

System/36 Software

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System Support Program (SSP)

SSP, a licensed program, is a disk-resident operating system designed to provide multiprogramming support that is easily usable by new and departmental users. SSP provides these major capabilities:

- Concurrent multiple interactive and batch job execution
- Virtual storage management techniques (swapping) to allow overcommitment of main storage
- Disk data management that provides file sharing and protection for input, update, and add operations
- Execution time binding of resources to applications
- A single Operation Control Language for interactive and batch execution
- Operation Control Language features:
 - Extensive testing capabilities
 - Branching and substitution
 - Operator prompting
 - OCL to program communications
- Auto-response facilities to enhance unattended operation
- Security including:
 - Password signon with maximum signon attempts
 - Password date checking
 - Procedure execution at signon
 - Multilevel data file
 - Multilevel library access
 - Operator menu control
- System utilities for data file and library:
 - Create/delete
 - Rename
 - Copy
 - Save/restore
- Development Support Utility (DSU), a full-screen editor for creating and maintaining OCL statements, procedures, messages, display formats, and program source code
- Interactive Data Definition Utility (IDDU), to provide data dictionary support for the office licensed programs. Allows for the definition and storage of descriptions for data and communications files.
- System configuration utility to interactively define the configurations:
 - Input/output devices
 - Local and remote workstations
 - Security
 - Performance options
 - Other IBM-supplied support
- System history to provide a record of all jobs executed, operator prompts, and operator responses. The amount of history maintained online is user selectable.
- Interrupt/resume support to allow any workstation operator the option of suspending a current operation, performing another operation, and then resuming the current operation
- Spooling support optionally available for all printers attached to the system, including those attached via communication facilities. Two levels of console support are provided:
 - The system console may be used, for example, to display the status of any spool job or to change the position on the queue, the number of copies, or the form number. The system console may also be used to cancel print jobs or reroute them.
 - Subconsole(s) have the same facilities as the system console with the restriction of only viewing and controlling the printer(s) under their control.
- Input queue (JOBQUE) that supports submission of batch jobs from any workstation operator or jobstream. The system console may view and control all JOBQUE jobs and all subconsole operators may view and control their own jobs.
- System program library and multiple user libraries

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- HELP facilities (over 2000 screens) to provide the occasional user assistance in using system-provided services
- Local and remote display and printer support. System and application functions on local workstation devices are available on remote devices without requiring any changes to programs, job control, or system tables.
- Sort/merge facility
- Online programming support
- Dynamic workload management
- Remote operation support facility (ROSF)
- Support for batch binary synchronous communications (BSC)
- Support for asynchronous communications
- Additional SSP support
 - Diskette I interchange support
 - Multinational character set
 - 1255 magnetic character set
- Tape Support Feature
 - Tape save/restore support for 8809 Magnetic Tape Unit (5360 only)
 - Tape save/restore on 6157 Streaming Tape unit

Interactive Communications Feature (SSP-ICF)

This feature consists of a set of subsystems matching the link and logical protocols of various host subsystems, terminals, and other systems. A common user interface is provided that isolates the user from the link and logical protocols.

System/36 SSP-ICF consists of a common user interface for application programs and several subsystems:

- Internal protocol:
 - INTRA, which allows application program-to-program communications within the same System/36
- BSC subsystems:
 - CCP for System/3 Model 15D CCP
 - CICS for CICS/OS/VS and CICS/DOS/VS
 - IMS for IMS/VS IRSS (BTAM)
 - BSCCEL for System/3 Batch BSC, 3740 BSC, Office Systems BSC, System/34, System/36 BSC, and System/38 as a System/3
- SNA subsystems:
 - SNA upline facility (SNUF) for CICS and IMS/VS
 - SNA peer (peer) for System/34, System/36, and System/38
 - SNA finance subsystems for 4701, 3601, and 3694
- Advanced program-to-program communications (APPC) supports mapped SNA LU6.2 communications with a high-level user interface.
- SSP-ICF file transfer subroutines allow a user-written ICF application program to send or retrieve entire data files between System/36s using COBOL, RPG II, or Assembler programs. Application programs may be written to communicate

through the APPC, async (not 5364), BSCCEL, or peer ICF subsystems.

- Asynchronous communication support:
 - Switched or non-switched point-to-point communication between a System/36 and an asynchronous device
- Interactive terminal facility:
 - System/36 connection to services of public data networks such as the TELEMAIL service of GTE Telenet Network. (This is *not* an endorsement of this network.)

Additional SSP Support

Feature 6000 (Extended SSP) has been repackaged into two new SSP features:

- Feature 6101, Additional SSP Support, provides support, for diskette I format, multinational character set, 1255 Magnetic Character Reader (5360 only).
- Feature 6102, Tape Support feature, provides support for tape save/restore and data interchange on the 8809 Magnetic Tape Unit attached to the 5360 System Unit and tape save/restore on the 6157 Streaming Tape Unit.

