.
1	12976A	1,950	Dynamic Mapping System including memory protect.
2	12991A	1,200	Power Fail Recovery for CPU & memory extender.
1	12539C	550	Time Base Generator
1	12992B	100	Disc Loader ROM
3	13130A	29,925	Three additional 7905 Disc Drives
1	12925A	2,605	Photoreader, interface & winder
1	12926A	3,750	Tape punch and interface
1	12986A	4,100	Optical Mark Reader
1	12987A	8,325	Line Printer, 64 character set
1	12970A	9,500	9-Track 800 cpi, Mag Tape
4	2640A	12,000	CRT Terminals
4	12880A	1,400	2640 Interfaces
4	-001	N/C	2640 Cables
1	29402B	1,290	One bay 56" Cabinet
1	-002	70	Extruded legs
1	-003	20	Removable Side Panels
1	-120	550	Power Control System
2	29402B	2,580	One Bay 56" Cabinet
2	-002	140	Extruded Legs
2	-100	440	Fan Assembly
2	-300	180	Power Service Strip
2	-K06	570	Disc Cabinet Modifications
1	93723A	N/C	System Checkout Service
1	-006	500	Applicable Racking & Checkout
1	-005	400	Applicable Racking & Checkout
	-007	900	Applicable Racking and Checkout

SUBTOTAL: \$115,195 Hardware Price

Required on first OEM order and on each End User order:

1 92060A 6,000 RTE-III (includes BSM)

TOTAL: \$121,195 Total System Price

Notes:

- (1) For racking 7905's in other cases (such as in non-HP cabinets, the plenum can be separately ordered. Order as 40018A-001 (Special until released). Price \$250.00.
- (2) The last newsletter talked about cabinet option K07, the tape cooling unit. Since the tape cooling unit is included

as part of the systems as well as the factory checkout service (93723-005), it is felt that going through a product release on opt K07 is unnecessary. For the few cases, therefore, when the tape cooling unit is needed to be ordered separately, order as product no. **62413A** directly from the *New Jersey Division*.

- (3) In order not to confuse with the *tape cooling unit*, the *disc cooling unit* is being designated "the plenum." Mounted below the 7905, it consists of an empty chamber with two 4" fans bringing fresh air in from the front. Option 001 provides the grill.

45 MBytes in one 56" Bay Cabinet!! That took some doing (thanks for your patience), but now this fully checked out unit is ready to offer you a significant competitive advantage. In addition, your requests to us to simplify ordering and configuration has got us all stirred up. You'll agree the super checkout service is a good start, but we don't want to stop there. In the coming weeks you should continue to see even simpler and more modular configurations resulting in easier ordering. Good selling.



OEM Sales mean



BIG Profits

DOS-III/7905 SOFTWARE RELEASED

By: Jerry Kleinberg



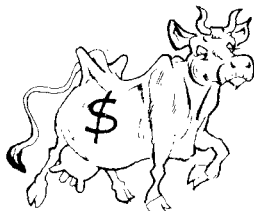
If Gary Johnson (photo above) appears delighted, it is because he, as well as the rest of us, are delighted at getting the DOS-III/7905 software released. Gary should be especially pleased because he is the one responsible for the development of this software package. The DOS-III/7905 software will appear on the May 1 Price List as the 24307C. DOS-III/7905 operates with the 7905A disc unit only, but supports up to eight 7905 drives for 120 M-bytes of mass storage. The required hardware for DOS-III/7905 is a 2100A/S computer with 16K of memory and DMA, or a 21MX processor with 16K memory and Dual-Channel Port Controller, plus one 12962A 7905 disc subsystem; system console and interface; and a 12925A tape reader. Except for being able to support 7901/2883/2884 DISCS on the system, DOS-III/7905 employs the same operational features as DOS-III/7900 (24307B). Prices and options for DOS-III/7905 are as follows:

24307C	DOS-III/7905 Software Package. Supplied on cartridge disc. Includes source code for the system modules.	\$2,500
-001	Supplied on paper tape. —No source tapes included—	—0—
-100	DOS-III Upgrade for existing DOS-M. DOS-III/7900 users	\$-2,000

For customers changing an existing 7900 based system to 7905, a copy routine is included which provides for copying programs from the 7900 Disc to the 7905 Disc. The DOS-III Reference Manual (24307-90006) is now updated to cover both 24307B and 24307C products.



MILK THE OEM



"CASH COW"

May 1 SYSTEM PRICE CHANGES

By: Dave Borton

Even though new memories and manufacturing economies have allowed us to decrease 9640 and 9700 system prices, cost increases with some electromechanical devices have forced us to raise their subsystem prices. In particular, the 2752A Teleprinter, the 12979A I/O Extender, and the 12971A 7 Track Mag Tape have all had their prices changed effective May 1. These price changes have been reflected on all 9600/9700 systems as well. Specifically, the following increases have been made:

9600/9700

Option	Description	Old Price	New Price
R00	2752A TTY & Interface, 60 Hz	\$ 2,550	\$ 2,850
R01	2752A TTY & Interface, 50 Hz	2,760	3,060
T00	12979A I/O Extender with DCPC 60 Hz	4,000	5,000
T01	12979A I/O Extender with DCPC, 50 Hz	4,000	5,000
Q40	12971A 7 Track Mag Tape Master	12,400	14,250
Q41	12971A-010 7 Track Mag Tape Slave	6,900	8,750

In addition, to cover the costs of factory integration of BCS Software in 9640 systems, the price of 9640A-A00 has been increased from no charge to \$500. Even with this increase, BCS based systems have decreased \$500 due to the 9640 base system price decrease of \$1000 (see this newsletter for a related article). And, of course, the \$500 charge is considerably less than the \$1500 for 20855A stand-alone BCS Software.



