IBM World Trade Data Processing

Program Product Announcement

OS/360 INVENTORY CONTROL READY FOR SHIPMENT

- **Program Product 5734-M52**

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

OS/360 Inventory Control is ready for shipment to OS/360 users who have an order point inventory control application and who wish to project or forecast future requirements based on past demand.

OS/360 Inventory Control is a package of seven programs that:

- Classify inventory items to determine the type of control.
- Calculate economic order quantities based on previous usage or future requirements.
- Compute safety stock level and order point.
- Project or forecast demand based on historic data.

Three of the programs handle the planning function - Inventory Analysis, Order Point, and Order Quantity.

The remaining four handle the projection function - Edit, Model Select, Initial Update, and Update and Project.

Monthly Charge ... $175.

Program Service Classification ... B

Program Product Specifications (GH20-4008) are available fom Mechanicsburg; each branch office has been sent a limited supply.

No RPQs will be accepted at this time.

See the reverse side for ordering instructions. For other details, see PPA 360.27 in the program product section of the sales manual.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM OS/360 Inventory Control (5734-M52) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

FOR IBM INTERNAL USE ONLY

John Fahey
WTC Director of DP Marketing

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90D

Basic Material:

Unlicensed Documentation: One copy each of the Program Description Manual (SH20-0776), Operations Manual (SH20-0778), Program Product Specifications Sheet (GH20-4008).

Licensed Machine Readable Material: One copy machine readable material consisting of source code plus a sample problem.

To order the basic material, select one of the following specify numbers:

Specify Number 2311 User	Specify Number 2314 User	Track/Density	Description	Qty.
Order from IBM				
9126	9326	7 DC/800	2400' MT	1 reel
9128	9328	9/800	2400' MT	1 reel
9129	9329	9/1600	2400' MT	1 reel
Customer Supplied				
9026	9226	7 DC/800	2400' MT	1 reel
9028	9228	9/800	2400' MT	1 reel
9029	9229	9/1600	2400' MT	1 reel

Charge:

Type	Program & DPMO Number	Programming Svc. Classification	Monthly Charge
5734	M52	B	$175

Related Optional Material (no additional charge): To order, use feature 7040.

Licensed Documentation: One copy of Systems Manual.

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form No.	Single Charge/Copy
Systems Manual	8011 (LY20-0528)*	$5.60

*For customer, order by feature number from Area Program Library and bill customer; for IBM use, order by form number from Mechanicsburg.

Unlicensed Documentation (order from Mechanicsburg):

	Selling Price/Copy
Program Description Manual (SH20-0776)	$6.40
Operations Manual (SH20-0778)	1.20

General Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0752).

For further information, contact your Manufacturing Industry Marketing Representative.

NEW PROGRAM PRODUCT OFFERS BROKERAGE FIRMS IMPROVED OPERATING EFFICIENCY

- **PROGRAM PRODUCT 5736-F31**

The Brokerage Accounting System Elements (BASE), program product 5736-F31, is a highly integrated system of programs for brokerage firm operations. It streamlines many procedures and provides the user with improved operating efficiency in his 'back office' by automating present manual or partially mechanized accounting functions. BASE helps a brokerage house to support increased trading volume and to control fails.

The system provides account information and more than 75 standardized reports associated with the daily security transactions. The modular design facilitates tailoring to the user's unique processing or report format requirements.

The BASE system creates and maintains the critical files and generates reports in the following accounting areas:

- Customer accounts
- Interest charges
- Proxy statements
- Dividends
- Transfers
- Clearing operations
- Floor brokerage accounts
- Correspondent trading
- Fails
- Rights/warrants/when issues
- Trade blotters
- Stock record

Planned Availability ... May 31, 1971
Monthly Charge ... $800.
Programming Service Classification ... B

The Program Product Design Objectives (GH20-4060) are available from Mechanicsburg; each branch office librarian has been sent a limited supply.

The sales manual write-up is printed on the reverse side.

Availability of the Application Description Manual will be announced in a future Publications Release Letter.

No RPQs will be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Brokerage Accounting System Elements (5736-F31) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing–This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

Brokerage Accounting System Elements (BASE) (5736-F31): BASE is a highly integrated system of programs for brokerage firm operations. It streamlines many operating procedures and provides the user with improved operating efficiency in his 'back office' by automating present manual or partially mechanized accounting functions. BASE helps a brokerage house to support increased trading volume and to control fails.

The system provides account information and more than 75 standardized reports associated with the daily security transactions. The modular design facilitates tailoring to the user's unique processing or report format requirements.

The BASE package creates and maintains the critical files and generates reports in the following accounting areas:

- Customer accounts
- Interest charges
- Proxy statements
- Dividends
- Transfers
- Clearing operations
- Floor brokerage accounts
- Correspondent trading
- Fails
- Rights/warrants/when issues
- Trade blotters
- Stock record

Description: The BASE system is written in languages that further improve its flexibility and adaptability. COBOL is used for the processing programs, assembler language for subroutines, and RPG for reports. The system has been designed to operate on a 64K DOS system and multiprogramming is possible for users with larger systems.

