

COMPUTER SYSTEMS NEWSLETTER

For HP Field Sales Personnel



Vol. 2, No. 14
June 1, 1977

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BOISE DIVISION NEWS

Sales Aids

Discounts on Terminets

By: Steve Davis/BOISE

Boise Division is offering a special sale price on 2762A Terminets at the low price of \$3950 per unit. When purchased and delivered in quantities of 5-10, the Terminets sell for \$3000 each. For quantities greater than 10, still lower prices can be negotiated.

These Terminets include the pedestal and restocking shelf (Option 018) free of charge.

This offer is a golden opportunity to provide significant savings to your customers.

SELL TERMINETS!

Used Equipment Sale

By: Steve Davis/BOISE

The following used equipment is available from Boise Division:

Product	Options	Serial Number	Sale Price
13182A	001/888	(1 available)	\$ 5,900.00
13193A	STD/888	(2 available)	230.00
13196A	001/888	(1 available)	460.00
2607A	001/888	1336A-00364	4,900.00
2752A	STD/888	1302A-04462	1,750.00
2752A	STD/888	1302A-06160	1,750.00
2767A	STD/888	1309A-00488	10,725.00
2767A	STD/888	1309A-00663	10,725.00
2767A	STD/888	1309A-00690	10,725.00
2767A	STD/888	0976A-00218	10,725.00
7261A (or 12986A)	002/888	1316A-00319	2,600.00
7261A (or 12986A)	003/888	1509F-00169	2,600.00

Remember — all quotes should be made "subject to prior sale." In addition, each order should specify the serial number of the unit and should also specify option 888 (designating used equipment). Before transmitting your order, contact Boise Division Order Processing to insure that the unit you desire is available.

DISC MEMORY NEWS

Division News

DMD Organization Grows

By: Bob Hoke/DMD

The DMD Marketing organization is expanding in anticipation of relocating to Boise around July 1st. DMD Marketing has added a Marketing Services function and we've asked *Jerry Worth* to be our Marketing Services Manager and *Beth Olson* to be our Order Processing Supervisor.

Jerry is a long time HP employee (about 20 years) and has worked in every aspect of the marketing system. *Jerry*, additionally, has an excellent systems background and was most recently a master Scheduler from DSD. *Jerry's* experience and knowledge will ensure an excellent marketing services function. Reporting to *Jerry* as Order Processing Supervisor is *Beth Olson*. You may remember *Beth* at Data Systems where she was most recently an OP lead. *Beth's* enthusiasm and excellent background in OP policies and procedures gives DMD a significant strength in that area.

Jerry's and *Beth's* combined experience guarantee a smoothly running and efficient OP function. Expect great things from them. They are up to it.

CE CORNER

New Service Kits Available

By: Bob Hoke/DMD

Customer Service Kits and Head Alignment Packs are now available for the HP 7920. Part numbers and price are: 13399A (7920 Service Kit) — \$12,900; 13398A (Head Alignment Pack) — \$2400. Also released and available is the customer version of the Servo Formatter for the HP 7905 13214C Formatter — \$2700. These products will appear in the 1 July CPL. Until that time you will have to override HEART when you place your order.

Product News

Longer Cables for the 13395A

By: Bob Hoke/DMD

We have now added Option 001 to the 13395. This will provide one 7920S-001 and one 7920 Standard, as opposed to two Standards. This enables the 13395A to be added as the first two drives on HP System 3000. Cable configurations for the 7920S/13395A are as follows:

System Configuration	Product	Cable Length	Connection
Add-On Drive	7920S	8' Multi Unit and 50' Data Cable	Up Stream Drive Controller
As 1st Drive (no existing 7920S or 13180B)	7920S-001	18' Multi Unit 25' Data Cable	Controller Controller
Add-On Drive	13395A	(2) 8' Multi Unit (2) 50' Data Cable	Up Stream Drive Controller
As 1st two Drives (no existing 7920S or 13180B)	13395A-001	18' Multi Unit 25' Data Cable 8' Multi Unit 50' Data Cable	Controller Controller Up Stream Drive Controller

The cable configuration on 7920S/13395A results because the Multi Unit Cable is daisy-chained from the Controller to 1st Drive, from 1st and 2nd, etc. The 18' Multi Unit Cable enables you to go from the Controller installed in the system cabinet to the 1st Drive. The 8' Multi Unit Cable enables you to reach the next drive. The Data Cable always goes back to Controller for all 8 drives. The 1st drive is 25' long and for all subsequent drives, 50' long.

Hope this helps.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

Order Processing

Correction to OEM Discounts

By: Bob Hoke/DMD

This is a correction to the article on OEM/VEU Agreements which appeared on page 4 of the May 1st issue of the Newsletter.

There are no changes to the way the 12960, 12962, 13180, 13180A/B are being treated. The only change is on the new product 7920M and S. The new products are subject to the discount that is the same as the system they will be added to.

For example: in an OEM situation the 12960, 12962 and 13180 are categorized as 2B and are subject to Schedule B discount regardless of the system they are added to. The 7920M/S are categorized as 2B but are subject to the discount schedule per the system they are added to. For example, schedule B for add-on's to 21MX and 212X DISComputer and Schedule C for HP 1000 and 3000 Systems.

GOOD SELLING!

DATA SYSTEMS NEWS

Product News

New Way of Ordering Cabinets

By: Jim McCabe/DSD

Beginning July 1 you can order 56" cabinets with new, easier-to-understand options. All other options (100, 101, 300, 301, etc.) will disappear from the price list. A new cabinet data sheet will be available to further describe these options. In the future all DSD sales literature will only reference these options. Notice that each of the new options are mutually exclusive—you need only one of the options for each cabinet bay.

29402B	Single bay 56" cabinet without power wiring (no change)	\$1150
Option 200	Standard 115V cabinet configuration: Adds power wiring and accessories to a 29402B to permit operation with 115V computers, peripherals and instrumentation. (Includes old options 120 and K05)	\$650
Option 210	Standard 230V cabinet configuration: Adds power wiring and accessories to a 29402B to permit operation with 230V computers, peripherals and instrumentation. (Includes old options 111 and K05)	\$650
Option 400	Standard 115V add-on cabinet configuration: Adds power wiring and accessories to 29402B to permit operation with 115V computers, peripherals and instrumentation. This option also permits the cabinet to be bolted together with an adjacent 29402B option 200 cabinet. (Includes old options 100, 300, K06)	\$400
Option 410	Standard 230V add-on cabinet configuration: Adds power wiring and accessories to a 29402B to permit operation with 230V computers, peripherals and instrumentation. This option also permits the cabinet to be bolted together with an	\$400

adjacent 29402B option 210 cabinet.
(Includes old options 101, 310, K06)

Also note that the 40017A heavy duty stabilizer accessory must be ordered along with single bay cabinets when the computer is racked at the top of the cabinet and a 7900/7905 disc is not included in the same rack.



HP 1000 Add-On Discs

By: Jim McCabe/DSD

Beginning July 1st, 7900 and 7905 add-on discs will be shipped from Boise rather than Cupertino. This means that the 93723A racking service for discs now only includes preparing the cabinet to receive the disc rather than racking and checking out of the disc. For example, the new definition of 93723A Option 102 is "Prepare cabinet to receive 7900A disc subsystem and mag tape unit—includes system front door". With this change 93723A Options 002, 003, 005, 007, and 107 no longer make sense and therefore will be dropped from the price list. No price changes for remaining options.