59310B COMPUTER INTERFACE CARD

By: C. Dixon

Yes it is true! The 59310A Computer Interface Card is no longer available and is being replaced by the 59310B.

Please transmit future orders in the following manner:

Qty.	Product	Opt. #	Description	Price
1	59310B	423	HP-IB Computer Interface Card Operating & Service Manual, Diagnostic Program	1,000
		423	BCS Software, BCS Driver, Manual	N/C

Note! The price of the new board has been substantially reduced by improved manufacturing procedures.

Yes! The product is in production according to Dick Anderson.

**PRODUCT DEVELOPMENT CHECKPOINT COMPLETION
DATA SYSTEMS DIVISION**

PRODUCT TEAM: PROJECT # 2465 PRODUCT # 59310B
 Project Mgr. BOB PASSMORE DESCRIPTION HP-IB INTERFACE
 Product Mgr. CHARLES DIXON ISSUE DATE _____
 Prod. Engr. DOYLE MANESS

OPTION # 423 OPTION DESCRIPTION BCS DRIVER

PILOT RUN PHASE COMPLETE
 Mgr. Manager [Signature] 5/24/76 Date
 Mkt. Manager [Signature] 3/30/76 Date
 Oper. Manager [Signature] 3/22/76 Date
 Prod. Assr. Manager [Signature] 3/30/76 Date

RELEASE FOR MANUFACTURING
 PRICE LIST & AVAILABILITY SCHEDULE APPROVAL
 Div. Manager [Signature] 3/30/76 Date

RUN BREAKDOWNS & ALLOCATIONS:

	Run Qty	Std	Options	Allocated to
PROD. PROTO	_____	_____	_____	_____
PILOT RUN	_____	_____	_____	_____
Lst PROD. RUN	<u>20</u>	<u>20</u>	<u>0</u>	<u>SHIPMENTS</u>
SCHEDULED INTRO. DATE	<u>5/10/76</u>		SCHEDULED SHIP DATE	<u>3/23/76</u>

Due to a tremendous backlog of orders, present availability of the new card is 13 weeks. However, given the present production schedule and sales forecast availability will be reduced to seven weeks by June.

GET ON THE BUS!



SALES ENGINEERS' CORNER

NEW KID SHINES

By: Bob Hoke

Ralph Kotoski, former System Engineer for the Albuquerque area went on quota as a HP Sales Representative in March. As we totaled the results for March, Ralph turned out to be Number One Data System Salesperson for North America. From new kid on the block to number one is a helluva fine start. Keep up the good work.



Ralph Kotoski

NEELY ANNOUNCES TWO NEW DISTRICT MANAGERS

By: Bob Hoke

Neely has two new Computer System Group District Managers. Reed Hilliard/Neely Santa Clara and Norm Matlock/Albuquerque.

Reed will be responsible for the East Bay Area and Sacramento office and Norm has Albuquerque, Las Cruces, Salt Lake, and Denver offices.

Both Reed and Norm have done an outstanding job of selling for us in the past and we all look forward to working with them in their new positions.



Reed Hilliard

Norm Matlock



MIDWEST/WEST HAS A NEW DM

By: Bob Hoke

Tom Rappath/HP St. Paul has been named as a new District Manager for the Mid-West Sales Region. I'm sure we all wish *Tom* the best and will look forward to a successful new district. *Tom* has done an incredible job for us and we're sure it will continue. Congratulations, *Tom* and keep up the good work.

(hp)

Sales Aids

MULTIPLE REACKNOWLEDGEMENTS

By: Frank Jackson

Has your customer been complaining about the number of reacknowledgement dates his order has received? If so, here are the reasons behind it and what you might do about it.

- All divisions have been asked to reacknowledge an order whenever the scheduled delivery date changes. This is not bad in itself and keeps you and your order processing people up to date with the order status.
- Only with the *first* acknowledgement does the order paper control code send a copy directly to the customer. All reacknowledgements are through the sales office. Your order processing gets both the customers and their own copies of the reacknowledgement.
- The philosophy behind the policy is to allow you the flexibility of deciding whether the customer should receive each and every change date. In order to have better control of these reacknowledgements you should ask your order processing people to pass the paperwork to you before sending on to the customer.

(hp)

DEMO BENCHMARK

By: Mike Manley

For quite some time, HP has suffered from mathematical benchmarks. The field keeps seeing the same old DEC or DATA GENERAL designed benchmarks over and over. Typically the benchmark is a series of additions, subtractions, divisions, and multiplications performed over and over again. Since our multiply and divide routines are performed in software or firmware and the competitors routines are hardwired, HP looks very bad.

To combat this situation the following disc benchmark was written. The benchmark is optimized for DISC throughput and contains both the best features of HP hardware and software.

The idea to market here is "so what if we add 2+2 a little slower. Throughput is what you want to measure. What good is a fast 2+2 if you can't get it out of the CPU!"

The benchmark initializes a 1,048,576 word file on the disc and places forward and backward record pointers in each record. With RTE III, 7905 disc, and FFP it takes 5-1/2 seconds. The same program ran on a big IBM System 3 and took 35 seconds.