Highlights:

- Generates customer confirmations for daily mailing.
- Generates customer statements.
- Maintains security and account master files.
- Maintains commission master files and generates a variety of commission reports.
- Maintains stock record and bookkeeping master files.
- Creates blotters of daily transactions for the Cashier and the Purchase & Sales Departments.
- Creates Break Sheet for NYSE and ASE trades, (floor tickets vs. orders) for immediate handling.
- Aids in processing settlement date items and maintains a file of open "fails".
- Creates reports and cards for Stock Clearing Corporations (NYSE, ASE, NOTC).
- Creates Odd Lot register for Odd Lot house.
- Creates registers for correspondent houses.
- Generates special mailing lists and labels for proxies and dividends, general mailing lists/labels and special file cards.
- Maintains file of floor brokerage accounts and generates reports of the payables and receivables by account and by security.
- Calculates and applies interest charges on customer accounts.
- Maintains a file of items in transfer.

The BASE program enables a brokerage firm to enhance its finanical position by eliminating costly clerical operations and manual procedures. Coupled with this are the timely and extensive reports that can aid a firm's staff in rendering good customer service.

Special Sales Information: These programs will normally be run shortly after trading hours. However, the equipment is available at other times for other applications.

Customer Responsibilities: The customer must have a thorough knowledge and understanding of the application area before installation ... write conversion programs to create the user data base consisting of a variety of files to support the specific applications implemented ... modify programs to meet his requirements with respect to the outputs for printing and punching and entry into other systems.

Programming Systems: IBM System/360 Disk Operating System ... Assembler D (360N-AS-465) ... COBOL (360N-CB-452) ... Report Program Generator (360N-RG-460) ... Tape Sort/Merge (360N-SM-400) ... Disk Sort/Merge (360N-SM-450).

Minimum System Configuration: System/360 Central Processing Unit 64K bytes (2030F) with Decimal Arithmetic (3237), Selector Channel (6960), and 1051 Attachment (7915) ... 1051 Control Unit Model N1 ... 1052 Printer-Keyboard Model 8 ... 2540 Card Reader/Punch Model 1 ... 1403 Printer Model 2 ... 2821 Control Unit ... four 2400 Magnetic Tape Units ... two 2311 Disk Storage Drives ... 2841 Storage Control Model 1.

The BASE System requires 52K bytes of core in addition to DOS Supervisor facilities.

Basic Program Product Offering:

Unlicensed Documentation: One copy each of the Program Description Manual* and Operations Manual*.

Licensed Machine Readable Material: One copy of machine readable material consisting of source code and sample problem. To order, select one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7 DC/800	2400'MT	1 reel
	9028	9/800	2400'MT	1 reel
	9029	9/1600	2400'MT	1 reel
Order from IBM	9126	7 DC/800	2400'MT	1 reel
	9128	9/800	2400'MT	1 reel
	9129	9/1600	2400'MT	1 reel

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	F31	B	$800

Optional Support Package (no additional charge):

Licensed Documentation: One copy of Systems Manual*.

Related Documentation (available only from Mechanicsburg): Application Description Manual (availability and form number will be announced in a future Publication Release Letter) - preliminary copies may be obtained from Finance Industry Marketing, Princeton, New Jersey ... Program Product Design Objectives (GH20-4060).

For further information contact Finance Industry Marketing Representative.

*Prices (for additional copies) and form numbers/feature number of manuals will be available when the program is available.

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COURSEWRITER III/OS VERSION 2 A NEW PROGRAM PRODUCT (5734-E12) IS READY FOR SHIPMENT

Monthly Charge ... $150.

Program Service Classification ... B

Coursewriter III provides extended capability for operational Computer Assisted Instruction. It can significantly assist both curriculum development and instructional research in the industrial and military training environment and in educational institutions.

This program product allows students, authors, monitors and supervisors to interact simultaneously with the System/360 through IBM 1050 and 2740 terminals.

Coursewriter III, used in conjunction with the IBM Operating System/360, provides users with the capability to implement CAI projects on System/360 models that have at least 128K of processing storage. The program is made up of four elements. They are:

- *Coursewriter III Author Language*
- *Coursewriter III Processor Program*
- *Coursewriter III Input/Output Control Program*
- *Coursewriter III Student Response Processor*

The *Coursewriter III Author Language* enables authors to control computer presentation of course material and the processing of student responses. The contents and techniques of instruction can vary widely depending on the type of student, the learning environment and the performance objectives of the course.

The *Coursewriter III Processor Program* operates interpretively and contains control routines, author routines, student and monitor routines, and supervisor routines. Together, these routines direct System/360 to perform the specific tasks initiated by its users.

The *Coursewriter III Input/Output Control Program* maintains the current status of communication lines and their associated terminal stations.

The *Coursewriter III Student Response Processor* operates as a utility program and prints selected information from the Coursewriter III recording tape.

Version 2 of Coursewriter III/OS is functionally identical to Version 2 of Coursewriter III/DOS (Type II program - 360A-UX-01X). Course material produced with Coursewriter III is usable on either system; assembly language functions may have to be altered.

