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EDITOR'S NOTE

In this final issue of the COMMUNICATOR 3000 for 1978 two new software products, MFG/3000 and VIEW/3000, are presented. The first of these, MFG/3000, is an application program designed to manage the material planning and control functions for manufacturing (MFG) companies. VIEW/3000 represents a new generation of HP data entry software. Replacing DEL/3000 (which will be removed from Hewlett-Packard's price list in January), VIEW offers several powerful features intended to make your data entry processes easier to design and implement.

The other articles presented in this issue deal with some very practical topics. "A Quiz for Console Operators" consists of several sets of questions - of varying difficulty - which can help those who run HP 3000's review the range of operations they control. Questions concerning MPE III enhancements are included.

If you do encounter a usage problem with your system, your efforts toward isolating and accurately documenting the difficulty greatly assist HP support personnel in finding a solution. "How to Report a System Usage Problem" outlines steps for achieving this specificity. Lastly, to help everyone who must decipher abbreviations and mnemonics commonly used in the computer industry, we offer a sequel to the mnemonics primer published in issue #17.

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INTRODUCING MFG 3000

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MFG/3000 is an application software product which helps manage the material planning and control functions of companies with discrete manufacturing processes. This new product maintains information that is used to plan material requirements, and to recognize and plan priorities effectively. The primary objective of MFG/3000 is to minimize inventory investment.

As shown in Figure 4-1. MFG/3000 consists of three products:

EDC/3000 - Engineering Data Control software which maintains descriptive, cost, and planning information and Bill of Material and routing data about the parts in your manufacturing operation.

IOS/3000 - Inventory and Order Status software which tracks planned issues (allocations) and planned receipts (workorders and purchase orders), and maintains stockroom inventory balances.

MRP/3000 - Material Requirements Planning software which generates the materials plan with recommendations about what and how much material to order and when to order it.

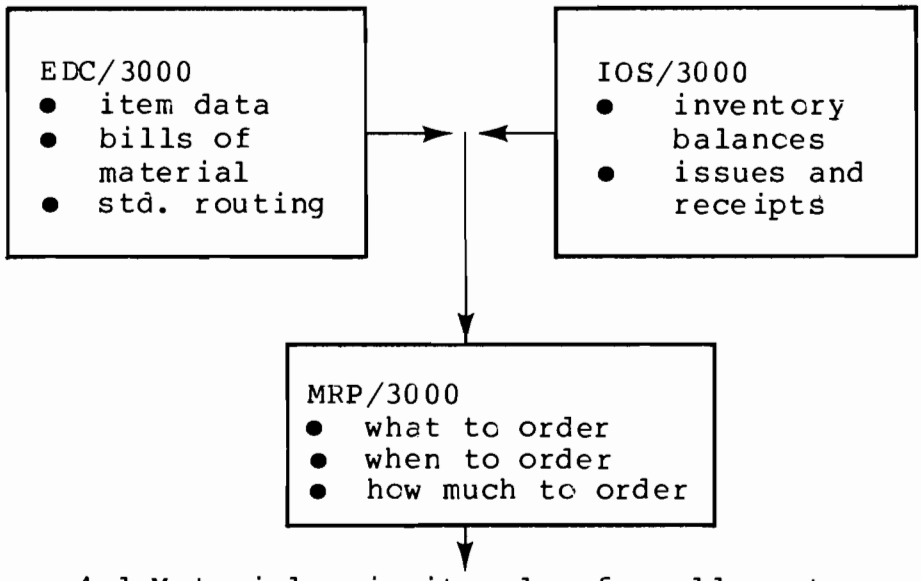


Figure 4-1 Material priority plan for all parts

MFG/3000 is designed to be used with Hewlett-Packard terminals. By placing terminals in the user's work area, information is available when and where it is needed. Data is input by the people responsible for its generation. Timely and complete information for operations and decision-making is available within seconds.

The user is guided through MFG/3000 by a simple menu selection approach. This technique eliminates the need to learn a new language or set of commands. One simply selects the function (i.e., retrieve Bill of Material, review stock status, etc.) from the menu and MFG/3000 flashes the desired information on the screen.

MFG/3000 utilizes Hewlett-Packard's award-winning data base management system, IMAGE/3000. The advantages of IMAGE include:

- Elimination of redundant information
- Capability for on-line update and retrieval
- Maintenance of data integrity
- Predefined manufacturing data base

In addition, Hewlett-Packard's English-based QUERY is available to generate reports and retrievals not specifically provided by MFG/3000. QUERY allows users to quickly produce reports themselves without involving a programmer. This increases the productivity of your manufacturing operation by providing quick response for required information.

EDC/3000

Engineering Data Control/3000 (EDC/3000) maintains information about every item in the materials inventory, including part numbers, product descriptions, cost data, bills of material, bills of labor, and engineering change information.

EDC/3000 is designed so that data is easily entered and changed by the user. With formatted data screens, one can quickly enter and review information on parts and bills of material. Terminals can be located in the work areas of the people responsible for maintaining part description, cost and planning information.

Information concerning bills of material, where used, and routing for parts can be reviewed on-line. Printed reports supplied on demand by EDC/3000 include: Single Level Bills, Indented and Summarized Parts Lists, Where Used Lists, and Routing Lists.

USING EDC

In a typical EDC/3000 installation, interactive CRT terminals are placed in all areas that require bill of material and engineering documentation. Requests for documentation are satisfied directly by on-line retrievals at the terminals, which could be located in production engineering, R&D, production control, manufacturing specifications, and other appropriate departments. Requests for lengthy reports entered by the terminal operator are serviced in regularly scheduled batch runs.

Data entry and editing using on-line CRT terminals can be accomplished either by a central group responsible for manufacturing documentation or by each individual responsible for specific portions of the data. Production Control, for example, might be responsible for the content of lead time fields, while production engineering would control bills of material. EDC/3000 employs regularly scheduled batch computer runs to actually update the data base with the transactions collected and edited by the CRT data entry. This batch updating facilitates control, security, and synchronization of inputs.

IOS/3000

Inventories can be classified in three ways: stockroom, work in process, and finished goods. Inventory and Order Status/3000 (IOS/3000) controls the stockroom inventory by maintaining complete and accurate records of all actions that affect inventory balances:

- Receipt of purchase orders and workorders
- Backorder filling
- Material issue (planned and unplanned)
- Adjustments

All record keeping and updating is done on-line, providing immediate and accurate information.

Using IOS/3000, the user can create, modify, and maintain records on workorders and purchase orders. When a workorder is partially issued, a backorder is automatically created. Information about each vendor gives a complete record that can be used for purchase order generation.

IOS/3000 automatically allocates all open workorders. Using the EDC Bill of Material, IOS explodes the workorder one level to determine the components required to manufacture it. By allocating the workorder, IOS is able to identify potential parts shortages before they occur. This aids in eliminating backorders.

IOS/3000 notes exceptional conditions and reports them to the people responsible for action (buyers, schedulers, stockroom personnel). The timely notification of exceptions to the Inventory Plan, represented by planned receipts (orders) and planned issues (allocations), can allow corrective action before the results become disastrous. The on-line nature of IOS helps foster accuracy of inventory and order data which can be used by MRP for generation of a total materials plan. IOS is thus responsible for the implementation and control of your material plan.

USING IOS

IOS offers the capability to control stockroom inventory movement. Orders to replenish stock are issued either to outside

vendors or a customer's own production facility.

A vendor purchase order is entered at a CRT terminal in the purchasing department, and includes the necessary tracking information such as quantities and due dates, as well as descriptive data. Once such an entry passes the customer defined edits, it is immediately added to the order file. When material is received, a CRT terminal with attached hard copy printer in the receiving area is used to update the order to reflect the receipt, print an accounts payable material receipt document, and increment on-hand inventory or inspection inventory as appropriate. If backorders exist for the part being received, a document is generated indicating the quantity of parts backordered and the department requiring them. This insures prompt filing of backorders once an out-of-stock item is received. All receipts to the stockroom are processed in this manner.

A workorder to an in-plant production facility is entered at a CRT terminal by the production control department using procedures similar to those for purchase orders. This workorder, since it is an authorization to build an assembly, part, or product, requires withdrawal of component parts from stock. These component withdrawal requirements are obtained in a batch run (usually done daily) which "explodes" the workorder quantity by the bill of material from EDC to create allocations which, on the appropriate date, will become requisitions for the correct amounts of each component.

By having allocations available before the actual issue of materials, pre-shortage reports which match all allocations for a particular part to the balance on hand are produced to point out possible parts shortages.

Just prior to the start date of the workorder, picking lists are produced to control the issue of material from the stockroom. Individual requests for parts are serviced directly at a terminal in the stockroom, as are responses to the picking lists.

When the workorder is completed, the material is received back into the stockroom in the same manner described earlier for purchase orders.

In addition to on-line control over all issues and receipts to the stockroom, a cycle counting system based on total usage value of the parts (ABC value classification) helps insure inventory record accuracy.

MRP/3000

MRP/3000 is a material requirements planning system which simulates the complex flow of material in a manufacturing company. If the material is short, it suggests an order for an appropriate quantity of the material, or expedites an existing order. Current and anticipated demand for a part is matched with the cur-

rent and anticipated supply for that part to find potential conflicts, and to suggest corrective actions whenever supply and demand get out of agreement.

MRP/3000 starts with up-to-date information about current status provided by EDC and IOS. Information about future requirements is provided by means of the master schedule. Defined time and quantity information is used to calculate material requirements for each inventoried part according to the planning horizon desired. A material plan is generated which can be used to evaluate priorities, anticipate potential problems, adjust future plans, and control material costs.

MRP/3000 is a net regenerative system - regenerative in that a complete materials plan is generated every time MRP is run, net in that demand is balanced against available and projected supplies to determine net requirements. These characteristics combine to produce a fully documented, visible materials plan on every run.

MRP/3000 provides visibility of the source of all demands by pegging the requirement to the order that created it. A specific due date is also assigned to each order or suggested order, making MRP/3000 a "bucketless" material requirements planning system.

USING MRP

The bill of material information from the EDC data base and the current inventory levels and order status from the IOS data base are combined by MRP/3000 to produce a series of reports used by production control and purchasing to plan inventory procurements.

MRP/3000 takes the independent demand for products represented by the customer's master schedule and calculates time-phased demand for component parts. Once all demands for a part or assembly have been determined, MRP will allocate current inventory and orders to these demands and then suggest new orders based on the part's order planning algorithm. The current and suggested orders are then offset by the assembly leadtime, modified by yield factors, and "exploded" via the bill of material to form dependent demand for this assembly's component parts.

The parts controller receives an exception report that highlights all MRP suggestions for "push outs" and "pull ups" of existing orders, as well as any new suggested orders that should be looked at before the next MRP run. Exceptions are detected according to individual controller parameters that are maintained via a CRT terminal.

The controller may take appropriate action based directly on the exception report, or may prefer to investigate the situation that triggered the suggested action. An action report, which displays all supply and demand entries for each part, can be consulted to

determine the cause of the exception. The parts controller (inventory planner) has the ability to override any MRP actions. Once decisions on the actions required have been made, the controller may update IOS/3000 to reflect his plan for order reschedules and new order releases.

More information about MFG/3000 can be obtained from your HP sales representative.

NOTE: MFG/3000 is available in North America & Europe only.

VIEW 3000:
NEW DATA ENTRY SOFTWARE

Jutta Kernke
General Systems Division

VIEW/3000 was introduced by Hewlett-Packard in September 1978 and is the result of the implementation of new advances in data entry technology and of suggestions gathered from more than 600 current DEL/3000 (Data Entry Library) users. VIEW 3000 is not an enhanced version of DEL but a completely new data entry software product.

VIEW/3000 can help users implement straightforward interactive data entry tasks easily and efficiently, and facilitates the development of more complex terminal-oriented applications through the use of a high-level program interface.

Designed both as a stand-alone source data entry facility that can be implemented without programming effort and as a "front-end" to transaction processing applications, VIEW/3000 provides four important features:

1. A FORMS DESIGN FACILITY

The VIEW/3000 program FORMSPEC is an interactive forms design facility that reduces the complex problem of formatting CRT terminal screens to a simple step-by-step process.

The FORMSPEC program enables the creation of screen formats or forms by drawing them on a terminal screen. Each form contains fields whose characteristics are defined from a set of standard descriptions such as type of field (Required, Optional, or Display-only.) and data type (Character, Numeric, or Date). Default values are provided for each field to accelerate and simplify the screen development process. It is possible, therefore, to design forms with VIEW/3000 much more quickly than with conventional programming techniques.

The FORMSPEC facility provides comprehensive DATA EDITING, DATA FORMATTING, DATA MOVEMENT AND CONDITIONAL CONTROL functions without having to generate such routines independently:

- Comprehensive data editing capabilities are offered. Among other edits, the following are available:

  Length Check
  Range Check
  Table Check
  Equality Checks
  Pattern Match
  Check Digit Verification (Mod. 10/11)

- Data may be formatted as it is being collected. VIEW/3000 offers standard routines which justify, fill, strip, and upshift the data in the fields specified.

- Data movement may be specified to move values between fields in a single form or field values between forms. This capability, for example, allows the sum of several fields in a form to be moved to another field in the same form reserved for the total amount.

- Arithmetic and conditional processing, dependent on the value entered in a field, may be defined and specified as needed by utilizing the standard advanced edit processing features of VIEW.

- Custom error messages can be specified with each edit characterization, to be displayed at run time.

Finally, multiple screens may be linked together for one application, and the sequence in which the forms are presented for data entry may be altered as data is collected.

All unprotected fields on a form have unique identifiers independent of their physical location on the form which allows rearranging of fields or form modification without changes to existing specifications.

In summary, VIEW/3000's Forms Design Facility provides an easy to use method of interactively designing forms that are immediately applicable to a wide variety of customer data entry requirements. Once the forms are designed, they are stored in a forms file for use whenever needed. Any form or field stored in the forms file is easy to modify either during or after initial creation.

2. A SOURCE DATA ENTRY FACILITY

For situations which require a stand-alone source data entry capability, VIEW/3000 provides a data entry program called ENTRY. The ENTRY program allows forms to be called from the forms file created by VIEW/3000's FORMSPEC program and to be displayed on the terminal screen. As data is entered, the ENTRY program performs the editing and validation routines specified by the designer for each field. If an error is detected during data entry, ENTRY highlights the field containing the error and displays a diagnostic message for the operator. Data can be immediately corrected and reentered at the source.