These changes do not affect the system discs in HP 1000 systems which will still be shipped from DSD Cupertino included in the system as in the past.

Cable Change for the 12889A

By: Bill Stevens/DSD

The cabling for the 12889A Hardwired Serial Interface is being enhanced by substituting a new cable (Part No. 12889-60004) for the present cable. The new cable has MS type, circular 2 pin connectors instead of BNC connectors. Customers who fabricate their own cables for longer distance interconnections than the HP supplied 12889-60004 cables reach will require the new connector (MS 3101A-10SL-4P Male and MS 3106A-10SL-4S Female connectors each with MS 3057-4A clamps). This change is being implemented now for all units being shipped.

9640A Options

By: Jim McCabe/DSD

You may have noticed that prices on some memory, I/O and peripheral options to the 9640 have not kept pace with the component price changes. To correct this problem, effective July 1st, most 9640 memory, I/O card, and peripheral options can be ordered as line items rather than 9640 options. Compatibility, prerequisites and racking requirements as defined in the old 9600 configuration guide [5952-1653(22)D] will still apply.

Example

Instead of ordering —	
P12 Option to 9640	\$1500
After July 1st order —	
12998A 8K Memory	\$750

Example

Instead of ordering —	
R10 Option to 9640	\$5324
After July 1st order —	
2762A Terminal Printer	\$4950
Option 018 Pedestal	195
12531D Interface Card	350
Option 001 Local Mode	55
	\$5550

After July 1st only the following 9640 options will remain on the Corporate Price List: 9640A, A00, A04, A06, A10, A11, A12, A13, A15, A25, A26, 015, P24, W10, W12, W11. Please continue to order software and cabinets via these options.

Also, when ordering line items, please be careful to just quote capabilities that are listed in the 5952-1653 configuration guide. For example, do not order the 12732A Flexible Disc Subsystem for the 9640 because it is not shown in the configuration guide and is not compatible with the 9640 system.



Product Content Guide

By: Bill Senske/DSD

DSD has received lots of positive comments about the new Product Content Guide. You should have all received your April 1977 version by now. It is hoped that this will prove to be a very useful tool for selling and installing products.

Please note that the Product Content Guide is updated quarterly and that the packing slip should be used for inventory purposes at installation, not the Product Content Guide.

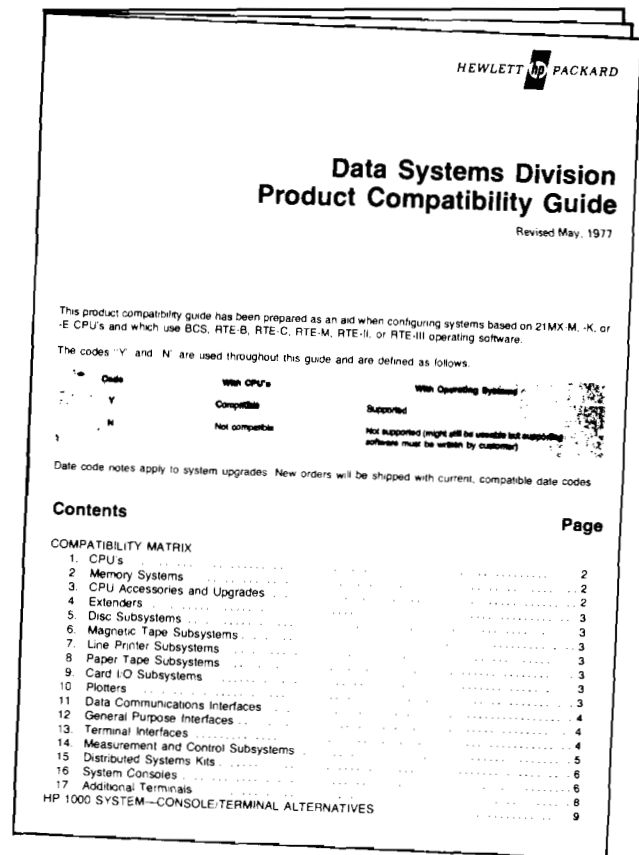
Updated DSD Product Compatibility Guide Now Available

By: John Dilks/DSD

An updated version of DSD's popular Product Compatibility Guide was distributed to all sales offices on May 20th. This time, the Guide was printed on tan paper (so you can tell it from the original) and includes RTE-M (to help you sell HP 1000 Model 20 systems).

While we have removed the "HP Private" designation from the Guide, please restrict external distribution to those who really need to know which products work with which.

Additional copies of the Guide are available directly from the Corporate Literature Depot (the publication number is 5952-9948). Since we only printed 5000 copies, orders for more than 25 copies must be approved by DSD.



DATA TERMINALS NEWS

Division News

Sales Development Lineup

By: Carl Flock/DTD

Here's who to call at DTD:

Sales Development Engineer	Region Supported
Steve Berman	NSR — South
Sarv Thakur	NSR — North
Rich Ferguson	ESR
Eric Grandjean	CSR, SA/IC
Tom Lee	MSR-E, MSR-W, SSR
Francis Marc (at Grenoble)	HPSA
Hideki Gushima (at YHP)	Japan

Sarv Thakur Joins Sales Development

By: Tom Lee/DTD



Data Terminals is expanding again! In a move to provide better support to the field, DTD has hired Sarv Thakur. Sarv has been with HP for four years working in both hardware and software design for the DSD labs.

We have divided Neely into two sections — Sarv will cover Neely-North and Steve Berman will still provide support for Neely-South.

So, for all you folks in Neely North, Sarv's your contact at DTD; call him when you need help.



Collector's Item

By: Eric Grandjean/DTD

We have recently made a reprint of articles published in our portion of the CS Newsletter. The reprint has four sections:



1. Soft Key Notes
2. Application Notes
3. Technical Notes
4. Communication/Cable Notes

We intend to update it from time to time, to enhance your collection.

We would welcome your contributions, particularly in the area of unusual applications on HP systems and especially on non-HP systems. This should prove very interesting for everyone.

You may order your copy of the reprint by completing and returning the form below:

TO: DATA TERMINALS DIVISION, Sales Development
 Building 43U, Cupertino
 ATTN: Soni Hogan

Please rush my personal copy of the Newsletter Reprints.

(Name) _____

(Office) _____

Product News

Excedrin Headache No. 13261

By: Tom Lee/DTD



"You mean I have to order device firmware?"

Picture a busy HP sales office late on a Friday afternoon. The phone rings and it is your new terminal OEM . . .

Customer:

"Hi, (insert your name), you know those 2649's I just received with Option 007?"

Salesman:

"Yes, how are things going?"

Customer:

"Well, the tapes don't work. I plug in a cartridge and they just sit there."

Salesman:

"Um . . . I don't know why they don't work . . . they are supposed to work . . . I think . . ."

Before this happens to you, REMEMBER, you must specify device support firmware (13261) in addition to Option 007 (the drives) when ordering 2649's if you want our firmware. There is a corresponding price difference between Option 007 and the 2649 and Option 007 on the 2645 which does include the firmware. Many field people ask, "Why not include the device support with Option 007 on the 2649?" To make the 2649 such a flexible product, we have allowed the OEM to buy only what he needs. Many OEM's will want to write specialized device firmware and will not want to order the 13261.