Communications Feature

- Autocall provides support for automatically establishing communication connection for MSRJE, 3270DE, ICF, and batch BSC.
- X.21 support provides software for interface to X.21 switched and nonswitched networks.
 - X.21 short-hold/single-port sharing support
- X.25 support provides native support with the following features:
 - Permanent virtual and virtual circuit call support
 - Availability of up to three lines with 16 virtual circuits per line for a total of 48 circuits
 - Integrated pad support compatible to the GTE Telenet Network (*not* an endorsement)
 - Packet sequence by Module 8 and 128
 - Packet sizes of 64, 128, 256, and 512 bytes
 - Window sizes from 2 to 15 packets
 - Other related optional features
- Base support is provided for MSRJE, 3270DE, ICF and advanced program-to-program communications (APPC)
- Asynchronous communications support:
 - Point-to-point, switched or non-switched
 - Communication between System/36 and an asynchronous device. The communication link requires a System/36 application program to communicate with or provide services to the attached devices/system. Such an application program is not part of the asynchronous communications support and has to be written by using the SSP-ICF interface.

3278 Emulation via IBM Personal Computer

3278 Emulation via IBM Personal Computer consists of two components. One component executes in the System/36. The second executes in the IBM Personal Computer. 3278 Emulation allows the users of IBM Personal Computers to emulate a 3278 display station Model 2 or a 3279 Color Display Station Model 2A or S2A when using the System/36 3270 Device Emulation Feature in an SNA network.

3270 Device Emulation Feature

The 3270 Device Emulation feature allows the System/36 attached workstations (3179 Model 2, 3180 Model 2, 5251 Model 11, 5291, 5292, and 5150 personal computers with 5250 emulation mode) to appear as 3270 control unit and devices to a host system:

- System/36 appears as a 3271 Model 2 under BSC or as a 3274 Model 1 under SNA.
- An attached workstation appears as a 3277 Model 2 display.
- Any attached printer (3262, 5219, 5224, 5225, 5256) appears as a 3288 Model 2 printer, including spooled remote printers.
- Up to 32 device addresses are supported under BSC and up to 30 device addresses per line are supported under SNA.
- One BSC line and/or up to eight 3270 SNA lines are supported.

Distributed Disk File Facility (DDFF) Feature

The System/36 Distributed Disk File Facility (DDFF) permits a System/34 application program to access System/36 files.

Distributed Data Management (DDM)

DDM allows a System/36 application program to access files stored on another System/36, a System/38, or a System/370 running CICS (target only), thus making it easier to distribute data processing among multiple systems.

Display Station Pass-Through (DSPT)

Provides support for terminals attached to a System/36 to sign on to a remote System/36 or a System/38 or vice versa. Program output (disk files, printer output) will be on the remote system on which the user is signed-on.

Advanced Peer-to-Peer Networking (APPN)

APPN allows users to communicate on a logical, point-to-point basis across a network of interconnected System/36s. System/38s can participate in an APPN network as end-nodes. APPN allows users to communicate with other systems without having to know the network paths to the remote systems. Per-

sonal Services/36 document distribution (SNADS), Display Station Pass-Through, Distributed Data Management, and Advanced Program-to-Program Communications are supported by APPN. This allows users to extend capabilities beyond an adjacent system or node without any operator intervention on the adjacent system. APPN supports switched and leased SDLC lines, X.25 circuits, and Local Area Network (LAN) connections.

Multiple Session Remote Job Entry Feature

MSRJE is a feature of the System/36 System Support Program that permits a System/36 to function as a remote job entry (RJE) workstation for submission of jobs to a central host running RES, JES2, JES3, RSCS (BSC only), or POWER/VSE (SNA only), using BSC or SNA protocols:

- Multiple sessions are supported:
 - Up to 15 readers*
 - Up to 15 printers*
 - Up to 15 punches*
- For SNA protocols the line may be shared with SSP-ICF (SNUF and APPC subsystems), Communications and Systems Management (C&SM) feature, and PS/36.
- Consistent and common user interface are provided regardless of the line protocols.

*Seven sessions when using BSC protocols, 15 for SNA

Display Station Pass-Through (DSPT)

System/36 Display Station Pass-Through (DSPT) feature provides support for 5250 or equivalent workstations to sign on to a remote System/36 and execute procedures and application programs on that remote system. Program output (disk file, printer output) will be on the remote system to which the user is signed-on. DSPT utilizes APPC sessions as the communication protocol.

3278 Emulation via IBM Personal Computer

3278 Emulation via the IBM Personal Computer allows the users of the IBM PC, Portable PC, PC XT, and PC AT to emulate a 3278 Display Station Model 2 or 3279 Color Display Station Model 2A or S2A when using System/36 3270 Device Emulation (DE) in a SNA network.