Coursewriter III is structurally similar to Coursewriter I and II. However, due to differences in terminal media capabilities and language features, courses developed for previous systems may be significantly different and not readily adaptable from one system to the other.

Coursewriter III is designed to serve both developmental and operational instruction. No claims should be made as to the proven effectiveness of CAI as a means of instruction or that it is more effective in terms of time, cost, or quality than alternative methods of instruction.

Detailed information is in the sales manual write-up on the reverse side. The Program Product Specification (GH20-4003) is available from Mechanicsburg; each branch office librarian has been sent a limited supply.

No RPQs will be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Coursewriter III/OS Version 2 (5734-E12) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

Coursewriter III/OS (5734-E12): Coursewriter III/OS Version 2 can be used with System/360 Models with at least 128K of processor storage to develop and present course materials for Computer Assisted Instruction (CAI).

Description: This program can be used for educational research, curriculum development, and operational uses of CAI. Course materials may be designed for basic or supplemental instruction and can include pretests to assess student capabilities, drill and practice problems, and laboratory simulations.

The System/360, through IBM 1050 or 2740 terminals, interfaces directly with students, authors of curriculum materials, monitors who assist students, and supervisors of the CAI installations.

Coursewriter III applications exist primarily in the following areas:

- Teaching and learning research
- School and university instruction
- Industrial and military training

The Coursewriter III programming system is made up of four elements:

- Coursewriter III Author Language
- Coursewriter III Processor Program
- Coursewriter III Input/Output Control Program
- Coursewriter III Student Response Processor

These elements, under control of the Operating System/360, store, present, and administer the author-prepared course material.

The Coursewriter III Author Language provides capability for the development and presentation of educational course materials through the terminals. This special language enables authors to control computer presentation of course material and processing of student responses. The contents and techniques of instruction can vary widely depending on the type of student, the learning environment, and the performance objectives of the course.

The Coursewriter III Processor Program operates interpretively and contains the control routines, author routines, student and monitor routines, and supervisor routines. Together, these routines direct System/360 to perform the specific tasks initiated by its users.

The Coursewriter III Input/Output Control Program maintains the current status of communication lines and their associated terminal stations.

A Coursewriter III Student Response Processor Utility Program is also included, which extracts and prints from selected records from the Coursewriter III recording tape.

Highlights: Coursewriter III provides essential language, processor, and control program capabilities that enable:

- Authors to write, test, and correct course material.
- Data to be collected on student responses for later analysis.
- Authors or programmers to add new functional capabilities to the Coursewriter III Language for unique requirements.
- A macro capability to be used for easier development of repetitive course routines.
- Independent 1050 or 2740 terminals to be serviced when used in conjunction with System/360 Operating System.

Special Sales Information: IBM has been actively examining the potential of Computer Assisted Instruction as an educational tool since 1958. Early experimental work was performed on the 1401/1440 Systems using Coursewriter I. IBM commitment to CAI was significantly increased through use of Coursewriter II on the 1500 Instructional System. The announcement of Coursewriter III for System/360 encourages and expands developmental and operational uses for CAI.

Version 2 of Coursewriter III/OS is functionally identical to Version 2 of Coursewriter III/DOS (360A-UX-01X). Course material produced with Coursewriter III is usable on either system; assembly language functions may have to be altered.

Coursewriter III is structurally like Coursewriter I and II. However, due to differences in terminal media capabilities and language features, courses developed for previous systems may be significantly different and not readily adaptable from one system to the other.

Coursewriter III is designed to serve both developmental and operational instruction. No claims should be made as to the proven effectiveness of CAI as a means of instruction or that it is more effective in terms of time, cost, or quality than alternative methods of instruction.

Use: IBM System/360 models with at least 128K of storage serve as central processing units for Coursewriter III instructional systems. The CPU can access course material from 2311 or 2314 Disk Storage Drives, interpret course statements, analyze student responses and control data flow between the CPU and system terminal stations.

Removable 1316 or 2316 Disk Packs store the course materials, along with student performance records and other administrative materials.

IBM 1050 or 2740 terminals are used by students to receive instruction and by course authors to input and modify instructional materials.

Customer Responsibilities: Customers are responsible for providing their own course materials. Currently, only limited amounts of course materials are available from publishers or other users. Therefore, customers should have an experienced staff to develop and evaluate curriculum materials. The customer must make the necessary arrangements for communication lines and equipment. Knowledgeable individuals thoroughly trained in OS/360 and teleprocessing techniques are essential.

Programming Systems: The Coursewriter III System is written in Assembly Language and uses BTAM, BDAM, and BSAM access methods under control of OS/360.

Coursewriter III will operate with the OS/360 Primary Control Program (PCP), the OS/360 Multiprogramming with a Fixed Number of Tasks (MFT), or the OS/360 Multiprogramming With a Variable Number of Tasks (MVT).