QUESTION: *Is the benchmark realistic?*
ANSWER: **YES. ABSOLUTELY!**

Consider the fact that all measures of system performance stress throughput and a match of software to hardware. For example, compilations, assemblies, and program loading are all disc bound operations for mini computers. Moreover, most real time measurement and control applications stress getting the information quickly to the disc *first* and then analyzing the information later at the programmers leisure. Other examples of why this benchmark is much more relevant than 2+2 should easily come to mind.

WHY IT'S FAST

The benchmark takes advantage of three features:

- 1) No packing buffer in software for 128 word records. This is a file manager feature.
- 2) 7905 disc has 128 word blocks. Thus a software hardware match.
- 3) The error handling is done by subroutine. Since parameter passing is done in firmware (FFP), the subroutine execution is very fast.

IMPROVEMENT

The speed of execution can be improved by making sure that the disc used for the array is mounted directly after the system disc and has no other files on it.

If lines 73, 74, and 75 are placed in a subroutine and called like:

```
CALL POINTER (NUM,BUFFER(INDEX + 127), BUFFER (INDEX))
```

the over all speed of the benchmark will be worse, but the time it will take our competition to execute the code will be much worse. The reason is that we would pass the parameters in firmware, our competition would pass parameters in software. If you decide to do this, take care that the competition plays according to our rules (i.e., they must call a subroutine also — no in-line code).

In the future, I hope to have other benchmarks tailored to our system.

If you have questions, comments, or suggestions, do not hesitate to contact me. If you can get comparison times for other vendors, please pass this information back to me so I can make it available to your colleagues. Paper tape sources can be made available on request.

RDISC T=00004 IS ON CR00100 USING 00010 BLKS R=0000

```
0001 FTN4,L
0002 PROGRAM RDISC
0003 C
0004 C MIKE MANLEY VERSION 3 3/15/76
0005 C
0006 INTEGER BUFFER(6144),PRAM(5),DCB(144),ERR,FNAME(3)
0007 DIMENSION ITIME1(5),ITIME2(5)
0008 DATA FNAME/2HSC,2HMO,2HOL/,BUFFER/6144*2H
0009 C
0010 C
0011 C
0012 C THIS PROGRAM INITIALIZES A 1,048,576 WORD ARRAY ON THE DISC
0013 C (2**20 WORDS). IN ADDITION THE PROGRAM FILLS THE FILE
0014 C CREATED WITH RECORD POINTERS SUCH THAT :
0015 C RECORD(1) = FORWARD RECORD POINTER
0016 C RECORD(2) = BACKWARD RECORD POINTER
0017 C FIRST FORWARD POINTER = 0
0018 C LAST BACKWARD POINTER = 0
0019 C
0020 C
0021 C THE EXECUTION SEQUENCE IS:
0022 C
0023 C 1) GET START TIME
0024 C 2) CREATE THE FILE
0025 C 3) INITIALIZE THE ENTIRE FILE TO ASCII BLANKS
0026 C INCLUDING FORWARD AND BACKWARD RECORD POINTERS
0027 C 4) CLOSE THE FILE
0028 C 5) GET ENDING TIME
0029 C
0030 C
0031 C
0032 C *****
0033 C *
0034 C *
0035 C * IF YOU RUN THIS PROGRAM MORE THAN ONCE BE SURE TO PURGE
0036 C * THE OLD FILE. DO A
0037 C *
0038 C * :PU,SCHOOL:MM:17
0039 C *
0040 C * NOTE THAT CARTRIDGE REF IS 17 AND SECURITY CODE IS MM,
0041 C * CARTRIDGE REF AND SECURITY CODE IS HARD CODED. THEY
0042 C * CAN AND SHOULD BE CHANGED TO REFLECT THE CONFIGURATION
0043 C * OF THE SYSTEM THE PROGRAM RUNS UNDER.
0044 C *
0045 C *****
0046 C
0047 C GET START TIME
0048 C CALL EXEC(11,ITIME1)
0049 C
0050 C
0051 C CALL CREAT(DCB,ERR,FNAME,8192,1,2HMM,17)
0052 C CALL ERPOP(ERR,FNAME,1,1)
0053 C
0054 C START LOOPS
0055 C
0056 C NUM = 0
0057 C DO 200 IBLOCK = 1,8160,48
0058 C DO 300 INDEX = 1,6016,128
0059 C BUFFER(INDEX+127) = NUM
0060 C NUM = NUM + 1
0061 C BUFFER(INDEX) = NUM + 1
```



```

0062 300      CONTINUE
0063          CALL WRITE(DCB,ERR,BUFFER,6144,IBLOCK)
0064          CALL ERROR(ERR,FNAME,2,2)
0065 200      CONTINUE
0066 C
0067 C
0068 C      DO REST OF FILE
0069 C
0070 C
0071          NUM = 8161
0072          DO 400 INDEX = 1,3968,128
0073              BUFFER(INDEX +127) = NUM
0074              NUM = NUM + 1
0075              BUFFER(INDEX) = NUM + 1
0076 400      CONTINUE
0077 C
0078 C      FIX LAST POINTER TO REFLECT END OF CHAIN
0079 C
0080          BUFFER(INDEX - 1) = 0
0081          CALL WRITE(DCB,ERR,BUFFER,4096,8161)
0082          CALL ERROR(ERR,FNAME,3,3)
0083 C
0084 C
0085 C      CLOSE FILE
0086 C
0087          CALL CLOSE(DCB,ERR)
0088          CALL ERROR(ERR,FNAME,4,4)
0089 C
0090 C
0091 C
0092 C      GET STOP TIME
0093 C
0094          CALL EXEC(11,ITIME2)
0095 C
0096 C
0097 C      PRINT RESULTS ON LIST DEVICE
0098 C
0099 C
0100          WRITE(6,500) (ITIME2(J),J=4,1,-1),(ITIME1(J),J=4,1,-1)
0101 500      FORMAT(10X,"HRS  MINS  SECS  MSEC/10",/,3X,"STOP",4I6,
0102          &/,2X,"START",4I6)
0103          END
0104 C
0105 C
0106 C
0107 C
0108          SUBROUTINE ERROR (ERR,FNAME,LOCATN,DUMMY2)
0109          INTEGER FNAME(J),LOCATN,DUMMY2,ERR
0110 C
0111 C
0112 C      THE PURPOSE OF THIS ROUTINE IS TO CHECK FOR ALL FILE
0113 C      RELATED ERRORS. THIS VERSION DOES NOT USE DUMMY2.
0114 C      GENERALLY DUMMY2 WOULD BE A DECISION PARAMETER USED
0115 C      TO DETERMINE SEVERITY OF FILE ERROR.
0116 C      THE PARAMETER IS LEFT IN TO DETERMINE SYSTEM ABILITY
0117 C      TO PASS SUBROUTINE PARAMETERS.
0118 C
0119          IF(ERR.GE.0) RETURN
0120          WRITE(6,600) ERR,FNAME,LOCATN
0121 600      FORMAT(2X,"ERROR # ",I6," ON FILE ",3A2," LOCATION =",I6)
0122          RETURN
0123          END
0124          ENDS