So remember the 13261 with Option 007 and you won't get that dreaded phone call!

13250B vs. 13260B (Or, What a Difference a Digit Makes . . .)

By: Steven Berman/DTD

Many field people (and some factory people) have wondered what IS the difference between a 13250B and a 13260B. Here's the explanation (again):

Consider the 2645A option 030. This option deletes the 2645A standard data communications capability. To do this, the option deletes the datacomm board, the datacomm ROM (one standard), the baud rate label (the one with the speed selections on it), AND the strip along the top of the

keyboard that has the labelling for the function, edit, and mode keys. (This is called the keyboard overlay).

Why delete all this stuff? Well, suppose somebody wanted to have asynchronous multipoint communications capability in a 2645A. Clearly they don't need (and can't use) the standard datacomm board or datacomm ROM; in addition, the baud rate label and keyboard overlay are different. So, we offer the 13260 series of products; these provide the complete package of parts unique to whatever datacomm capability you need.

Now, getting back to the topic of the article. The 13260B is the datacomm package designed to give you extended asynchronous (point-to-point) data communications. The ROM, baud rate label, and keyboard overlay are the same as the standard 2645A. The datacomm board itself is different. The board is the same board that you get if you buy a 13250B; as a matter of fact, if you buy a 13250B, all you GET is a board (HP part number 02640-60143).

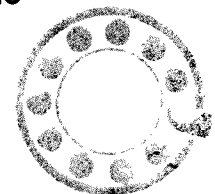
The moral of the story, folks, is don't try and outsmart yourself. Ordering a 2645 with option 030 and a 13250B will get you a non-functioning terminal (no datacomm ROM, among other things) and an unhappy customer. Go for the 13260B; that's why we have 'em.

Incidentally, should you run into a situation where someone has a 2645A and they merely wish to upgrade to the datacomm capability offered by the 13260B, buy a 13250B. Then tear out the old datacomm board (02640-60086), stuff the new one in (properly strapped first, though; best to check this carefully), and you're off! (Remember, the old ROM, keyboard overlay, and baud rate label work jut fine, right?)

There you are, gang; hope that clears up some of the confusion surrounding this area of our product line.

How to Use 2645 Tapes and Printer Over the Phone

By: John Morris/SSR



By changing the cable which connects the 12966 interface card to the HP 264X Terminal, the 2645 can be run through a modem such as the Bell 103. Since DVR05 is used, the tapes and printer can be handled. Restriction — ASCII only, no binary; tested at 300 baud only.

Modify the 12966-60008 cable as follows:

- Remove WHT/ORN from P1 pin F, reconnect to P1 pin 10.
- Remove and cut off BRN/WHT from P1 pin z.
- Connect P1 pin z to P1 pin A.

- d. For 300 BAUD — connect P1 pins 12 and 13 to P1 pin 8. Cut off the P2 (terminal) connector, install RS-232 male connector as follows:

Pin	Color	RS-232
2	Red	BA
3	Brn	BB
4	Blk	CA
7	Grn	AB
20	Wht/Orn	CD

For further information, contact me in Richardson, Texas (214) 231-2101.

RTE and the 2640 Series of CRT Terminals

By: Ken Posse/SSR

RTE is designed to operate the 264X terminals in either BLOCK or CHARACTER mode using the 12966 interface card in the computer and a 13260 (13250 in older CRT's) card in the terminal. There are two important facts to remember concerning this combination:

1. DVR05 (the RTE software supporting these terminals) checks the status of the terminal ONLY once — when the system is bootstrapped. It will not check at any other time. Therefore, if any strapping options are changed in any CRT, you MUST reboot the system from disc. If this is not done, the CRT may behave strangely.
2. In 2645 CRT's, after a strap is changed, the terminal must be either turned off, then on again or a hand reset (push RESET twice) before the change will be recognized.

This can be summed up easily: If you change an internal strap on a CRT, do so with the CRT turned off and the system halted. When you are ready to use the CRT, reboot the system and turn the 2645 power on.

Service News

Module and IC ROM Interchangeability List

By: Ed Churka/DTD

At long last, through the persistent efforts of *Bruce Hall* of Lexington, Mass., we have completed the complete (I hope) new board, exchange board, options, and IC ROM interchangeability or commonality between the entire DTD product line. *Bruce* did a list on Blue-Stripe modules and came very close. He did show us the need and that was an accomplishment!

There are four pages of easy to read part lists for all terminals to date. Some modules and IC ROM's are missing on unreleased products, and will be updated when these part numbers are established. How's that for prior notice of new products?

Where can the list be found?

In the IOSM (02640-0577-03) titled: 2640 Series Terminal Service Kit Changes (April, 1977).

This IOSM will also contain information on the new Product Support Package (PSP) plan. If you do not have your copy by the end of June, 1977, let me know and you will get personal service.

GENERAL SYSTEMS NEWS

Division News

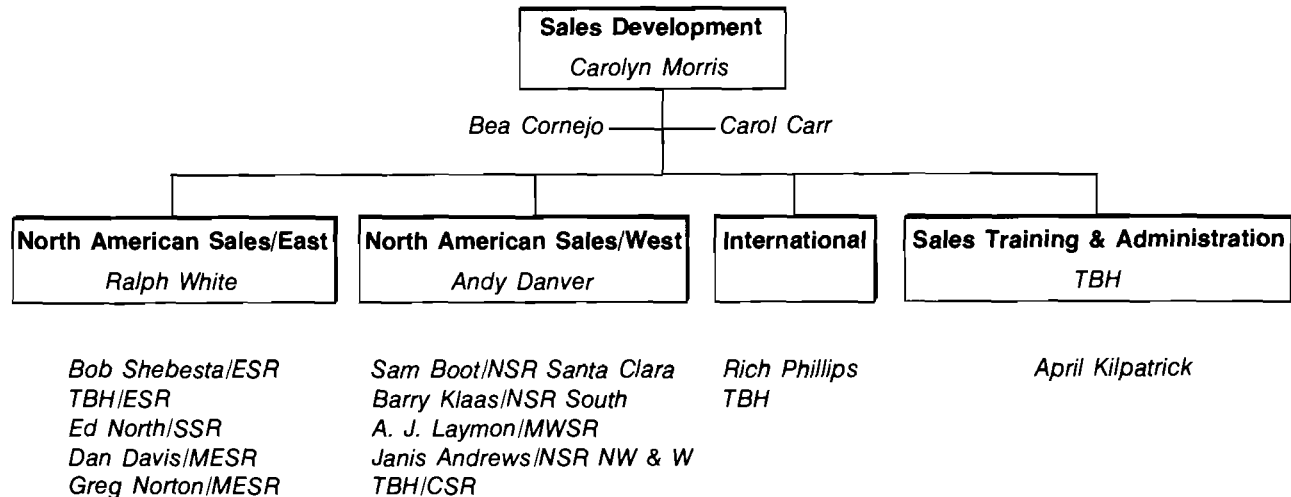
GSD Sales Development — Bigger and Better

By: Carolyn Morris/GSD

The Sales Development group at GSD is currently under reconstruction and expansion. Being outfitted to accommodate the demands of our growing business, as well as

guarantee satisfaction to you, our customer, the new GSD sales team will be larger and stronger than ever. Additional staffing and internal training will provide long-range, intensive sales support to make you even more successful.

