data systems newsletter

For HP Field Sales Personnel

DIVISION NEWS

WHEN YOU'RE HOT YOU'RE HOT (or to put it another way). . .FIRST PLACE IS GOOD ENOUGH

by Dick Byhre

Eastern Sales Region Sales Development Team (LF to RT) Bob Kresek, Bob Blake, Jean Toth Kelley, Dick Byhre, Frank Jackson.

These are the smiling faces of a winning team. Over the past quarter (3rd) a little friendly competition between Sales Development groups here at DSD has developed over which U.S. region would exceed quota for the quarter. You guessed it, ESR took home the bacon. Bottom line figures show ESR ahead of the first runner-up by 15%. Of course, all the kudos go to *John Sundry* and his fantastic sales team for making it happen. Look out world!　　　HEWLETT [hp] PACKARD

INTERNAL 3000 INSTALLATION

by Ronnie Covington

HP Boise has installed their first HP 3000. It is a 3000CX model with the 7905 as the system disc (one of the first delivered) and one 47 megabyte disc for file storage.

In This Issue . . .

The system will be primarily dedicated to data processing for Manufacturing, Finance, and Order Processing with the development lab also sharing its capabilities.

Boise is going to aim at doing all data processing locally in lieu of the Corporate IBM 370 systems. They hope to use RJE on the HP3000 to supply corporate their required information instead of having the corporate computers supply them with the required information.

Boise will be adopting the manufacturing systems developed at Data Systems Division as quickly as possible to their needs. They hope to also provide a data center demonstratable to potential customers in the North in the near future.

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Company Private

SALESMEN'S CORNER

3000CX AT PHILADELPHIA WATER WORKS

by Jean Toth Kelley

Crane Hertz   *Jerry Crawford*

Crane Hertz, F.E., and *Jerry Crawford*, S.E., closed a 3000CX at Philadelphia Water Works during the month of June. Four of Philadelphia's systems analysts evaluated six proposals from HP, General Automation, IBM system 3/15, IBM 370/115, and Univac 9030 on Hardware, Software, Applications Packages, Data Base Management, Proof of Performance, Ease of Conversion, Expandability, Training, Maintenance and Backup. Some categories were weighted but HP came out number 1 in both raw points and weighted points. HP is replacing an 1130 in an engineering DP environment. IMAGE and FORTRAN will be their main subsystems. **Congratulations Crane!**

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THE FIRST 3000CX SALE FOR BARRY BERGMAN, KOP

by Jean Toth Kelley

Barry Bergman

Jerry Crawford

From one of those bingo leads which "never work," *Barry Bergman* invited commercial account National Publishers Service to a Data Base Management Seminar at HP/King of Prussia. That was March 1975. They are a Service Bureau for Publishing Houses - strictly COBOL & RPG. *IMAGE* attracted their immediate attention. But their final criteria for selection was a one-hour benchmark of their RPG II program running against their installed 360.30 and our competition, a 370 125.

By *Barry*'s description, S.E. *Jerry Crawford* put forth a Herculean effort converting NPS's RPG II programs to the 3000CX. A most dramatic finale occurred the afternoon the benchmark was scheduled to run at 4:00 PM. One last problem was discovered at 1:00 that afternoon. *Jerry* RJE'd the customer's code to Cupertino where S.E.'s *Bob Strand* and *Jim Willits* cooperated with lab personnel *Harry Leslie* for a real time fix. The solution was RJE'd back to Rockville for a successful 4:00 PM demo. That's Teamwork! Here's the result:

System	Time
360/30	71 min
370/125	37 min
3000CX	37 min

Congratulations Barry on this $316K order.

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PRODUCT NEWS

HOW TO PUT THREE ACCESSORIES IN A 2640A

by Tom Anderson

There seems to be some confusion about when the 13240A Option Slot Extender is required in a 2640A CRT Terminal.

Basically, there are two things to know:

1. The standard 2640A has two option slots available.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

2. The following accessories require 1 option slot each:

13231A Display Enhancements
13233A Terminal Memory Module (+2K)
13234A Terminal Memory Module (+4K)
13238A Terminal Duplex Register
13245A PROM Character Set Accessory
13246A 9866A Printer Subsystem (same as 2640A/012)

If you want to put more than two of these in a 2640A, you need the 13240A Option slot Extender. Change orders can be costly and time consuming. Remember, more than *two* accessories and you need the 13240A Option Slot Extender.

