SPERRY UNIVAC

ATTN: CHARLIE GIBBS

00724
CAV208M45541 UP 9265 33

SPERRY UNIVAC UAS
SUITE 906
1177 WEST HASTINGS ST
VANCOUVER BC V6E 2K3 CAV
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PUBLICATIONS RELEASE

OS/3 SYSTEM 80

Extended System Software (ESS) Type Number 6211-xx

Program Product Specification

UP-9265.33

This Library Memo announces the release and availability of the Extended System Software (ESS), Type Number 6211-xx, Program Product Specification (PPS) UP-9265.33.

This PPS describes the Extended System Software product available to System 80 users. The Extended System Software product includes a screen format generator, a data utility, two sort/merge facilities, a spooling and job accounting facility, and a dialog specification language translator.

This PPS, formerly identified as U6685, has been updated to include OS/3 Release 8.0 enhancements, and to change its document number to agree with all other OS/3 PPSs. The document numbers for all OS/3 PPSs have been changed to begin with the designation "UP-9265".

Destruction Notice: This PPS supersedes and replaces the PPS identified as U6685. Please destroy all copies of U6685.

Additional copies may be ordered by your Sperry Univac representative.

LIBRARY MEMO ONLY	LIBRARY MEMO AND ATTACHMENTS	THIS SHEET IS
Mailing Lists BZ, CZ and MZ	Mailing Lists B00, B01, 28U and 29U (8 pages)	Library Memo for UP-9265.33
		RELEASE DATE: May, 1982

SPERRY UNIVAC

System 80
OS/3

PROGRAM PRODUCT SPECIFICATION

Extended System Software (ESS)

Type Number: 6211-XX

SECTION I

The Extended System Software Group (ESS) offers additional system software facilities that increase functionality and ease of use. The components of this software group are:

- Screen Format Generator
- Data Utilities
- Sort/Merge
- SORT3
- Spooling and Job Accounting
- Dialog Specification Language Translator

PRODUCT FEATURES

A summary of each component follows. Additional information is available in the user documentation for each component.

SCREEN FORMAT GENERATOR

The Screen Format Generator (SFG) is an easy-to-use, interactive utility program that creates and maintains screen formats (templates) for data input and output to a workstation or terminal. SFG offers an easy way to standardize data input and output. The SFG provides the capabilities for interactively creating screen formats, modifying existing formats, and deleting formats. The user is permitted to lay out the format to his specifications and include up to 255 fields within the screen. Each data field is defined for field editing attributes (whether the field is for input or output or both), screen disposition after use, and edit characters. The SFG optionally provides extensive prompting to lead the novice through the process of creating or modifying a format. The SFG automatically stores completed formats in a user or system file.

SFG also has the capability to detect errors during the creation and modification of formats.

DATA UTILITIES

Data Utilities is an easy-to-use set of utility programs for reproducing and maintaining data files.

Information concerning file processing is submitted through a job control stream (batch) or responses to screen prompts (interactive). Statements describe files and the processing to be accomplished. These statements enable the user to compare files or selected areas of a file, delete or insert records, copy existing files onto any storage device available in the system, edit records, or produce a printed copy of any file.

The following are a few examples of possible applications:

- The transferring of data to a different type of device for the purpose of long-range storage or to take advantage of a faster access device
- Data from one program could be used in another program by reformatting the records and transcribing them to a storage medium compatible with the receiving program.
- Selection or deletion of specific areas of a file for testing purposes or report preparation
- The contents of a file can be readily displayed.
- To make certain that no discrepancies have occurred during a copy operation, the input and output files can be compared by using the compare option.

SORT/MERGE

The Sort/Merge system provides the user with a varied group of sorting capabilities, with a minimum amount of user effort. The Sort/Merge software package has two components: a subroutine Sort/Merge facility, which is accessible through user programs, and a processor, which is accessible through JCL. The processor accepts input data to be sorted or merged from tape, diskette, or disk and uses the Sort subroutine to perform the actual sorting or merging operation.

Major features of Sort/Merge include:

- Tape sort capabilities
- Data validity and data integrity checks
- Tape or disk work files
- Data reduction and record sequencing through user own code routines
- ANS'74 COBOL support

SORT3

SORT3 is a sort program compatible with the sort program of IBM System/3, System/32, and System/34. SORT3 sorts and reformats selected records from as many as nine input files. Input may be on card, tape, disk, or diskette.

Major features of SORT3 include:

- Tag and selection sort capabilities
- Data validity and integrity checks
- Including and omitting record selection
- Duplicate record deletion
- Field summarizing for equal control fields
- Alternate collating sequence

For compatibility with System/32 and System/34, SORT3 features:

- Messages concerning the operation of SORT3 may be output to a workstation.
- Comparisons against the following keyword parameters may be made: UDAY, UDATE, UMONTH, UYEAR.

SPOOLING AND JOB ACCOUNTING

Spooling

The Spooling definition is established during system generation. All jobs will run automatically according to the spooling parameter options selected. Additional control over spooling functions is provided through the use of job control statements and spooling commands.

Input spooling offers several automatic features and options. For efficiency, input spooling uses main storage space only when writing data to the spool file. An option is provided to automatically call a job to process an input file as soon as it is completed or to process the input at a later time. Also, input files may optionally be retained in the spool file after having been processed by a user job.

Output spooling also provides many features and tailoring options.