So, whether you want seminars, customer visits, or configuration consulting, call us.



Product News

Self-Test #2

By: Rich Edwards/GSD

Welcome to part two of the "How Well Do You Know the 3000?" self-test. The following questions were given to an HP 3000 prospect by an IBM salesman. Revealed in most of the answers was a great deal of misunderstanding of the 3000's capabilities on the part of our competitor's salesman. Again, we would like to share with you the issues raised by IBM with the HP prospect and give you the REAL scoop.

All the following are prefaced by the question ... "IS IT TRUE THAT ...".

10. Instruction speeds are slower?
The HP 3000 and the IBM System/3 have different instruction sets; the 3000 models have \geq 192 instructions, whereas the System/3 models, while having differing numbers of instructions, don't exceed 28 instructions. The speeds cannot be compared.
11. Instruction compatibility with RPG II is not there?
That is, Arithmetic, Moves, Table Processing, Array Processing, Chaining, Matching Records, Control Levels (total and detail time), Internal Subroutine Execution (EXSR), External Subroutine Execution (EXIT), Go To

Operations, "READ" Operation in CALC, "EXCEPT" Operation in CALC.

RPG/3000 is compatible with IBM System/3's RPG II. In fact, the HP 3000 has instructions for specific RPG operations, such as moves, compares, etc. Note that RPG/3000 has some additional features, such as parameter passing to external routines, lacking on the System/3. Another important difference is that an RPG/3000 program can call COBOL, FORTRAN, SPL routines; the System/3 RPG can only call BAL (Basic Assembly Language) routines; this allows the 3000 user more flexibility—use the language best for each portion of an application. (Technical note: System/3 BAL programs are not compatible with either 370 assembly language or HP 3000 SPL.)

12. The spooler does not provide for operator notification when special forms are needed?

The HP 3000 spooler does handle special forms. Application programs may contain statements that will print a forms message to the operator on the system console. The output priority (OUTPRI) scheme can be used on the 3000 to separate spooled output into sorted classes.

13. The spooler may not start printing before job is complete?

Correct.

14. The spooler may not be able to be restarted?

Not true; a spoolfile can be restarted with the "SPOOL <ldv>, RESET" command.

15. RPG overlays are in increments of 1-2-3-4K increments? On the HP 3000 this refers to the segment size. The

segment sizes listed are correct; note that the segment size is controlled by the programmer on the H specification sheet. Thus, compilations are much faster due to the 3000's hardware implementation of segmentation.

16. RPG compile time tables and arrays are loaded only from disk?

Not true. Compile time arrays and tables can be in the job stream which can be loaded from disk, tape, or cards.

17. Automatic overflow is skip to 1 instead of specified by programmer?

Spacing and line skipping for printer files is the SAME in RPG/3000 as on the System/3.

18. a. Maximum number of fields per record is 127?

b. Maximum number of fields is 255?

c. Is there any data compression such as packing?

These points all refer to IMAGE/3000. The number of data item (field) names per data base is 255 and the number of data items (fields) per data entry (record) is 127. [See page 48 of the current Price/Configuration Guide (#5395-0515) for additional specifications.]

Packing on the 3000 is similar to the System/3. The HP 3000 uses packed decimal or binary representation on discs. In addition, RPG numeric fields used during processing in main memory are packed, resulting in memory data compression, a feature NOT found on the System/3 but available on the System/370.

Turn to the June 15th Issue for the last installment of the "How Well Do You Know the 3000?" Self-Test.

Competition

What Does IBM's Systems' Picture Look Like?

By: Rich Edwards/GSD

Have you gotten confused by all the recent introductions and price changes by IBM? The following chart was designed to give you a "bird's-eye" overview of how IBM's processors fit into a purchase price/main memory spectrum, showing purchase prices before and after the recent price reductions.

A very general description of each of the "systems" gives you an introduction. See detailed reports in Datapro and/or Auerbach (as well as recent GSD Field Training Manuals) for further information.

Data Processing Division (DPD):

System/370 — Family of general-purpose computers marketed by DPD; successor to the popular System/360 series. Models range from approximately \$1/2 to \$10 million in cost (115 to 168-3 and 3033 based systems).



General Systems Division (GSD):

System/3 — The most successful computer system in history; over 40,000 systems installed. First introduced (Model 10) in 1969, latest model (15D) announced June 1976. Primarily a batch system, with terminal capabilities on larger systems.

System/32 — "A compact, entry-level business computer system that includes 16Kb of main storage, a non-removable disk drive, a diskette drive, a printer, a keyboard, and a display unit in its basic configuration" — Datapro. Introduced in January 1975, over 10,000 systems installed.

System/7 — "IBM's 16-bit minicomputer is gradually attaining the status of a full-fledged general-purpose computing system. Initially limited to sensor based functions . . . now equipped with a card reader, line printer, and high performance 3340 disk drives." — Datapro.

(NOT SHOWN: Series I — "minicomputer" and the new System/34 — see separate article for description).

What Does a System/3 Cost After the Recent Price Cuts?

By: Rich Edwards/GSD

On March 29, IBM announced price cuts for both the System/3 models and add-on memory. The following pricing comparison is based upon the new prices (effective March 29) used to configure a Model 15D similar to an HP 3000 Series II Model 6 with 128 Kb memory, magnetic tape,

approximately 100 Mb disc storage, system console, 1250 lpm line printer, and an 80 column card reader. Note that no software or maintenance is included, as IBM charges by the month for each (i.e., no purchase of software on a System/3). The cost of terminals must also be added to each system.

(Besides the final comparison in costs, note the difference in the ease of configuring a system!)

IBM SYSTEM/3 — HP 3000 COMPARISON (IBM purchase prices effective March 29, 1977) (excluding software and maintenance)

IBM System/3 Model 15D			HP 3000 Model 6		
Component #	Description	Purchase Price	Part #	Description	Price
5415-D20	Processing unit w/128Kb	\$108,780	32416A	System (Model 6) w/128Kb, 50Mb disc,	\$110,000
5415-5733	Processing unit expansion	501		1600 bpi (45 ips) mag tape,	
3277	Display station, Mode/1-Console	2,940		2640B console, 103 modems	
4632	78-key console keyboard	1,205			
3340-A2	Two disc drives & control (82Mb)	36,000	7920S	50Mb add-on disc subsystem	14,000
3348	Data Module (disc) for 3340	2,200			
3348	Data Module (disc) for 3340	2,200			
3411-03	Mag Tape Unit & Control (40 ips)	24,030			
3411-3211	Single Density Feature	2,295			
3411-7003	Sys/3 attachment (req'd on 3411)	2,890			
7951	3411 Mag Tape Attachment	4,155			
4702	Local Display Adapter	6,240			
4701	Basic attachment feature ^{For Terminals}	1,530			
	Sub-Total	\$194,966		Sub-Total	\$124,000
1403-N1	132 position, 1100 lpm printer	38,140	30209A	Line printer controller	1,275
1403-5421	Printer control unit	7,685	2618A	1250 lpm, 132 position printer	35,400
5415-4150	Printer attachment for Mod 15	960	30106A	Card reader subsystem; 600 cpm	7,700
5415-4160	Printer base attachment for Mod 15	3,450			
2501	Card reader for Mod 15	12,330			
3630	1501 coupling (req'd for 2501)	168			
8090	2501 attachment (req'd on 5415)	6,965			
	TOTAL	<u>\$264,664</u>		TOTAL	<u>\$168,375</u>

Maintenance not included; software is additional

What Do the Recent IBM Marketing Announcements Mean?