```

"NOW WHAT CAN WE DO FOR YOU?"

By: Linda Schefter

This tagline in our latest HP 21MX ad campaign is not directed at customers alone! We believe these ads can help you in acquiring prospective accounts or strengthening leads you already have. This chart summarizes Data Systems' April ad schedule:

DATA SYSTEMS ADS	APRIL PUBLICATIONS
9600: "YOU CAN'T MAKE MONEY ON IT UNTIL IT'S GONE."	AUTOMATION CONTROL ENGINEERING
21MX: "THIS OEM ASKED US TO BE TOUGH."	COMPUTER DESIGN COMPUTERWORLD 4/12 ELECTRONIC NEWS 4/12 MODERN DATA
21MX: "THIS OEM ASKED US TO GIVE HIM THE WORKS."	COMPUTERWORLD 4/19 DATAMATION DIGITAL DESIGN ELECTRONIC DESIGN ELECTRONIC NEWS 4/5
21MX: "THIS OEM ASKED US FOR A HEADSTART."	COMPUTERWORLD 4/26 EDN 4/20 ELECTRONICS ELECTRONIC NEWS 4/19 MINICOMPUTER NEWS 4/8



International News

MORE SUPPORT LITERATURE FOR HP SYSTEMS!

By: Georges Ouin/Grenoble

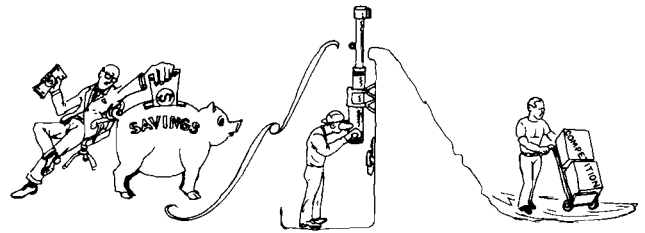
HP Grenoble has published a Programming Guide (07260-90010) showing how to use the HP 7260A Serial Optical Mark Reader with the DOS-III and the 2000F Systems (with or without modems).

Copies of the manual are being distributed to the field. Contact Grenoble or Boise for more copies.



OEM SALES ARE MONEY MAKERS

Competition



SAVE \$ - - - - KNOW MORE ABOUT YOUR COMPETITION

By: Jim Eckford

We have just completed negotiations which qualify Hewlett-Packard sales offices to buy Datapro Reports on Minicomputers for \$125 instead of the normal price of \$390 a year.

After an extensive study of the popular competitive analysis reports we chose Datapro as the best overall cost/performance buy. Datapro has a very responsive group which is on-line in Delran, N.J. to answer your special inquiries in addition to the binders and the newsletters. (Datapro will actually call the competitor for the answers if they don't already know them.)

A monthly information service that saves time and money two ways.

Attention: Hewlett Packard Sales Managers!

This is Hewlett Packard's special group for you. Datapro Reports are available to you for \$125 a year. Buy them now. Contact Datapro for more information.

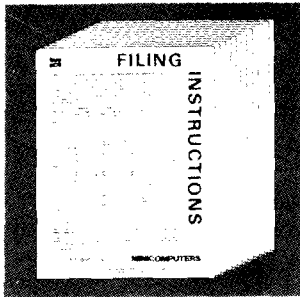
Use Enclosed Card.



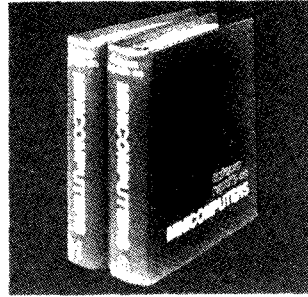
We realize that this is not the whole answer when it comes to the competitive issue but it can go a long way in providing background and specialized phone assistance.