An output file may optionally be retained in the spool file after it has been processed, or it may be held in the spool file without processing. Output spooling provides capabilities to direct how output is to be processed and written and how system resources are to be used. Normally, when a job produces several files (subfiles), output spooling writes all of a terminated job's output files in the order in which they were created and as a continuous entity. The system operator has the option of changing the output spooling operation so that completed output subfiles from different jobs are available before their jobs have

terminated. This may be used to obtain a particular output data file in the quickest way possible or to free file space. The workstation user also has control over output spooling operations performed on jobs he is running from his workstation.

Additional options may be used to direct output spooling to select only those files created by a particular job or with the same file name, or those records designated for the same device type.

Other output spooling features include:

- Option to print informational header lines to separate files
- Option to produce multiple copies of an output file
- Capability of testing forms alignment on a printer
- Capability of writing diskette output files that may be used as input later on
- Capability to redirect print/punch output to a tape, disk, or diskette for subsequent processing
- Capability to direct print output to an auxiliary printer connected to a local workstation

Job Accounting

As each job runs, informational log records pertaining to the job are stored in the spool file, printed, and deleted from the spool file when the job terminates. The log for a job contains the job control used and the messages displayed on the system console screen, as well as informational records to be used for accounting purposes. A formatted job accounting report can be produced from the accumulated accounting records.

The Log Accumulation Program is used to extract job log, console log, and accounting records residing in the spool file to tape or disk. The new file is then available for subsequent processing by the JOBLOG Report Program or by a locally developed program.

The JOBLOG Report Program produces a formatted job accounting report. This accounting report provides the following job-related information:

- Run date
- Account number
- Job name
- Step name
- Time on and time off
- Elapsed time

- CPU time
- Allocated main storage
- Job termination code
- Switching (execution) priority at start of job
- Devices used by job and other number of input/output requests
- Form name used for printed reports
- Number of printed pages generated
- Number of copies of printed report or card file

Options are provided to select one of three accounts report formats:

1. Jobs listed in the order they were submitted to the system
2. Jobs grouped by account number and job name, with subtotals taken when the account number/job name changes
3. Jobs grouped by account number, with subtotals taken whenever the account number changes

The system also provides accounting for interactive user sessions. Immediately after a user logs off, an accounting report of the session just completed is recorded in the workstation log and may be printed out on the system printer if the workstation log is printed. Like job logs, the interactive accounting records are held for future retrieval or accounting purposes. The accounting records are kept whether or not the workstation user selects workstation logging.

Each interactive session accounting record consists of four messages. Their content is as follows:

1. User-ID, account number, wall clock time of LOGON and LOGOFF, and the amount of time the user was connected to the system (length of session)
2. Central Processor Unit (CPU) time used during the session and total number of Execute Channel Program (EXCP) I/O requests made during the session
3. Number of commands entered at the workstation during the session, number of files accessed during the session, and number of supervisor calls and transient routine calls made during the session
4. Number of EXCPs made per session, listed by device identification number. Spooled readers, printers, and card punches are included in this listing, as well as actual devices. Spooled devices do not have device identification numbers; they are identified by RDR for reader, PTR for printer, and PCH for card punch.

DIALOG SPECIFICATION LANGUAGE TRANSLATOR (DSLT)

The Dialog Specification Language Translator (DSLT) is a high-level language compiler that encodes programs written in the Dialog Specification Language (DSL).

DSL is an English-oriented language that has facilities for specifying dialog structures messages to be displayed; input to be entered; and the content, format, and mapping rules for the output.

Language features of DSL include:

- Tree specification to describe the sequencing of the dialog session
- Block structuring to control looping, initialization, and the scope of variables. Looping may be controlled by a count or continue while or until a certain condition is true.
- Declaration of data items, array, and corresponding masks
- Format Control Facilities to define data appearance
- Output source listing and error messages are available.

The DSLT allows the user to create his own job-oriented dialogs. It accepts DSL source code as input and uses that input to generate a dialog display. Dialogs consist of a series of queries to which the user responds with the appropriate information. Users can use the dialog specification language to produce dialogs to meet their requirements. The user assigns a name of each dialog generated through the DSLT, and this name is used to access the dialog. Each language has commands to access a dialog. Once accessed, the dialog is displayed, and the information entered in response to the dialog is passed to the requesting program for processing.

SECTION II

SOFTWARE REQUIREMENTS

ESS requires the following OS/3 software products for operation:

SCS - OS/3 System Control Software

HARDWARE REQUIREMENTS

ESS operates on any System 80 model and configuration that meets the minimal hardware requirement for that specific model and satisfies the main storage requirements specified in the software release documentation accompanying each release.

Additional main storage and/or peripheral devices may be required, depending upon the user's selection of the system's supported features and size of the user's programs, files, and/or data bases.

CUSTOMER EDUCATION

Sperry Univac makes available customer education related to this program product. Course availability and schedules are contained in the published course catalog. Charges for courses are at the prevailing rates. Customers should contact their local Sperry Univac representative for enrollment procedures.

PROGRAM PRODUCT SUPPORT

Sperry Univac will endeavor to correct any significant error in an unaltered current release of the Program Product that the customer brings to the attention of Sperry Univac in accordance with established correction procedures. Sperry Univac does not represent or warrant that all errors will be corrected. This error correction service may result from time to time in update releases that the customer will install. Sperry Univac reserves the right to alter the classification of this Program Product to reflect changes in policy or support requirements.

ORDERING INFORMATION

This Program Product and its associated documentation may be leased from Sperry Univac at separately stated lease charges. Upon execution of the appropriate Consolidated Agreement or Supplemental Agreement, the following will be provided:

1. A magnetic tape or diskette(s) in OS/3 Operating System format

2. One copy of the associated documentation

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