Communications and Systems Management

This SSP optional feature contains change management and distribution and "alerts," as well as a distributed host facility. The System/36 support works in conjunction with the program product Distributed Systems Executive (DSX) or Distributed Host Command Facility (DHCF). Network Problem Determination Application (NPDA), and Network Communications Control Facility (NCCF) on the host

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System/370 (4321 to 3084). Distributed Host Executive distributes (and retrieves) programs, screen formats, procedures, and data files to (and from) the host. Procedures can be sent to a System/36, executed, and the results returned to the DSX host while the SSP Distributed Systems Node Executive (DSNX) is in session with the host. Alerts will also be transmitted to the host via the SSP feature. Distributed Host Command Facility (DHCF) allows a System/370 network terminal user to communicate to the System/36 via the Host Command Facility (HCF) on the System/370. The System/370 terminal will appear to the System/36 as a remotely-attached 5250 workstation. The System/370 terminals will be able to access and control applications written and running on the System/36.

Data Encryption Standard (DES) Subroutine for Banking Feature

This feature provides data encryption support for banking customers:

- DES is used to generate personal identification numbers (PINs) for use with the 3624 Consumer Transaction Facility.
- DES can be used in an RPG II, COBOL, or Assembler application program.
- DES cannot be used in a BASIC program.

Ordering Information

System Support Program

Program number: 5727-SS1

System/36 PC

Program number: 5727-SS6

Extended SSP

System/36 PC: Not available

Additional SSP Support

Program number: 5727-SS1, feature 6101

System/36 PC Not available

Tape Support Feature

Program number: 5727-SS1, feature 6102

System/36 PC

Program number: 5727-SS6, feature 6144

Interactive Communications Feature

Program numbers:

ICF Upline: 5727-SS1, feature 6264

ICF Finance: 5727-SS1, feature 6265

ICF Base: 5727-SS1, feature 6266

System/36 PC

Program numbers:

ICF Upline: 5727-SS6, feature 6264

ICF Finance: 5727-SS6, feature 6265

ICF Base: 5727-SS6, feature 6266

SSP Communications Feature

Program number: 5727-SS1, feature 6001

System/36

Program number: 5727-SS6, feature 6047

3270 Device Emulation

Program number: 5727-SS1, feature 6003

System/36

Program number: 5727-SS6, feature 6049

Distributed Disk File Facility Feature

Program number: 5727-SS1, feature 6006

System/36 PC: Not available

Distributed Data Management Feature

Program number: 5727-SS1, feature 6037

System/36 PC

Program number: 5727-SS6, feature 6052

Multiple Session Remote Job Entry Feature

Program number: 5727-SS1, feature 6004

System/36 PC:

Program number: 5727-SS6, feature 6050

Display Station Pass-Through

Program number: 5727-SS1, feature 6079

System/36 PC

Program number: 5727-SS6, feature 6090

Advanced Peer-to-Peer Networking

Program number: 5727-SS1, feature 6096

System/36 PC

Program number: 5727-SS6, feature 6096

3278 Emulation via IBM Personal Computer

Program number: 5727-SS1, feature 6080

System/36 PC

Program number: 5727-SS6, feature 6091

Communications and Systems Management

Program number: 5727-SS1, feature 6029

System/36 PC

Program number: 5727-SS6, feature 6051

Data Encryption Standard Subroutine for Banking Feature

Program number: 5727-SS1, feature 6005

System/36 PC

Program number: 5727-SS6, feature 6077

Reference Material

- Guide to Publications, GC21-9015
- Operating Your Computer, SC21-9026
- System Reference, SC21-9020
- Interactive Communications Feature, SC21-7910
- Interactive Communications Feature, Guide and Examples, SC21-7911
- Multiple Session Remote Job Entry Guide, SC21-7909
- 3270 Device Emulation Guide, SC21-7912
- Distributed Disk File Facility, SC21-7869
- 3278 Emulation Via Personal Computer, Users Guide, SC09-1086
- SSP Specifications, GC21-9021
- Using System/36 Communications, SC21-9082

BASIC

System/36 BASIC, a licensed program, is a high-level, interactive language for users who have commercial data processing requirements or who need to solve business, technical, and scientific problems.

Ordering Information**System/36 BASIC**

Program number: 5727-BA1

System/36 PC

Program number: 5727-BA6

Reference Material

- Programming with BASIC, SC21-9003
- BASIC Licensed Program Specifications, GC21-9011

COBOL Compiler and Library

The System/36 COBOL Compiler and Library is a licensed program that operates under control of the System/36 System Support Program.

COBOL is a high-level language widely used in commercial data processing; it supports batch, interactive, and communications processing.

Ordering Information**System/36 COBOL Compiler and Library**

Program number: 5727-CB1

System/36 PC

Program number: 5727-CB6

Reference Material

- COBOL Compiler and Library Licensed Program Specifications, GC21-9009
- Programming with COBOL, SC21-9007
- IBM Guide to COBOL, SC21-7890

FORTRAN IV

The IBM System/36 FORTRAN IV licensed program processes programs written in the System/36 FORTRAN IV Language (X3.10-1966), producing output suitable for execution with the System/36 System Support Program.

FORTRAN is a mathematically-oriented high-level language used to solve complex numerical problems in either batch or interactive mode.

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Ordering Information

System/36 FORTRAN IV

Program number: 5727-FO1

System/36 PC

Program number: 5727-FO6

Reference Material

- Programming with FORTRAN IV, SC21-9005
- FORTRAN IV Licensed Program Specifications, GC21-9010

RPG II

The System/36 RPG II Compiler is a licensed program that operates under control of the System/36 System Support Program.