The ENTRY program stores the corrected, entered data in a batch data file. ENTRY also allows operators to review the data in the file and, if desired, to change the entered data.

3. A DATA REFORMATTING FACILITY

Occasionally, it is necessary to reformat the entered data to meet the specific input requirements of a customer's application program. For this, VIEW/3000 provides the following reformatting capabilities:

- Combining data from several forms into a single record in the output file.
- Splitting data from a single form into two or more records in the output file.
- Rearranging the data within a record, inserting constants, and generating check digits before writing it to the output file.
- Adjusting data within fields (for example, justifying the data or performing a zero fill).

The program REFSPEC allows specification of how the data in the batch file is to be reformatted and written to an output file. Specifications are entered using standard menus much like those used for forms design. The specifications are stored in a "reformat specification file".

The program REFORMAT performs the reformatting of the data. REFORMAT is a non-interactive program that requires only the names of the batch data file, reformat file, and output file to execute. It can be run at any time after data entry is complete, and the output file can then be used as input to existing application programs. A formatted listing of the output records can be requested.

4. A PROGRAM INTERFACE

VIEW/3000 provides a library of high-level procedures which provides a simple programmatic interface between an application program on the HP 3000 computer, the terminal, the forms and edits defined, the entered data, and the batch data file. These procedures provide control from the user's RPG, COBOL, BASIC, FORTRAN, or SPL application program.

The table below lists a few of the functions these procedures perform for forms management, terminal input/output, data editing, and data access.

VGETNEXTFORM - Retrieves the screen image and all editing characteristics in a single access.

VSHOWFORM - Displays the current form, any data in the

data buffer and diagnostic error messages on the terminal.

VREADFIELDS - Reads input from the terminal.

VFIELDEDITS - Edits all fields according to forms file specifications.

VGETFIELD - Returns the value of a single field to the program.

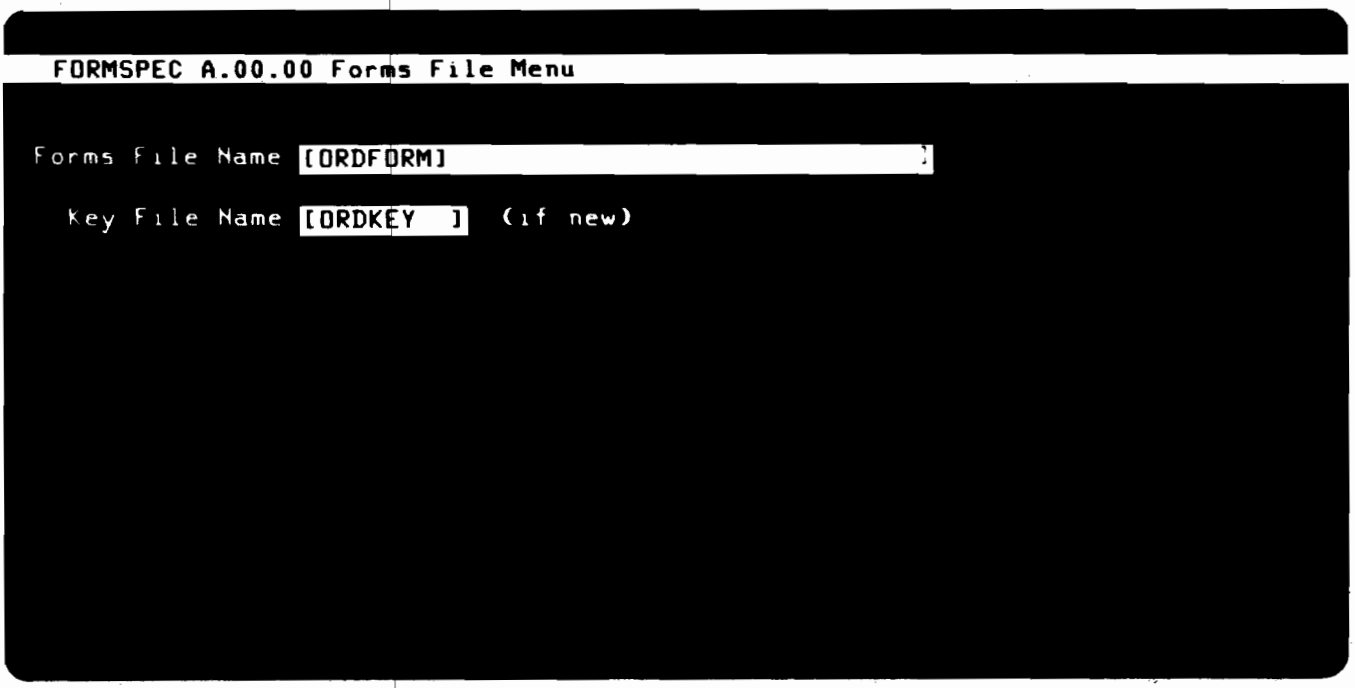
VPUTBUFFER - Writes data from the application program to the data buffer.

Most of the procedures require only one parameter and all are easy to use. For more information concerning these procedures consult the VIEW/3000 reference manual (part number 32209-900001).

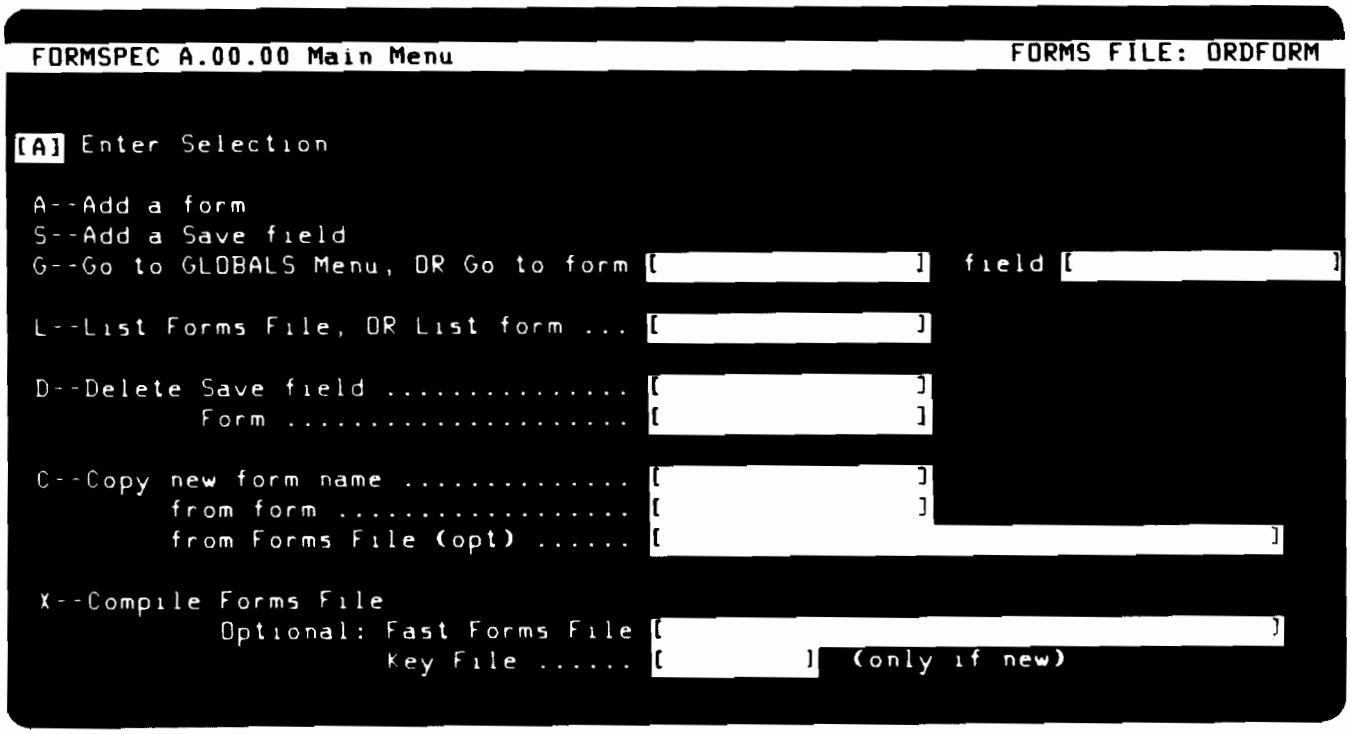
5. AN EXAMPLE OF USING VIEW/3000

The following example demonstrates the ease of using VIEW/3000. A single-form "Purchase Order" is developed in a step-by-step manner. Even when form creation and field definition are far more sophisticated than illustrated here, the process remains essentially as easy and straightforward as shown.

Step 1. After logging onto the HP 3000 and running the program FORMSPEC, VIEW displays the first forms design menu. The menu requests the name of the forms file where the forms are to be stored. The forms file is named ORDFORM and the key file name is ORDKEY. The FORMSPEC program automatically creates these files.



Step 2. After pressing the ENTER key on the user's terminal, the MAIN menu is displayed. This menu allows selection from a number of useful functions. To show how a new form is created "ADD A FORM" is selected by typing the letter "A".



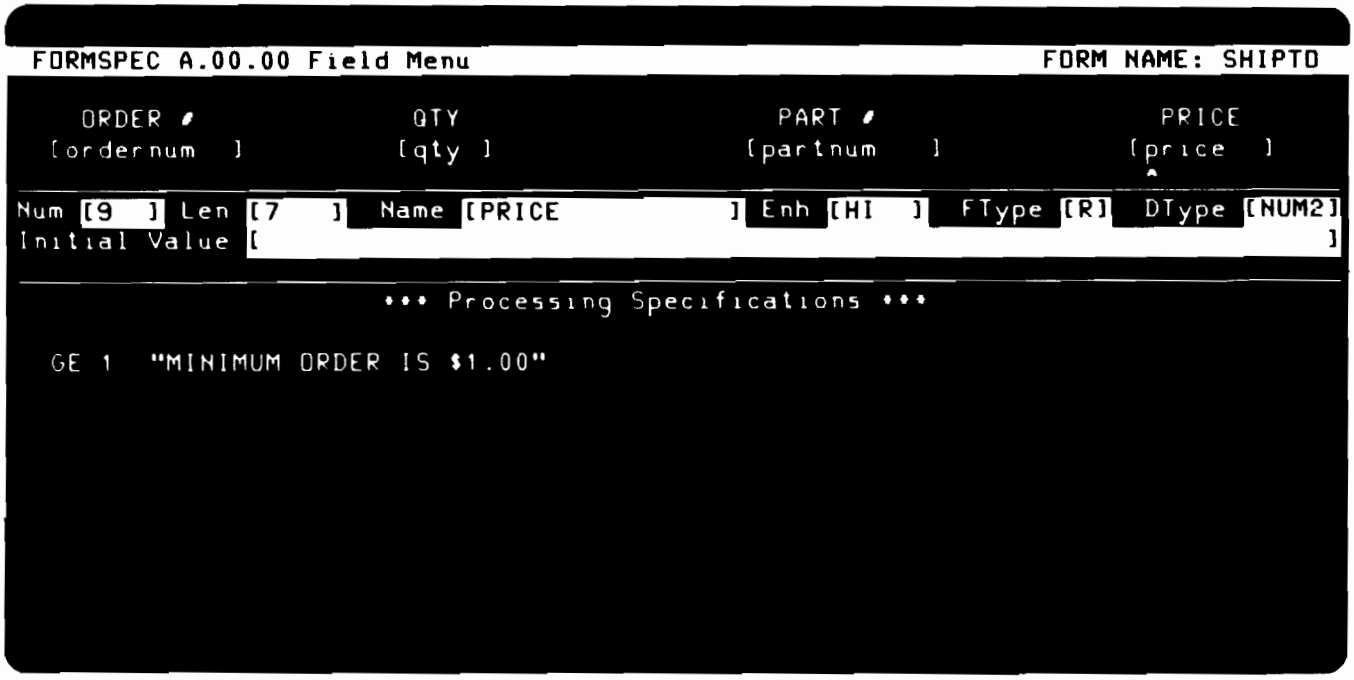
Step 3. After pressing the ENTER key again, the FORM menu is displayed. This menu is used to identify the form by name, to select how the form is to be displayed, and to define its sequence in relation to other forms. A form called "SHIPTO" is created that is to be repeated during data entry until all data has been entered.

Step 4. Pressing the ENTER key clears the terminal screen completely. The form can now be drawn on the blank screen exactly as it is to appear to the data entry operator. In this example, data fields are indicated by left and right brackets. (Non-displaying delimiters are also available.) The fields must be identified by typing a name within each. When the form is completely drawn, pressing the ENTER key causes the form to be stored in the forms file.

A decision could be made at this point to accept default editing specifications for all the fields in the form. If so, the user would proceed to Step 6 and compile the forms file. This application would then be ready for immediate use by the ENTRY program or any other suitable application program. However, in this example, some simple editing is specified in Step 5.

