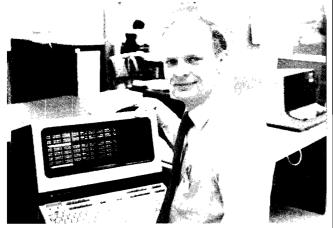


Volume 2 no. I November

DIVISION NEWS

DATA SYSTEMS WELCOMES DICK ANDERSON



Dick Anderson

by Ed McCracken

Data Systems division now has the responsibility for a unified computer systems and OEM strategy under our new General Manager, Dick Anderson. Dick has responsibility for the 3000, 2000, 9600 and OEM component product lines.

Working for Dick is the same management team at Data Systems, including:

1,	Manufacturing		Dick Love
2,	Engineering	-	Dick Hackborn
3.	Marketing		Ed McCracken

In Marketing, Bob Brannon will continue as Product Manager for our 9600 industrial measurement systems working for Bill Krause. Joe Schoendorf will join Ted Doyle's Sales Development team as Domestic Sales Development Manager. Wil Houde and Jerry Peterson will have Customer Engineering and Systems Engineering responsibility for the combined product lines. Ed Hayes, of course, will continue to market our product to our growing OEM market.

This unified approach, combined with a single sales force, gives HP a unique capability to compete in the minicomputer market. I'm sure you will join with those of us at Data Systems in welcoming Dick Anderson and in aggressively pursuing minicomputer business in 1975.

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WINE SHIPPED!



by Bob Hoke

The wine has hit the road. The first load has left, so you should be seeing it in a week or so.

Good drinking!

NEW INSTRUCTIONAL SOFTWARE SUPPORT POLICY

by Marilyn Branthwaite

There has been a significant change in the support policy of the instructional software: IMF-I, IDF-I, HP MATH, CWF, and Graphics. Up until now, these products have been supported by the Marketing Applications Development group at no charge to the customers.

Support for this software will now be provided by the factory Customer Engineering (CE) group. Customers will specify on a Customer Maintenance Agreement the level of support they require and they will be charged accordingly. Specific support plans for each product will be distributed to all CE Managers and CE's

Questions concerning the use of IMF-I, IDF-I, HP MATH, CWF, and Graphics should be directed to the Systems Engineering (SE) group. Questions concerning operating problems or the new support policy should be directed to *Marilyn Branthwaite* in the CE group, Cupertino.

"STARTER SET" PACKAGES USING THE 7901 DISC

by Peter Palm

ORDER THIS COMPONENT	S/310 (7901-based)	S/210 (7901-based)	List Price
2108A Computer	1	. 1	\$5,300
2102A Memory System	1	1	500
2102A-001 Port Controller	1 ,	1 .	750
2102A-008 8K Memory	2 ', ?' `	2	4,300
2102A-003 Memory Protect	1 1	1 .	500
12944A Power Fail Restart	1	_	475
12539C Time Base	1		550
12925A Paper Tape	1 4	. 1	2,165
2860B Cabinet	1 🗇	1	850
2860V-001 Power Control	1	1	1,150
12903B Rack Slides	1 '	1	150
2752A Teleprinter	1	1	2,000
12531C TTY INfc.	1	1	350
12961A 2,4 Mbyte disc	1	1	5,500
24307B DOS-HIB	-	1	2,500
2300E RTE	1 1	· -	5,770
	\$30,310	\$26,015	Maria San

These save about 3,000 off the price for the 7900-based S/310 and S/210.

The most cost-effective solution for the customer and the most profitable for HP are the 7900-based S/310 and S/210. Sell 7901-based systems only when you're under price-sensitive pressure.

7901 SUBSYSTEM AVAILABLE IN SINGLE QUANTITY

by Vijay Kapoor

Effective immediately, the minimum-quantity – 5 requirement to buy 12961 at \$5,500 is being removed. You can now place orders at the following price, for any quantity:

12961 2.5 M Byte Subsystem for 2100 or 21MX \$5,500 -010 Add-on drive, slides, cable and cartridge \$4,500 (12961-001 can also be ordered as an add-on to a 12960 Subsystem)

No OEM or quantity discounts apply.

Now that we have the authority to quote 12961 at the low, low price, we also have an additional responsibility. We must make sure that the 12961 does not impact legitimate 12960 business. In particular, before you sell a 12961, make sure that:

- 1. Customer does not need more than 2.5 M Bytes.
- 2. He will not pay the additional cost to get the 12960.

Unless *both* of the conditions are met, you will be doing yourself, HP and your customer a favor by steering him to a 12960.

The \$5,500 for a 2.5 M Byte drive and controller does give you a very attractive opportunity to go for the price-sensitive, low-end, disc-based system business. Make the most of it!

X2/X1 EXCHANGE PROGRAM ANNOUNCED

by Ted Doyle

A few weeks ago, a TWX was sent out to all Field Sales Managers announcing a one-shot exchange policy for customers who want X1 (Mostek) memory on their 21MX, but also want a fast delivery. For these customers, for the next few months, we will allow them to order X2 (T.I.) memory for fast delivery, with the option to exchange this for X1 memory when available at no charge other than the list price difference between these two memories.

This is a one-shot deal, designed to help you close accounts now, and it will expire as soon as X1 memory is readily available. The prime purpose is to allow an OEM to start his program development immediately.

The details are as follows:

- Whether a new order or a change order from X1 to X2 memory is involved, you should note in the special instructions section the intent to convert to X1 memory when available.
- 2. For OEM's ordering the 2124A (Mostek), the 2124B (T.l.) should be ordered with the same note in special instructions. (Continued on page 3)

X2/X1 EXCHANGE PROGRAM ANNOUNCED -(Continued)

3. When X1 (Mostek) memory becomes available, your customers will be notified by the Factory that they have 60 days to exercise their option to convert from X2 to X1 memory, at no cost other than the price differential of the products.

We hope this policy helps you close new 21MX, and especially 21MX OEM accounts today. GOOD SELLING!