Minimum Machine Configuration: A 2040 Model G Processing Unit with Decimal Arithmetic (#3237), First Selector Channel (#6980), Storage Protection (#7520), 1052 Adapter feature (#7920) ... 1052 Printer-Keyboard Model 7 ... 1442 Card Read Punch Model N1 ... 1443 Printer Model N1 with Selective Character Set (#6402) ... 2841 Disk Storage Control Model 1 ... three 2311 Disk Storage Drives Model 1 ... 2803 Tape Control Model 1 ... 2401 Magnetic Tape Unit Model 1 ... 2701 Data Adapter Unit Model 1 with IBM Terminal Adapter, Type I, Model II (#4640), Selective Speed (#9581), and appropriate data sets or line adapters (see M 2700 pages) ... 2740 Communication Terminal with Record Checking (#6114) ... Printing Element 1167963.

IBM 1050 or 2740 terminals may be connected to a System/360 through remote dial-up or dedicated voice grade lines. A user selects one of three transmission control units according to the number of terminals to be serviced by the system. The 2701 Data Adapter Unit can service up to four lines while the 2702 Transmission Control Unit can service up to 15 half-duplex communication lines. The 2702, with a 31 line expansion feature (#7955), can service up to 31 half-duplex communication lines. The 2703 Transmission Control Unit can service up to 176 half-duplex communication lines.

The 2701 Data Adapter Unit requires special features #4640, #9581, and an appropriate data set or line adapter. The 2702 requires special features #9696, #4615, #9684, and the appropriate line adapter. The 2703 requires special features #7505 or #7506, #4878, #4619, #4696, and appropriate line sets. (For information on the appropriate data sets, line adapters, and line sets see the M 2700 pages.) Each 1051 Model 2 terminal must be equipped with feature #4408, each 1052 Model 2 with feature #1006, each 2740 Model 1 with feature #6114. Printing Element 1167963 should be ordered with each terminal type.

Either the tape or the printer is required as a log device in the minimum machine configuration. To record student responses and at the same time perform functions such as print course, course off/on, one tape must be added for each such function performed.

Coursewriter III will accommodate the following sample configurations with multiprogramming under control of OS/360:

Model	Core Size	Coursewriter III Partition Size	Number of Terminals
40	128K	59K	5
40	256K	108K	62
40	256K	170K	124
50	512K	220K	161

The number of terminals a system can actually handle will depend upon the amount of core storage available and the response time required. The response time to the student will be dependent upon many factors, including:

- System configuration.
- Complexity of courses being used.
- Number of terminals in use.
- Type of job running in other partitions.
- Number and type of buffer areas allocated at Coursewriter III system generation time.

Basic Program Product Offering:

Unlicensed Documentation: One copy each of the Application Directory ... Author's Guide (GH20-0609-1) ... Student/Monitor User's Guide (GH20-0608-1) ... Supervisor's Guide (GH20-0610-1) ... Operator's Guide (SH20-0744) ... Program Product Specification Sheet (GH20-4003).

Licensed Machine Readable Material: One copy of machine readable material containing one source macro (for system generation), object modules, and sample problem. To order, select one of the following specify numbers:

Specify Number	Track/Density	Description
9027	9/800	DTR
9030	9/1600	DTR

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5734	E12	B	$150

Optional Support Package:

Licensed Documentation: One copy of the Operating System Programmer's Guide.

Licensed Machine ..eadable Material: One copy of machine readable material containing Coursewriter III, Version 2, source program modules, listings, and flowcharts. To order, select one of the following feature numbers:

	Feature Number	Track/Density	Description	Quantity
Customer Supplied	7028	9/800	2400' MT	1 reel
	7029	9/1600	2400' MT	1 reel
IBM Supplied	7128	9/800	2400' MT	1 reel
	7129	9/1600	2400' MT	1 reel

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Single Charge/Copy
8000 (LY20-0495)*	$3.60

*For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

Unlicensed Documentation (order from Mechanicsburg)

Operator's Guide (SH20-0744)	$1.20

Related Documentation (available from Mechanicsburg): Application Description Manual (GH20-0735) ... Student/Monitor User's Reference Card (GX20-1780) ... Author's Reference Card (GX20-1781) ... Supervisor's Reference Card (GX20-1782) ... Instruction Sheet (GX20-1750) ... Student Text for Authors (GC20-1706).

Reference Material: Computer Assisted Instruction at The Florida State University (GX20-0208) ... Learning and the Computer (G520-1967).

For further information contact the industry representative responsible for consulting with your customer.

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IBM World Trade **Data Processing**

Program Product Announcement

NEW PROGRAM PRODUCT SMOOTHS FLOW OF SHOP FLOOR PAPERWORK

- **PROGRAM PRODUCT 5736-M31**

Paperwork is speeded up and efficiency is improved through a new shop floor control program designed to help companies engaged in fabricating or assembling finished products.

System/360 Shop Floor Control (5736-M31) is planned for availability August 31, 1970.

Highlights ...

- Provides release of open orders.
- Creates a detailed open-order data base.
- Provides open order maintenance.
- Provides retrieval report capability.
- Generates a work list.