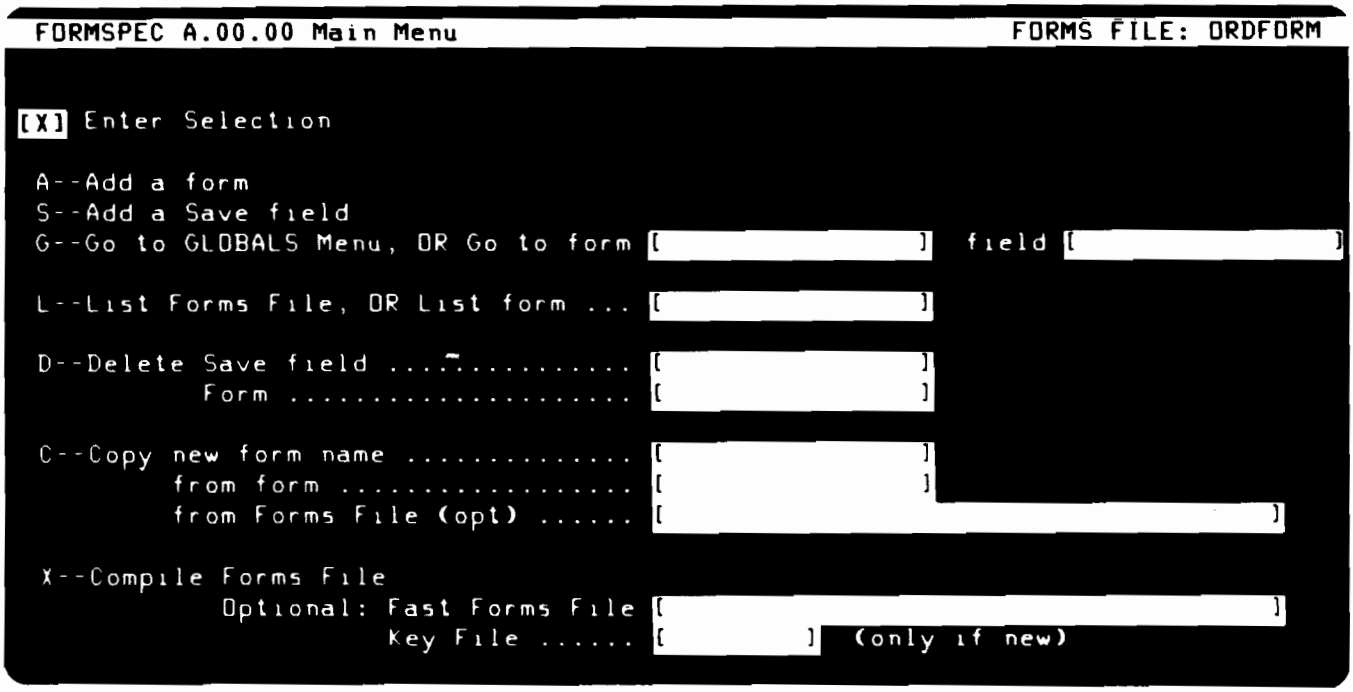
Step 5. The FORMSPEC program displays each data field in the new form in left to right, top-to-bottom screen order with default values. Each field can be changed from an "optional" to a "required" or "display-only" type of field; and its data type changed from "character" to one of a variety of numeric types or to one of three date formats.

Additional editing, data movement, formatting and conditional control may be specified for each field by using a simple set of processing statements. These statements are entered at the bottom of the field manual in a free-form area. In the example, the PRICE field is to be a numeric, required field that must be greater than or equal to 1. FType was changed from Optional to Required, and DType from CHARacter to NUM2. A customized error message -- MINIMUM ORDER IS $1.00 -- is to be used when the edit condition is not met by the data entered.



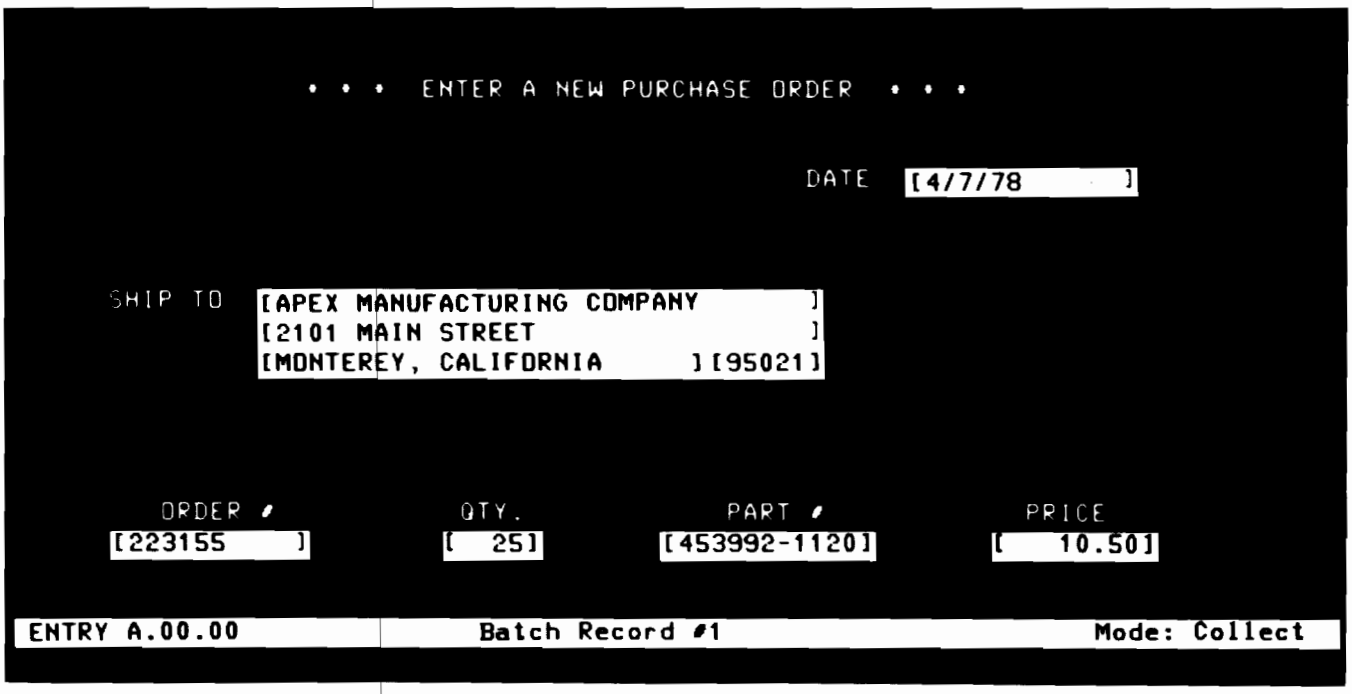
Step 6. The user can now return to the MAIN menu and specify that the forms file be compiled. The form is now ready for immediate use in data entry.

When the forms design is complete, the user can compile the forms file to a "fast forms file" which is created with a minimal record size. Such a forms file can improve performance at run time.



Step 7. Running the ENTRY program uses the newly created form to enter purchase order information.

As shown in this example, VIEW/3000 facilitated the design of an interactive form and the entry of data into this form in seven simple steps.



AN HP MNEMONICS PRIMER: VOLUME II

Pete Sinclair
General Systems Division

Issue number 17 of the COMMUNICATOR 3000 contained a list of about 130 Engineering Computer Mnemonic (ECM) terms and their definitions. Considering the widespread use of mnemonics in the computer industry, we felt that such a listing would be helpful. Well, the response to that first list has been so great that a second list has been compiled with nearly 400 terms.

The expanded guide, which is printed below, is meant for everyone from line employees to secretaries to managers. Engineers might even find this list useful (considering they "developed" most of the terms). The list contains PC board abbreviations, order processing terms, sales jargon, and numerous other abbreviated misnomers and mindbogglers. You will probably cherish it as much as your paycheck.

As with the first ECM guide, this list is not complete. Feedback and ideas from you are most welcome. If you have any suggestions, please send them to me at GSD. Happy translating.

103's	BELL MODEM, 300 BPS, FULL DUPLEX
113's	BELL MODEM (FANCY 103), 300 BPS, FULL DUPLEX
202's	BELL MODEM, 1200/1800 BPS (DEPENDS ON LINE CONDITIONING), HALF DUPLEX
212'S	BELL MODEM, 300 OR 1200 BAUD, SWITCHED LINES, FULL DUPLEX

A

ACB	ACCESS CONTROL BLOCK
ACE	ACCOUNT CUSTOMER ENGINEER
ACK	ACKNOWLEDGE CHARACTER IN BISYNC
ADCC	ASYNCHRONOUS DATA COMMUNICATIONS CONTROLLER (FOR SERIES 33 - TWO TYPES: MAIN AND EXTENDER)
ADR	ADDRESS REGISTER
ALGOL	ALGORITHMIC LANGUAGE
ALU	ARITHMETIC LOGIC UNIT
AM	AREA SALES MANAGER
AMD	AUTOMATIC MEASUREMENT DIVISION (NOW PART OF DATA SYSTEMS)
APL	A PROGRAMMING LANGUAGE (#32105A)
AR	ASYNCHRONOUS REPEATER (EXTENDS TERMINAL DRIVING DISTANCE - #30037A)

ASCII	AMERICAN STANDARD CODE FOR INFORMATION INTERCHANGE
ATC	ASYNCHRONOUS TERMINAL CONTROLLER (#30032A)
ATTN	ATTENTION

B

BACK	BUS ACKNOWLEDGE
BAEDP	BAY AREA ELECTRONIC DATA PROCESSING (INTERNAL HP COMPUTER CENTER)
BASIC	BEGINNER'S ALL-PURPOSE SYMBOLIC INSTRUCTION CODE
BATT	BATTERY TEST POINT
BAUD	SIGNALLING RATE PER SECOND (RECEIVER SAMPLING RATE)
BCD	BINARY CODED DECIMAL
BCS	BINARY CONTROL SYSTEM FOR 2100-SERIES COMPUTER
BIC	BUS INTERFACE CONTROLLER
BISYNC	BINARY SYNCHRONOUS COMMUNICATIONS
BNDV	BOUNDS VIOLATION
BOT	BEGINNING OF TAPE
BPI	BITS PER INCH (MAG TAPE TERM)
BPS	BITS PER SECOND
BRQ	BUS REQUEST
BSC	BINARY SYNCHRONOUS COMMUNICATIONS
BSI	BRITISH STANDARDS ORGANIZATION
BTU	BRITISH THERMAL UNIT
BUSD	BUS DATA REGISTER

C

CAR	CENTRAL ADDRESS REGISTER,
CAS	COLUMN ADDRESS STROBE
CCE	CONDITION CODE EQUAL
CCG	CONDITION CODE GREATER THAN
CCIR	INTERNATIONAL CONSULTATIVE COMMITTEE FOR RADIO
CCITT	INTERNATIONAL CONSULTATIVE COMMITTEE FOR TELEGRAPH
CCL	CONDITION CODE LESS THAN
CDR	CENTRAL DATA REGISTER
CE	CUSTOMER ENGINEER
CHI	HPIB INTERFACE CONTROLLER
CHL	CHANNEL
CIR	CURRENT INSTRUCTION REGISTER
CIS	COLLEGE INFORMATION SYSTEMS (SOFTWARE PACKAGE)
CLST	COLD-LOAD SELF-TEST
CMOS	COMPLEMENTARY METAL OXIDE SEMICONDUCTOR
CMS	CORPORATE MATERIALS AND SERVICES
CNTL	CONTROL
CNTR	COUNTER
COBOL	COMMON BUSINESS ORIENTED LANGUAGE
CPC	CORPORATE PARTS CENTER
CPI	CHANNELS PER INCH (MAG TAPE TERM)

CPP	CHANNEL PROGRAM PROCESSOR
CPS	CHARACTERS PER SECOND
CPU	CENTRAL PROCESSING UNIT
CPVA	CHANNEL PROGRAM VARIABLE AREA
CRC	CYCLIC REDUNDANCY CHECK
CRCC	CYCLIC REDUNDANCY CHECK CHARACTER
CRT	CATHODE-RAY TUBE (VIDEO SCREEN)
CS	COMMUNICATION SYSTEM
CSD	COMPUTER SERVICE DIVISION
CSR	CANADIAN SALES REGION
CSRQ	CHANNEL SERVICE REQUEST
CST	CODE SEGMENT TABLE
CTL	CENTRAL DATA BUS OR COMPLEMENTARY TRANSISTOR LOGIC
CTS	CLEAR TO SEND (MODEM SIGNAL)
CWF	COURSE WRITING FACILITY (COLLEGE SOFTWARE PACKAGE)

D

D/C	DATA COMMUNICATIONS OR DATE CODE
DAV	DATA VALID
DB	DATA BASE
DBMS	DATA BASE MANAGEMENT SYSTEMS
DCD	DATA CARRIER DETECT (SIGNAL FROM MODEM)
DCEM	DISTRIC CUSTOMER ENGINEERING MANAGER
DCIF	DISC CONTROLLER INTERFACE (#30229)
DEL	DATA ENTRY LIBRARY (SOFTWARE PACKAGE)
DEV	DEVICE
DEVNO	DEVICE NUMBER
DEVNR	DEVICE NOT READY
DIO	DATA INPUT/OUTPUT LINES
DIS	DISABLE
DIT	DEVICE INFORMATION TABLE
DM	DISTRICT SALES MANAGER
DMA	DIRECT MEMORY ACCESS
DMD	DISK MEMORY DIVISION
DRT	DEVICE REFERENCE TABLE
DS	DISTRIBUTED SYSTEMS (LINKS BETWEEN 3000's)
DSD	DATA SYSTEMS DIVISION
DSN	DISTRIBUTED SYSTEMS NETWORK
DSR	DATA SET READY (MODEM SIGNAL)
DST	DATA SEGMENT TABLE
DTD	DATA TERMINALS DIVISION
DTR	DATA TERMINAL READY (TERMINAL SIGNAL)
DTS	70 DIGITAL TEST SYSTEM (CIRCUIT TESTING FIXTURE)
DUMP	MEMORY DUMP
DUS	DIAGNOSTIC UTILITY SYSTEM

E

E	EFFECTIVE ADDRESS REGISTER
EBCDIC	EXTENDED BINARY CODED DECIMAL INTERCHANGE CODE
ECL	EMMITTER-COUPLED LOGIC
ECM	ERROR CORRECTION MEMORY
EDC	ENGINEERING DATA CONTROL (#32380A - MANUFACTURING APPLICATION SOFTWARE PACKAGE)
EIA	ELECTRONIC INDUSTRIES ASSOCIATION
EIS	EXTENDED INSTRUCTION SET (#30011A FOR PRE-SERIES II, #30012A FOR SERIES II/III)
EN	ENABLE
ENQ	ENQUIRY CHARACTER IN BISYNC
EOB	END OF BLOCK (USED IN DATA COMMUNICATIONS)
EOF	END OF FILE (USED WITH DISKS, MAG TAPES, AND TERMINALS
EOI	END OR IDENTIFY
EOR	END OF RECORD
EOT	END OF TEXT, TRANSMISSION, OR TAPE
ERS	EXTERNAL REFERENCE SPECIFICATION
ESD	ELECTROSTATIC DISCHARGE
ESL	ELECTROMAGNETIC SYSTEMS LABORATORY (OEM BUYER)
ESR	EASTERN SALES REGION

F

FCA	FAULT CORRECTING ARRAY (CORRECTS MEMORY ERRORS - #30009)
FCB	FILE CONTROL BLOCK
FCO	FIELD CHANGE ORDER
FE	FIELD ENGINEER (SALES PERSON)
FHD	FIXED HEAD DISK (2660)
FICS	FIELD INVENTORY CONTROL SYSTEM
FIFO	FIRST-IN, FIRST OUT MEMORY
FLI	FAULT LOGGING INTERFACE (INTERFACES PROCESSOR AND MEMORY FAULT CONTROL LOGIC)
FORTRAN	FORMULA TRANSLATOR (SCIENTIFIC PROGRAMMING LANGUAGE)
FP	FRONT PANEL
FPLA	FIELD PROGRAMMABLE LOGIC ARRAY
FSI	FIELD SERVICE INVENTORY
FSM	FIELD SALES MANAGER