PRODUCT NEWS

POWERFULLY NEW MX-BASED S/310

by Sherry Washing

Now you can order a Scientific/310 Real Time Multiprogramming System based on a 2108 with X/2 memory for the new low price of \$30,900! The standard system (similar to picture) is as follows:

You can order now and later upgrade to include RTE-II software and expanded memory when it is implemented. We are now ready to compete head-to-head with DEC and Data General (See DEC & DATA GENERAL BEWARE this NEWSLETTER). Don't let them lowball you with a configuration that doesn't have our horsepower.

(Continued on page 4)

MODEL Number	DESCRIPTION	PURCHASE PRICE	BASIC MONTHLY MAINTENANCE CHARGE
196588	Scientific/310 Data System consisting of:	\$30,900	\$283
	HP 21-M/20 Processor including:		
	16,384 word 16 bit X/2 semiconductor memory system		
	Dual Channel Port Controller		
	Extended Arithmetic Instructions		
	Power Fail Recovery System		
	Memory Protect		441
	Memory Parity Check with Interrupt	Y.M. 94/	
	Floating Point Hardware		
	Time Base Generator		
	Console Interface		
	High-speed tape reader and interface		
	System console (modified Teletype ASR-33)		
	Moving-head mass storage (4.9M byte cartridge disc),		
	power supply and interface		三 三 三 三 三 三 三 三 三 三 三 三 三 三 三 三 三 三 三
	Single-bay cabinet (60 Hz)		
	Paper tape-reroller		
	Real Time Executive software and manuals		
	One enrollment in one-week training class License agreement is required		
System Power	 (2) 関係を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を		
-015	230V/50 Hz operation	N/C	N/C
Main Memory (GH (2011年) 2011年 - 1911年 - 1	7 (17) (17) (17) (17) (17) (17) (17) (17	THE STATE OF THE S
-160	Expand memory to 24,576 words	2,150	4
-161	Expand memory to 32,768 words	4,300	8
Mass Storage O	ANTIA CONTRARENTAR		
-204	Add disc drive 4.9 million bytes (12960A-010)	8,500	95
-205	Add magnetic tape subsystem 9-track, 800 bpi, NRZI,	8,900	73
	45 ips (12970A)	- 7.7 T	
-213	Add 15 million byte disc capacity	17,000	295
Cabinet Option			
-002	Replace single bay cabinet with two bay cabinet (2860D)	800	4
Console Option			- Math
-400	Delete system console and interface.	-2,350	-54
Software Optio	表。 「本語」を表して、 「ALL MANUSCHINE」、ALL MANUSCHINES AND ALL MANUSCHINES AND AND ALL MANU		
-303	Add RTE File Manager package and two-day training class.	515	N/C
	This package requires that either option 160 or 161 be		T. T. B.
	ordered.		jan da karantaran da karan
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Training Optio	unity a - 127 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	-750	ANA
403	Delete RTE Training course		N/A
. 1 / SA HER 756, 76800年最初的	理論を発する コープログラ 一切 アンド 一切 アンド 一切 アンド	2 n 5 25 (1974) 1 2 2	*** **********************************

POWERFULLY NEW MX-BASED S/310 - (Continued)

Price Sheets, Data Sheets and a general capabilities brochure are being distrubuted to the field. Normal 21MX system availability applies.

Get a real jump on your competitors and get your orders in now!



Scientific/310 Real Time Multiprogramming System

21MX IN ALL HP 2000 SERIES DISC OPERATING SYSTEMS

by Dan Jorgenson

Effective November 1, 1974, you can order the 21MX in all HP 2000 Series Disc Operating Systems (DOS-IIIB): S/210, M/230, M/260 and S/250. The 2100S computer in these systems has been replaced by an equivalent 2108A with X2 memory. New 21MX System prices will be on the November 1974 Corporate Price List.

Highlights

1. Standard system prices have been reduced on all systems

except for the M/230 where there is no change. Because of the reduced number of I/O slots available on the 2108A (9 versus 14 in the 2100S), the M/230 now has an I/O extender in its standard configuration. See the "New Prices" chart for the number of I/O slots utilized out of the total available for each system.

- 2. Service prices are reduced on all systems.
- 3. A delete option for the magnetic tape unit on the M/230, M/260 and S/250 is now available.
- Memory protect, power recovery system, time base generator, and disc loader ROM are included in all systems.
- All 21MX based DOS systems at this time utilize a maximum of 32K words, DOS-IIIB, TCS-B and IMAGE/2000 "B".

New Prices

System	CPU	System Model Number	Price	BMMC I/O Slots Service Used
4.000	04.000	Talka:	# 00.0E0	
s/210	21008	19657A	\$ 30,950	\$ 338 4 of 14
1	2108A	196578	29,790	295 4 of 9
		Allies	,	1. N. 487
M/230	21005	19662A	48,950	440 11 of 14
4277	2108A	19662B	48,950	415 12 of 24
de de		14 A A A A A A A A A A A A A A A A A A A		
M/260	21005	19655A	53,950	443 7 of 14
4.4	2108A	19655B	50,500	428 7 of 9
		100個点的。		
S/250	2100S	19660A	59,950	527 8 of 14
*	2108A	196608	56,465	512 8 of 9

New 21MX Components in Each System

Each system contains the following processor and memory components.

Qty.	Model	Description	
. 1	2108A	Processor	
1	2102A	Memory system	
(X)	2102A-008	16K for S/210, M/230	
		24K for M/260, S/250	
1	2102A-001	Dual Channel Port Controller	
. 1	2102A-003	Memory Protect	
1	2108A-014	Disc Loader ROM	
/ 1	12944A	Power Recovery System	
. 1	12539C	Time Base Generator	

New Options

These options replace equivalent "A" Model system options. All other "A" Model options are applicable to the "B" Model system.

(Continued on page 5)

HP Computer Museum www.hpmuseum.net

For research and education purposes only.