By: Rich Edwards/GSD

In the past month, IBM has shown the computer industry (and the rest of the world) that it is (and intends to remain) a formidable competitor.

The year prior to March 1977 saw several major marketing announcements by various IBM divisions, including: new System/370 models 138 and 148; the Series I — IBM's first "minicomputer"; System/3 new model 15D with a third

partition and enhancements for terminals; the System/6 — word processing system from the Office Products Division.

After the dismissal of the Calcomp antitrust suit IBM went to the stock market and offered to buy back some of its outstanding shares, thus reducing its large accumulated cash holdings held in reserve. Over the past two months IBM has also been very active on the marketing front: a new /370 processor, reductions up to 35% in add-on memory prices; price reductions in /370 and System/3 models, an entirely new small business system — System/34 (see comments, below), and an operating system plus two high level languages for the Series I.

At the end of this article is a chronology of the March-April announcements.

BY FAR THE MOST IMPORTANT ANNOUNCEMENT IS THE NEW SYSTEM/34. This first release (available 1/28/77) is probably the precursor of IBM's (long-anticipated) new low cost, on-line, transaction-oriented, multiprogramming "small business" computer system. It has an all new operating system, new peripherals (including a terminal similar to HP's 2645), unbundled software including the operating system, and compatibility with the System/32 and System/3. Their marketing message is very similar to that of HP's in marketing the HP 3000: "The way to get now answers to now questions" — (see the new HP brochure "An Introduction for Managers" (#5953-0501) for complete details on the HP 3000's role in solving your commercial customer's data processing needs).

IBM is expected to gradually expand the System/34 to offer its small business customers (and divisions of large companies, too!) an on-line, multiprogramming system that is compatible with the current System/3 and System/32 software. For more details on the first "release" announcement, see the article "What's a System/34?" As we learn more about the system, we'll keep you informed.

IBM March — April 1977 Announcements

March 25 — IBM Data Processing Division (DPD) (press release)

3033 processor introduced by IBM DPD
Purchase prices of 370 models 158, 168 cut by 30%
35% reduction of purchase (effective immediately), rental & lease (effective April 1) prices of MOSFET main memory for 370 models 115, 125, 138, 148, 158, 168 and 3704 and 3705-II communications controllers.
Operating System enhancements with first software/MICROCODE/hardware package.

March 29 — IBM GSD Marketing Announcement (press release)

Purchase price reductions for System 7 Models, System/3 Models 4, 8, 12 and 15 (CPUS), System/360 Model 20 (CPU only), and 1130.

Purchase price reductions on storage (memory) increments on 3741 (floppy disc—data station), 3747 (floppy to mag tape), 6 other peripheral units; System/3, System/32, Series I and 5100 computer memory increments.

April 1 — IBM GSD Marketing Announcement (press release)

Rental reductions on System/32 and System/3 Models 8, 12, and 15 storage (memory) increments and storage increments on 3741, 3747 and 5320 units.

April 13

DPD lowered purchase (effective immediately), rental & lease (effective May 1) prices for the 370 Model 115 and 125 processors 20% – 35%, Models 135 and 145 reduced, too.

April 14

GSD "expanded its line of computers for small businesses and first-time users by introducing the SYSTEM 34, which can accommodate up to 8 operators."

April 14 — IBM-GSD Marketing Announcement (press release)

Series/1 computer software introduced: a realtime operating system and two high-level languages, FORTRAN and PL/I.

What's A System/34?

By: Rich Edwards/GSD

The System/34 is a NEW small business/first time user computer SYSTEM from IBM's General Systems Division which can accommodate up to eight terminals interactively. The System/34 was announced April 14, 1977, with first deliveries promised for January 1978. Note that this is not another MODEL in the System/32 family which is also designed for first time users, but an all new system which is IBM's first on-line, multiprogramming system by DESIGN in the small business marketplace. The following details were taken from IBM announcements and brochures. The configuration diagram was constructed from presently available information and believed to be correct.

According to IBM, the System/34 will be compatible with both the System/3 and the System/32. Official statements say that System/32 [RPG] programs "with minor modifications" can be used on the System/34.

Processor:

Model 5340
MOSFET memory: 32Kb (double the standard System/32 capacity) 48Kb, or 64Kb — 600 nSec memory cycle time.

Multiple special processors/controllers capable of operating in parallel.

Work station controller — all polling of devices is done by the work station (CRT + optional printer) controller without CPU interference.

Overlap of I/O capabilities except for diskette or data transfer with other disk reads and writes.

EBCDIC internal coding.

(NOTE: the 5340 "system unit" is a single enclosure containing the processing unit, disk, diskette, and work station controller.)

Disk Storage

NONremovable disk storage in capacity options of 8.6, 13.2, or 27.1Mb (total) storage
40mSec average access time (range: 10-55mSec)
89,000 byte/Sec data transfer rate

Diskette Media

Choice of integral unit — either one sided or double-sided
Double-density one megabyte drive

Communications

BSC (Binary Synchronous Communications) to Systems 360, 370, 3, 32, 34, 7 and 3741 Data Stations and 3747 Data Recorder

MRJE (Multi-Leaving Remote Job Entry Utility)
Data communications to a System/370 via SNA/SDLC
Transmission overlapped with all I/O devices & processing
Transmission speeds up to 9600 bps

Terminals (Display Station)

New 5251 Display Station looks like and has the characteristics of HP 264X Terminals:

1920 character display screen
Moveable typewriter-like keyboard
10-key numeric proof keyboard
Program controlled display attributes:

- Normal or bright intensity
- Blinking
- Underline
- Reverse image
- Column separator

Attachment up to 5000 ft (1500 meters) from CPU.

Printers

Several new models — both line printers (160-300 lpm) and table-top serial printers (40, 80, 120 cps bi-directional)

Magnetic Ink Character Reader

Up to 750 documents per minute

Operating System

NEW: System Support Program (SSP)
(The System/3 and System/32 operating system is SCP = System Control Program)

Provides these major capabilities:

Job and memory management, Operational Control Language (OCL), system utilities, data management, system history area, printer spooling, inquiry/resume, overlay linkage editor, multiple user library support, operator ID, password security and menu selection of jobs.

Note that unlike a System/32, the System/34 can be operated in MULTIPROGRAMMING MODE where multiple operators are concurrently invoking procedures or control commands and multiple programs are executing concurrently under the control of the SSP task dispatcher. In this mode, memory is managed as a pool of non-contiguous 2048 byte segments.

System/34 OCL is highly compatible with System/3 and System/32 OCL (Operation Control Language).

Charge: \$85 per month. This and the recently (April 14, 1977) announced real-time operating system on the Series I (\$1200 or \$20 monthly) are the FIRST UNBUNDLED SMALL SYSTEM OPERATING SYSTEMS from IBM.