All DM's will be receiving a Datapro brochure and order blank in the mail very soon. If anyone has any questions, please call me.

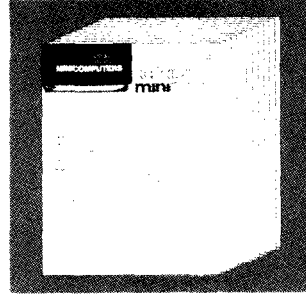
A subscription to Datapro Reports includes:



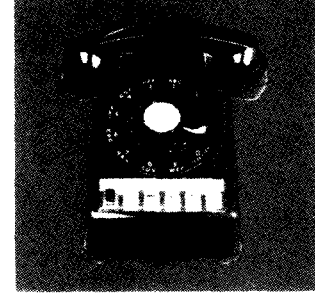
12 Monthly Supplements keep your volumes up to date by listing changes and new products, prices, and vendors — while they're still new.



Two looseleaf volumes filled with more than 1000 pages of information on thousands of firms, markets, peripherals and other vendors.



12 Monthly Newsletters deliver information and perspectives on developments in the micro market, and all of this means to users who get to know



Custom Telephone Inquiry Service

lets you and your wife (or spouse) get all the details and answers you need and more.



GET IT IN WRITING

By: Joe Schoendorf

Just a reminder to get in writing any and all special commitments made by anyone at Data Systems Division. What is a special? Anything not on the Corporate Price List, the Delivery Schedule, or referenced in the Data Systems Newsletter. Generally the only place the special commitments should come from is the Sales Development group or Tom Winker's Customer Engineering group where appropriate. It is impossible for us to work effectively when we ask for the source of some special commitment and you tell us "I got it on the telephone from a product manager four months ago." Product Management is not authorized to make these special commitments directly and must work through Sales Development — in writing.

SAVE ON TIME — AVOID SLIP SHIPMENTS — GET IT IN WRITING!



DSD'S TOP 10 IN NORTH AMERICA

By: Bob Brannon

Dave Head stays ahead! The first 5 months results are in on how the North American field engineers are doing selling Data Systems Division products.

- Dave Head is Numero Uno in two categories: overall and PL-65 YDT.
- Al Ipson has moved into first place for PL-08 just edging out J. Mason and P. Tucciarone.

In analyzing the data some conclusions seem fair. It really helps to have one or more OEM accounts to get into the top 10. In fact it's almost a must. These 10 salesmen account for a whopping 20% of our total number of OEM's. Several of the F.E.'s in the top 10 can almost make a "normal" year in less than 6 months. Another observation is that there is still a lot of

activity in the End-User market for both PL-65 and PL-08. Several F.E.'s are expecting to close multiple system deals. There's a lot of jockeying around in PL-08 for the top 10 positions. It's probable that we'll see some different names on this list by the end of the year. Keep selling those MX's and RTE's.

DATA SYSTEMS DIVISION NORTH AMERICA — F.E. RESULTS RANKED YEAR TO DATE — THRU

RANK	PL-08	PL-65	FACILITY
1	A. Ipson	D. Head	D. Head
2	P. Tucciarone	P. Tucciarone	P. Tucciarone
3	G. Mason	G. Mason	G. Mason
4	R. Kotoski	J. Sigismonti	J. Sigismonti
5	D. McClelland	L. Castagnola	L. Castagnola
6	J. Tourkolias	K. Volet	K. Volet
7	B. Snyder	J. Oliphant	J. Oliphant
8	A. LaFargue	J. Malone	A. Ipson
9	E. Hineman	J. Allen	J. Allen
10	J. Pitko	J. Clarke	R. Kotoski

DATA SYSTEMS NORTH AMERICAN F.E. RESULTS RANKED MONTH OF MARCH

RANK	PL-08	PL-65	FACILITY
1	R. Kotoski	D. Head	R. Kotoski
2	E. Oakley	L. Castagnola	D. Head
3	A. Ipson	J. Allen	P. Tucciarone
4	T. Wade	P. Tucciarone	E. Oakley
5	B. Hitchcock	G. Mason	L. Castagnola
6	K. Howey	G. Inglehart	R. Drost
7	P. Gilfoyle	R. Drost	G. Inglehart
8	R. Toth	R. Kotoski	J. Allen
9	R. Drost	K. Volet	K. Howey
10	P. Tucciarone	T. Bills	P. Gilfoyle



THIS OEM ASKED US FOR A HEAD START.

Management Systems Technology in Chicago was in the market for a minicomputer and a disc. We said, "There's a better way."

Then, we introduced them to the Hewlett-Packard DISComputer concept.

Some vendors offer systems in which a disc, controller and mini-computer have been *put* together. In contrast, the elements of the HP DISComputer were *designed* together.