System	Equiv. Opt. A	Opt. B	Description	Price	Sanie
19657B, 19662B	-154	_1 6 0 '	X2 Memory Expansion 16K to 24K	\$ 2,150 .	7/1 2 /10/14
196578, 196628	-155	-161	X2 Memory Expansion 16K to 32K	4,300	8
19655B, 19660B	-156	-16 2	X2 Memory Expansion 24K to 32K	2,150	4
All except 19662B*	-207	-214	Add I/O Extender (12979A)	2,700	18
All except 19657B		-406	Delete 1600 cpi Magnetic Tape	-10,900	-110
19660B	-008	-012	Replace FFP (12977A) with WCS (12978A)	1,250	

^{*}The standard M/230 (19662B) contains one I/O extender, 12979A, in its price of \$48,950.

NEW PRICES + NEW COMPONENTS + NEW OPTIONS = MORE SELLING POWER FOR DOS SYSTEMS

See the article in this issue of the NEWSLETTER describing several recent Management Systems Orders!

TALLY LINE PRINTER CONVERTER

by John Hill/Boise

Tally 2000 series line printers which have been purchased by a customer directly from Tally Corporation cannot be modified to the HP 2607A configuration in a practical manner. The configuration of the 2000 series printers from Tally Corporation varies according to the requirements of the customer. While wanting to accommodate our customers, we cannot offer to modify non-HP supplied printers due to these variations in configurations.

TERMINET 1200 NOW SUPPORTED ON 2000F

by Don Pantle

The G.E. Terminet 1200 can be used with the 2000/F or the 2000C' with IOP software level 1410. The terminet is a type 3 user terminal.

Hardwired, and 120 cps speed presents no problem. If a customer wishes to use the full capability of the Terminet 1200 over modems, he will have to use the Vadic 3400 modems which *John Wynbeek* describes in this issue.

In many cases, the Terminet 1200 with its speed and 120 column capability will suffice for a user in lieu of a line printer.

LINE PRINTER FIRE SALE!

by John Hill/Boise

Effective immediately, the 12980A (2610A) subsystem price is reduced from \$14,935 (standard and 015) and \$17,035 (001 and 016) to \$11,000 for all options! This offers your customer a fantastic savings on a 200 LPM printer and offers you an opportunity to close additional year-end sales. Only a limited number of these units are available so get those orders in and consult your availability schedule.

Orders are being received now for the rest of the 2614A line printer (600 LPM). The 2614A and 12982A subsystem

will be removed from the Corporate price list. Contact Karen Nichols, Boise Data Systems, regarding price and availability of any remaining units.

The next issue of this NEWSLETTER will contain information regarding the 2613A and 2618A which are replacements for the above products.

2000 SITE PREPARATION AND SYSTEM CONSOLE TABLE

by Don Pantle

When we announced on July 1st that the 2000/E and 2000/F now have a system console and table, some people did not realize the full impact. The 2762A console does not have a pedestal; it's supposed to rest on the table. The table is 60" wide X 30" deep X 28" high and takes more space than the console alone.

If your customer requires a console with a pedestal, use option 405 to delete the standard console and order the replacement (and its interface) the customer desires. It must be either a 2762A or a 2754B.

\$110 YOUR CHOICE OF CPU

by Don Pantle

The November 1 Corporate Price List offers both a 2100S and a 2108A based S/110. The customer has his choice of either a core memory or a semiconductor memory (X/2) system.

The important facts are:

- The 2108A, as configured, includes all of the 2100S features except memory protect and power fail recovery.
- Neither BCS nor HP BASIC, the software provided with the S/110, have been altered to use the 2108A instructions.

CPU	System Product # Price	Monthly Maintenance
2100S 2108A	19656A \$15,750 19656B 15,415	213

TIMESHARED D.S. AVAILABLE WITH 2108 CPU

by Don Pantle

The November 1 Corporate Price List will offer both 2100S and 2108A configurations for the 2000/E and the 2000/F. The important changes to notice are:

- The systems are priced the same so that a customer may choose his system based on which computer he desires and not price.
- The 2000/F price is lowered to \$63,500. The 2000/E remains \$34,950.
- The 2108A computer which replaces the 2100S contains all features of the 2100S except memory protect which is not used by TSB/E or TSB/F.
- The 2108A's are configured with low density memory, X/2.
- Neither the TSB/E nor the TSB/F software have been altered for these systems.
- 6. The maintenance prices for 2108A systems are lower.

Operating System	CPU	System Product No.	Price	Monthly Maintenance
TSB/E	2100\$	19661B	\$34,950	\$320
	2108A	19661C	34,950	276
TSB/F	2100S	19663B	63,500	526
	2108A	19663C	63,500	451

RECENT CLOSES

HP 2000 MANAGEMENT SYSTEMS ORDERS APPLICATIONS

by Dan Jorgenson

Several recent orders for HP 2000 Series Management Systems are highlighted below. Moving west to east coast

LONGS DRUG STORES, INC., WALNUT CREEK, CALIFORNIA

Reed Hilliard of Neely Santa Clara office had the right prescription for Longs Drugs, a large west coast drug store chain: $\frac{1}{2}$ M/230

Because of the limited growth path and high percentage of tape cassette errors of the Datapoint 2200, the M/230 System was picked to replace multiple Datapoint 2200's in Longs' accounting department. The M/230 under control of TCS will eventually have 11–16 HP 2640 terminals on it to enter and edit accounting data for magnetic tape transfer to the corporate computer system (NCR 100 at time of this order). Longs' programmers are currently implementing their own data entry software. The M/230 with its full complement of terminals has a price tag of approximately \$100K.

Apparently, the M/230 was a powerful prescription—Reed followed up the M/230 order with an order for an HP 3000 to replace the NCR 100! The 3000 will become the new corporate computer, and a combination of multiple 230's

and a 3000 could form the basis for a future prescription pharmacy data base management system. Contact *Larry Hartge* in Sales Development for further information.