G

GIC	GENERAL INPUT/OUTPUT CHANNEL
GIM	GENERAL INFORMATION MANUAL
GSDXX	TRAINING COURSE NUMBERS

H

HASP	HOUSTON AUTOMATIC SPOOLING PROGRAM (IBM OPERATING SYSTEM)
HEART	HP CORPORATE CENTRAL ORDER PROCESSING SYSTEM
HLT	HALT
HPDSN	HP DISTRIBUTED SYSTEMS NETWORK
HPIB	HP INTERFACE BUS
HPPO	HP POLICIES AND OBJECTIVES CLASS
HPSA	HP EUROPEAN SALES AND SERVICE
HSI	HARDWIRED SERIAL INTERFACE (#30360A)
HSUI	HIGH SPEED UNIVERSAL INTERFACE (#30059 - ESL BOARD)

I

I/C	INTERCONNECT
I/F	INTERFACE
I/O	INPUT/OUTPUT
IC	INTEGRATED CIRCUIT OR INTERCONNECT PROCESS
ICF	INTEGRATED COMPUTER FAMILY
ICON	INTERCONTINENTAL SALES AND SERVICE
ICS	INTERRUPT CONTROL STACK
IDIMS	INTERACTIVE DIGITAL IMAGE MANIPULATION SYSTEM (ESL MODIFIED 3000 SYSTEM)
IDF	INSTRUCTIONAL DIALOGUE FACILITY (2000 SOFTWARE PACK)
IDS	INTEGRATED DISPLAY SYSTEM (SERIES 300)
IFC	INTERFACE CLEAR
ILT	INTERRUPT LINKAGE TABLE
IMB	INTER MODULE BUS
IMF	INSTRUCTIONAL MANAGEMENT FACILITY (2000 SOFTWARE PACK)
IMS	INTERNAL MAINTENANCE SPECIFICATION
INT	INTERMITTENT OR INTERRUPT
IO	INTERNAL ORDER
IOP	INPUT/OUTPUT PROCESSOR
IOS	INTERNAL ORDER SHORT FORM OR INVENTORY ORDER STATUS (#32384A - MANUFACTURING APPLICATION SOFTWARE PACKAGE)
IOSM	INTER-OFFICE SERVICE MEMO
IRP	INTERMEDIATE RANGE PLAN
IRQ	INTERRUPT REQUEST
ISR	INTERRUPT STATUS REGISTER
ISS	INFORMATION STORAGE SYSTEMS (MANUFACTURED 2883 THROUGH 2888 DISK DRIVES - DIVISION OF SPERRY UNIVAC)
IT	INSTALLATION TAPE (NEW NAME FOR MASTER INSTALLATION TAPE)
IVR	IDENTIFY, VERIFY, AND REPORT

J

JCL	JOB CONTROL LANGUAGE

K

K/A	KNOWN AS
KSAM	KEYED SEQUENTIAL ACCESS METHOD (DATA BASE MANIPULATION ROUTINE)

L

LD	LOAD
LF	LINE FEED
LOAD	COLD LOAD
LP	LINE PRINTER OR LAB PROTOTYPE
LPDT	LOGICAL-PHYSICAL DEVICE TABLE
LPU	LINE POWER UP (POWER SUPPLY OUTPUT INDICATOR)
LSI	LARGE SCALE INTEGRATION

M

MB	MEGABYTE
MBO	MANAGEMENT BY OBJECTIVES
MCL	MEMORY CONTROL AND LOGGING BOARD (#30007)
MCS	MEMORY CONTROL AND STATUS
MCU	MODULE CONTROL UNIT BOARD (#30003-60007)
MC^2	3000II MEMORY DIAGNOSTIC OR HP 16 BIT SOS MICRO-CPU CHIP (MICROPROCESSOR)
MEMA	MEMORY ADDRESS REGISTER
MFG	MANUFACTURING APPLICATIONS SOFTWARE PACKAGE
MHD	MOVING HEAD DISK
MI	MAINTENANCE INTERFACE
ML	MATERIAL LIST
MM	MAINTENANCE MODULE
MMT	MASTER MAINTENANCE TAPE (FOR 3000 SOFTWARE)
MODEM	MODULATOR/DEMODULATOR
MOP	MEMORY OPERATION CODE
MOS	METAL OXIDE SEMICONDUCTOR
MOSAIC	GSD INTERNAL VERSION OF INVENTORY ORDER STATUS PROGRAM
MPE	MULTI-PROGRAMMING EXECUTIVE (3000 OPERATING SYSTEM)
MPEC	MULTI-PROGRAMMING EXECUTIVE (PRE-SERIES II)
MPEII	MULTI-PROGRAMMING EXECUTIVE (1976 RELEASE)
MPEIII	MULTI-PROGRAMMING EXECUTIVE (1978 RELEASE)
MPI	MAINTENANCE PANEL INTERFACE BOARD (#30354)

MRF	MATERIAL RECORDS FILE (PARTS DATA BASE)
MRJE	MULTILEAVING REMOTE JOB ENTRY (ALLOWS MULTIPLE I/O RJE)
MRP	MANUFACTURING REQUIREMENTS PLANNING (#32388A - MANUFACTURING APPLICATION SOFTWARE PACKAGE)
MRT	MATERIALS REQUEST TAG
MSR	MIDWEST SALES REGION
MSRE	MIDWEST SALES REGION EAST
MSRW	MIDWEST SALES REGION WEST
MT	MAGNETIC TAPE
MTBF	MEAN TIME BETWEEN FAILURES
MTRS	MAGNETIC TAPE REFORMATTING SYSTEM
MTS	MULTIPOINT TERMINAL SOFTWARE OR MEMBER OF TECHNICAL STAFF OR MAGNETIC TAPE SYSTEM (OPERATING SYSTEM FOR 2100 COMPUTER)
MTTR	MEAN TIME TO REPAIR
MUX	MULTIPLEXER (MUX CHANNEL INTERFACES ALL PERIPHERALS BUT TERMINALS AND HIGH SPEED DISKS WHILE MUX PANEL INTERFACES TERMINALS)

N

NEP	NET EXCHANGE PRICE
NIR	NEXT INSTRUCTION REGISTER
NPT	NEW PRODUCT TOUR (IN-FIELD TRAINING)
NRDI	NOT READY FOR DATA INPUT
NRFD	NOT READY FOR DATA
NRZI	NON-RETURN TO ZERO INVERTED (MAG TAPE TERM)
NSC	NEELY SANTA CLARA
NSN	NO SERIAL NUMBER
NSR	NEELY SALES REGION
NTF	NO TROUBLE FOUND
NVAS	NET VALUE ADDED SALES

O

OBS	OBSOLETE
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OIMS	OBSOLESCENCE IN MANUFACTURING SPECS
OIP	OBSOLESCENCE IN PROGRESS
OJT	ON-THE-JOB TRAINING
OP	ORDER PROCESSING
OPCODE	OPERATION CODE
OSS	OPERATING SYSEMS SPECIALIST
OT	OVER-TIME
OVF	OVERFLOW

P

P	PROGRAM POINTER
P/S	POWER SUPPLY
PADD	PRE-ADDER
PAL	PROGRAMMABLE ARRAY LOGIC
PB	PROGRAM BASE
PC	PRINTED CIRCUIT OR PROGRAMMABLE CONTROLLER
PCA	PRINTED CIRCUIT ASSEMBLY
PCAL	PROCEDURE CALL
PCB	PRINTED CIRCUIT BOARD OR PROCESS CONTROL BLOCK
PCE	PARTS CENTER EUROPE
PCM	POWER CONTROL MODULE (3000 POWER DISTRIBUTION UNIT)
PCO	PRODUCTION CHANGE ORDER
PCU	POWER CONTROL UNIT (ISS DISK POWER DISTRIBUTION UNIT) OR PROCESSOR CONTROL UNIT
PDU	POWER DISTRIBUTION UNIT
PE	PHASE-ENCODED OR PARITY ERROR
PFW	POWERFAIL WARNING
PHI	SINGLE CHIP HPIB INTERFACE
PICS	PHONE-IN CONSULTATION SERVICE (FOR CUSTOMER QUESTIONS)
PL	PROGRAM LIMIT
PLA	PROGRAMMABLE LOGIC ARRAY
PON	POWER-ON SIGNAL
PP	PRODUCTION PROTOTYPE OR PARALLEL POLL
PRCY	PRIORITY CARRY
PRI	PRIORITY INPUT
PRO	PRIORITY OUTPUT
PROC	PROCEDURE OR PROCESS
PROF	PRODUCTION FAILURE REPORTING SYSTEM
PROM	PROGRAMMABLE READ-ONLY MEMORY
PSP	PRODUCT SUPPORT PACKAGE (CE HARDWARE PACK)
PSU	POWER SUPPLY UP SIGNAL
PT	PRODUCT TYPE
PTOP	PROGRAM TO PROGRAM COMMUNICATIONS (DS TERM) OR POINT TO POINT (HARDWIRE CONNECTION)

Q

Q	STACK MARKER

R

RA	LOGICAL TOP OF STACK
RAL	ROM ADDRESS LINE
RALU	REGISTER AND ARITHMETIC LOGIC UNIT CHIP
RAM	RANDOM ACCESS MEMORY
RAR	ROM ADDRESS REGISTER

RAS	ROW ADDRESS STROBE
RASS	REGISTER, ADDRESS, SKIP, AND SPECIAL IC CHIP
RB	TOP OF STACK - 1
RC	TOP OF STACK - 2
RCEM	REGIONAL CUSTOMER ENGINEERING MANAGER
RD	TOP OF STACK - 3
RDBA	REMOTE DATA BASE ACCESS
REN	REMOTE ENABLE
RFA	REMOTE FILE ACCESS
RFI	RADIO FREQUENCY INTERFERENCE
RI	RING INDICATOR (MODEM SIGNAL)
RIR	ROM INSTRUCTION REGISTER
RJE	REMOTE JOB ENTRY
RM	REGIONAL MANAGER
RO	REPAIR ORDER
ROM	READ ONLY MEMORY
ROPS	REPAIR ORDER PROCESSING SYSTEM
RPG	REPORT PROGRAM GENERATOR (SOFTWARE)
RS232C	MODEM LINE LOGIC LEVEL STANDARDS
RSM	REGIONAL SALES MANAGER
RSVP	REMOTE SYSTEM VERIFICATION PROGRAM
RTE	REAL TIME EXECUTIVE (2000 OPERATING SYSTEM)
RTEC	REAL TIME EXECUTIVE (2000 CORE-BASED SYSTEM)
RTS	REQUEST TO SEND (MODEM SIGNAL)

S

S	STACK POINTER
S/W	SOFTWARE
SAS	STUDENT ASSIGNMENT SYSTEM (EDUCATION SOFTWARE PACKAGE)
SCC	SELECTOR CHANNEL CONTROLLER BOARD (#30030)
SCD	SANTA CLARA DIVISION
SCMB	SELECTOR CHANNEL MAINTENANCE BOARD (#30033)
SCR	SELECTOR CHANNEL REGISTER BOARD (#30030)
SDE	SOURCE DATA ENTRY
SDLC	SYNCHRONOUS DATA LINK CONTROLLER
SDUP	SYSTEM DIAGNOSTIC UTILITY PROGRAM (SERIES I)
SDUPII	SYSTEM DIAGNOSTIC UTILITY PROGRAM (SERIES II/III)
SE	SYSTEMS ENGINEER
SF	SYSTEM FAILURE
SF#XXX	SYSTEM FAILURE NUMBER (3000 MPE)
SIO	START INPUT/OUTPUT
SIOP	START INPUT/OUTPUT PROCESSOR
SIS	STUDENT INFORMATION SYSTEM (EDUCATIONAL SOFTWARE PACK)
SLEUTH	STAND-ALONE DIAGNOSTIC UTILITY SOFTWARE
SMA	SEMICONDUCTOR MEMORY ARRAY
SMR	SOFTWARE MAINTENANCE REQUEST
SODA	SALES OFFICE DATA ACCESS
SOS	SILICON ON SAPPHIRE (IC FABRICATION TECHNIQUE)
SOVF	STACK OVERFLOW
SP	SCRATCH PAD
SPL	SYSTEM PROGRAMMING LANGUAGE (FOR 3000 SYSTEM)

SPR	SOFTWARE PROBLEMS REPORT
SR	SERVICE REQUEST OR SALES REPRESENTATIVE
SRQ	SERIAL REQUEST
SRST	SYSTEM RESET
SS	SYSTEM SPECIALIST
SSB	SOFTWARE STATUS BULLETIN
SSC	SOFTWARE SUBSCRIPTION CENTER
SSF	SKIP AND SPECIAL FIELD BOARD
SSLC	SYNCHRONOUS SINGLE LINE CONTROLLER BOARD (#30055A)
SSM	SYSTEM SERVICE MANUAL
SSR	SOUTHERN SALES REGION
SSS	SOFTWARE SUBSCRIPTION SERVICE
STA	STATUS REGISTER
START	WARMSTART
STT	SEGMENT TRANSFER TABLE
STX	START OF TEXT (BISYNCHRONOUS COMMUNICATIONS)

T

TAC	TRANSFER AT COST
TAR	TECHNICAL ACTION REQUEST
TAV	TOP OF STACK - A VALID
TBG	TIME BASE GENERATOR
TBO	TO BE OBSOLETED
TBV	TOP OF STACK - B VALID
TCI	TERMINAL CONTROLLER INTERFACE BOARD (#30062)
TDI	TERMINAL DATA INTERFACE BOARD (#30032)
TOS	TOP OF STACK
TSB	TIME-SHARED BASIC
TSP	TELECOMMUNICATIONS SUPPORT PACKAGE
TTL	TRANSISTOR-TRANSISTOR LOGIC
TTY	TELETYPE OR TELEPRINTER

U

UCOP	USER CONTROLLER PROCESSOR (MPE MODULE)
UDC	USER-DEFINED COMMANDS
UI	UNIVERSAL INTERFACE BOARD
UL	UNDERWRITERS LAB
USL	USER SUBPROGRAM LIBRARY

V

VAS	VALUE ADDED SALES
VDE	GERMAN SAFETY STANDARDS ORGANIZATION

W

WSTAB WORKING SET TABLE

X

X INDEX
XC CONDITIONAL INDEX

Y

YHP YOKOGAWA HP (HP JAPAN)

Z

Z STACK LIMIT

HOW TO REPORT A SYSTEM USAGE PROBLEM

Roy Clifton
General Systems Division

The efficiency with which HP support personnel deal with system usage problems reported by customers is, to some degree, a function of the accuracy the customer exhibits in reporting the problem. A problem which has been isolated and well documented is already partially solved in that no further time need be spent on these preliminary functions by the support organization. The following procedures outline an effective problem reporting sequence:

1. In isolating a system usage problem the following steps are helpful:

   a. Change the environment so that only the selected program(s) will execute.

   b. Determine if the program has been executing in the past. If it has, determine what changes have been made to the program since the last successful execution.

   c. Segment the program and execute each module independently to isolate the problem.

   d. If your System Manager cannot isolate the problem, he may use the phone in consulting service (PICS). A Systems Engineer will attempt to isolate the problem over the phone and, if this is not possible, to discuss with you what on-site services are required.