GOOD SELLING!

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NEW 600LPM PRINTER ON THE 3000CX

by Jean Toth Kelley

The new Data Products 600 lpm Printer Subsystem, 30133A, has been released for the 3000CX at $19,000. Monthly maintenance is $154/month with N/C for options.

This appears on the August 1 price list.

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59310A/HP INTERFACE BUS

by Charles Dixon

This is the first of a series of three articles on the 59310A/HP-IB, that should give a capsule view of the HP-IB concept, 59310A, 59310A/HP-IB orogramming and applications. The first article is designed to give a brief overview of the HP-IB.

On a conceptual basis, flexibility cost, capability, and component integration should be the objective of any bench instrument interface system. The interface must be capable of communication with a wide variety of instruments (e.g., Measurement & Stimulus Equipment, Displays, Storage Units and Controllers), handle a wide range of data codes, data rates and communications paths.

In the practical world these conceptual ideas yield the following rules of thumb for interface protocol, data rate, interface dimension at the bench instrumentation level:

(1) There are usually 10-20 devices in any system - instrument controller and associated devices.

(2) Instruments are normally located quite close to one another. Total interface transmission length of 20 meters is normally adequate.

(3) Bench instruments are neither *programmed* nor output data in excess of a hundred kilobytes per second.

(4) Precise interface protocol and time relationships must be defined.

The HP-IB is the result of many man years of thought and experimentation on the obove objectives. The general implementation of this universal interface is described below.

HP-IB INTERFACE BUS

● Means of developing stimulus and response test systems, using programmable bench instrumentation.

● Detail of irterface standard is covered in IEEE Std, 488-1975, "IEEE standard digital interface for programmable instrumentation".

● Passive standard piggyback connectors are used for interconnection of devices.

● All active TTL circuitry to drive the BUS is contained within the instruments on the BUS. The BUS can support up to 15 devices, one of which may be the computer.

● 15 devices can be supported on BUS including the computer.

● BUS instruments will fall into at least one of the following categories:

|	
Controller	Instrument that has the ability to control other instruments on the BUS.
Talker	Instrument with the ability to communicate with other instruments on the BUS.
Listener	Instrument with the ability to receive messages transmitted by a BUS talker.

HP-IB COMMUNICATIONS STRUCTURE

● 16 lines are contained in the HP-IB cabling.

DATA LINES (8)
HANDSHAKE (3)
MANAGEMENT (5)
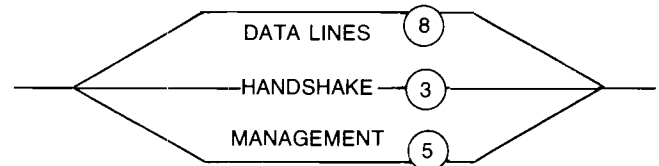
● 8 data lines

● 3 lines used to effect the transfer of data over the data lines - called the handshake process.

● 5 lines are used to manage an orderly flow of information across the BUS.

DIO1-8 DATA INPUT/OUTPUT LINES

```
            1
            2
            3
            4
            5
            6
            7
            8
```
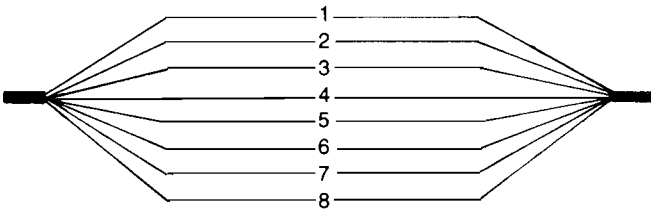
• Used to transfer all data

• Used to transfer all addressing information & multiline commands

• Transfer occurs in a bit parallel, byte serial fashion

GENERAL INTERFACE MANAGEMENT LINES

• Lines used by controller or interact with the controller to manage communication over the HP-IB BUS.

• Only one BUS device at a time can be active controller.