CITY AND COUNTY OF DENVER, COLORADO

An M/260 is operating in the rarefied atmosphere of the Mile High City. It is installed in the Manpower Administration Department of Denver's city-county government and maintains a data base (using IMAGE/2000) of available jobs, and minority and student job applicants.

Stu Kagan, now of the Neely Santa Clara office, sold this account over DEC and Data General competition. Key to the sale was true data base management capability at a minicomputer price. Currently, the data base fits on one 5 Mbyte disc and is accessed through the console terminal (HP 2615) using QUERY/2000. A tally printer (12987A) is used for printing reports. Future plans call for additional disc storage and multiple terminal operations using TCS and 12920A multiplexer. Contact Bill Senske in Sales Development for further information.

FALCONER COMPANY, BALTIMORE, MARYLAND

Account control has paid off for *Bob Bolcik* of the Rockville office. Falconer Company, an established HP customer, has ordered an \$80K M/260 system to keep track of orders for its personalized bank check printing service. The M/260 data base management capability, IMAGE/2000, was a key factor in this sale by minimizing application program development time. This system will use TCS also to allow two 2615 terminals to enter and manipulate order data. A tally printer (12987A) will be used to print reports while 20 Mbytes of disc storage (4-7900's) will be used for Falconer's data base. Contact *Jim Elliott* in Sales Development for further information.

OEM AGREEMENTS SIGNED IN SEPTEMBER

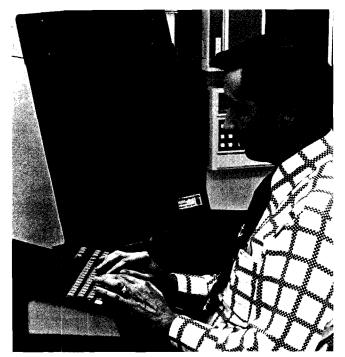
by Penny Matlock

The following OEM agreements were signed during the month of September. Congratulations to the Field Engineers listed below:

Customer	Field Engineer	Equipment	Applications
Apollo Information Management Systems	Ron Johnson	1 System	Hospital Management Information System
Control Data Corp.	Tom Rappeth	25 Tapes	Military System
Intermedia Systems	Bill Hilliard	5 Systems	Display Systems
Jones & Henry	Bill Payne	5 Systems	Payroll & Accounting
Logics System	Ron Westergren	5 Systems	Off Line Plotting
Owens-Illinois	Jim VanSlambrook	1 System	Satellite Navigation
Serpro	Oscar Barbosa	100 Systems	
TimeShare Corp.	Alan Greenfield	25 Systems	Educational & Commercial Time Sharing Systems
U. of W. Australia	Bruce Graham	5 Systems	

EDUCATIONAL NEWS

ADCIS SUMMER MEETING



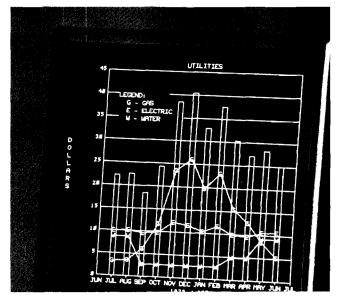
Rich Ferguson, your Sales Development Education Man, trying out the Plasma Display Terminal.

by John Wynbeek

This summer's Association for the Development of Computer-Based Instructional Systems (ADCIS) meeting was held August 12–14 at Western Washington State College in Bellingham, Washington. The conference was attended by approximately 150 CAI specialists including representatives of all the major CAI centers in the United States and Canada. There to tell them what HP has to offer were Hal Peters and John Wynbeek from Educational Marketing, Dick McClelland from HP's Bellevue, Washington, sales office, and Don Thomson from HP's Vancouver sales office.

The theme of the conference was Networking which included both the concept of physical interconnection of computers and the sharing of computer-based curricula, either via computer networks or indirect transfer from one machine to another. Hal showed how effectively HP can handle the latter by running a course which had been converted from Coursewriter III, Version 3 to HP's Course Writing Facility (CWF) using the CWIII, V3 to CWF Conversion Facility. This demonstration received many nods of approval from the advocates of improving transferability of computer-based instructional material from one kind of machine to another.

Don McClain of the University of Iowa, presented a paper which touched on both aspects of the conference theme. The paper was entitled "CWIII ON A MINICOMPUTER" and contrasted the various features of HP's Course Writing



Graph displayed on the Plasma Display Terminal.

Facility running on their 2000F with CWIII, V3 available on their IBM 360/65. Attendees were generally impressed with so much capability from a comparatively small machine. *Don* also briefly mentioned the project at the University to interface the 2000F with an IBM 360 (2000G project).

A thought provoking session on "The Ideal Instructional Terminal" made it obvious that on-line graphics capabilities are becoming more widely available and will receive increased attention from educational computer users. Coincidentally, we announced a new software product "Timeshared Graphics for Tektronix Terminals" described in the October 1st issue of the Data Systems NEWS-LETTER (Vol. 1, No. 16, page 4). This package was demonstrated on Tektronix 4010 series terminals. We also demonstrated a developmental version of software operating a Magnavox Model 10000 Plasma Display terminal. Both types of terminals were running remotely from the 2000C High Speed at Evergreen College in Olympia, Washington. Communication at 1200 baud was facilitated by a pair of VADIC modems.

USER "SOCKS IT TO 'EM"



by Pat Danzer

In a letter to the editor of COMPUTER WORLD, Thomas R. Harborn chastizes COMPUTER WORLD for "...perpetuating archaic and inefficient modes of operation...". The reference was to a story entitled "TP Monitor Separates Student, Administrative Data" printed in COMPUTER WORLD, August 2nd.

Mr. Harborn, Director of the Computer Center at Anderson College, Anderson, Indiana, cited their use of one system, an HP 3000, to meet all their student and administrative needs, averaging three to seven simultaneous multiprogrammed jobs and supporting twelve terminals.