After isolating the suspected problem, your next step should be to consult the latest copy of the Software Status Bulletin (SSB). If the problem is reported in this publication, you can assume that HP is aware of the malfunction and that the appropriate corrective steps are being taken. A work-around may have already been developed and entered in the Software Status Bulletin.

Now, if you do not find the problem listed in the SSB, and if you subscribe to an HP Full Software Support policy, then phone your local PICS center to determine if more recent information about the problem is available.

If, after completing all of the steps discussed above, you find that your problem is unique (i.e., it has not been reported previously), submit a Software Maintenance Request. Accompanying the Software Maintenance Request should be all materials needed to duplicate the problem.

2. For documenting a system usage problem the following materials may be necessary:

   a. A compiled listing of the program(s) with a PMAP listing (required when a user's program is involved).

   b. A listing of the actual execution showing the indicated problem. (REQUIRED)

   c. A STREAM file that will reproduce the problem, or a memo of commands and input/output for reproducing the problem. (REQUIRED when user program is involved)

   d. A magnetic tape with the STREAM file, program source, USL, RL, SL, or program files and any data files needed to reproduce the problem. The originator's name and mailing address must be put on the tape to insure its return. (REQUIRED when programs larger that 10 lines of code are needed to isolate the problem)

   e. A printed cold dump of the system if it failed, halted or hard paused.

   f. A line printer copy of the file LOADMAP.PUB.SYS

   g. A copy of the I/O configuration.

Forward your Software Maintenance Request to the Consulting Service center (PICS) at the local HP sales office. A Systems Engineer will be assigned the maintenance request and will sign the form after verifying the problem. If the SE is unable to resolve the Software Maintenance Request, it will be mailed to the factory. This sequence enables your local support organization to be aware of any problems you may be experiencing.

At the factory, your report will again be checked and, if it describes a unique, reproducible bug, will be entered in the Software Status Bulletin.

A QUIZ FOR CONSOLE OPERATORS

This set of questions has been developed as a learning tool for persons who operate HP 3000 Series II/III computer systems. We're sure they will provide you with hours of good, clean fun.

The range of difficulty of the questions varies greatly: compare, for example, Section A with Section I. Our intent is to challenge everyone who decides to work through the set, from a beginning operator to an experienced system manager.

We also expect, despite our efforts otherwise, that there may be some errors. If you find any, please send them to the COMMUNICATOR (find the address under EDITOR'S NOTE) and we will print them. We would also be glad to consider the addition of questions which you think are important.

```
*****
* A *
*****
```

1) WHAT DOES "BPI" STAND FOR? (E.G., 800 BPI; 1600 BPI)

---

2) HOW DO YOU IDENTIFY THE OWNER OF A LISTING?

---

3) WHAT IS USED TO CLEAN OUR TAPES DRIVES?

---

4) WHAT IS THE MAIN PURPOSE OF THE DISC?

---

5) WHAT IS THE MAIN PURPOSE OF THE LINEPRINTER?

---

6) WHAT IS THE MAIN PURPOSE OF THE TAPE DRIVE?

---

7) ON AN UPPER/LOWER CASE LINEPRINTER, WHICH SIDE OF THE PAPER IS USUALLY PRINTED ON?

*****
* B *
*****

1) WHAT COMMAND DISPLAYS ALL PENDING =REPLY MESSAGES?

---

2) WHAT IS THE COMMAND USED TO ANSWER PENDING REQUESTS?

---

3) WHAT DOES "PIN" STAND FOR?

---

4) =SHOWJOB WAIT,N WHAT DOES THE "N" STAND FOR?

---

5) =SHOWJOB @.USERNAME.ACCOUNTNAME IS THIS A VALID COMMAND? IF NOT HOW WOULD YOU MAKE IT VALID?

---

6) WHAT COMMAND WILL SUMMARIZE INFORMATION REGARDING JOB/SESSION ACTIVITY?

---

7) WHAT COMMAND SHOWS ONLY THOSE JOBS/SESSIONS THAT ARE EXECUTING?

---

8) WHAT COMMAND DISPLAYS STATUS INFORMATION ABOUT INPUT DEVICEFILES?

---

9) WHAT COMMAND IS A REQUEST FOR ALL INPUT SPOOLED DEVICE-FILES ONLY?

---

10) WHAT COMMAND WILL SHOW STATUS INFORMATION ABOUT OUTPUT DEVICEFILES?

---

11) WHAT COMMAND WILL SHOW YOU STATUS INFORMATION ABOUT ALL DEFERRED, READY TO PRINT OUTPUT DEVICEFILES ONLY?

---

12) WHAT COMMAND DEFINES ACCEPTABLE INPUT PRIORITIES?

---

13) WHAT COMMAND DEFINES ACCEPTABLE PRIORITIES FOR OUTPUT SPOOLED FILES?

---

14) WHAT COMMAND SETS CONTROLS ON THE NUMBER OF CONCURRENTLY RUNNING JOBS/SESSIONS?

---

15) WHAT COMMAND ALLOWS YOU TO DISABLE A USER'S ABILITY TO SUBMIT JOB/SESSION AND OR DATA STREAMS?

*****
* C *
*****

1) WHAT COMMAND ALLOWS YOU TO SUSPEND AN EXECUTING JOB?

---

2) CAN SESSIONS BE SUSPENDED? IF SO HOW?

---

3) WHAT COMMAND ALLOWS A SUSPENDED JOB TO BEGIN EXECUTING AGAIN?

---

4) WHAT COMMAND ALLOWS YOU TO SEND A MESSAGE TO ALL SESSIONS?

---

5) WHAT COMMAND ALLOWS YOU TO SEND A MESSAGE TO ALL NON-QUIET SESSIONS?

---

6) WHAT IS THE PROMPT CHARACTER FOR THE =WELCOME COMMAND?

---

7) HOW DO YOU GET OUT OF THE =WELCOME COMMAND?

---

8) WHAT COMMAND DISPLAYS INFORMATION FOR A PARTICULAR DEVICE, A CLASS OF DEVICES, OR ALL DEVICES?

---

9) WHAT COMMAND STOPS HEADER/TRAILER OUTPUT TO A DEVICE?

---

10) WHAT COMMAND RESUMES HEADER/TRAILER OUTPUT TO A DEVICE?

---

11) WHAT COMMAND GIVES YOU THE CURRENT SYSTEM TIME?

---

12) WHAT COMMAND IS USED TO LOGICALLY DISMOUNT A PRIVATE VOLUME SET OR CLASS?

---

13) WHAT COMMAND WILL DISPLAY INFORMATION ABOUT ALL DISC DRIVES CONFIGURED ON THE SYSTEM?

---

14) WHAT IS THE PROPER COMMAND TO MOUNT A PRIVATE VOLUME SET DEFINITION (VOLUMES) IN THE FINANCE GROUP WITHIN THE REVISION ACCOUNT?

---

15) IF YOU WANTED TO MOUNT A THIRD GENERATION OF THAT PARTICULAR VOLUME, WHAT WOULD BE ADDED TO THE PREVIOUS =MOUNT COMMAND?

---

16) WHICH VMOUNT COMMAND GIVES YOU THE LEAST AMOUNT OF CONSOLE INTERVENTION?

---

17) IF YOU WANT TO FIND OUT WHICH PRIVATE VOLUME USERS ARE ON THE SYSTEM, WHICH CONSOLE COMMAND WOULD YOU ISSUE?

*****
* D *
*****

LDEV #	DEVICE TYPE	DEVICE CLASS
18	CARD READER	CARD
6	LINE PRINTER	FASTLP
11	LINE PRINTER	SLOWLP
10	MAG TAPE	JOBTAPE
57	PAPER TAPE PUNCH	PTPN
58	PAPER TAPE READER	PTPR
30	PLOTTER	PLOT

USING THE ABOVE TABLE ANSWER THE FOLLOWING QUESTIONS:

1) GIVE THE COMMAND TO SPOOL THE CARDREADER.

---

2) GIVE THE COMMAND TO SPOOL FASTLP.

---

3) GIVE THE COMMAND TO SPOOL THE MAG TAPE FOR INPUT.

---

4) WHAT ARE THE THREE POSSIBLE STATES OF AN INPUT SPOOLFILE?

---

5) WHAT ARE THE THREE POSSIBLE STATES OF AN OUTPUT SPOOLFILE?

---

6) WHAT STATE MUST AN OUTPUT SPOOLFILE BE IN BEFORE YOU CAN ALTER ITS PRIORITY?

---

7) IF YOU RECEIVED NUMEROUS SPOOLEE I/O MESSAGES FROM THE LINEPRINTER, WHAT TYPE OF PROBLEM WOULD YOU SUSPECT?

---

8) GIVE THE COMMAND TO STOP SPOOLING ON THE PLOTTER.

---

9) WHAT COMMAND WILL STOP THE CREATION OF ANYMORE SPOOLED DEVICE FILES ON SLOWLP, BUT WILL ALLOW THE PHYSICAL DEVICE TO CONTINUE PRODUCING OUTPUT?

---

10) WHAT COMMAND WILL SUSPEND OUTPUT SPOOLING OF THE PAPER TAPE PUNCH, BUT ALLOWS THE SPOOLING PROCESS TO THE PAPER TAPE PUNCH TO CONTINUE?

---

11) THE PAPER HAS JAMMED IN FASTLP ON AN ACTIVE LISTING. WHAT COMMAND SHOULD YOU USE AFTER YOU FIX THE PAPER?

---

12) A LISTING ACTIVELY PRINTING ON SLOWLP IS NO LONGER NEEDED. WHAT COMMAND DO YOU USE TO GET RID OF IT BEFORE IT FINISHES PRINTING?

---

13) WHAT COMMAND ALLOWS YOU TO ALTER ATTRIBUTES OF OUTPUT SPOOLING FILES?

---

14) WHAT COMMAND ALLOWS YOU TO ALTER ATTRIBUTES OF JOBS IN THE WAIT QUEUE?

---

15) CAN YOU ALTER THE ATTRIBUTES OF EXECUTING JOBS WITH THE SAME COMMAND?

---

16) WHAT COMMAND ALLOWS YOU TO DELETE ANY READY DEVICEFILE?

---

17) WHAT COMMAND ALLOWS YOU TO REMOVE A DEVICE FROM NORMAL SYSTEM USE?

---

18) WHICH COMMAND DISALLOWS JOBS/SESSIONS AND/OR DATA ON THE CARD READER?

---

19) WHICH COMMAND ALLOWS YOU TO RESUME JOBS/SESSIONS AND OR DATA ON THE CARD READER?

---

20) WHAT COMMAND REMOVES THE FASTLP FROM NORMAL SYSTEM USE?

---

21) WHAT COMMAND RETURNS THE SLOWLP BACK TO NORMAL SYSTEM USE ASSUMING THAT IT IS NOW UNAVAILABLE TO THE SYSTEM? ALSO GIVE THE COMMAND TO SPOOL IT.

---

22) WHAT ARE THE LOWER AND UPPER LIMITS OF THE =JOBFENCE COMMAND?

---

23) WHAT DOES THE =LOGOFF COMMAND ACCOMPLISH?

---

24) HOW DO YOU OPEN A MULTIPOINT LINE FOR MULTIPOINT TERMINAL USAGE?

---

25) WHAT COMMAND WILL CLOSE THE MULTIPOINT LINE?

*****
* E *
*****

1) WHAT COMMAND ALLOWS THE THE OPERATOR TO USE THE CONSOLE AS A USER TERMINAL?

---

2) A USER HAS JUST STREAMED A JOB THAT YOU WISH TO REMOVE FROM THE SYSTEM BEFORE IT STARTS EXECUTING. IT IS CURRENTLY IN THE WAIT QUEUE. HOW DO YOU GET IT OFF THE SYSTEM?

---

3) A USER IS LOGGED ON TO A TERMINAL (LDEV #40) BUT IS LOCKED OUT. NO COMBINATION OF CONTROL KEY SEQUENCES WILL FREE THE DEVICE FROM LOCKOUT. WHAT COMMAND SHOULD BE ISSUED FROM THE CONSOLE TO FREE THE DEVICE?

---

4) WHICH COMMAND DISPLAYS INFORMATION ABOUT THE SCHEDULING OF PROCESSES ON THE SYSTEM?

	(A1) DORMANT			(A2) WAITING			(A3) RUNNING		
A)	Q	PIN	JOBNUM	Q	PIN	JOBNUM	Q	PIN	JOBNU
B)	L	4		C	U26	#S2	L	3	
C)	L	5		C	U23	#S2	C	U24	#S2
D)	L	6					C	U25	#S2
E)	L	7					D	U30	#J5
F)	L	10							
G)	L	11							
H)	L	12							
I)	L	13							
J)	L	14							
K)	L	15							
L)	C	M16							
M)	D	M17							
N)	C	M20							
O)	C	U21	#S1						
P)	C	U22	#S2						
Q)	D	M27							

USING THE ABOVE EXAMPLE ANSWER THE FOLLOWING QUESTIONS. PLEASE NOTE ROWS (A-R) AND COLUMNS (A1-A3) WHEN ANSWERING QUESTIONS.

5) WHAT DOES DORMANT MEAN?

6) WHAT DOES "L 4" MEAN IN ROW/COLUMN (C/A1)?