Planned Availability ... August 31, 1970
Monthly Charge ... $100.
Programming Service Classification ... B

The Program Product Design Objectives (GH20-4064) are available from Mechanicsburg; each branch office has been sent a limited supply.

No RPQs will be accepted at this time.

Turn the page for expanded highlights and other details.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM System/360 Shop Floor Control (5736-M31) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

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WTC Director of DP Marketing

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[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90G

Shop Floor Control (5736-M31): This group of integrated programs provides for open order maintenance, open order maintenance, general information retrieval and work list preparation for the Shop Floor Control segment of a user's production information and control system.

Highlights:

- Provides updating of revised planned orders and component gross requirements from output of IBM System/360 Capacity Planning (5736-M11 and 5736-M12) or user input.
- Performs component availability checking of orders subject to release.
- Performs allocation of component requirements of orders that can be released.
- Provides a material shortage report of orders that cannot be released due to insufficient availability of material.
- Provides for the release of orders regardless of material availability.
- Provides for release of time series planned orders, order point orders, and rush orders.
- Provides for the creation of an open order summary record and open order detailed records for each order released.
- Provides for the preparation of a work file containing most information required for shop paperwork.
- Provides for cancelling an open order.
- Provides for open order splitting.
- Provides for adding operations to existing open orders.
- Provides retrieval/report capabilities to generate various levels of detailed reports from data in the item master, work center master, open order summary, and open order detailed files.
- Provides for retrieval of records for the user to update from shop floor feedback.
- Provides for three order priority calculations for preparation of a work list. Calculations include: order due date, shortest operation first, and slack time for remaining operations.
- Provides a work list report to indicate priority of orders at each work center.

Special Sales Information:

- The Item Master, Subordinate Item Master (optional), Work Center Master, Product Structure, Standard Routing, and Open Order files must be organized by the Bill of Material Processor (360A-ME-06X) or the Data Base Organization and Maintenance Processor (5736-XX4).
- "Planned Orders" are provided via the System/360 Type II programs or program products or in a format identical to the output of these programs.
- Shop Floor Transactions do not have to be sequenced to be processed. Input can be from any device which can supply a consecutive file.

Many of the aspects of capacity planning are discussed in the Production Information and Control System manual (GE20-0280).

Use: The System/360 Shop Floor Control programs are direct access file oriented and work in conjunction with an item master file or subordinate item master file, a product structure file, a work center master file and a standard routing file. The records within these files are created and maintained by System/360 Bill of Material Processor.

System/360 Shop Floor Control can be used by all companies engaged in the fabrication and/or assembly of finished products. Extensive program exits are provided which will allow modification to fit most special situations.

The order release function is normally run weekly, although rush orders, order changes, order point orders, etc., may require that small batches be run on a daily basis.

Transactions are normally processed daily or even more frequently if data collection systems are utilized.

The Retrieval/Report is run as frequently as new information is required. Because of the capability of the programs to handle special requests (batch requirements), this program could be run several times a day.

The Work List program can introduce shop discipline to the work centers. It is recommended that it should be run daily to reflect the most current open order status.

Customer Responsibilities:

- Tailor the source programs to meet installation requirements.
- Create and maintain the item master or subordinate item master file, product structure, work center master file, and standard routing file.
- Define content and format of the above files.
- An understanding of the production planning concepts embodied in System/360 Shop Floor Control, so that the user can make the proper selection and/or specification of parameters.
- Write user routines to perform tasks not provided in the programs.
- Provide planned and open order information. System/360 Requirements Planning may be used for the creation of planned order information. System/360 Inventory Control may be used for projecting requirements for order point items.

Programming Systems: System/360 Shop Floor Control uses the following IBM programming systems: System/360 Disk Operating System (DOS/360), System/360 Disk Operating System Basic PL/I, System/360 Disk Operating System Assembler Language, System/360 Disk Sort/Merge associated with the System/360 Disk Operating System, and Bill of Material Processor (360A-ME-06X) or the Data Base Organization and Maintenance Processor (5736-XX4).

Minimum System Requirements: For a 2025 Processing Unit Model ED (48K bytes) ... 2540 Card Reader (see note 1) ... 2540 Card Punch (see note 1) ... 1052 Printer-Keyboard Model 7 (see note 1) ... 1403 Printer Model 2 (see note 1) ... 2311 Disk Storage Drives as required to contain DOS/360 and the user's data files (minimum of two).

For a 2030 Processing Unit Model F (48K bytes) ... Decimal Arithmetic (#3237) ... 1051 Control Unit Model N1 ... any S/360 card reader (see note 1) ... any S/360 card punch (see note 1) ... 1052 Printer-Keyboard Model 8 (see note 1) ... any S/360 printer with at least 132 print positions ... 2841 Storage Control Model 1 ... with two 2311 Disk Storage Drives Model 1 (as required to contain DOS/360 and the user's data files (minimum of two)), or 2314 Direct Access Storage Facility Model A1 (see note 2).

Notes:

1. Refer to the sales manual for appropriate attachments required for connection of input/output units.
2. In addition, a system configuration containing only a 2314 also requires a 2400 series tape drive for systems preparation.