System/34 Utility Program Product (Optional: \$30 per month) provides:

Work Station Utility (WSU) for data entry programs
SORT, supported as on System/32
Data File Utility
Source Entry Facility
Languages:

- RPG II (similar to System/32 with enhancements) \$25/month
- BAL (Basic Assembler Language) \$75/month
Application Programs

NEW: Distributors Management Accounting System II designed for the System/34; modular, includes programs for billing (\$50/mo), inventory control (\$45/mo), accounts receivable (\$35/mo) and sales analysis (\$45/mo). Additionally, Single-Program-Mode Application Programs for the System/34 will be available for 10 industries previously supported by Industry Application Programs (IAPs) on the System/32.

A few additional points were clarified by the IBM GSD data sheet:

If each workstation has both a terminal and a printer, the maximum is 3 "complete" "workstations" plus an additional CRT or printer on 1 line. Maximum # of CRT's is 7 (no 5256 printers attached) plus console.

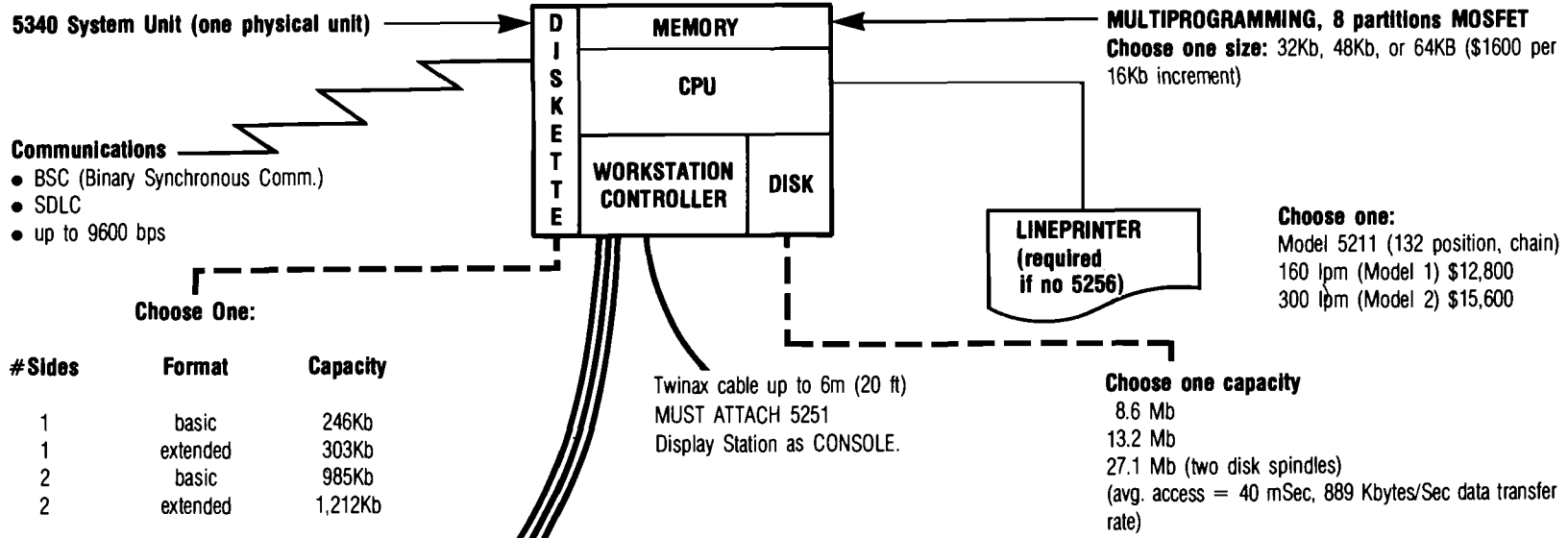
Note: Multiple workstations are attached to one cable via the #2680 cable-thru feature in the workstation.

A few other fine print discoveries:

- "A system printer must be provided to satisfy IBM maintenance requirements when using IBM System Support Program (operating system)."
- "Cover design (on new 5211 printer) reduces noise level for placement in administrative areas . . . fully enclosed paper path."
- "System/34 RPG II is highly compatible with System/3 RPG II."
- All model upgrades are field installable.
- SDLC mode on #2500 Communications Adapter is scheduled for availability 1/26/79 whereas BSC (Bi-synch) mode is scheduled for 1st shipments on 1/27/78.
- "The main storage processor represents a 'hardwired' SYSTEM/3 language processor . . . A microprocessor, with 16K words of control storage, operates in parallel with the main storage processor, and supports a micro-coded control function and each of the I/O devices . . . Processor unit . . . combination of LSI/MSI . . . Workstations are attached directly to a microcontroller in the 5340 System unit via four twinax cable connectors on the 5340."

IBM SYSTEM/34

April 14, 1977 Announcement



Three twinax cables, each up to 1524m (5000 ft). Up to seven (7) workstation DEVICES (5251 Display Station [=CRT] or 5256 Printer [up to 180 cps bidirectional]) may be attached to the system on these three lines.

Pricing:
5251 (CRT) \$3,200 each
5256 Printers:
 40 cps (Model 1) \$5,200
 80 cps (Model 2) \$5,800
 120 cps (Model 3) \$6,250