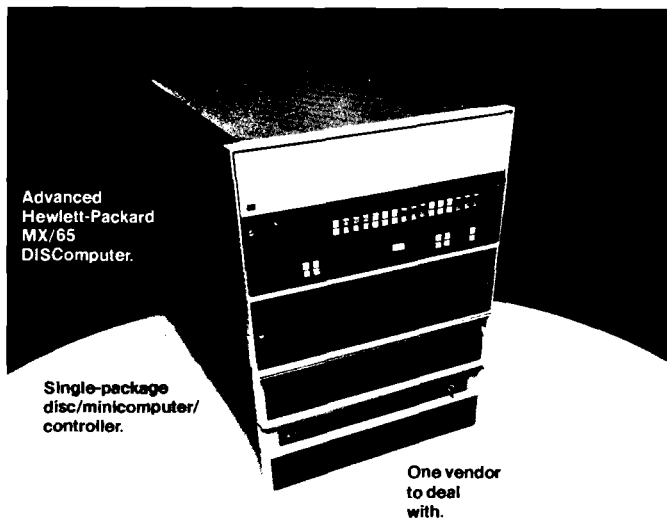


Management Systems Technology, Inc., builds a system that provides druggists real-time data on patient profiles and drug interactions, prints labels, handles billing and taxes. At its heart is a Hewlett-Packard DISComputer.

This means you don't get bogged down trying to optimize the performance of our hardware. Instead, you can jump ahead and put your efforts into developing your own systems.

You can also benefit from advanced HP software. RTE-III, the newest member of the RTE family, gives access to 64 partitions, up to 128K words of main memory, plus multiple languages and multi-programming.

At \$17,655*, the MX/65 DISComputer price/performance ratio is exceptional.



Advanced Hewlett-Packard MX/65 DISComputer.

Single-package disc/minicomputer/controller.

One vendor to deal with.

The further economies of dealing with a single vendor could help turn a head start into a winning performance any day of the week.

Just ask Management Systems Technology in Chicago.

THE HEWLETT-PACKARD MX/65 DISCOMPUTER AT A GLANCE

Minicomputer:	Controller:	Disc:
8K to 128K words Solid state 4K RAM memory Microprogrammable Parity, EAU, floating point standard Brownout-proof power supply Optional Dynamic Mapping System	Links to multiple CPU's Combined seek/data transfer Built-in error detection and correction Automatic track switching Data protect and recovery features.	25 msec average seek time 15 Mbytes of storage, expandable to 120 Mbytes Exceptional 937 Kbyte transfer rate Operates over wide power and environment range

*DOMESTIC USA OEM PRICES QUANTITY 50 WITH 32K MEMORY, 15 MBYTE DISC

NOW WHAT CAN WE DO FOR YOU?



Sales and service from 172 offices in 65 countries.

1501 Page Mill Road, Palo Alto, California 94304

DATA TERMINALS NEWSLETTER

Division News

HOW'S IT GOING? FANTASTIC, THANKS TO YOU!

By: Dick Byhre

We finished March in the high nineties and I am optimistic that April will be above target. By the end of April, we will have shipped our 5000th 2640 and 700th 2644. How about that, folks!!

Since the beginning of this year, we have brought you increased sales leads through better advertising and decreased service prices through better reliability. To help you sell, we initiated a new purchase agreement to discount lower quantities and a brand-new rental program for the customers who wish to limit capital investment. We have added a Specials capability so you can land those large volume deals you would otherwise lose. We know a lot more about interfacing to IBM, CDC and Honeywell and have a top priority program to document them during the next month.

As you can see, we have a lot to be excited about and hope you will share our enthusiasm and optimism for the next half.



Sale\$ Succe\$\$e\$\$

CONGRATULATIONS TO DON THOMSON!

By: Rich Ferguson

DON THOMSON from our Vancouver, Canada sales office has landed a "biggie." Here we see *Dick Byhre* presenting *Don* with a plaque to commemorate the occasion. The University of Saskatchewan just ordered sixteen terminals for use on their IBM 370/158 computer system. The operating system is TSO. There will be eleven 2640's and six 2644's, for a total of about \$80,000.

On a recent two-day trip, he contacted the Director of the Computing Centre for the University of Saskatchewan. He was quickly informed that most departments were renting

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CRT's from the Telephone Company and, as no complaints had been registered, the Director believed everyone was happy.

On the first day, *Don* put on a two-hour seminar on the 26MX for eighty potential users. He finished the seminar by scheduling individual sessions for the end users on day two, at half-hour intervals, to show them how the terminals could be used in their individual departments. On the second day, *Don* had the 2644A humming away. His basic pitch was "if you would like one of these terminals that everyone else is getting, in place of your existing CRT's, contact the Director's secretary and tell her your name, department, and the model number you would like."

At the end of the second day, *Don* checked back with the Director and requests had been made from almost every user! *Don* picked up an order for six 2644's and ten 2640's, before he rushed off to catch a plane to his next two-day stop in Winnipeg, Manitoba.

The application includes program development for their undergraduate students and typing manuscripts and dissertations for their graduate students. Also, some of the terminals will be used for administration purposes.

In addition to the fact that our terminals will be hooked up to an IBM system, our competition was VuComm. When asked what features of our terminals the University liked best, *Don* replied, "multiple character sets, the off-screen storage and off-line editing capability turned the tide."

CONGRATULATIONS, DON, FOR A JOB WELL DONE!



BOB ULERY DOES IT TWICE IN ONE MONTH

(or)

BOB ULERY DOUBLES HIS PLEASURE!!

By: *Rich Ferguson*



BOB ULERY from the NEELY/ Airport sales office has had two large terminal sales this month! Allan Hancock Joint Junior College in Santa Maria has purchased a 2640-based HP computer system. The terminals will be used for a multitude of things, including program development, administration and instructional use.

In the administrative area, the terminals will be accessing a data base management package. When asked what features the college liked best, *Bob* replied, "the high resolution display, off-screen storage, and the multiple character set capability."