Basic Program Product Offering:

Unlicensed Documentation: One copy each of the Program Description Manual* and Operations Manual*.

Licensed Machine Readable Material: One copy of machine readable material consisting of source code plus a sample problem available on one magnetic tape reel or one disk pack. To order, use one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7 DC/800	2400'MT	1 reel
	9028	9/800	2400'MT	1 reel
	9029	9/1600	2400'MT	1 reel
	9052	1316	Disk Pack	1 pack
Order from IBM	9126	7 DC/800	2400'MT	1 reel
	9128	9/800	2400'MT	1 reel
	9129	9/1600	2400'MT	1 reel
	9152	1316	Disk Pack	1 pack

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	M31	B	$100

Optional Support Package (no additional charge): To order, specify feature #7040.

Licensed Documentation: One copy of Systems Manual*.

Related Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0753) ... Data Base Description Manual (GH20-0754) ... Program Product Design Objectives (GH20-4064).

Reference Material (order from Mechanicsburg): Production Information and Control System (GE20-0280) ... System/360 Bill of Material Processor - Application Description Manual (GH20-0197) ... Bill of Material Processor, Programmer's Manual (GH20-0246) ... System/360 Requirements Planning - Application Description Manual (GH20-0487) ... System/360 Requirements Planning Program Description Manual (GH20-0584) ... System/360 Capacity Planning - Application Description Manual (GH20-0627) ... System/360 Data Base Organization and Maintenance Processor - Application Description Manual (GH20-0771).

For further information, contact a Manufacturing Industry Marketing Representative.

*Prices and feature number to use for ordering additional copies of documentation (licensed) will be announced when the program is available. Form numbers will also be provided for unlicensed documentation at availability time.

IBM World Trade **Data Processing**

Program Product Announcement

CLINICAL LABORATORY MANAGEMENT SYSTEM (CLMS) PROGRAM PRODUCT (5718-H12) IS ANNOUNCED

A new program product, utilizing a unique file approach on the IBM 1800 Data Acquisition and Control System, meets the rapidly changing requirements of a modern clinical laboratory.

Planned Availability ... July 31, 1970

Monthly Charge ... $250.

Program Service Classification ... B

CLMS does not perform the data acquisition function for the laboratory. The Clinical Laboratory Data Acquisition System (CLDAS) program product 5718-H11 or its equivalent must be used for this purpose. If the customer intends to monitor instruments on-line to the computer, he should be cautioned that it requires a relatively complex programming effort. Serious consideration should be given to the use of CLDAS as opposed to attempting to develop an equivalent system.

CLMS directs and controls the flow of information from receipt of the initial requisition for a test until the final result has been developed and is ready for reporting. It operates under the IBM 1800 Time Sharing Executive System (see C26-6990) on the IBM 1800 Data Acquisition and Control System.

Highlights:

- Creates and prints a master log of requested work for reference in the laboratory.
- Organizes and generates worklists to be used at the work stations.
- Prints a quality control listing for verification of numeric data from automatic analyzers.
- Permits result verification and correction by the technologist using simple English language typewriter procedures.
- Summarizes this numeric data into patient reports.
- Maintains a master file reflecting the status of laboratory requests for response to inquiry.
- Collects and stores laboratory operating data for the management and planning function.
- Provides a control listing for follow-up on unreported results.

Details are in the sales manual write-up on the reverse side. The Program Product Design Objective (GH20-4058) is available from Mechanicsburg; each DP branch office librarian has been sent a limited supply.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Clinical Laboratory Management System (CLMS) (5718-H12) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: **July 1, 1970**
Distribution: **Australia, Canada, New Zealand, Selected European Countries, South Africa**

P70-90H

Clinical Laboratory Management System (5718-H12): The Clinical Laboratory Management System (CLMS) is a system of files and procedures designed to satisfy the basic information processing requirements of clinical laboratories in modern hospitals. Using the Clinical Laboratory Data Acquisition System (CLDAS) program product (5718-H11) or its equivalent for the data acquisition function, CLMS provides a broad base for an information management system. CLMS, with its unique file approach, directs and controls the flow of information from receipt of the initial requisition for a test until the final result has been developed and is ready for reporting.

Description: CLMS processing revolves around a key file, the Master Log File, which maintains the status of each test as it progresses through the laboratory cycle. Initial entries in this file are created from test requisitions entering the laboratory. The system uses this file to generate the printed master log and the worklists for the various work stations. As the test runs at the work stations are completed, the system prints quality control listings to permit verification of the final test results before they are made available for reporting. Upon verification, these results are placed by the system into the Master Log. Periodically, the Master Log can be reviewed and a patient report printed for the completed tests. Entries into a charge file may be made at several points in the process.

The Master Log contains work status indicators which are maintained by the system. These indicators show when a specimen has physically entered the laboratory and is ready for testing, when it has been placed on a worklist for a test run, and when a result has been obtained and is ready for reporting. These indicators are used by the system to direct the laboratory work flow. They are also available to the user for real-time response to inquiries on the status of tests.