RPG II is a fixed-format high-level language intended to be used for commercial data processing applications; it supports batch, interactive, and communication programs.

Ordering Information

System/36 RPG II

Program number: 5727-RG1

System/36 PC

Program number: 5727-RG6

Reference Material

- Programming with RPG II, SC21-9006
- RPG II Licensed Program Specifications, GC21-9008

Utilities

The System/36 Utilities licensed program provides support for functions of general use in system preparation and maintenance. The following utilities are included in System/36 Utilities:

- Data File Utility (DFU) to create, maintain, list, and inquire into user data files
- Source Entry Utility (SEU) to create and maintain OCL statements, procedures, messages, display formats, and program source code
- Work Station Utility (WSU) to define interactive data entry programs

- Screen Design Aid (SDA) to design, create, and maintain display formats and job menus interactively

Ordering Information

System/36 Utilities

Program number: 5727-UT1

System/36 PC

Program number: 5727-UT6

Reference Material

- Utilities Licensed Program Specifications, GC21-7895

Development Support Utility (DSU)

The System/36 Development Support Utility is a full-screen editor for creating and maintaining OCL statements, procedures, messages, display formats and program source code.

- Extensive online documentation and HELP support
- Line commands supported consistent with other System/36 products

Ordering Information

Development Support Utility (DSU)

Program number: 5727-DS1

System/36 PC

Program number: 5727-DS6

Reference Material

- Development Support Utility Guide, SC09-1085
- IBM System/36 Development Support Utilities Guide, SC09-1085

Performance Monitor PRPQs

The Performance Monitors consist of two parts:

- The appropriate Host program (P84089 System/36 Response Time Measurement Facility PRPQ for 5360 and 5362, or P84092 for the 5364)
- IBM Personal Computer program (P84090 Personal Computer Performance Monitor for the System/36 PRPQ)

System performance can be monitored during the measurement period while the information is “fresh,” and the user environment can be observed in relation to the measurements being displayed.

The two PRPQ's are listed below.

Response Time Measurement Facility

See “Performance Monitor PRPQs” above.

Response Time Measurement Facility PRPQ (P84089 for 5360 and 5362 or P84092 for 5364) provides for local workstation response time logging and recording. Response time is measured between the time the keyboard is locked with the input inhibited and the time it unlocks. Response data is recorded in a system trace file.

Ordering Information

Response Time Measurement Facility PRPQ

Program number: 5799-PAZ

System/36 PC

Program number: 5727-DS6

Reference Material

- Development Support Utility Guide, SC09-1085
- IBM System/36 Development Support Utilities Guide SC09-1085

Personal Computer Performance Monitor for System/36

See “Performance Monitor PRPQs” above.

Personal Computer Performance Monitor for the System/36, PRPQ P84090, is a personal computer program that facilitates the analysis of performance data from SMF runs or in realtime. The PC program evaluates the data and issues “alerts” that flag conditions that may impair balanced system performance.

It works in conjunction with PRPQ 84089 on the 5360/5362 or PRPQ 84092 on the 5364.

Reference Material

- User's Guide, SC21-9477
- Program Specifications, GC21-9487

System/36 Office Applications

There are four integrated System/36 applications for the office (see below): Query/36, DisplayWrite/36, Personal Services/36, and PC Support/36.

Query/36

The Query/36 licensed program provides functions that can be used by principals, secretaries, and other office workers to help improve their productivity. This program supplies easy-to-use information retrieval that can result in data being displayed, printed, or saved in a disk file using a variety of selection criteria.

Highlights

- A part of the integrated System/36 office support, consisting of DisplayWrite/36, Personal Services/36, and Query/36
- Prompted interface for definitions
- Fast path for definitions
- Data entry: creating, updating, or deleting data records in disk files
- Online information
- Output options to display, printer, or disk file
- Selection of up to 5 files
- Revising a query or patterning a query after an existing query
- Copying and deleting a query
- Executing a previously-defined query
- Result field definition by calculations performed with constants and existing fields
- Field selection and ordering
- Record selection by field content, constant value, result field, range of values, or list of values
- Ascending or descending sort on up to five fields
- Totals, averages, maximum, minimum, and counts of fields
- Kanji (ideographic data types) support
- Alternate collating sequence and summary output to disk

DisplayWrite/36 (DW/36)

System/36 DisplayWrite/36 is a high-function word processing program supporting the creation, revision and printing of documents. The full-screen text editor was designed with an interface and function similar to other DisplayWrite family products. DW/36 provides capabilities for data and text merge, graphics and text merge, image and text merge, processing large documents, automatic hyphenation, spelling

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verification, spelling correction assistance, synonyms, repetitive letters, label printing and report writing. DW/36 supports the IBM office system architecture Document Content Architecture for both revisable format (RFTDCA) and final format (FFTDC). DW/36 includes a program that current users of System/36 Text Management (TMS) can use to convert TMS documents to a format that can be used by DW/36.