• Logic States ⌐• hi = 2.4V
              └• low =0.4V

```
    IFC
    ATN
    SRQ
    REN
    EOI
```

IFC - interface clear
ATN - attention
SRQ - service request
REN - remote enable
EOI - end or identify

ATN ⌐→ data word transfer
        └→ address & commands

IFC ⌐→ (disabled)
        └→ all talkers & listeners are unaddressed

REN ⌐→ places devices in local control
        └→ places devices in remote control

SRQ ⌐→ no request for service
        └→ indicates to controller that a device requires service

EOI ⌐→ (disabled)
   └→ used to indicate end of multiple byte transfer

HANDSHAKE OR DATE - BYTE TRANSFER CONTROL BUS

• Used for the handshaking process by which a talker or controller can synchronize its readiness to transmit data with the listeners readiness to receive data.

```
    DAV
    NRFD
    NDAC
```
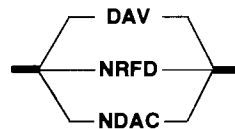
DAV - data valid
NRFD - not ready for data
NDAC - data not accepted

• Talker sets DAV high before data or command is placed on data line.

• Listeners set NRFD high when all listeners are ready to accept data or commands.

• Talker sets DAV low when data may be accepted.

• NDAC line set high by listeners when all data accepted.
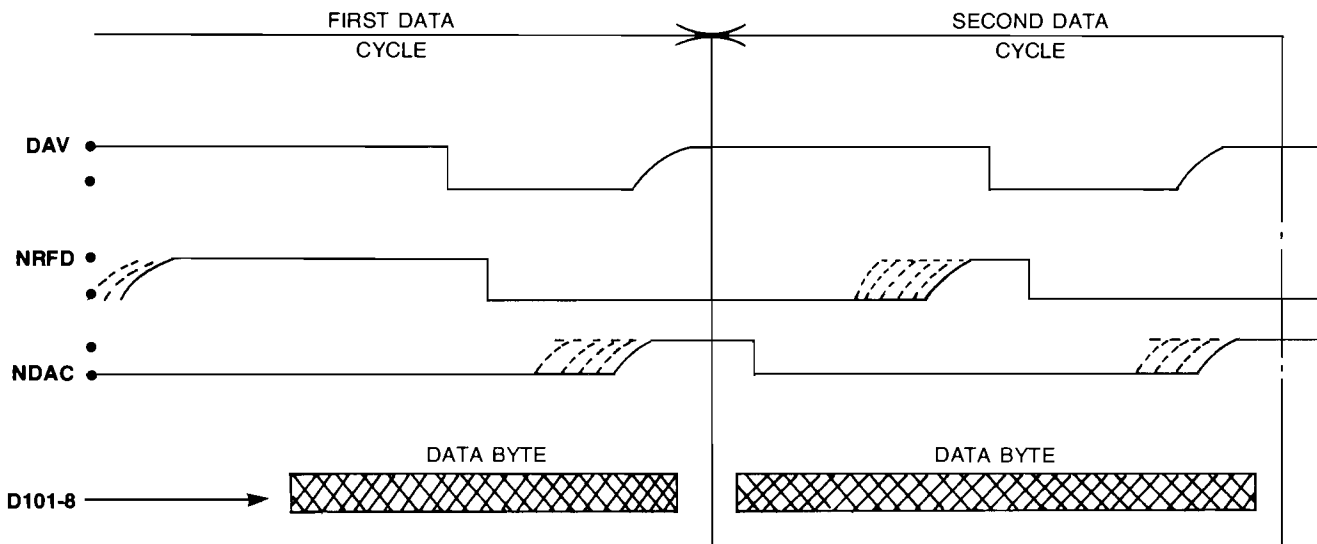
DYNAMIC MAPPING SHIPS IN SEPTEMBER

by Wayne Gartin

For those of you who have been waiting for Dynamic Mapping for a customer's 21MX, your wait is over. DMS was released to manufacturing July 30 and the first production run is underway. In September, the system will begin volume shipments.

If you are upgrading a 21MX to Dynamic Mapping, your CE will be installing a "Mini-kit" in the CPU to bring all the components to the current revision level. The CE will be notified by the factory prior to the shipment of the DMS unit, and the customer will not be charged for the mini-kit.

Keep selling those large memory systems, especially to those new OEM's. Once they see and use our Dynamic Mapping System, they will realize that it's unmatched in power and versatility.

- SELL OEM -

THE MX/65 DISCOMPUTER IS HOT!

by Wayne Gartin

Sales of the MX/65 are really doing well--Thanks to all of you. For a problem which requires fast access and has a small to medium size data base, there is *nothing* that can compete with us. Even if price was the only criteria, no other minicomputer manufacturer can offer a better solution. Add HP's performance and service and you have an unbeatable product.