7) WHAT DOES WAITING MEAN?

8) WHAT DOES RUNNING MEAN?

9) WHAT DOES "C U24 #S2" MEAN IN (D/A3)?

10) WHAT DOES "D M27" MEAN IN (R/A1)?

11) WHY ISN'T THERE A #S OR #J FOR (C/A3)?

*****
* F *
*****

(SOME QUESTIONS IN THIS SET REFER TO THE DRAWING OF THE SYSTEM CONTROL PANEL IN SECTION 2 OF THE CONSOLE OPERATOR'S GUIDE - FIGURE 2-1)

1) WHICH SWITCH RESETS THE CIRCUITS OF THE CPU?

---

2) WHICH SWITCH DISABLES AND ENABLES THE CONTROL PANEL FOR USE?

---

3) WHICH SWITCH DISABLES OR ENABLES THE AUTO RESTART SYSTEM PROGRAM IN THE EVENT OF A POWER FAILURE?

---

4) WHAT IS THE PURPOSE OF THE "CURRENT INSTRUCTION REGISTER"?

---

5) WHICH LIGHTS COME ON IN THE EVENT OF AN IRRECOVERABLE SYSTEM ERROR ENCOUNTERED BY HARDWARE?

---

6) WHAT DOES IT MEAN WHEN THE RUN LIGHT IS LIT?

---

7) WHAT LIGHTS SHOULD BE ON IN THE SWITCH REGISTER TO BRING THE SYSTEM UP FROM DISC? SYSTEM DISC DRT=17.

---

8) AFTER THE DRT IS IN THE SWITCH REGISTER, WHAT SEQUENCE OF BUTTONS DO YOU PUSH ON THE PANEL?

---

9) WHAT IS THE PURPOSE OF THE BATTERY STATUS LIGHT?

---

10) THE SYSTEM JUST CRASHED. WHAT IS THE COMPLETE PROCEDURE FOR DUMPING AND WARM STARTING? BE EXPLICIT. SYSTEM DISC DRT=4, SYSTEM TAPE DRT=6.

---

11) WILL A COOLSTART RECOVER INCOMPLETELY PROCESSED SPOOLED JOBS AND SPOOLED DEVICE FILES?

12) WHAT DOES "DRT" STAND FOR?

*****
* G *
*****

1) WHAT MPE COMMAND ALLOWS US TO COPY MPE TO TAPE?

2) WHEN YOU DO A COMPLETE SYSDUMP WHAT DATE DO YOU GIVE?

3) WHEN YOU MAKE A COLD LOAD TAPE WITH THE DIRECTORY AND NO FILES, WHAT DATE DO YOU GIVE?

4) CAN YOU MAKE CHANGES DURING A SYSDUMP?

5) GIVEN:

```
FILE IN;DEV=TAPE
FILE OUT;DEV=LP
```

WHAT IS THE CORRECT COMMAND TO SYSDUMP WITH TAPE AND LISTFILE?

---

6) CAN OTHER USERS BE ON THE SYSTEM DURING SYSDUMP?

---

7) IF YOU MAKE CHANGES DURING A SYSDUMP DO THE CHANGES TAKE PLACE ON THE SYSTEM? EXPLAIN.

---

8) IF YOU WANT A CURRENT COPY OF THE I/O CONFIGURATION, HOW CAN YOU ROUTE IT TO THE LINEPRINTER WITHOUT DUMPING MPE TO TAPE? GIVEN: FILE OUT;DEV=LP.

---

9) WHAT IS THE CORRECT WAY TO PERFORM A SYSDUMP, TO TAPE, OF ALL PUB.SYS FILES?

---

10) A COMPLETE SYSDUMP WAS TAKEN FRIDAY 9/15/78. WE WANT TO BACK UP ALL FILES MODIFIED SINCE THAT DATE. WHAT DATE DO WE GIVE FOR DUMP DATE? IT IS NOW 9/20/78.

---

11) HOW OFTEN DO WE TAKE A COMPLETE SYSDUMP?

---

12) OTHER THAN COMPLETES, HOW OFTEN DO WE USUALLY TAKE A SYSDUMP?

---

13) HOW OFTEN DO WE USUALLY BACK UP THE FILES WHICH ARE ON PRIVATE VOLUMES?

_____

_____

14) WHAT CAPABILITY DO YOU NEED TO USE THE COMMAND :SYSDUMP?

_____

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*****
* H *
*****
```

DEV #	DRT #	UNIT	CHAN	TYPE	SUB TYPE	TERM TYPE	TERM SPEED	REC WIDTH	OUTPUT DEV	MODE		DRIVER NAME	DEV CLASS
1	4	0	0	0	8			128	0			IOMDISC1	SPOOL SYSDISC
2	5	0	1	0	3			128	0		*	IOMDISC0	SP DI
3	5	1	1	0	3			128	0		*	IOMDISC0	SP DI
6	14	0	0	32	0			66	0		S	IOLPRT0	LP OL
7	6	0	0	24	0			128	0			IOTAPE0	TA
8	6	1	0	24	0			128	0			IOTAPE0	TA
9	6	2	0	24	0			128	0			IOTAPE0	TA
10	6	3	0	24	0			128	LP	JA		IOTAPE0	JO
20	7	0	0	16	0	11	??	40	20	JAID		IOTERM0	CO
21	7	1	0	16	0	4	??	36	21	JAID		IOTERM0	FA
22	7	2	0	16	1	??	??	80	22	JAID		IOTERM0	DA
23	7	3	0	16	0	6	??	36	23	JAID		IOTERM0	FA
24	7	4	0	16	0	4	??	36	24	JAID		IOTERM0	FA
25	16	0	0	19	3			0	0			CSHBSC0	HS
26	#25	0	0	41	0			128	0			IODS0	HD
27	#25	0	0	16	0	??	??	36	27	J ID		IODSTRM0	DST
28	#25	1	0	16	0	??	??	36	28	J ID		IODSTRM0	DST
29	#25	2	0	16	0	??	??	36	29	J ID		IODSTRM0	DST
30	#25	3	0	16	0	??	??	36	30	J ID		IODSTRM0	DST

LDN	PM	PRT	LCL MOD	TC	RCV TMOUT	LCL TMOUT	MODE	TRANSMIT SPEED	TM	BUFFER SIZE	D C	DRIVER OPTIONS
16	8	1	1	1	20	60	C	250000	1	576	N	0

ALL QUESTIONS PERTAIN TO THE ABOVE EXAMPLE.

1) WHAT DOES THE "*" MEAN ON LDEV#2 & 3 UNDER DRIVER NAME?

---

2) WHAT DOES THE "S" MEAN ON LDEV#6 JUST BEFORE DRIVER NAME?

---

3) WHAT DOES THE "??" MEAN ON LDEV#22 UNDER TERM TYPE?

---

4) WHAT DOES THE "#25" MEAN ON LDEV#26-30 UNDER DRT?

---

5) WHAT DOES THE "J" STAND FOR UNDER MODE?

---

6) WHAT DOES THE "A" STAND FOR UNDER MODE?

---

7) WHAT DOES THE "I" STAND FOR UNDER MODE?

---

8) WHAT DOES THE "D" STAND FOR UNDER MODE?

9) HOW DO YOU DELETE A DEVICE FROM THE SYSTEM?

10) WHY IS LDEV#6'S RECORD WIDTH ONLY 66?

11) WHY IS LDEV#10 LISTED AS "JA" UNDER MODE?

12) IF THE ENTRY FOR LDEV #6 IS REENTERED, DO OTHER STEPS HAVE TO BE ACCOMPLISHED IN THE I/O CONFIGURATION LISTING? IF SO, WHAT ARE THEY?

FOR EACH OF THE NEXT FEW QUESTIONS, LIST THE ANSWER ON A SINGLE LINE.

13) ADD DEVICE 31 TO DRT 7. IT IS A 2644A.

---

14) ADD A CARDREADER (IOCDRD0) TO THE SYSTEM: DRT=8, LDEV#34, TYPE=18, AND SUB TYPE=1.

---

15) ADD LDEV#35 TO THE SYSTEM. IT WILL BE A PSUEDO TERMINAL FOR LDEV#25.

THE NEXT FEW QUESTIONS CONCERN OTHER CHANGES UNDER SYSDUMP. PLEASE INDICATE UNDER WHAT CATEGORY (DISC ALLOCATION CHANGES, ETC.) THESE CHANGES CAN BE MADE OR REPLY YES OR NO WHERE APPLICABLE.

16) CAN YOU CHANGE THE MAXIMUM # OF CONCURRENT RUNNING SESSIONS UNDER SYSDUMP?

---

17) CAN YOU CHANGE THE # OF SECONDS ALLOWED FOR LOGON UNDER SYSDUMP?

---

18) CAN YOU CHANGE THE SIZE OF VIRTUAL MEMORY UNDER SYSDUMP? IF NOT, WHEN CAN YOU?

---

19) UNDER WHAT CATEGORY CAN YOU GET A LIST OF THE CURRENT VOLUME TABLE?

---

20) CAN YOU DELETE A VOLUME DURING SYSDUMP? IF NOT WHEN CAN YOU?

---

21) CAN YOU ADD A VOLUME DURING SYSDUMP? IF NOT WHERE CAN YOU ADD ONE?

---

22) UNDER WHAT CATEGORY CAN YOU ADD A LINEPRINTER TO THE SYSTEM?

---

23) UNDER WHAT CATEGORY CAN YOU REPLACE A DRIVER NAME?

*****
* I *
*****

1) DESCRIBE A COLD LOAD. WHAT IS ITS PURPOSE?

---

2) DESCRIBE AN UPDATE. WHAT IS ITS PURPOSE?

---

3) DESCRIBE A RELOAD. WHAT IS ITS PURPOSE?

4) IF A RELOAD IS ABORTED, CAN YOU COLD LOAD TO BRING THE SYSTEM UP? IF NOT, WHAT CAN YOU DO?

5) IF A COLD LOAD IS ABORTED, CAN YOU COOL START? IF NOT, WHAT CAN YOU DO?

MPE COMPONENT	WARMSTART	COOLSTART	UPDATE	COLD LOAD	RELOAD
MPE PROGS. & SYSTEM LIBRARY					
I/O, SYS CONFIG AND SYS PARMS					
ACCOUNTING INFO, FILE DIRECTORY VOLUME TABLE AND USER FILES					
SPOOFILES & JOBS					

6) IN THE TABLE ABOVE, FILL IN THE BOXES WITH TAPE, DISC, OR N/A. UNDER EACH TYPE OF STARTUP, FILL IN WHERE THE PARTICULAR MPE COMPONENTS WILL BE INITIALLIZED.

7) DESCRIBE THE SPREAD OPTION OF RELOAD.

_____

_____

_____

_____

_____

_____

8) DESCRIBE THE COMPACT OPTION OF RELOAD.

_____

_____

_____

_____

_____

_____

9) DESCRIBE THE RESTORE OPTION OF RELOAD.

10) DESCRIBE THE ACCOUNTS OPTION OF RELOAD.

11) DECRIBE THE NULL OPTION OF RELOAD.

12) UNDER WHICH KINDS OF STARTUP CAN YOU RECOVER LOST DISC SPACE?

13) CAN YOU CHANGE THE DIRECTORY SIZE ON A COLD LOAD? IF NOT WHERE CAN YOU CHANGE IT?

14) CAN YOU CHANGE THE VIRTUAL MEMORY SIZE ON A COOL START? IF NOT WHERE CAN YOU CHANGE IT?

*****
* J *
*****

1) YOU WANT A COPY IN STORE FORMAT OF ALL THE FILES IN PUB.SYS AND PUB.ACCOUNT WITH A LINEPRINTER LISTING OF THE FILES THAT YOU PUT ON THE TAPE.

A) UNDER WHAT NAME WOULD YOU LOGON?

B) WHAT FILE EQUATIONS ARE NEEDED?

C) WHAT IS THE ENTIRE COMMAND?

---

2) SOME FILES WERE PURGED OFF THE DISC BUT YOU HAVE A BACK UP TAPE. YOU AREN'T SURE IF ALL OF THE FILES ON THE TAPE ARE THE MOST CURRENT VERSION OF THE FILES. SOME OF THE FILES ON THE TAPE DIDN'T GET PURGED AND HAVE SINCE BEEN UPDATED. THERE ARE TOO MANY FILES TO SELECTIVELY PICK OUT THE ONES YOU NEED. THERE ARE THREE ACCOUNTS ON THE TAPE, ADMIN, SPLII, AND SUPPORT. YOU WANT A LISTING ON THE LINEPRINTER AND YOU DON'T WANT TO DESTROY THE FILES ON THE DISC.

A) UNDER WHAT NAME WOULD YOU LOGON?

B) WHAT FILE EQUATIONS ARE NEEDED?

C) WHAT IS THE ENTIRE COMMAND?

---

3) WHAT COMMAND LOADS A PROGRAM WITHOUT RUNNING IT?

---

4) WHAT COMMAND REMOVES A PROGRAM PREVIOUSLY ALLOCATED?

---

5) WHAT COMMAND INITIATES A JOB ON THE SYSTEM?

---

6) WHAT COMMAND INITIATES A SESSION ON THE SYSTEM?

---

7) BRIEFLY, WHAT IS DS/3000?

---

8) WRITE THE USER DIALOGUE TO LOGON TO ONE SYSTEM AND, USING DS/3000, TO LOGON TO A CONNECTED SYSTEM. LINE# 70.

---

9) WHAT IS THE ORIGINAL SYSTEM CALLED WHEN USING DS/3000?

---

10) WHAT IS THE SECOND SYSTEM OR SYSTEMS CALLED WHEN USING DS/3000?

---

11) WHAT IS THE CONSOLE COMMAND TO BRING UP DS/3000 ON LDEV# 70?

---

12) WHAT IS THE CONSOLE COMMAND TO HALT USERS FROM USING DS/3000 ON LDEV# 71?

---

13) CAN MUTIPLE USERS SHARE A SINGLE DS LINK TO A REMOTE COMPUTER?

GIVEN THE FOLLOWING SITUATION, RESPOND TO QUESTIONS A AND B.

14) THE MOST CURRENT SET OF DAILY SYSDUMP TAPES CONSISTS OF TWO TAPES. THE MOST CURRENT SET OF COMPLETE SYSDUMP TAPES CONSISTS OF FIVE TAPES. YOU ARE RELOADING THE SYSTEM TO REPACK THE DISCS. NOTE THAT THE DAILY SET OF TAPES IS THE MOST CURRENT OF THE TWO SETS.

A) WHICH TAPES DO YOU START THE RELOAD WITH?

B) YOU HAVE STARTED THE RELOAD AND YOU HAVE JUST MOUNTED THE SECOND TAPE. THE SYSTEM RESPONDS WITH "NOT A RELOAD TAPE, MOUNT NEXT TAPE". YOU KNOW THAT YOU MOUNTED THE CORRECT TAPE AND IT IS A RELOAD TAPE. WHAT IS THE BEST WAY TO GET THE SYSTEM UP WITH THE MOST CURRENT FILES, WITHOUT LOOSING FILES?

*****
* K *
*****

1) WHAT IS LOGGING?

---

2) WHAT EFFECT IS THERE ON THE SYSTEM AS FAR AS PRIORITIES ARE CONCERNED WITH AND WITHOUT LOGGING ENABLED?

---

3) CAN YOU CHANGE THE ASPECTS OF LOGGING? IF SO HOW?

---

4) CAN YOU LIST LOGFILES? IF SO HOW?

---

5) WHAT IS A LOAD MAP?

---

6) WHEN CAN YOU GET A COPY OF THE CURRENT LOAD MAP ?(WARMSTART, COOLSTART, COLD LOAD, UPDATE, RELOAD)?

6(A) HOW ELSE CAN YOU GET A COPY OF THE LOAD MAP?

6(B) WHEN IS THE LOAD MAP FILE CHANGED?

---

7) WHAT IS SPOOK?

---

8) WHAT KINDS OF THINGS CAN YOU DO USING SPOOK?