A high level of ease-of-use characteristics is provided:

- Menu-driven access to all functions
- Cursor-sensitive help at all levels
- Optional menu bypass and line commands for advanced users
- Online user's guide

Document processing options allow the user to:

- Create a new document
- Revise an existing document
- Copy, delete, view, print or rename a document
- Change document description
- Change print options
- Send a document
- Paginate a document

Basic text entry and editing capabilities include:

- Automatic word wrap
- Automatic windowing
- Continuous text entry
- Document, page, and line formats
- Indentation
- Insert/replace modes (with word wrap)
- Underline
- Move, center, bold, copy, and delete
- Interactive adjust of line endings
- Half index up and down

Advanced editing capabilities include:

- Headers and footers
- Running headings
- Automatic date, time, page numbers, document name inserted in document
- Auto hyphenation
- Global find/replace
- Get (interactive)
- Go To (page number, line number)
- Column move, copy, delete
- Column layout
- Include external data (batch)
- Graphics (PC/IDU or BGU/36)
- Image (PC Imagedit or PC/IDU)
- Keep
- Widow/orphan line control
- Stop codes
- Roll key customization
- Multicopy document merge
- Overstrike

- Change symbols
- Conditional text
- Table of contents
- Automatic indexing
- Automatic outline
- Automatic numbered lists
- Comments
- Skip lines
- Line commands
- Multiple formats (line, page, document, alternate)
- Fast paths
- Summary math

The following proofreading aids require the System/36 DisplayWrite/36 Language Dictionaries licensed program:

- Spelling verification will show misspelled words in reverse image.
- Spelling assistance will show up to five possible alternate words.
- Hyphenation assistance will assist with determining where the word can be hyphenated.
- Synonym support will show as many synonyms as will fit in the display area.
- Grade-level analysis flags words for grades 4-16 reading comprehension.

Extensive print support includes:

- Advanced printer functions for 4224 and 3812 Printer
 - Color (4224)
 - Rotate support for 0, 90, 180, and 270 degrees (3812)
 - Expand print (4224)
- View print image on the display
- Draft or letter quality output
- Optional cover page
- Printer selection
- Forms options: continuous, cut sheet with drawer select, envelope
- Continuous-form or sheet-feed labels
- Selectable fonts within a document
- Optional change symbols (revision markers)
- Lines per page
- Print using alternate character sets (large characters)
- Additional spaces to left of margin
- Print within range of page numbers
- Print number of copies
- Composite document print

Flexible data/text merge:

- Is integrated with IBM System/36 Query
- Permits graphs created with Business Graphics Utilities/36 to be inserted into DisplayWrite/36 text document using ".include"
- Allows data to be merged interactively or in batch mode
- Can embed data in a document

- Can support compound documents
- Can produce multiple copies of documents for mass mailings
- Can produce multiple copies of documents using unique data for each document
- Can store merged documents as revisable text
- Uses one or more data files as input
- Has extensive selection and sorting capabilities

Security provides for:

- Document folder security (five levels)
- Document security within a folder (four levels)
- Authorization lists

Recoverability:

- Integral part of DW/36
- Recovery option screen presented to the user if previous work was ended abnormally. User can return to last page worked on or begin again.
- Automatic user folder reorganization/expansion, if required
- Folder rebuild (if required) at IPL

Ordering Information

DisplayWrite/36

Program number: 5727-WP1

System/36 PC

Program number: 5727-WP6

Reference Material

- DisplayWrite/36 Tips and Techniques, G360-1002
- Getting Started with DisplayWrite/36, GC21-8005
- System/36 in the Office, GC21-8002
- Getting Acquainted with DisplayWrite/36, GBOF-1096

DisplayWrite/36 Language Dictionaries

The System/36 DisplayWrite/36 Language Dictionaries program makes available to the DisplayWrite/36 user seven optional language dictionary diskettes to support spelling verification, hyphenation, spelling correction aid, and synonym aid (English only). The following language dictionary packages are available:

- US English, UK English, Legal and Medical
- French
- French (Canada)
- Spanish
- Italian
- Danish
- German

Ordering Information

DisplayWrite/36 Language Dictionaries

Program number: 5727-WP2

System/36 PC

Program number: 5727-WP7

Personal Services/36 (PS/36)

The System/36 Personal Services/36 (PS/36) is a set of related office functions that provide electronic document distribution, calendar and scheduling functions, directory services, user list maintenance, and local message functions. PS/36 runs under the control of the System/36 System Support Program (SSP) and it complements DW/36, which is a prerequisite for running PS/36. It also includes aids to convert from the Office Management System (5727-OS1) to PS/36. Electronic document distribution is supported by Document Interchange Architecture (DIA) and SNA Distribution Services (SNADS) using LU6.2 protocol.

The System/36 PS/36 functions are menu driven and provide a consistent interface to System/36 ease-of-use standards, list processing capability, online reference material, HELP-key functions, and access to the "Getting Started" manuals. PS/36 supports the 5250 family of display products and a wide variety of printers. It defines the following user categories: the general user who signs directly onto PS/36 on the System/36; the indirect user who can only receive printouts; and the independent workstation user who signs onto the PS/36 using the Electronic Document Distribution licensed program product.