The Master Log, in the normal course of processing, collects data on most aspects of the laboratory operation; the type and number of tests performed, the technologists performing them, the devices and procedures used, etc. This information is available to the user for the preparation of statistical and other special reports of value in managing the laboratory and planning for its future.

CLMS does not perform the data acquisition function for the laboratory. CLDAS or its equivalent must be used for this purpose. If the customer intends to monitor instruments on-line to the computer, he should be cautioned that it requires a relatively complex programming effort. Serious consideration should be given to the use of CLDAS as opposed to attempting to develop an equivalent system.

Customer Responsibilities: CLMS is a comprehensive set of programs which may be tailored to fit a user's environment. A good understanding of the system is necessary for successful installation and operation.

For a description of the laboratory, CLMS uses a set of internal descriptive files. These files are created by the system from punched cards containing operational data specified by the user. By respecifying the operational data, the user may at any time modify the sytem to reflect additions, deletions, or rearrangements in his test procedures.

CLMS uses the card reader, printer, and console typewriter as its principal means of communication with the user. However, all input and output functions of CLMS originate or terminate in a system file. These interfacing files simplify the incorporation of other input-output devices into the system. The user is responsible for any additional device support programs. A knowledge of the 1800 and its programming languages is required to write these additional device support programs.

CLMS uses an internal file, the Patient ID File, for patient data such as name, location, birthdate, and sex. The user is responsible for creating and maintaining this file.

CLMS is a series of background batch process programs designed to operate concurrently with the data acquisition function. The user must provide CLDAS or its equivalent for the direct monitoring of his laboratory instruments.

The user should generate and maintain a compilation listing which should be available for all personnel servicing the system.

Programming Systems: CLMS operates under the IBM 1800 Time Sharing Executive System (TSX). Both IBM 1800 FORTRAN Languages and IBM 1800 Assembler Language are used in the system.

System Configuration: The TSX system has minimum system requirements for Systems Generation as outlined in "IBM 1800 Time Sharing Executive System Concepts and Techniques" (C26-3703). CLMS requires that the 1801 Processor-Controller have at least 16K core storage (a minimum of 6,244 words of variable core is required in the TSX system). A 1443 Printer, 1442 Card Read Punch, and an 1816 Console Typewriter are required. An 1810 Disk Storage Model A2 is also required. (While the Model A2 will normally provide adequate storage capacity, it is possible that laboratory volumes could be large enough to necessitate a Model A3. Refer to the Application Description Manual [availability will be announced in a PRL] for guidelines in determining disk storage requirements). The user's method of executing the data acquisition function will dictate the IBM 1800 Process I/O features required on the system.

Basic Program Product Offering:

Licensed Documentation: One copy of the Systems Manual*.

Unlicensed Documentation: One copy each of the Program Description Manual* and Operations Manual*.

Licensed Machine Readable Material: One copy of machine readable material containing CLMS source modules and sample problem.

To order, select one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Order from IBM	9128	9/800	2400' MT	1 reel
Customer Supplied	9028	9/800	2400' MT	1 reel

Charge:

Type	Program & DPMO Number	Programming Service Classification	Monthly Charge
5718	H12	B	$250

Related Documentation (available only from Mechanicsburg): Application Description Manual (availability will be announced in PRL) ... Program Product Design Objective (GH20-4058).

For additional information contact your Medical Industry Marketing Representative, GEM Region.

*Prices (for additional copies) and form numbers of the manuals will be available when the program is available.

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITTMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

SYSTEM/360 BILL OF MATERIAL PROCESSOR EXTENDED VIA DATA BASE ORGANIZATION AND MAINTENANCE PROCESSOR PROGRAM PRODUCT (5736-XX4)

The Data Base Organization and Maintenance Processor (5736-XX4) is a major extension of System/360 Bill of Material Processor (360A-ME-06X). As such, this program package still includes those programming and documentation aids specifically of use to manufacturing customers. Source-level compatibility for user programs has been maintained.

The program provides the flexibility of data organization required to implement a data based information system. It establishes the framework for a system that enables:

- Elimination of redundant data and implied redundant maintenance.
- Reduction in application implementation costs, storage and processing costs.
- Improved accuracy through entry of data to a single data base that can service multiple applications.
- Availability of centralized, consistent data to all organizational units on a timely, accurate basis.

The Data Base Organization and Maintenance Processor creates, maintains, reorganizes, and accesses the file structure defined by the user as the system focal point.

Highlights ...

- Variable-length lists of logically related data records.
- Cross-referencing of related data.
- Data base content, format, and structure are user-defined.
- Modular in design, options and features are selected and tailored in a systems generation procedure.

New program features, conversion considerations and other details are in the sales manual write-up on the reverse side.