```
DEV/CL   DFID JOBNUM    FNAME     STATE    FRM SPACE RANK PRI #C

LP       #O4   #J2     $STDLIST   OPENED       384
LP       #O1   #J1     $STDLIST   READY       1024    2     8   2
31       #O10  #S5     $STDLIST   OPENED
22       #O2   #S2     $STDLIST   OPENED
SLOWLP   #O11  #J3     POUT       READY         56    3     8   1
SLOWLP   #O12  #J4     OFLE       ACTIVE       524    1     8   1

6 FILES:
     1 ACTIVE
     2 READY; INCLUDING 2 SPOOFLES, 0 DEFERRED
     3 OPENED; INCLUDING 1 SPOOFLES
     0 LOCKED; INCLUDING 0 SPOOFLES
     4 SPOOFLES: 1988 SECTORS
OUTFENCE=2
```

GIVEN THE ABOVE SHOWOUT:

9) IF YOU WANT THE OUTPUT FROM JOBS #1 AND #3 ON TAPE SO THAT YOU CAN MOVE THEM TO ANOTHER SYSTEM FOR PRINTING. WHAT ARE

THE FILE EQUATIONS, LOGON DIALOGUES, AND COMMANDS NECESSARY TO PUT THE SPOOFLES ON TAPE.

---

10) NOW YOU WANT TO GET THE SPOOFLES FROM TAPE ONTO THE NEW SYSTEM AND READY THEM FOR PRINTING. GIVE ALL EQUATIONS, LOGONS, AND COMMANDS NECESSARY TO PUT THE FILES ON THE SYSTEM.

```
*****
* L *
*****
```

1) WHAT CAPABILITY IS NEEDED TO BUILD ACCOUNTS?

---

2) GIVEN:

```
LOGON MANAGER.SYS
:NEWGROUP X.ADMIN
:NEWUSER SUE;HOME=X
```

IS THERE ANYTHING WRONG WITH THE ABOVE EXAMPLE? IF SO, WHAT?

---

3) HOW WOULD THE COMMAND LOOK FOR BUILDING A NEW ACCOUNT WITH MGR AS THE MANAGER OF THE ACCOUNT AND 10,000 SECTORS OF DISC SPACE AS THE ACCOUNT DISC LIMIT?

4) WHAT ARE THE DEFAULT CAPABILITIES FOR AN ACCOUNT?

5) WHAT ARE THE DEFAULT CAPABILITIES FOR THE ACCOUNT MANAGER?

6) WHAT ARE THE DEFAULT CAPABILITIES FOR A GROUP?

7) WHAT ARE THE DEFAULT CAPABILITIES FOR NORMAL USERS?

8) WHAT DO THESE ABBREVIATIONS REPRESENT?

SM = _____

AM = _____

AL = _____

GL = _____

DI = _____

OP = _____

SF = _____

ND = _____

PH = _____

DS = _____

MR = _____

PM = _____

CS = _____

IA = _____

BA = _____

CV = _____

UV = _____

9) WHAT CAPABILITY IS NEEDED TO PURGE ACCOUNTS?

_____

*****
* M *
*****

GIVEN :

ACCOUNT <<HELP>>

USERS <<SUE, ART, MARK, BILL, TOM, JOE>>

GROUPS <<PUB, DEKALB, PERERA, PHILLIPS>>

ACCOUNT MANAGER <<TOM>>

SUE-special capabilities <<REMOTE JOB ENTRY, PROCESS HANDLING, GROUP LIBRARIAN>>

ART-special capabilities <<MULTIPLE RINS>>

BILL-special capabilities <<ACCOUNT MANAGER, SYSTEM SUPERVISOR>>

SUE-group <<DEKALB>>

ART-group <<PERERA>>

BILL-group <<PHILLIPS>>

MARK-group <<PUB>>

TOM-group <<DEKALB>>

DEKALB-special <<ANYONE IN THE ACCOUNT SHOULD BE ABLE TO READ AND EXECUTE ANY FILES IN THE GROUP BUT NOTHING ELSE>>

PUB-special <<ANYONE ON THE SYSTEM SHOULD BE ABLE TO READ AND EXECUTE ANY FILES IN THE GROUP BUT ONLY THE ACCOUNT LIBRARIAN AND GROUP USERS SHOULD BE ABLE TO DO ANYTHING ELSE>>

HELP-account <<5,000 SECTORS>>

PUB-group <<1,000 SECTORS>>

ALL OTHER GROUPS <<3,000 SECTORS>>

HELP-password <<ME>>

SUE-password <<NO>>

TOM-password <<WHITNEY>>

PERERA-password <<FIND>>

1) GIVE ALL COMMANDS AND LOGONS NECESSARY TO BUILD THE ABOVE ACCOUNT AND ALL THE USERS AND GROUPS WITH SPECIFICATIONS GIVEN.

2) WHAT PROGRAM ALLOWS YOU TO CHECK THE ATTRIBUTES OF A FILE, USER, GROUP, OR ACCOUNT?

3) WITHOUT USING THE ABOVE PROGRAM (QUESTION 2) WHAT COMMAND COULD YOU USE TO CHECK THE CPU SECONDS OF GROUP DEKALB? YOU ARE LOGGED ON AS MANAGER.SYS.

4) WHAT COMMAND WILL LIST ALL DISC SPACE USED FOR ALL GROUPS IN ACCOUNT HELP?

5) WHAT IS THE PROGRAM THAT ALLOWS YOU TO COPY A DISC FILE TO A TAPE PUNCH?

```
*****
* N *
*****
```

1) HOW DO YOU GET INTO THE BASIC SUBSYSTEM? HOW DO YOU GET OUT OF THE BASIC SUBSYSTEM?

2) HOW DO YOU GET INTO THE COBOL SUBSYSTEM? HOW DO YOU GET OUT?

3) HOW DO YOU GET INTO THE SPL SUBSYSTEM? HOW DO YOU GET OUT?

4) HOW DO YOU GET INTO THE FORTRAN SUBSYSTEM? HOW DO YOU GET OUT?

_____

_____

5) HOW DO YOU GET INTO THE APL SUBSYSTEM? HOW DO YOU GET OUT?

_____

_____

6) THERE IS ONE WAY TO GET OUT OF ANY OF THE ABOVE SUBSYSTEMS (EXCEPT APL) WITH ONE COMMAND. WHAT IS THE COMMAND?

_____

_____

7) WHAT PROGRAM DO WE RUN IF WE WANT TO ANALYZE THE LOG FILES?

_____

8) CAN LOG FILES BE PURGED USING THIS LOG FILE PROGRAM?

_____

9) GIVEN: LOG0533,LOG0534,LOG0535, & LOG0536. WE WANT TO ANALYZE ALL LOG FILES AND PURGE THEM. HOW WOULD YOU DO THIS?

PROGRAM NAME = _____

FIRST = _____

LAST = _____

PURGE LOG FILES = _____

WHAT RESPONSE DO YOU GIVE AFTER ALL EVENTS HAVE BEEN LISTED?

_____

10) DO YOU HAVE AN OPTION TO RUN AGAIN?

_____

11) WHAT COMMAND ALLOWS YOU TO SET THE CPU SECONDS & CONNECT MINUTES BACK TO ZERO FOR ALL ACCOUNTS?

_____

12) YOU ARE IN THE EDITOR AND YOU WANT TO DO A LISTF. WHAT DO YOU DO?

---

13) WHAT COMMAND LETS YOU CHANGE THE BAUD RATE OF YOUR TERMINAL TO 1200 CHARACTERS PER SECOND?

---

14) WHAT COMMAND ALLOWS YOU TO SEND A MESSAGE TO THE CONSOLE?

---

15) WHAT COMMAND DO YOU USE IF YOU WANT TO SEE THE STATUS OF THE CURRENT LOGFILE?

---

16) WHAT COMMAND DO YOU USE TO CHANGE TO THE NEXT LOG FILE?

```
*****
* O *
*****
```

1) HOW MANY UDC FILES CAN BE LINKED FOR ANY ONE USER NAME?

---

2) WHAT SYSTEM FILE IS MISSING IF USERS DO NOT HAVE THEIR UDC'S ACTIVE WHEN THEY LOGON?

---

3) DOES A USER NEED TO COPY INTO HIS OWN ACCOUNT A COMMON UDC FILE THAT RESIDES IN PUB.SYS BEFORE USING IT?

---

4) WHAT DOES "OPTION LOGON" IN A UDC FILE ACCOMPLISH?

A

1. bits per inch
2. identification information (O#, J#, S#, etc.) on header or trailer page
3. texpads (installation dependent)
4. store information
5. print data
6. alternate (less expensive) storage medium from disc
7. the unlined or white side

B

1. =RECALL
2. =REPLY
3. process identification number
4. non-deferred
5. no =SHOWJOB JOB=@,username.accountname
6. =SHOWJOB STATUS
7. =SHOWJOB EXEC
8. =SHOWIN STATUS
9. =SHOWIN SP
10. =SHOWOUT STATUS
11. =SHOWOUT READY,D
12. =JOBFENCE
13. =OUTFENCE
14. =LIMIT
15. =LIMIT 0,0 and =STREAMS OFF

C

1. =BREAKJOB
2. no
3. =RESUMEJOB
4. =WARN@
5. =TELL@
6 #
7. carriage return, twice
8. =SHOWDEV LDEV,classname
9. =HEADOFF
10. =HEADON
11. =SHOWTIME
12. =DISMOUNT.vsname.group.account
13. =DSTAT ALL
14. =MOUNT VOLUMES.FINANCE.REVISION
15. ;GEN=3
16. =VMOUNT ON,AUTO
17. =VSUSER

D

1. =SPOOL 18,STARTIN
2. =SPOOL 6,STARTOUT
3. =SPOOL 10,STARTIN
4. active
   ready
   opened
5. active
   ready
   opened
6. ready, opened or locked by SPOOK
7. hardware
8. =SPOOL 30,STOP
9. =SPOOL 11,SHUTQ
10. =SPOOL 57,WAIT
11. =SPOOL 6,RESET
12. =SPOOL 11,DELETE
13. =ALTFILE
14. =ALTJOB
15. no
16. =DELETE
17. =DOWN
18. =REFUSE 18
19. =EXCEPT 18
20. =DOWN6
21. =UP11 SPOOL 11,STARTOUT
22. 0 and 14
23. aborts all jobs/sessions and prevents further logons of non-HIPRI jobs/sessions
24. =MPLINE #,OPEN
25. =MPLINE #,SHUT

E

1. =SESSION
2. =ABORTJOB #JXXX
3. =ABORTIO 40
4. =SHOWQ
5. processes have no main memory resources and are not waiting for the CPU
6. process is in a linear queue and the pin # is 4
7. process is in a long I/O wait (terminal read)
8. processes require the CPU in order to continue
9. pin #24 is running in the C queue for session #S2; "U" means user process
10. pin #M27 is job/session main process in D queue
11. any pin without a #S or #J number is an MPE system process - pin 3 is for PROGENITOR which executes commands from the console operator and which is in the running state while it completes the =SHOWQ

F

1. CPU reset switch on inside of front panel
2. DSBL/ENBL switch on inside of front panel
3. PF/ARS - DSBL/ENBL
4. under halt mode:
   (a) halt code (halt instruction bits 12-13) or,
   (b) the amount of memory dumped when the DUMP switch has been pressed

   under run mode: nothing specific
5. system halt
6. system is running
7. 12,13,14,15
8. enable/load-run
9. indicate battery status
10. (a) mount tape on unit 0
    (b) press ENABLE/DUMP
    (c) wait till tape is rewound (series III only) or stops moving (series II)
    (d) verify that all memory has dumped by checking the value in the CIR
    (e) turn on bit 15 (only)
    (f) press ENABLE/LOAD
    (g) press RUN
    (h) press CR on the console
    (i) answer appropriate questions
11. no, only a warmstart
12. device reference table (the hardware address of the controller

G

1. sysdump
2. 0
3. 9/9/99
4. yes
5. :SYSDUMP *IN,*OUT then answer "yes" to to the question, "LIST FILES?"
6. yes, but any files being accessed during sysdump (except program files being executed or files open with READ access only) will not be backed up
7. no, the changes are recorded on the dump tape which must then be cold loaded into the system before the changes take effect
8. SYSDUMP $NULL,*OUT
9. fileset @.PUB.SYS - in sysdump
10. 9-15-78
11. depends on your installation
12. depends on your installation
13. depends on your installation

H

1. the driver will reside permanently in main memory
2. this device is initially spooled
3. carriage return was hit for default
4. these pseudo terminals reference LDEV25 which is DRT 16
5. accept jobs/sessions
6. accept data
7. interactive
8. duplicative - all input to a terminal will be echoed by the software
9. during sysdump, enter the DRT# of the device to be deleted. when sysdump inquires "DRT # ?", enter 0
10. this printer has 132 print columns, 66 is the number of words
11. it is a tape drive configured as job/data accepting
12. yes, ldev 10 would have to be reentered (as would any entry for a ldev with the device class LP) because changing the ldev #6 entry causes the current entry for this device to first be deleted and then reentered. since it is the only entry with the device class LP, all other entries requiring LP as the output device are also deleted during the change.
13. 31 7 5 0 16 0 10 40 JAID IOTERM0 T2644
14. 34 8 0 0 18 1 cr 40 JA IOCR00 CARD
15. 35 #25 5 0 16 0 36 35 JID IOPSTRM0 STERM
16. yes, miscellaneous configuration changes
17. yes, miscellaneous configuration changes
18. yes, disc allocation changes; however, the actual change on the system will take effect only after reload
19. disc allocation changes
20. the change can be made during configuration; however, the change will take effect only after a reload
21. yes, but the change must be cold loaded into the system
22. I/O configuration changes
23. I/O configuration changes

I

1. allows modification of the system configuration while retaining user files. its purpose is to load the MPE system using system files, system parameters, and the I/O device configuration from tape
2. cold loads the system from magtape or serial disc. the system files come from a backup medium. I/O configuration, directory, accounting information, and system parameters come from the system disc. user files remain undisturbed
3. cold loads MPE, all user files, the I/O configuration and system parameters
4. no - must be reloaded
5. no - coldstart update or reload
6. n/a | n/a | tape | tape | n/a(*)

n/a	n/a	n/a	tape	tape
n/a	n/a	n/a	n/a	tape
disc	n/a	n/a	n/a	n/a

(*) brought in only if the system disc volume label is different between the tape and the system disc. if reloading, then update or coldstart after the reload is complete.

7. an attempt is made to put the fle back on a disc in the same device class as it was originally created. if this fails, an attempt is made to replace the file on a disc of the same type and subtype. if this fails, an attempt is made to put the files on any disc in device class (disc). if this fails, a message is printed and the file is not reloaded. in each of these attempts files are spread among similar discs.
8. MPE attempts to place the file on the same volume from which it came. if this fails, the SPREAD option is used.
9. attempts to place files back on the same volume and at the same location from which they came
10. creates a directory from the input medium, and loads the system files, (drivers). no user files are loaded
11. MPE creates a null directory and no user files are copied to the disc
12. coolstart, cold load, update
13. no, only on a reload
14. no, reload option only

J

1. a. manager.sys
   b. FILE T;DEV=TAPE
      FILE SYSLIST;DEV=LP
   c. :STORE @.PUB.SYS,@.PUB.ACCOUNT;*T;SHOW
2. a. manager.sys
   b. FILE T;DEV=TAPE
      FILE SYSLIST;DEV=LP
   c. RESTORE *T;@.@.ADMIN,@.@.SPLII,@.@.SUPPORT;KEEP;SHOW
3. :ALLOCATE
4. :DEALLOCATE
5. :JOB
6. :HELLO
7. a combination of hardware and software which enables communication between HP computers
8. :HELLO username.acctname
   :DSLINE 70
   :HELLO username.acctname
   :REMOTE
   #
9. local session
10. remote session
11. =DSLINE 70,OPEN

12. =DSLINE 71,CLOSE
13. yes, provided the first user does not specify exclusive access
14. (a) the current set of daily sysdump tapes
    (b) reload with accounts option only and then,
        (1) :RESTORE @.@.@ (using daily tapes)
        (2) :RESTORE @.@.@;KEEP (using complete sysdump tapes)

K

1. logging is a procedure for recording the usage of system resources by accounts, groups, and users on a job or session basis
2. with logging, job input and listing output priorities are 8; without logging they are 13
3. yes, during a sysdump
4. yes, by running LISTLOG2.PUB.SYS
5. a load map displays the correspondences between MPE code segments and programs and code segment table (CST) entries
6. coolstart, coldstart, update, reload
   (6a) using FCOPY or EDITOR
   (6b) the loadmap file is rebuilt each time you update, cold load, or reload from magnetic tape
7. SPOOK is a utility program which allows one to interrogate and operate on spooled devicefiles (spoolfiles) created and maintained by MPE
8. list contents of a spoolfile, delete a spoolfile, store or restore spoolfiles, modify spoolfiles
9. :HELLO MANAGER.SYS
   :RUN SPOOK
   >01,11;*T
10. :HELLO MANAGER.SYS
    :FILE T;DEV=TAPE
    :RUN SPOOK
    >INPUT @.@;*T

L

1. system manager
2. yes, you must logon as account manager to the account for which you are creating a new group or user
3. :NEWACCT MANAGER,MGR;FILES=10000
4. am, al, gl, sf, nd, ia, ba
5. am, al, gl, sf, nd, ia, ba
6. ia, ba
7. sf, nd, ia, ba
8. system manager
   account manager
   account librarian
   group librarian
   diagnostician
   system supervisor
   save files - permanent