Congratulations especially to the Eastern, Midwest, and International sales teams for setting the pace in MX/65 sales! The list of MX/65 customers is growing fast and already includes Bell Labs, Management Systems Technology, Realtronics, Telesciences, Camsco and many others. Get your own Cash Cow the easy way--sell the MX/65.

- SELL OEM -

MEMORY - HOW MUCH IS ENOUGH?

by Tom Anderson

I recently distributed a memo about the 2640A Terminal's memory organization. I hope all of you have read at least the summary by now. The important points covered are:

A. 1024 bytes of RAM cannot display 1024 characters (or 1920 characters).

B. The maximum number of control codes allowed in a single line is dependent on memory configuration.

C. Most block mode applications *require* additional memory. Character mode applications may not require additional memory, but users prefer it.

The 2640A's Dynamically Allocated Memory is an important selling point and this memo will help you understand its advantages as well as limitations. If you need a copy, let me know.

GOOD SELLING!

RESET TROUBLES?

by Tom Anderson

One of the thousands of 2640A operators and programmers discovered a surprise. That is, ESC E does not reset *all* terminal functions. This is normally not a problem but can potentially be troublesome in block mode. To be safe, a complete terminal reset can be programmed by an ESC & bx. This operation takes about 200 milliseconds. Remember if you use block mode, reset with ESC & bx.

SALES AIDS

PROGRAMMABLE CONTROLLER CUSTOMER LIST ON THE 3000CX

by Jean Toth Kelley

The following list is an up-to-date summary of 3000CX customers who have (or have ordered) the BCS or RTE programmable controller.

Use reference selling. Sell the 3000CX with the programmable controller to interface foreign devices.

Customer	Field Engineer	HP Office	HP Office Telephone
Dow-Badische	Ed Oakley	Richmond	(804) 285-3431
Donaldson Co.	Tom Rappath	St. Paul	(612) 636-0700
CIBA-Geigy Photochemie Ltd.	Heinz Studiger	Zurich	
Geological Institute of Helsinki	Kari Laatikainen	Helsinki	
Westinghouse Learning Corp.	Bill Burger	Iowa City	(319) 338-9466
Hughes Aircraft	Alan Nonnenberg	Fullerton	(714) 870-1000
Institute Cerac, SA	Heinz Studiger	Fullerton	(714) 870-1000
ASARCO, Inc.	Bill Little	Englewood	(505) 526-2485
Bayerische Motor-enwerke AG (BMW)	J. Schwarzbauer	Munich	
Borg-Warner-York Division	Dave Murphy	King of Prussia	(215) 265-7000
Chester Engineering	Jim VanSlambrook	Pittsburgh	(412) 782-0400
Luther College	Bill Burger	Iowa City	(319) 338-9466
National Institute for Medical Research	Bob Sarah	Winnersh	
Yale-New Haven Hospital	John Kuplec	Paramus	(201) 265-5000

EDUCATIONAL NEWS

MAY EDUCATION SALES

by Vickie Thompson

Below is a list of Education Sales for the month of May. Also shown is the application of the sale. Thanks to all the people I talked to in making this first article for me an easy one!

There were several other educational sales in May but I was unable to get in contact with the appropriate person for the needed information. They will appear in the June report.

Customer	System	R.E.	S.E.	Application
Stanford U. Hospital Stanford, CA.	2124B	Dick Burkhart	Gary Gujral	Monitoring Animals Used for Heart Research
San Diego City Schools San Diego, CA.	1-32 Terminal 2000F	Jerry Allen	Bill Clark	Instructional and Limited Administrative
Fairfax County School Dist. Fairfax, Maryland	Disc Drive	Jim Banisch	—	They are adding to their on-line data base. In the process of writing a Library Information Management System (LIMS) using IMAGE and QUERY. Will finally manage all aspects of book purchase from requisitioning to delivery.
Wichita Public Schools Wichita, Kansas	2000E to F Upgrade	Al Wood	—	Student Grading, file master. Will be adding more terminals.
Richmond School Board Richmond, B.C.	2000E	Don Thomson	Rick Schwartz	Instructional problem-solving.
Oklahoma State University Stillwater, OK	21MX	Neil Fisk	Rick Griffen	Computer Science Teaching
Riverside City College Riverside, CA	2000F	Al Nonnenburg	Allen De Fever	Instructional. Also purchased IMF, IDF, Coursewriter, and Graphics Package Software.

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