Entitled "THEY DID TWICE THE WORK AT HALF THE COST IN INDIANA", this article is a good testimony from a satisfied customer. For a reprint, contact *Rich Ferguson* in Sales Development.

ANNOUNCING THE HP 2640A CRT TERMINAL

by OEM Product Marketing

From timesharing to sophisticated data entry applications, the HP 2640A leads the pack. MOST ANY TERMINAL IS A THING OF BEAUTY, THE 2640 IS A JOY FOREVER!* Get those target accounts with these seven joys forever:

* with apologies to John Keats

"A thing of beauty is a joy for ever;
Its loveliness increases; it will never
Pass into nothingness; but still will keep
A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing."

HIGH RESOLUTION/EASY TO READ DISPLAY!

The 2640A has a 5-inch by 10-inch rectangular display providing a 1,920 character capacity in 24 lines of 80 characters per line. The characters are formed by a 7×9 dot matrix generated in a 9×15 dot character cell. The high resolution of the 7×9 dot matrix is augmented by ½ space dot shifting for precise character definition; and by the use of the enlarged character cell for wide character and line separation, underlining, line descenders, and inverse video. These display features are engineered to increase clarity and ease lengthy sessions at the CRT terminal.

PLUG-IN CHARACTER SETS!

Recognizing the demand for terminals that speak many languages and fill diverse sets of needs, the HP 2640A has the capacity to include up to four 128 character sets resident concurrently in the terminal. Adjacent characters on the display may be from any of the four character sets. A Math Character Set and Line Drawing Set are available with the optional Underline, Blinking and Half-Bright feature.

SMART MEMORY (WITH 4K RAMS)!

Because of the efficient linking memory organization (transparent to the user) spaces to the right of line feeds are not stored in memory. Consequently, the basic 2640A terminal equipped with 1024 characters of display memory can store from 8 to 50 lines of information dependent on line length. Memory options of +2048 and +4096 bytes expand this line capacity to a maximum of 400 short lines of information. Lines are viewed 24 at a time by using the roll up, roll down, next page, and previous page keys.

POP-IN MODULARITY AND EXPANDABILITY!

The modular computer-like construction of the 2640A is designed for ease of service. Digital electronics are contained on printed circuit cards that can be easily exchanged within the terminal. Up to 14 cards can be accommodated to allow a flexible choice of options. The combination of microprogramming and modularity means that this terminal can be expanded as new technologies and devices become available.

MICROPROCESSOR CONTROL!

The operating characteristics of the 2640A terminal are controlled through firmware. The terminal's microprocessor

*

ANNOUNCING - - THE

The HP 2640A \$2,640 Each B



TOMORROW'S TE

manages memory allocation, data communications, keyboard scanning, and display control. This microprocessor implementation and the use of Single Data Bus architecture yields a terminal utilizing electronics and mechanics with a wide range of capabilities and potential for future enhancements.

CHARACTER OR BLOCK MODE (SWITCH SELECTABLE!)

The 2640A will operate character-by-character as a completely interactive terminal or is capable of operating a block at a time. Text can be composed and edited locally allowing the terminal user to verify and correct data before transmission to the CPU. Editing and CPU connect time are significantly reduced by such features as: character or line insert and delete, cursor addressability and positioning control, programmable protected fields, off-screen storage with scrolling and page select capability, tabulation, transparent display control characters, eight special function keys for user defined routines, such as forms entering, and a positionable memory protect.

SELF-TEST!

The HP 2640A has been engineered for high reliability, ease of maintenance testing, and rapid repair when needed. By depressing the TEST button, the user receives a Go/No-Go indication from results of a memory checkerboard test, firmware test, and display verification — the terminal that tests itself!

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INTELLIGENT NEXT STEP



CRT Terminal The Six-Pack!

he quality minals combining semiconductor Profession volume





Quantity	1-8 6-74 78-99	100-148 150-249 250+
End User	\$3,000 \$2,640	
a. Oty/Order	List Price (12% * Common	
b. No Agree- ment Re- quired	discount	
HP Computer System OEM	77.550	
a. No Quantity discount	(15% Functional discount)	
Volume Terminal Agreements	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
a, OEM or End User	\$2,550 (15%	\$2,490 \$2,400 \$2,310 (17% (20% (23%
b. Minimum 75 units	discount	t) discount) discount) discount)

* THE 12% END-USER DISCOUNT APPLIES TO THE STANDARD 2640A ONLY. ALL OTHER DISCOUNTS APPLY TO OPTIONS AND ACCESSORIES AS WELL.

	PRODUCT NO.	745 V	DESCRIPTION/NOTES		PRICE
	2840A	CRT Terminal Block or character m 110-2400 Baud; RS2 include computer int	node (switch selectable); upper case; 1024 E 132; includes 2 I/O slots; expandeble to 815 rerface)	lytas of storage; inverse video; 12 bytes maximum. (does not	\$3000 List
	opt. 001		men displayable control codes. NOTE: Order at least one of opt. 005/008	/007	100
	opt. 905	103/202 Modern /Mux (Adds male RS232 co			50
•	opt. 007	RŞ232C Cable Adds female RS232	connector		50
*	opt. Q1Q	Simplified Keyboard Replaces standard m padi	ultitask keyboord w/typewriter competible	keyboard (including numeric	-100
	opt. 015	230V/50 Hz		2.14.7	N/C
	13231A	DISPLAY ENHANCEM Adds blinking, half-b (requires 1 I/O slot)	ENTS pright & underline and provides for addition	of three 128-character sets	250
	opt. 201	Math Character Set Adds display of inte	gral signs, Greek letters, etc.		100
	opt. 202	Line Drawing Set Adds display of cont	inuous horizontal and vertical line segmen		100 🚉
are accepting APO's	13233A	TERMINAL MEMORY 2048 bytes of additi	MODULE (+2K) onal storage for 2640A, (Regulres 1 I/O st		250
November 1 orders December 1	13234A . 123	TERMINAL MEMORY 4096 bytes of additi	MODULE (+4K) onal storage for 2640A. (Requires 1 I/O sl	on).	375
	13238A	TERMINAL DUPLEX F	REGISTER CRT Terminal (requires 1 1/0 slot).		100
SE VOLUME ACCOUNTS!!!	opt 001	HP 9866 Cable	ection to 9866 line printer.		50
2640A PRICING pt Include Computer Interface)	18 240 A	2640 INPUT/OUTPUT Adds 5 I/O slots in 2		The second secon	150

RE-RELEASE OF IMF-1, IDF-1, AND HP MATH

by Bill Ansley

Here is an outline of our policies and plans for the re-release of IMF-1, IDF-1, and HP MATH.