```
        non-sharable device
        process handling
        extra data segments
        multiple rins
        privileged mode
        communications systems
        interactive access
        batch access
        create private volumes
        use private volumes
    9.  system manager

M

    1.  :NEWACCT HELP,TOM;FILES=5000;CAP=AM,AL,GL,&
        :OP,SF,ND,IA,BA,CS,PH,MR;PASS=ME
        :NEWGROUP DEKALB;FILES=3000;ACCESS=(R,X:GU)
        :NEWGROUP PERERA;FILES=3000;PASS=FIND
        :NEWGROUP PHILLIPS;FILES=3000
        :NEWUSER SUE;HOME=DEKALB;PASS=NO;CAP=IA,BA,SF,ND,CS,&
        :PH,GL
        :NEWUSER ART;HOME=PERERA;CAP=IA,BA,MR,SF,ND
        :NEWUSER MARK;HOME=PUB
        :NEWUSER BILL;HOME=PHILLIPS;CAP=IA,BA,SF,ND,AM,OP
        :NEWUSER JOE;HOME=PUB
        :ALTUSER TOM;HOME=DEKALB;PASS=WHITNEY;CAP=AM,SF,ND,IA,BA
        :ALTGROUP PUB;FILES=1000;ACCESS=(R,X:ANY;W,A,L,S,:AL,GU)
    2.  LISTDIR2.PUB.SYS
    3.  :REPORT DEKALB,HELP
    4.  :REPORT @.HELP
    5.  FCOPY.PUB.SYS

N

    1.  :BASIC
        >EXIT
    2.  :COBOL
        : return or :EOD return
    3.  :SPL
        : return or :EOD return
    4.  :FORTRAN
        : return or :EOD return
    5.  :APL
        shift 9 OFF
    6.  :EOD return
    7.  LISTLOG2
    8.  yes
    9.  LISTLOG2
        log0533
        log0536
        yes
        press return for printout of all logging events requested
   10.  yes
   11.  :RESETACCT @
   12.  :LISTF
```

13. :SPEED 120,120
14. :TELLOP
15. :SHOWLOG
16. :SWITCHLOG

O

1. 3
2. COMMAND.PUB.SYS
3. no - unless you do not normally have read access to the file
4. the commands entered under this option are automatically executed each time the user logs on

HEWLETT-PACKARD
COMPUTER SYSTEMS COMMUNICATOR ORDER FORM

Please Print:

Name _____ **Date** _____

Company _____

Street _____

City _____ **State** _____ **Zip Code** _____

Country _____

☐ HP Employee Account Number _____ Location Code _____

☐ **DIRECT SUBSCRIPTION**

Part No.	Description	Qty	List Price	Extended Dollars	Total Dollars
5951-6111	COMMUNICATOR 1000	_____	$48.00	_____	
	(if quantity is greater than 1 discount is 40%)			_____	
	TOTAL DOLLARS for 5951-6111				_____
5951-6112	COMMUNICATOR 2000	_____	25.00	_____	
	(if quantity is greater than 1 discount is 40%)			_____	
	TOTAL DOLLARS for 5951-6112				_____
5951-6113	COMMUNICATOR 3000	_____	48.00	_____	
	(if quantity is greater than 1 discount is 40%)			_____	
	TOTAL DOLLARS for 5951-6113				_____

☐ **BACK ISSUE ORDER FORM (cash only in U.S. dollars)**
(subject to availability)

Part No.	Description	Issue No.	Qty	List Price	Extended Dollars	Total Dollars
5951-6111	COMMUNICATOR 1000	_____	_____	$10.00	_____	
		_____	_____	10.00	_____	
		_____	_____	10.00	_____	
	TOTAL DOLLARS					_____
5951-6112	COMMUNICATOR 2000	_____	_____	$ 5.00	_____	
		_____	_____	5.00	_____	
		_____	_____	5.00	_____	
	TOTAL DOLLARS					_____
5951-6113	COMMUNICATOR 3000	_____	_____	$10.00	_____	
		_____	_____	10.00	_____	
		_____	_____	10.00	_____	
	TOTAL DOLLARS					_____
TOTAL ORDER DOLLAR AMOUNT						_____

☐ **SERVICE CONTRACT CUSTOMERS**

You will receive one copy of either COMMUNICATOR 1000, 2000, or 3000 as part of your contract. Indicate additional copies below and have your local office forward. Billing will be included in normal contract invoices.

Number of additional copies _____

FOR HP USE ONLY

CONTRACT KEY

5951-6111 Number of additional copies _____
5951-6112 Number of additional copies _____
5951-6113 Number of additional copies _____

Approved _____

HEWLETT-PACKARD
COMMUNICATOR SUBSCRIPTION AND ORDER INFORMATION

The Computer Systems COMMUNICATORS are systems support publications available from Hewlett-Packard on an annual subscription.

The following instructions are for customers who do not have Software Service Contracts.

1. Complete name and address portion of order form.
2. For new direct subscriptions (see sample below):
   a. Indicate which COMMUNICATOR publication(s) you wish to receive.
   b. Enter number of copies per issue under Qty column.
   c. Extend dollars (quantity x list price) in Extended Dollars column.
   d. Enter discount dollars on line under Extended Dollars. (If quantity is greater than 1 you are entitled to a 40% discount.*)
   e. Enter Total Dollars (subtract discount dollars from Extended List Price dollars).

   **To qualify for discount all copies of publications must be mailed to same name and address and ordered at the same time.*

SAMPLE

☒ **DIRECT SUBSCRIPTION**

Part No.	Description	Qty	List Price	Extended Dollars	Total Dollars
5951-6111	COMMUNICATOR 1000	3	$48.00	$144.00	
	(if quantity is greater than 1 discount is 40%)			57.60	
	TOTAL DOLLARS for 5951-6111				$86.40

3. To order back issues (see sample below):
   a. Indicate which publication you are ordering.
   b. Indicate which issue number you want (check availability in latest COMMUNICATOR).
   c. Enter number of copies per issue.
   d. Extend dollars for each issue.
   e. Enter total dollars for back issues ordered.

   All orders for back issues of the COMMUNICATORS are cash only orders (U.S. dollars only) and are subject to availability.

SAMPLE

☒ **BACK ISSUE ORDER FORM** (cash only in U.S. dollars)
(subject to availability)

Part No.	Description	Issue No.	Qty	List Price	Extended Dollars	Total Dollars
5951-6111	COMMUNICATOR 1000	XX	1	$10.00	$10.00	
		XX	2	10.00	20.00	
				10.00		
	TOTAL DOLLARS					$30.00

4. Domestic Customers: Mail the order form with your U.S. Company Purchase Order or check (payable to Hewlett-Packard Co.) to:

   HEWLETT-PACKARD COMPANY
   Computer Systems COMMUNICATOR
   P.O. Box 61809
   Sunnyvale, CA 94088
   U.S.A.

5. International Customers: Order by part number through your local Hewlett-Packard Sales Office.

Please photocopy this order form if you do not want to cut the page off. You will automatically receive a new order form with your order.

HEWLETT hp PACKARD

CONTRIBUTED SOFTWARE
Direct Mail Order Form

NOTE: No direct mail order can be shipped outside the United States.

Please Print:

Name _____ **Title** _____

Company _____

Street _____

City _____ **State** _____ **Zip Code** _____

Country _____

Item No.	Part No.	Qty.	Description	List Price Each		Extended Total	

Sub-total		
Your State & Local Sales Taxes*		
Handling Charge	1	50
TOTAL		

*Tax is verified by computer according to your ZIP CODE. If no sales tax is added, your state exemption number must be provided: # _____.
If not, your order may have to be returned.

Domestic Customers: Cash required on all orders less than $50.00. Mail the order form with your check or money order (payable to Hewlett-Packard Co.) or your U.S. Company Purchase Order to:

HEWLETT-PACKARD COMPANY
Contributed Software
P.O. Box 61809
Sunnyvale, CA 94088

International Customers: Order through your local Hewlett-Packard Sales office. No direct mail order can be shipped outside the United States.

All prices domestic U.S.A. only. Prices are subject to change without notice.

USE THIS FORM TO ORDER MANUALS

Do not order updates separately. Existing updates are automatically included in shipments. Only the current edition of a manual may be ordered.

HEWLETT hp PACKARD

CORPORATE PARTS CENTER

Direct Mail
Parts and Supplies Order Form

SHIP TO:

NAME _____

COMPANY _____ CUSTOMER REFERENCE # _____

STREET _____ TAXABLE*? _____

CITY _____ STATE _____ ZIP CODE _____

Item No.	Check Digit	Part No.	Qty.	Description	List Price Each		Extended Total	

Special Instructions

Sub-total		
Your State & Local Sales Taxes*		
Handling Charge	1	50
TOTAL		

*Tax is verified by computer according to your ZIP CODE. If no sales tax is added, your state exemption number must be provided: #_____ If not, your order may have to be returned.

Check or Money Order, made payable to Hewlett-Packard Company, must accompany order.

When completed, please mail this form with payment to:

HEWLETT-PACKARD COMPANY
Mail Order Department
P.O. Drawer #20
Mountain View, CA 94043

Phone: (415) 968-9200

Most orders are shipped within 24 hours of receipt. Shipments to California, Oregon and Washington will be made via UPS. Other shipments will be sent Air Parcel Post, with the exception that shipments over 25 pounds will be made via truck. No Direct Mail Order can be shipped outside the U.S.

Although every effort is made to insure the accuracy of the data presented in the **Communicator**, Hewlett-Packard cannot assume liability for the information contained herein.

Prices quoted apply only in U.S.A. If outside the U.S., contact your local sales and service office for prices in your country.

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