Mail Handling Functions

The mail handling function of the PS/36 program allows the user to send and receive electronic documents to local users and users on other systems in the network.

- Attach memo slips to documents
- View, file to a folder, retrieve, print, and delete documents
- Log all electronic mail automatically and hard copy mail by request. Mail is logged as new mail, outgoing mail, action item, or completed mail. Mail status (new, unopened, deleted, file, hard copy, sent, delivered, undelivered, action items) is also available for review.
- Search by keyword or any combination of parameters: name, date, date range, subject, sender, addressee, document name, specific keywords, author, or document class.

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- Use special functions: confirm delivery (receipt acknowledgment), assign priority, attach memo slip, send personal documents, implement up to five security levels, and allow for the use of cryptography.
- Mail waiting indicator
- Exchange among Personal Services/Products (DISOSS, PS/36, PS/38)
 - PC data
 - Composite document

Calendar Management Functions

- Manage the calendar and schedule appointments for individuals or departments, meetings, conference rooms, facilities, and equipment.
- Control automatic message notification and issue a message reminder of up to 210 characters to the user.
- Schedule a S/36 job to be placed in the job queue for execution at a specified date/time. Data processing reports, document printing, and query programs may be scheduled in this manner.
- View the individual calendars in different formats: week at a glance for an individual calendar, one particular day for a maximum of five different calendars, a specific time period for a maximum of ten different calendars (calendar conflict checking), and a list of appointments, programs, and reminders from one calendar.
- Display a six-month calendar
- Define user calendar values such as view format, starting day, time interval, starting time format, and time format
- Schedule/cancel appointments for multiple calendars
- Schedule groups

Directory Support Functions

- Create a single list or file of system users containing USERID, name and address, telephone, and location.
- Maintain the directory file (add/delete/print/change/select)
- View the directory file in USERID or name sequence
- Build, maintain and identify groups
- Distribute by USERID, distribution lists, or tailored user directories

Group Support Functions

- Define a group (maximum 150 entries, including other groups; a maximum of 500 persons may be in a group, less the number of nested groups.)
- Reference multiple users by using a group name
- Define distribution lists for document or message distribution
- Identify a set of calendars to view and schedule

- Simplify the use of other office components by making the group functions accessible to other system functions

Local Message Functions

- Support users of a single (local) System/36
- Improve interface to the existing System/36 SSP message facility
- Use the group function as a distribution list
- Transmit maximum 75-character messages to specific users, specific display stations, or all display stations on the System/36

Administrative Functions

If security is active, the PS/36 administrator must be the security officer. Otherwise, the following administrative functions may be executed at the system console:

- Install PS/36 (create folders, define file sizes and default values, administer security, and define applicable communication environments)
- Maintain PS/36 (change, backup and reorganize folders and files; modify file sizes and default values; and control applicable communication queues)

Connectivity

Documents may be distributed within a single System/36, between System/36s, or in a mixed system environment. Local and remote document distribution is via Document Interchange Architecture (DIA); remote distribution is via SNA Distribution Services (SNADS). SNA LU6.2 protocols support communication between PS/36 and the System/38, DISOSS/370 for OS/VS2 and VSE, the 5520 APP for the 5520, EDD for the Displaywriter and the Personal Computer using 5250 emulation. Recipients may be local and/or remote users, nonusers, and/or groups. In the DisplayWrite environment, the System/36 shared folder and organizer functions are used with the PC Support/36 program to transfer documents between the PC and System/36. Such documents are stored in DW/36 folders and may be revised by DW/36. They are then distributed by PS/36. Document Library Services allows a user to file, retrieve, search for, and delete documents on either a host System/370 with DISOSS or a System/38. Modification of a document profile and host printing of a document are supported.

Ordering Information

Personal Services/36

Program number: 5727-WP3

System/36 PC

Program number: 5727-WP8

Reference Material

- System/36 in the Office, GC21-8002
- Migrating from Office Management System to Personal Services/36, GC09-1063
- Getting Started with Personal Services/36, SC09-1061
- Personal Services/36 PROFS Bridge, GG24-3188
- Personal Services/36 DISOSS, G360-1011
- Personal Services/36 in a SNA Distribution Services Network, G320-0593

PC Support/36

PC Support/36 is a licensed program product which provides information exchange and resource sharing between the IBM Personal Computer and the System/36. The PC Support/36 organizer is a new PC Support/36 application designed to provide a single user interface for the IBM System/36 and the IBM PC. Through this function, the user can access IBM-supplied menus or IBM PC applications from any System/36 menu without the previous requirement to "hot-key" between the DOS and the System/36 display station sessions. Multiple System/36 sessions are available, one of which may be a printer session.