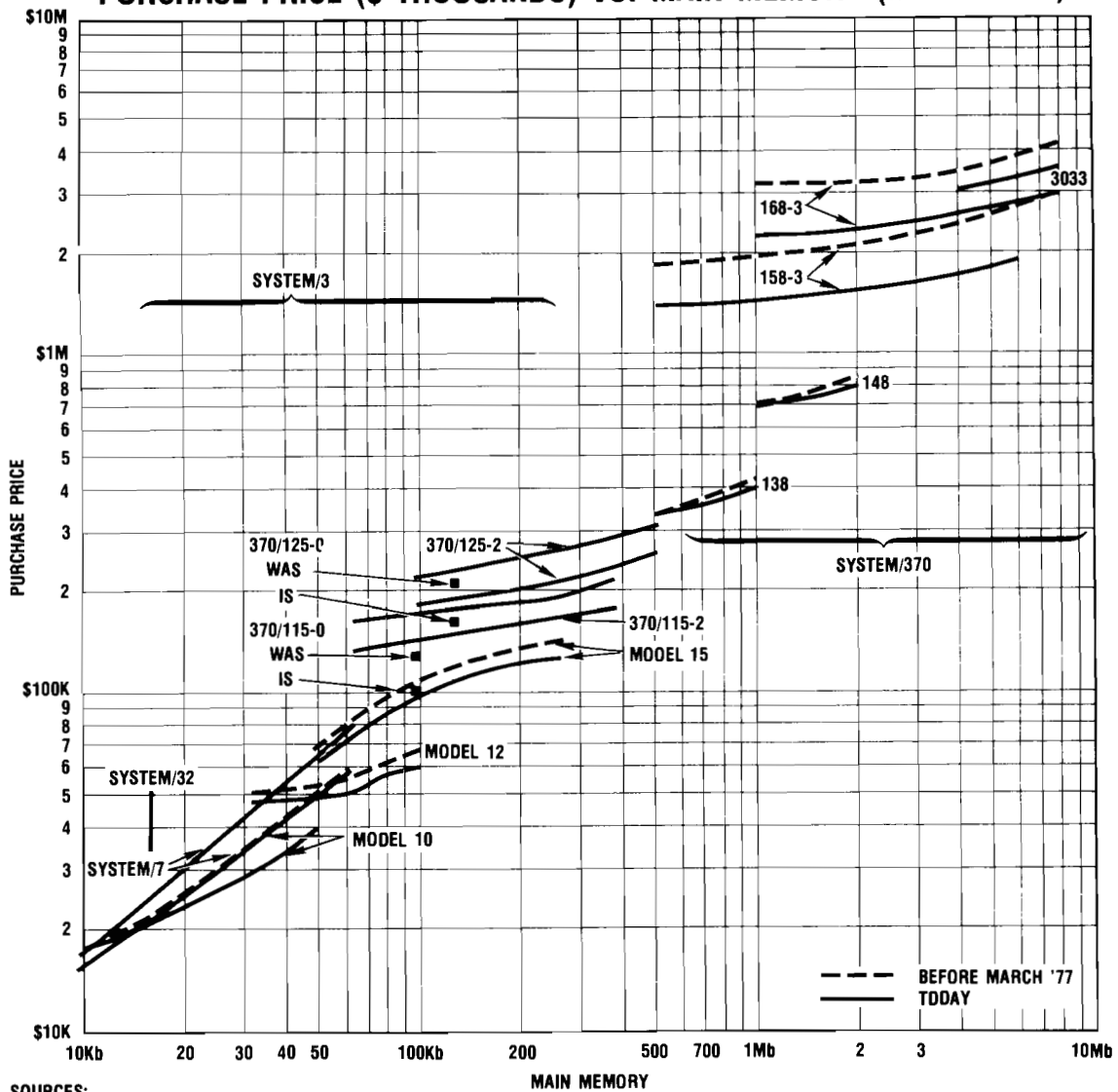
SOFTWARE — SYSTEM/34

- SSP (System Support Prog) \$85/mo
\$1200 purchase = operating sys.
- System/34 Utilities Program Product \$30/mo
- RPG II \$25/mo
- Basic Assembler Language (BAL) \$75/mo
- Distributors Management Accounting System II (DMAS II) — 4 modules
\$35-\$50/mo., each.

Summary — WHAT'S NEW

- IBM's first on-line, multiprogramming SYSTEM (from GSD) under \$150,000.
- Operating System: SSP (System Support Program)
- 5340 System Unit (1 package consisting of processor, disk, diskette & terminal controller)
- Model 5251 CRT (looks like HP 264X)
- Model 5256 Matrix Printer
- Model 5211 Printer
- Double-sided, double-density, one-megabyte diskette drive
- UNBUNDLING of operating system on a GSD System (simultaneously, a real-time op. sys. was introduced on the Series I).
- Microcoded several functions previously contained in the operating system software

**IBM PROCESSORS
PURCHASE PRICE (\$ THOUSANDS) VS. MAIN MEMORY (MEGABYTES)**



SOURCES:
EDP Industry Report 3/29/77
Datapro
Auerbach
IBM Press Releases

HP GRENOBLE NEWS

Trade Show News

Hanover Fair 1977

By: Jack Griffin/HPG

The 1977 Hanover Fair, one of the largest industrial/commercial trade shows in the world, was a tremendous success for exhibitors in general and HP in particular. Exhibitors showed everything from hand tools to earth movers and typewriters to computers.

Both calculators and computer systems were well represented at the HP stand—*Rolf Roebke* did a superhuman job on logistics, insuring that hardware from three different offices arrived intact.



Everything
from trains
and steel



Demos by *Klaus Dieter Klein* showed off the HP 3000's wide range of capabilities under the theme "Functional EDP-Distributed Processing". Three HP 1000's were on the stand, demonstrating instrument control, IMAGE, and factory data collection, a topic which generated a surprisingly high level of interest. *Hans Abendschoen*, *Karl-Heinz Van Husen*, *Jurgen Pomplun* and *Dieter Schmidtke* provided the software for the effective, eye-catching HP 1000 demos. As usual, the HP 264X terminals were popular among visitors, and compliments were received from both clients and competitors. *Horst Hennings* and *Klaus Dziubek*, the German terminal specialists, had a difficult time handling the steady stream of visitors to the terminal corner of the stand.

Pitt Schulthoff was stand-leader and kept morale at a high level, especially when he presented the daily bottle of champagne to the "lead generator" of the day.

The Computer Systems strategy was to generate as many sales leads as possible and the payoff exceeded all expectations: over 650 "Visitor Discussion Reports" were filled out by stand personnel and initial tallies show that about 25% of these concerned prospects with approved budgets, and intentions to buy one or more systems within 6-12 months.

to

Pocket Calculators





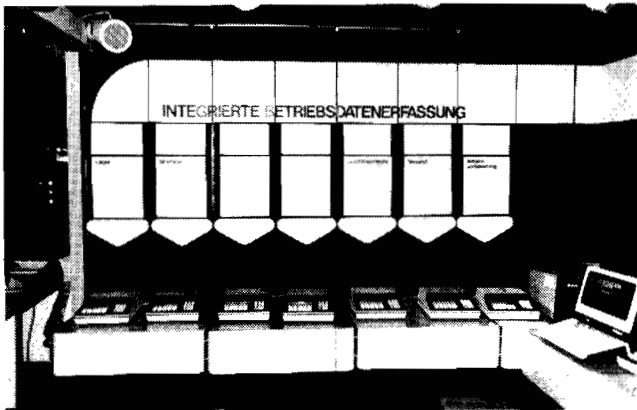
The 9896A System, a system for "Mutti und Vatti" (That's what we call Mom and Pop here in Deutschland, folks)



Functional EDP with the HP 3000



HP 1000 Model 81 for Instrumentation and Factory Data Collection



"Integrierte Betriebsdatenerfassung"! A French terminal that speaks German??!!



Where's the Soft Key to turn on Bonanza?

Sales Aids

Measurement Speed Performance with HP 3070A/HP-IB Devices

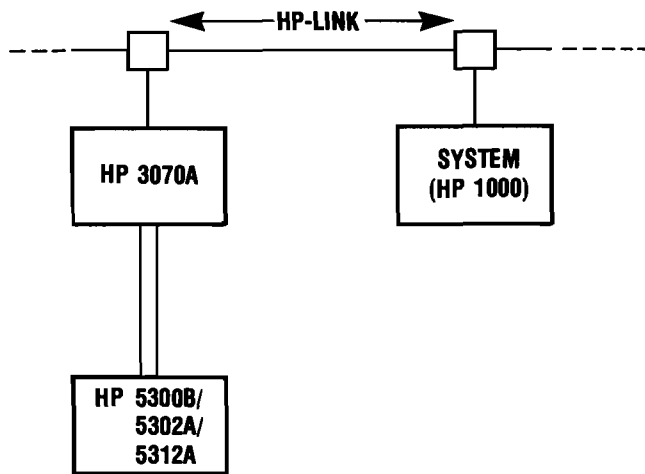
By: Georges Ouin/HPG

The main HP-IB function of the HP 3070A is to automate measurements which were done manually. It is not intended to allow control of high speed measuring devices such as the HP 3437A with its 5000 measurements per second.