PURPOSE FOR RE-RELEASE

A. To allow licensing to non-educational customers, including service bureaus and businesses.

This will provide:

- Income from the software license fees and system sales from these additional customers.
- Additional sales opportunities by having service bureaus provide wider access to our application packages.
- Additional sales opportunities by making the packages available to businesses for Industrial Training.
- B. To unbundle Applications Software.

This will provide:

- 1. Additional income from new customers.
- 2. A more accurate accessment of the importance of application software in systems sales.
- C. To bring sales documentation up to present standards by providing—
 - 1. Data sheets
 - 2. Sales manual
 - A new application note for HP Math to cover new courses. (These will be mailed to you as they are available over the next few weeks.)
- D. To bring applications software under a new software maintenance policy.
- E. To remove all bugs found to date.
- F. To highlight two additional HP Math courses.

SUMMARY OF PRICES:

Name	Product #	License Maintenance Fee Subsc. BMMC: \$/mo.
IMF-1	20308A	\$2,000 15 35
IDF-1	20309A	\$1,000
MATH	20310A	\$1,000
CWF	24383A	\$2,500 (Previously \$3,000 w/(MF-1)
		25 45
Graphics	20311A	\$ 500 (Sept. Price List)
7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		15 35
COMBINATIO	NS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
IMF, IDF	20004A	\$2,500
IMF, CWF	20004B	\$3,000
IMF, Math	20004C	\$2,500 (Sums of the above)
IMF, IDF, MATH, GRAPHICS	20004D	\$3,000
IMF, IDF, CWF, GRAPHICS	20004E	\$4,000

CONVERSION OF CURRENT CUSTOMERS TO NEW PACKAGES

Current customers have been or will be informed of the new packages and the policies on them via the HP Educational Users Group Newsletter and Computer News.

A. Current Packages Leased by Customer

The current versions of IMF, IDF, and MATH will be obsolete on Feb. 1, 1975, and will no longer be supported. Customers having these packages by Nov. 1, 1974, will be converted to the new packages between Nov. 1, 1974, and Feb. 1, 1975, at no charge. However, the new software maintenance policies will go into effect upon installation of the new packages. Also, any manuals needed will have to be purchased.

NEW CUSTOMERS AFTER NOV. 1, 1974

The new packages will then be available to all HP customers, educational and non-educational, at the prices previously shown.

Note that the new packages will all be under the new software maintenance policies.

PROVISIONS OF THE ONE TIME LICENSE AGREEMENT

Note that CWF and the GRAPHICS package are already under the one time license agreement. The packages are licensed to end users of HP TS systems. This means that a service bureau which has HP equipment could get a license for the packages. Also, a commercial firm which uses the system and packages for its own internal use can license the packages. An OEM which gets systems from us and sells them to the eventual user cannot obtain a license and then supply the packages to their customers. The OEM could, if they wish, inform their customers about the HP packages and the customers themselves could license the packages directly from HP.

A licensed user may transfer copies of the packages onto other systems which he owns without additional license fees to HP. He may NOT transfer copies to other people outside his organization. Software maintenance charges for the case of multiple systems owned by one user will be covered in the software maintenance policy guidelines. For now, use the current license agreement. It will soon be modified to stress the above points.

A letter announcing this policy was mailed to all educational customers and field engineers the first week in October.

COMPUTERS FOR CANADIANS

by Pat Danzer

Ontario, Canada, has been put on the map as far as educational computers are concerned! Last month HP sold two 2000F's to universities in Ontario.

The first was to McMaster University in Hamilton, Ontario. McMaster needed an entry level timesharing system. A system to orient the students on basic computer usage, interactive computing, the fundamentals of programming, etc. They had three alternatives; to upgrade their CDC 6400, to upgrade their IBM 158, or to buy a minicomputer to handle this student need.

(Continued on page 11)

COMPUTERS FOR CANADIANS - (Continued)

Two factors contributed to the HP choice and resultant sale. First, an onsite visit to the University of Iowa to demonstrate HP's capabilities. The people from McMaster spent a day and a half viewing the facilities and talking to people in many departments involved in computer usage.

Second, a key person from McMaster attended the HP Business School Users Group Meeting in Montreal. He was very impressed by what HP had to offer in that area.

The York University situation was different in that it was a clear case of financial justification. York had been spending about \$2,000 a month for outside computer services which provided them with five terminals. For approximately the same amount of money, York could buy an HP 2000F with the capability of supporting 32 terminals. Therefore, the purchase of a 2000F was clearly advantageous to them dollar-wise and facility-wise.

A good part of the computer usage at York will be for the school of business. Again, a school representative attended the HP Business School User's Group Meeting in Montreal and was favorably impressed.

Reference selling is one of the best techniques to use, and it is nice to know that our Canadian friends will now have two installations in their area to use, and won't have to go all the way to lowa!

VADIC 1200 BAUD FULL DUPLEX MODEMS

by John Wynbeek

*For technical information on operating principles see article "Full Duplex Communication on Two Wire Service", *Modern Data*, December, 1973, pp. 56-57.