PC Support/36 allows the user to:

- Transfer data from the System/36 to the IBM Personal Computer
- Transfer data files from the IBM Personal Computer to the System/36
- Select data from up to five files, externally defined by IDDU, and download the data to the PC in one operation, using the file join function or "Get Query" function in DisplayWrite 4.
- Transfer library source and procedure members between the System/36 and IBM Personal Computer files
- Translate character, packed decimal, zoned decimal and binary numeric data from System/36 data files to the IBM Personal Computer data format
- Translate IBM Personal Computer data formats except floating point to the appropriate System/36 data format based on the data definition in the interactive data definition utility (IDDU) dictionary
- Interactively create, save and execute data transfer definitions
- Direct IBM Personal Computer print output to a System/36 printer via the virtual print function
- Store IBM PC programs and data by defining virtual disks on the System/36 that vary in size from 5K to 32MB, in increments of 5K bytes. Each user can have up to eight virtual disks accessible at one time.

- Store all types of IBM PC files and documents transparent to the PC applications, using the folder management system. This extends the virtual disk concept and simplifies the use of it. Shared folders allow concurrent write access to the same folder (but not to the same file within a folder) by multiple IBM PC, DW/36, and PS/36 users. Shared folders also allow for automatic extensions when a folder is full.
- Allow concurrent use of the virtual print, shared folders and data transfer support across the link between the IBM Personal Computer and System/36

Ordering Information

PC Support/36

Program number: 5727-WS1

System/36 PC

Program number: 5727-WS6

Reference Material

- PC Support/36 Licensed Program Specification, GC21-9102
- System/36 to PC Connectivity Guide, G360-1001

Business Graphics Utilities/36

The graphics support utility allows the user to convert the keyed-in data into meaningful charts. The System/36 can generate various types of charts:

- Pie charts
- Bar graphs
- Line graphs
- Surface graphs

The display used is the IBM Personal Computer; the graph definition can also be done on the IBM 3180 Model 2. Printouts can be directed to the 5224/5225 and 4214/4224 Printers. In addition, the 6180 and 7372 color plotters can be attached to IBM Personal Computers to plot results. The user interface for accessing the System/36 business graphics support consists of a set of menus, HELP screens, and prompts.

Ordering Information

Program number: 5727-BG1

System/36 PC

Program number: 5727-BG6

Reference Material

- System/36 Business Graphics, G580-0571

5224/5225 Advanced Printer Function (APF/36)

The System/36 5224/5225 Advanced Printer Function licensed program allows the System/36 to use special functions of the 5224 (Models 1 and 2) and the 5225 (Models 1 through 4) printers. APF/36 consists of a forms generation utility and an alternate character set capability.

Advanced Printer Function/36 allows the user to:

- Define alternate character sets and symbols
- Define large characters (up to nine times normal size)
- Cause Universal Product Code (Version A), Code 39 (A-Z, 0-9, *), or European Article Number (EAN) type bar codes to be generated
- Build logos and emblems
- Allow bar graphs to be generated
- Produce a customized form that can be merged with spooled application report data

Ordering Information

Advanced Printer Function (APF/36)

Program number: 5727-AP1

System/36 PC

Program number: 5727-AP6

Reference Material

- Text/Office Brochure, G580-0454
- Advanced Printer Function Licensed Program Specifications, GC21-7981

System/34 to System/36 Migration Aid

The System/34 to System/36 Migration Aid is a set of System/34 and System/36 programs and procedures that assist the user in moving System/34 applications to a System/36. This migration aid does not address conversion of MRJE and SRJE communications applications.

The migration aid allows a user to do the major part of the migration (the library analysis work) on the installed System/34 prior to the arrival of the

System/36. Source program compilations are run on the System/36.

The migration aid runs on a 48KB minimum System/34 and on all models of the System/36. Use of the migration aid can help to relieve the user of many time-consuming tasks, provide for greater migration accuracy, and improve user productivity during the migration. The migration aid:

- Is easy to use (menu- and prompt-driven)
- Identifies source and OCL differences in reports
- Makes limited modifications to OCL statements and command procedures
- Generates OCL to save/restore the System/34 user files
- Generates OCL to move user library members from the System/34 to the System/36
- Generates procedures to compile System/34 source on the System/36
- Runs generated recompilation procedures with minimal user intervention

Ordering Information

System/34 to System/36 Migration Aid

Program number: 5727-MA1

System/36 PC: Not available

Reference Material

- System/34 to System/36 Migration Aid, SC21-9040
- Licensed Program Specifications, GC21-9058

System/36 Programmer and Operator Productivity Aid PRPQ (P84061)

The System/36 Programmer and Operator Productivity Aid is an integrated set of four utilities (File, Diskette, Library, and Edit) having the following characteristics:

- High-level
- Easy to use
- Menu driven
- Interactive

The functions it provides are commonly performed by application programmers and lead operators. These functions involve using:

- Fixed disk files
- Diskette files
- Libraries
- Library members

The File, Library, and Diskette Utilities allow the user to:

- Display the names (up to 64 at one time) of
 - All files or libraries on the system
 - Members within a selected library
 - All files in a diskette magazine
 - All files on a diskette volume
 - All members within a library file on diskette
- Perform operations (such as copy, print, delete, etc.) on individual files, libraries, or library members by using command keys and simple operation codes
- Display the data (a full screen at one time) within a data file or library member resident on disk or diskette
- Scan through the records within a data file or library member by using simple commands and the command function keys
- Perform character string searches on records within data files or library members
- Generate test data files
- Request assistance for utility functions through the online HELP and tutorial facility