More than speed, many people working in different areas such as incoming inspection, QA, manufacturing, R&D, etc. . . , are concerned by accuracy, repeatability. However, they would like to have some figures about the overall response of their automated network.

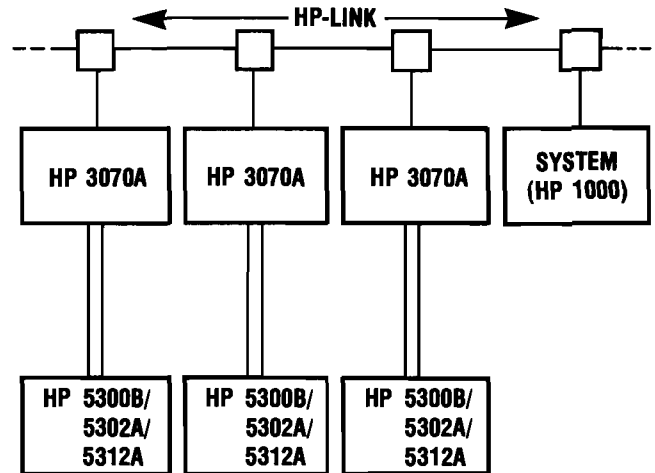
The following tests indicate what performance someone can get from a simple cluster composed of a 5300B frequency counter, and the HP 3070A terminal connected to an RTE system. A program was written to make 100 measurements of frequency with the counter gate time set to 100 milliseconds. The cluster was connected to a RTE III system configured with a 21MX computer, and with no FFP. The program was disc resident and it was the only active one. Measurement rate was plotted for HP 3070A addresses changed from 1 to 10.

Single measurement set-up:



The second test gave the response time of three of these clusters operating simultaneously. Each cluster was controlled by a separate program. These three clusters were connected to the HP 1000 through the same HP-LINK. The system did not have FFP and all programs were disc resident with the same priority level. There was enough memory so that there was no program swapping. Each counter gate time was set to 100 milliseconds, and highest terminal address changed from 3 to 10.

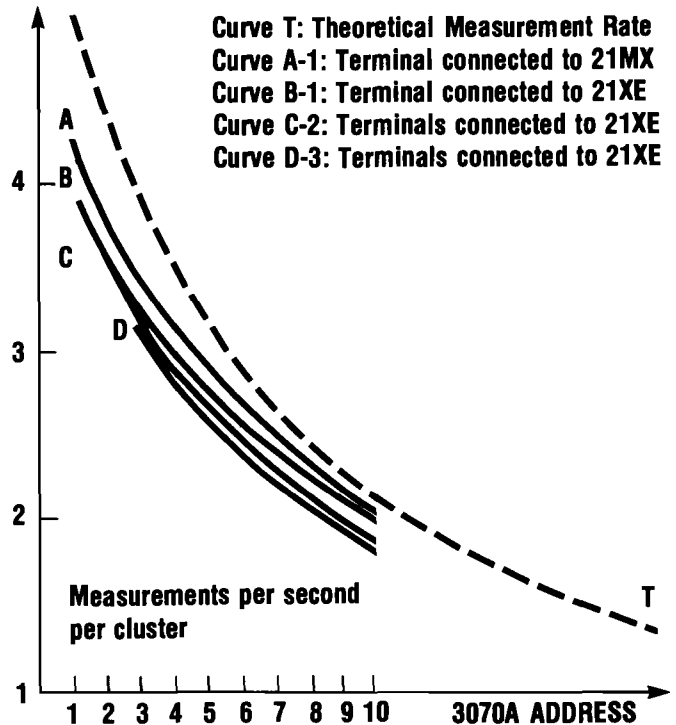
Multiple measurement set-up:



The following curves show the average measurement rate versus 3070A addresses for both tests, and the theoretical measurement rate calculated as follows:

$$\text{Measurement rate} = \frac{1}{\text{Link transfer time} + \text{counter time base}}$$

Link transfer time is calculated from the link transfer rate formula $\frac{25000}{61+28A}$ where A is the 3070A address. Each frequency measurement required 27 link transfers.



A Rewarding Way to Sell 7260A's

By: Alic Rakhmanoff/BOISE

We have found through our four years of selling 7260A's that the sales deals often start small and finish big.

Some examples:

- A well known oil company bought one 7260A for evaluation and 2 years later ordered 45 HP 7260A's.
- A Medical Laboratory System Supplier bought one 7260A and after a few months signed a contract for 50 HP 7260A's.
- Recently an Educational Institution used the 7260A consignment unit from a Sales Office and then signed a contract for 120 HP 7260A's.

Optical Mark Readers comprise a large and growing market of \$60 million for this year. Selling 7260A's by quantity is very rewarding: 15 HP 7260A's have about the same value as an HP 1000 system and 30 of them as an HP 3000 System. Remember that most of the time you'll double your sales by selling a 7260A with an additional terminal (printer terminal 2762A, CRT 2640 or 2645).

SELL OMR'S!

New Policy on Consignment Units

By: Alic Rakhmanoff/BOISE

When you order a 92900A consignment unit you get a 20 foot test cable with 2 connection boxes. With it you can connect one 3070A terminal to your 21XX computer.

If you want a longer cable and/or to connect more than one 3070A to show to your customer the multidrop capability of the 3070A, you need additional cable connection boxes. For consignment units you do not have to order 92902A and/or 92901A, but should specify in the "Special Instructions" part of your order what length of cable and how many connection boxes you need. We will provide them free of charge — because Grenoble really cares about your sales!

Time Change for European Countries

By: Jacqueline Vessiller/HPG

If you have to travel, you never know exactly at which date the countries change their time.

I thought it would be very useful to have acquaintance of the dates concerning the "time change".

You will find below the winter and summer time for each European country in relation to GMT with the corresponding dates:

Countries	Winter Time	Summer Period	Summer Time
France	GMT + 1	3 Apr—25 Sep	GMT + 2
Belgium	GMT + 1	3 Apr—25 Sep	GMT + 2
Netherlands	GMT + 1	3 Apr—25 Sep	GMT + 2
Luxemburg	GMT + 1	3 Apr—25 Sep	GMT + 2
Germany	GMT + 1	none	GMT + 1
U.K.	GMT	20 Mar—23 Oct	GMT + 1
Italy	GMT + 1	22 May—25 Sep	GMT + 2
Sweden	GMT + 1	none	GMT + 1
Norway	GMT + 1	none	GMT + 1
Denmark	GMT + 1	none	GMT + 1
Spain	GMT + 1	5 Apr—6 Oct	GMT + 2
Portugal	GMT	25 Mar— ?	GMT + 1
Switzerland	GMT + 1	none	GMT + 1
Austria	GMT + 1	none	GMT + 1
Greece	GMT + 2	10 Apr—10 Oct	GMT + 3

Applications

New Market for 3070A's

By: Alic Rakhmanoff/BOISE

In previous Newsletter articles we have focussed on two types of applications for 3070A's: Data Capture in the Manufacturing Environment and Remote Control of HP-IB Devices.

We have recently received an interesting order for 3070A's in chemical process control using an HP 1000 system. 3070A's are being used with an HP-IB interface to the 9871A line printer to help control a cellophane manufacturing operation. Two and one-half miles of serial link cable with 3070A's is leading to new sales.



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