Increased use of CRT and graphics terminals such as the Tektronix 4010 Series have spurred interest in higherspeed remote communication with both 2000 and 3000 computer systems. With this in mind, we have informally tested the Vadic VA3400 series modems on both 2000 (C High Speed and F) and 3000 computers and obtained excellent performance on both long and short haul connections. These modems are true full duplex, 1200 baud modems that operate on a single dial-up or leased telephone line.*

A pair of VA3400 modems is needed; one at the terminal and one at the computer. If a dial-up line is used, the modem at the computer can be accessed by any remote site equipped with a VA3400. Note that VA3400's only communicate with other VA3400's; no other type of modem can communicate with a VA3400. However, VA3400's will operate at speeds as low as one-quarter of the selected speed. This means that part of the time a user can operate at 1200 baud with a graphic device for instance and then use it with a device whose highest speed is less than 1200 baud but not less than 300 baud.

A data access arrangement (DAA) is required to connect a VA3400 to a telephone line as there are no acoustic couplers presently available. Typical installations are shown in the accompanying figures. Figure 1 shows the configuration at the computer site which consists of an automatic

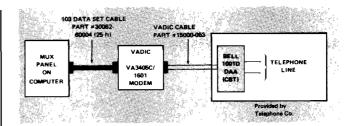


Figure 1. Typical Configuration at Computer Site

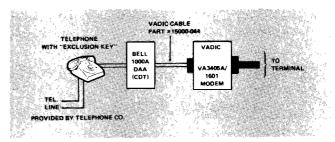


Figure 2. Typical Configuration at Terminal Site

answer modem (VA3405C/1601) and a Bell Systems 1001D data access arrangement. No telephone set is required. A standard HP 103-202 Data Set Cable (typically HP Part #30062-60004 - 25 ft.) interfaces between the computer and the modem. A cable ordered with the modem connects to the DAA (VADIC PART #15000-053).

TYPICAL CONFIGURATION AT COMPUTER SITE

Figure 2 shows the configuration at the remote terminal site. A manual originate modem is used (VA3405A) with a 1000A DAA which is connected to a telephone equipped with an EXCLUSION KEY for manual talk/data transfer. A cable ordered with the modem connects to the DAA (VADIC PART #15000-044). The terminal cable is the cable that would normally be used to connect the terminal to an acoustic coupler conforming to RS232C specifications.

TYPICAL CONFIGURATION AT TERMINAL SITE

To establish the connection between the terminal and the computer, the user calls the number of the line at the computer equipped with a VADIC modem and listens for the answer tone. When he hears the tone, he transfers the telephone line to the DAA by pulling up one of the switch-hook buttons (the EXCLUSION KEY) on the telephone. The user can then log on to the system in the normal fashion.

Statistics: VA3400 Series

Manufacturer: Vadic Corporation

505 East Middlefield Road Mountain View, CA 94043

Price: \$890 each, quantity 1-10
Rental: Not available through VADIC Delivery: Approximately 6–8 weeks

Warranty: 1 year unconditional, \$50 repair or replace

during 2nd or 3rd year

(Continued on page 12)

VADIC 1200 BAUD FULL DUPLEX MODEMS - (Continued)

Service: Direct to factory, allow 3 week turnaround

MTBF: 50,000 hours VADIC Sales Offices:

East of Mississippi call 609-696-1440 West of Mississippi call 415-965-1620 Canada (Toronto) call 416-292-1475

Vadic offers a number of different options in the VA3400 line to meet various line and interface arrangements. The modems are also available in a rackmounted configuration. Sales Development has sent a copy or two of a brochure on

the VADIC VA3400 modem to each US sales office which will provide additional information. Customers expressing interest in obtaining these devices should be referred directly to VADIC for specific ordering information and delivery schedules.

Although these modems have been used successfully over the past few months at Cupertino, no formal testing has been performed and no official endorsement of these devices has been made by HP. This article is intended merely to inform you of the existence of a particular modem that will work satisfactorily with our timeshared systems.

SALES AIDS

SCIENTIFIC/310 WORKS FOR A LIVING

by Sherry Washing

This flashy S/310 ad appeared in the October 11th edition of SCIENCE, the October 17th edition of ELECTRONICS,

and the October issue of *INDUSTRIAL RESEARCH*. The ad will be repeated in the same magazines in November.

While your phones are ringing off the hooks with S/310 prospects, be sure to inform your customer that the S/310 is now available with a 21MX at the new low price of \$32,400!

If you want to get more out of your quota, "put the Scientific/310 into it".



If you want to get <u>more</u> out of your lab, put the Scientific /310 into it.

Like any good lab system, HP's $\rm S$ - 310 lets you capture critical events in real time. Concurred by with extensive program development and computation.

HOWEVER, the S/310 does even $\underline{\text{more.}}\dots$ to get more.

By linking the \$7310 into a network, you can share data and work loads with larger systems $\,$

By adding HP's extended data base management, you make data manipulation and report generation easy.

And HP's microprogramming capability lets you speed program execution from 2 to 20 times.

This innovation works for a ! . ng.

You do. So call us

HP minicomputers. They work for a living.



This advertisement will first appear in SCIENCE, October 11, 1974; ELECTRONICS, October 17, 1974; INDUSTRIAL RESEARCH, October, 1974

DEC/DATA GENERAL BEWARE!

by Sherry Washing

The accompanying charts show how well the new S/310-MX with the 2108 processor and X/2 memory competes with DEC and Data General Real Time Systems, RSX-11D and RDOS. Besides being competitive in price, we also offer all the special power and microcode features

of the MX, a disc twice as fast as DEC's, and memory protect and parity, which is not even available on the Nova 2/10. Whoever heard of a reliable real-time multiprogramming system without hardware protection of key foreground tasks?

Now you can see how really competitive we are, so get out and sell those S/310-MX's!