The Edit Utility allows the user to:

- Create a new, or update an existing, source or procedure member in full-screen mode (22 display lines) or under format control in single-line mode (similar to the System/36 Source Entry Utility – SEU)
- Select the desired source or procedure member to be edited by the one of the following modes:
 - Specifying the appropriate library and member name
 - Specifying the library only. The names of the source and procedure members in that library are displayed for selection. The number of records within a source or procedure member can be displayed.
- Delete, insert, duplicate, and rearrange lines of data.
- Perform operations on either a single line of data or a group of data lines
- Perform character string searches, including optional replacement with another character string
- Copy lines of data from a member in the same or a different library into the member being edited
- Print a source or procedure member, including formatted printing for a text member
- Request online HELP for the edit commands, command and function control keys, and format selection options (single line model) via the HELP key

Ordering Information

S/36 Programmer and Operator Productivity Aid

Program number: 5799-BRJ

System/36 PC

Program number: 5799-BXT

Reference Material

- System/36 Programmer and Operator Productivity Aid Description/Operations Guide, SC21-9072
- System/36 Programmer and Operator Productivity Aid Licensed Program Specifications, GC21-9074

Industry Application Packages

A large number of application packages are available for System/36. Some of these programs are:

- Distributors Management Accounting System (DMAS). The System/36 DMAS program product offers distribution industry installations one complete application set to help them manage their accounting, financial, inventory management, and purchasing functions. Using System/36 DMAS, distributors can monitor important aspects of their operations and draw upon timely, accurate data to make critical business decisions. DMAS is also licensed for the System/36 5363 and 5364 System Units. DMAS program products also ease the migration for current System/34 DMAS II, DFAS II, and INVEN/34 users to System/36. The following applications are included:

Billing	5727-D41
Accounts Receivable	5727-D42
Inventory Control	5727-D43
Sales Analysis	5727-D44
Purchasing	5727-D45
Inventory Management	5727-D46
General Ledger	5727-D47
Accounts Payable	5727-D48
Payroll	5727-D49
Cross-Application System Support	5727-D4A

- Manufacturing Accounting and Production Information Control System – Version 2 (System/36 MAPICS II).

System/36 MAPICS II provides full-function, workstation-oriented applications for manufacturers. Based on System/34 MAPICS II, it also includes new features for ease of use during installation and problem determination, while maintaining full functional compatibility with System/34 MAPICS II. A full range of manufacturing processing requirements is addressed in the

System/36 Software

following integrated applications, licensed also for the System/36 5363 and 5364 System Units:

Product Control and Costing	5727-M71
Payroll	5727-M72
Accounts Payable	5727-M73
Accounts Receivable	5727-M74
Inventory Management	5727-M75
Product Data Management	5727-M76
General Ledger	5727-M77
Sales Analysis	5727-M78
Order Entry and Invoicing	5727-M79
Data Collection System Support	5727-M7A
Material Requirements Planning	5727-M7B
Capacity Requirements Planning	5727-M7G
Financial Analysis	5727-M7H
Master Production Schedule Planning	5727-M7J
Purchasing	5727-M7K
Forecasting	5727-M7L
Inventory Management for Process	5727-M7N
Location/Lot Management	5727-M7P
Cross-Application System Support	5727-M7X

- **Construction Management and Accounting System (CMAS).** The System/36 Construction Management and Accounting System and Cross-Application System Support provide an integrated and comprehensive workstation-oriented accounting and financial control system for the small-to-medium-size construction firm and related project-oriented business. The Payroll and Labor Costing, Accounts Payable, Job Costing, Revenue Accounting, and General Ledger applications are designed to meet the needs of the construction industry. They are also available for the 5363 and 5364 System Units.

Job Costing	5727-M66
General Ledger	5727-M67
Accounts Payable	5727-M68
Payroll and Labor Costing	5727-M69
Revenue Accounting	5727-M6A
Cross Applications Systems Support	5727-M6X

- **Business Management Accounting System.** The System/36 Business Management Accounting System provides fully integrated, full-function accounting programs applicable to a wide range of industry classifications. Written in enhanced System/36 BASIC, the Business Management Accounting System provides the ease-of-use characteristics required for the first-time computer user. The System/36 Business Management Accounting System is identical in function to the System/34 Business Management Accounting System.

The following applications are included:

General Ledger	5727-XB2
Accounts Payable	5727-XB3
Accounts Receivable	5727-XB4
Payroll	5727-XB5
Inventory Accounting	5727-XB6
Billing	5727-XB7

System/36 Business Management Accounting System Program Product for System/36 PC provides ease-of-use characteristics required for the first-time computer user:

General Ledger	6201868
Accounts Payable	6201869
Accounts Receivable	6201867
Payroll	6201871
Inventory Accounting	6201870
Billing	6201866