Not stopping there, *Bob* then sold AFSA Data Corporation another six 2640's! These terminals will be used for data base management on an HP system. AFSA is in the business of student loan processing and management for large banks across the United States.

The terminals will be involved in programming the applications for data base management, then will switch their roles to an administrative capacity, doing data entry and retrieval. AFSA said that the high reliability and quality of the terminal is the reason they chose Hewlett-Packard.

BOB, WE KNEW WE COULD COUNT ON YOU. THANKS AGAIN!!



2644'S ON CDC

By: *Eric Grandjean*



The Federal Institute of Technology (ETH) has recently placed an order for 17 Mini DataStations for their Computer Sciences and Programming Curriculum Department.

The Institute's interest in our terminals started when *Bernd Palmer* presented the 2640A to several professors and assistants just about a year ago. When the 2644A came out last September, and was displayed at the Bufo (major annual Swiss electronics show), ETH became very interested in our new product, and *Armando Foiadealli's* salesmanship did the rest.

The application . . .

ETH presently has one CDC 6400, one CDC 6500, and three CDC 1700's, as well as two RJE stations (one HP 2100 based, developed by ETH, and the other a PDP-11 based). *Armando* explains that eight 2644A Mini DataStations will be connected to one of the Central CDC systems and will be essentially operating as batch input stations (data coming from the cartridges.)

The remainder of the 2644's will be used completely off-line by the students to prepare and edit assignment programs to be batch processed by the CDC small central . . . ETH is simply eliminating their keypunch operations, and saving a bundle on punch card costs. They will benefit from more reliable equipment; namely our Mini DataStations, and a much "cleaner" batch input data medium.

ETH has developed a special applications program dubbed the "Handler", which controls Batch data from the cartridges. This interesting application illustrates the potential of our 2644A as an off-line/on-line Data Station.

Congratulations to *Bernd* and *Armando* for their pioneering efforts. Our success with ETH will undoubtedly become an excellent source of reference for further sales to other Swiss colleges and universities, as well as to the scientific and industrial community.



Bernd Palmer



Armando Foiadealli



ANGE COLUCCI HITS OEM PAY DIRT!

By: Carl Flock



When seconds mean millions of dollars, the HP 2640 keeps current. ANGE COLUCCI, who consistently brings in terminal orders, has done it again! This time the quantity is 16 and the customer is an OEM named R. Schriver Associates. The application is a financial one — Inventory control of billions of dollars of 90-day commercial paper. As a sidelight Ange has also placed a pair of HP 3000 to act as terminal controllers in this 2640-based system.

The number of terminals is expected to double within a year on this one system alone. Ange's instant analysis of the 2640's advantages over the competition made the sale possible.

We appreciate Ange Colucci's zeal in the pursuit of terminal business and commend him and all of Ralph Mele's team of Terminal Tigers for their success in the data terminal sales!



WHERE DO THEY COME FROM, WHERE DO THEY GO??

By: Carl Flock

JERRY TARTAGLIA just landed a 6-pack (of 2640, not BEER) from Bolt, Beranek and Newman, Inc. The 2640-based system will use a DEC-11 as the central processor. The application is classified and the customer's not talking, but since Bolt, Beranek and Newman is a consulting type company, we expect that this is the beginning of many more terminal orders.

This is just another example of how we like to hook up to "strange" computers. Jerry knows that all electrons look the same to a 2640 and IBM's or DEC's electrons can mean big dollars in your pockets.

Thank you, Jerry, and best wishes to the valiant warriors who live and fight in the enemy's stronghold. Jerry Tartaglia and each of Ted McCarthy's team understands the value of data terminals in their sales strategy!



"MINI-CARTRIDGES"

By: Fran Codispoti

The mini-cartridge (9162-0061) for the 2644A, should be ordered from CPC or PCE (Europe). We don't supply the cartridge as a stand-alone part.

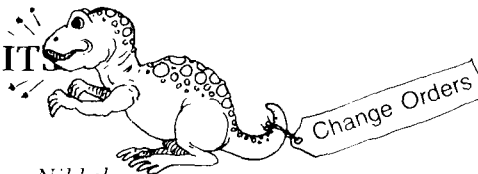
The only way to order them from DTD is as option 013, when ordering a 2644A.

We appreciate your assistance, as it is costly to transmit an order with us, cancel, and reenter with CPC.

Thank you, in advance, for your cooperation.



PROFITS



By: Dianne Nikkel

If you are overriding HEART to enter an order for DATA TERMINALS DIVISION products, you may want to think twice. Remember, it costs more than \$75 for every change order, and that's profit-sharing dollars!

DATA TERMINALS products are listed correctly on the Corporate Price List. Therefore, we ask that you not override HEART to enter orders referencing zero quantities. Order Processing for DTD will not accept an order containing zero quantities, including the mainframe. Options can be ordered at the product level. If you have difficulty deciding what product number to order, your order coordinator at DTD will be happy to help.

Also, check your configurations for the option slot extender if you are adding more than two items requiring slots, and be sure to include the option #015 (50 Hz) on units going to foreign countries.



UPPER/LOWER CASE UPGRADE

By: Rich Ferguson

You can upgrade a 2640 or 2644 from a standard 64 character upper case ROMAN character set to the 128 upper lower character set in the field. The part number you need to order is 1816-0613. This is the plug-in ROM that implements the upper/lower case characters. It is available from the Corporate part Center for \$100. So, if your customer, after having ordered the standard terminal, finds that he wants the upper lower case capability, this is what he needs to order. It is advised that a CE install it in the terminal. If your customer is technically competent, however, he could install it himself by plugging in the ROM in the control store board and making the appropriate strapping changes as outlined in the service and installation manual.