DEC 11/40 COMPETITIVE ANALYSIS

		: -///2.2004/1944				
Industrial 1142-D	\$48,900	S/310-mx	\$32,400			
11/40 with 48K parity memory, EAU, 5 Mbyte disc, memory management and line frequency	48K minimum veguited for RS	Option 161 (32K) X-11D	4,300			
clock.	> only line frequency vs. crystal clock	> only line frequency clock vs. crystal clock accuracy				
Floating Point Hardware	+ 1,400					
30 cps DEC writer	ind.	Replace TTY with	3,705			
(72 columns)		Terminet (118 columns)				
Paper Tape Reader	+ 2,400 → Ma	ny be required for Agnostics	incl.			
11/40 RSX-11D	\$52,700	S/310-mx	\$40,4051			

DEC 11/45 COMPETITIVE ANALYSIS

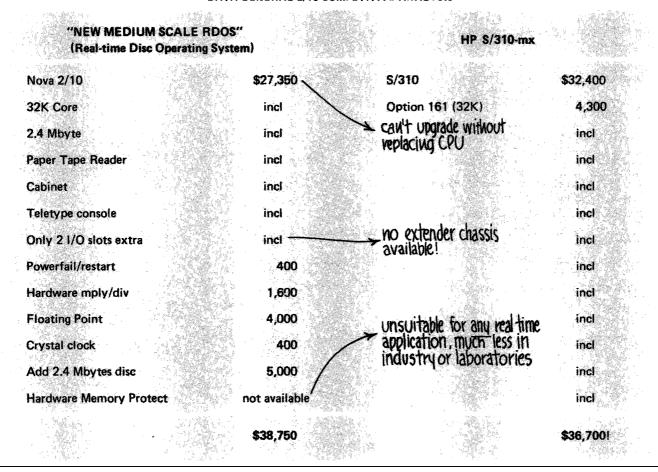
- Vicheriten - Large Allendo.'.

11/45	MH	\$67,370	S/310-mx	\$32,400
	11/45 with 48K parity memory,		Option 161 (32K)	4,300
4.0 Sh@haliki7	memory management, 5 Mbyte disc, and line frequency clock ———		→ 48K minimum required for RSX-110	
	Floating Point Processor	+ 5,290	crystal clock	
NAME AND THE PARTY OF	30 cps DEC writer (72 columns)	incl.	Replace TTY with terminet (118 columns)	3,705
	Paper Tape Reader	+ 2,400 \$75,060	Needed for diagnosti \$/310-mx	C5 incl. \$40,4051
	に対する ロング・1 日本語、英語語語は、 とは、新語語は、 とは、新語語は、			

(Continued on page 14)



DATA GENERAL 2/10 COMPETITIVE ANALYSIS



2000 SERIES CONTRIBUTED LIBRARY INDEX AVAILABLE

by Ginny Loyola

The complete INDEX TO HP 2000 SERIES CONTRIBUTED LIBRARY (HP 5952-4369) is now available. For the first time, the Index now lists both TSB BASIC and NON-BASIC contributed programs. Bulk shipments will be made to all HP sales offices and additional copies may be ordered from Dave Asplund, Bldg. 9H, Palo Alto.

This is a good customer hand-out to let your customers know all of the current library material available, along with ordering information and prices. Both the BASIC and NON-BASIC programs are listed by their major classification categories as well as in cross-reference format.

Volume V (HP 36000-91005) is our "Games" book—a joint publication with People's Computer Company, illustrating the educational values of our games. The book is in the final stages before going to the printer and will be out in November along with the mag tape (HP 36000-10005).

INTERNATIONAL NEWS

YOKOGAWA-HP (YHP) HP TAIWAN DO THEM-SELVES A FAVOR

by Norman Choy

YHP and HP Taiwan jumped on the OEM bandwagon with fervor in October. In Japan, *Tokayuki Satoh* and *H. Tanimura* journeyed from the Hachioji factory to Tokyo to receive the straight scoop on the current OEM policies and purchase agreements. Notwithstanding the local business customs, Cupertino's OEM policy fits very well in the Japanese marketplace.

In Taiwan, where Lok Lin (General Manager) and his enthusiastic sales team of Robert Liu, S.L. Lui, and Pierre Loisel formed the captive audience, the OEM briefing came at an opportune time. Several substantial OEM prospects are at the stage of discussing terms and conditions with HP.

The Far East portion of the HPIC region has gotten the word. Both OEM and End User business in balance is best for HP and the customer.

POTPOURRI

NEW EDITOR FOR "COMPUTER NEWS"

by Editor

Pictured below is *Linda Schefter*, the new editor of "COMPUTER NEWS". Linda replaces Henry Horn who recently transferred to Hewlett-Packard's Advanced Products Division to publish their in-house newsletter.

Linda is a 1974 graduate of Illinois University and joined HP's Marketing Communications Department as editor in July. Her first issue (Vol. 1, No. 4) is already in the field.

Additions and/or changes to the mailing list should be handled by sending the "blue" COMPUTER NEWS mailing list card to Linda's attention, Building 40, Cupertino. Every sales office should have a supply of these cards. Additional mailing list cards can be obtained from Building 9H, Palo Alto — part number 5952-4488.

Please direct any comments concerning our customer newsletter to Linda.



Linda Schefter

21MX CUSTOMER SEMINAR GENERATES MAXIMUM LEADS

by Jim Elliott

A major success was achieved by the Rockville sales office with a 21MX Customer Sales Seminar. The seminar produced upwards of 133 qualified leads from a broad spectrum of users located across the United States. All this was done without any prior notification of the upcoming event.

Impossible!!! Customer Seminars are complicated things you say?!! May be, but *Wil Workman's* ingenious idea suggests only three basic steps:

- Watch the trade journals for announcement of a major conference to be held in the area. (In this case, a major hotel was used.)
- 2. Rent a suite in the same facility.
- 3. Put a sign in the main lobby inviting the public to drop in.

The details of the content of the seminar are up to you. However, if the need arises, give Rockville a call at (301) 948-6370.

P.S. Watch the mails for your share of the leads.





Address inquiries and comments to: Nancy Sanford - Editor Sales Development - Building 40

HEWLETT-PACKARD DATA SYSTEMS
11000 Wolfe Road, Cupertino, California 95014 U.S.A.

John Kobis -Art Director