Thanks for selling terminals!



GOOD SELLING—KEEP PUSHING TERMINALS!

IBM 360/370 SYSTEMS COMPATIBILITY NOTE FOR 2640/2644

By: Bob Bowden

WATCH OUT BIG BROTHER!

A new System Compatibility Note for use of the 2640/2644 on IBM systems has recently been distributed to the field from DTD. This Note is intended to share current understanding of the IBM market for the 2640/2644; and is meant to be used as a general reference in selling to IBM sites. It contains:

- Sales overview of the 2640/2644 on IBM. Including characteristics of key IBM prospects, competitive feature strengths/drawbacks, and major hardware/software interfacing considerations.
- Representative case studies of 2640/2644's currently used on IBM systems. Including site configuration, interfacing considerations, level of implementation difficulty,

and a detailed example of the IBM support generation process for 2640/2644 terminals.

- IBM background information and terms. Including information on where our terminals fit into IBM configurations; communications controllers; software support referring to operating systems, access methods and applications programs; as well as the market size and key characteristics of IBM's major systems.

(hp)

TAPE CARTRIDGE QUALITY CONTROL

By: Ed Churka

GREG GARLOW of the Calculator Products Division is evaluating the quality of the 9162-0061 tape cartridge. He needs all defective tapes, old and new. Please send them to Calculator Customer Service, Loveland, Colorado, 80537.

(hp)

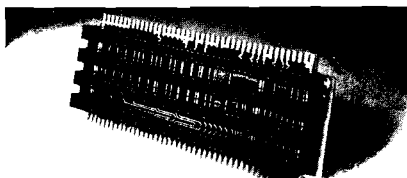


DATA
TERMINALS
NEWSLETTER

THIS OEM ASKED US TO GIVE HIM THE WORKS.



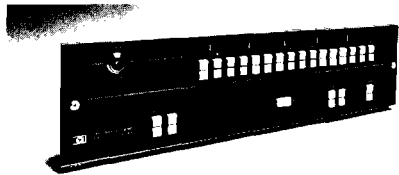
Brownout proof power supply
No extra cost.



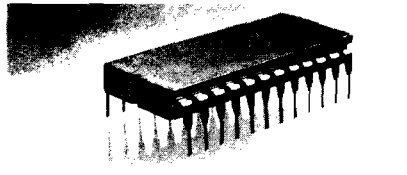
Extra memory and I/O capacity
No extra cost.



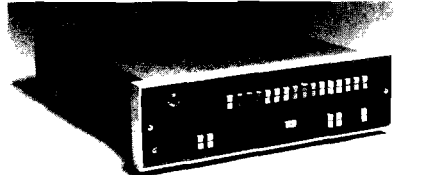
ROM bootstrap loader
No extra cost.



Display panel
No extra cost.



Parity, EAU, floating point
No extra cost.



The Hewlett-Packard 21MX minicomputer
One low cost.

You say it's a bargain at the price. But what do we get for our money? Canadian Marconi asked. They were planning systems that would use 20 to 250 of our minicomputers each.

A lot more than you'd expect, we replied. Even the smallest Hewlett-Packard 21MX

minicomputer uses solid state 4K RAM memories. Then we include floating point and extended arithmetic as standard items. From other suppliers these are extras that might add \$1,000 to \$4,000 to your bill!

Next there's parity. It's standard too - not the usual surcharge of up to \$1,000 per memory module.

Or consider the brownout proof power supply - one of the best in the industry. Standard again. As is a ROM bootstrap loader. As is power fail interrupt capability. Extra memory

slots. A full front panel that lets you display or change contents of data registers.

Standard, too is low power consumption and compact size, allowing more equipment to be put in each rack.

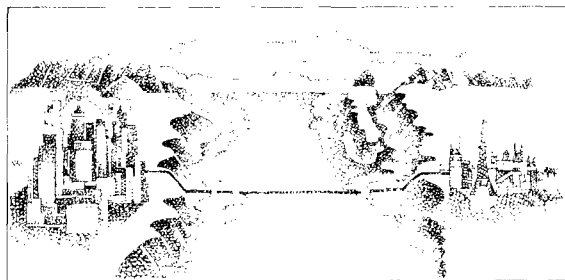
Even our options are surprisingly low in

cost. Want to add memory for example? It's just \$1,500 per 8K words. Want better throughput? You can microprogram custom routines using a Writeable Control Store (WCS) for \$1,000.

In fact, if you add up what it costs to bring a "bargain" minicomputer up to our standard capability,

don't be surprised if it adds up to a lot more than the \$4,059* you'll pay for the Hewlett-Packard 21MX.

So if you need the works, call us. Canadian Marconi did.



Canadian Marconi Company uses a minimum of 20 Hewlett-Packard 21MX minicomputers in each modular Telex switching system they build. These systems gather and switch Telex traffic for international transmission.

NOW WHAT CAN WE DO FOR YOU?

HEWLETT  PACKARD

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Address inquiries and comments to: Joey McHugh - Editor
Sales Development - Building 40
HEWLETT - PACKARD DATA SYSTEMS
11000 Wolfe Road, Cupertino, California 95014 U.S.A.
Garrett Prescott - Art Editor - Jon Schoendorf - Technical Editor