Planned Availability ... August 17, 1970

Programming Service Classification ... B

Monthly Charge ... $100

The Program Product Design Objectives are available from Mechanicsburg (GH20-4063) ; each branch office has been sent a limited supply.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Data Base Organization and Maintenance Processor (5736-XX4) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

Data Base Organization and Maintenance Processor (5736-XX4): The Data Base Organization and Maintenance Processor establishes the framework for implementation of a data based information system. This series of programs provides a flexibility of data organization that enables:

- Elimination of redundant data and implied redundant maintenance.
- Reduction in application implementation costs, storage costs, and processing costs.
- Improved accuracy through single manual recording of data at point of origin.
- Availability of centralized, consistent data to all organizational units on a timely, accurate basis.

Description: The Data Base Organization and Maintenance Processor is based on a direct access, file-oriented concept that separates data into recurring and nonrecurring classes.

Master files contain nonrecurring data. The records of a master file are organized and maintained in logical sequence of record identifiers (keys). They can be accessed in logical sequence, by identifier through an index, by disk location, or by consecutive location sequence. Two physical organization alternatives are provided; one is especially suited to volatile files.

Chain files contain recurring data, organized in variable-length lists of related fixed-length records. Each list is associated with a record in a master file. A chain record may belong to more than one list, thereby constituting a list intersection which in effect cross-references master records. User data which are unique to the intersection are stored in the chain record.

Highlights:

- Content, format and logical relationship of data files are user-specified.
- Data Base Organization and Maintenance Processor modules control the creation, maintenance, reorganization, and access of data files on 2311 or 2314 disk.
- Cross-referencing of related data is managed by the system.
- Modular in design, the system can be tailored to the requirements of the user in a systems generation procedure during which the user chooses only those options and features that apply. Multiple generations of various program modules may be generated to effect different options for different parts of the total data base.

Features: Maintenance functions include the addition, physical deletion, logical deletion, and change of master file records as well as the chain file functions of addition of a single record to an existing list, addition of a new list, physical deletion of a single record, physical deletion of an entire list, change to an existing record, replacement of one record by another within a list, the linking or unlinking of an existing record to or from an associated master record, list duplication (same-as-except), and replacement of one master record by another wherever the first is encountered in association with a chain file (mass replacement).

Disk file chaining is used to link logically related data ... related records are chained together to form lists ... any record may be incorporated in up to five lists, eliminating the need to maintain the same information in multiple files or extract information by lengthy file scans ... variable-length lists of fixed length records approximate variable-length record capability and eliminate the need to reserve space in each record for the maximum of information that could exist ... disk file space resulting from record deletions is reusable ... program modules can be generated and combined so that multiple maintenance functions can be performed against multiple files during the same program run ... bi-directional chains greatly enhance the performance of chain file record deletion ... reverse chaining also makes certain record lists accessible in descending sequence ... a run activity control number aids failure recovery and facilitates special data retrieval functions ... record counts are maintained for audit and control of direct access chains ... a macro is furnished to provide retrieval of a list of chain file records and their associated master records ... input/output modules are self-relocating.

Special Sales Information: This program is a major modification of the System/360 Bill of Material Processor (360A-ME-06X). To relate the terminology of the Data Base Organization and Maintenance Processor to that of the forerunner: (1) the part number (item) master file is a specific implementation of a master file; it should contain data relevant to each raw-material, piece part, assembly and end product of a manufacturing company, (2) the product structure file is a specific implementation of a chain file in which the relationship of items in the part number master file are recorded; a product structure record should contain data (such as quantity per assembly) which is unique to the relation of two specific items, (3) a work center master file is another specific implementation of a master file and (4) a manufacturing routing file is an implementation of a chain file which specifies the relationship between item master records and work center master records.

All functions originally provided in the Bill of Material Processor are incorporated in the Data Base Organization and Maintenance Processor package, including the special application mainline program for creation and maintenance of the four manufacturing files described above, low-level code routines for product structures, and instructions for application programming functions unique to product structures.

Among the more significant new features are:

- Documentation in terms of general file organization facilities.
- An alternate master file organization technique to reduce the impact of heavy file maintenance on performance and to reduce the frequency of file reorganization.
- An alternate method of file reorganization that will reduce time required to reorganize files.
- The ability to access the File Organization Logic modules from user-written Assembler Language, COBOL, or PL/I programs.
- Self relocating INPUT/OUTPUT modules to facilitate (1) permanent storage in the DOS core image library, (2) loading into core storage at variable core locations, (3) having multiple copies in core simultaneously, and (4) operation in a DOS foreground partition.
- The ability to mass replace one subordinate master record with another wherever the first is encountered in a cross-reference relationship.
- The ability to duplicate a parent list of chain file records already on file with later processing of exceptions as specified by the user.
- The ability to generate multiple disk file transactions per input transaction during file maintenance.
- Native 2314 mode source program residence.
- Improved customizer diagnostics.
- Improved error-checking and orderly abnormal job termination.

Conversion considerations:

1. System/360 Bill of Material Processor (360A-ME-06X) will remain available to support the 16K BOS user and the 24K DOS user. Other than correction of program errors, no changes will be made to 360A-ME-06X. Customers with 32K or larger systems should use the new program when available.
2. Users may upgrade to this program without disturbing their present Controlled Sequential Access Method files originally created by the Bill of Material Processor.
3. When desired, the reorganization program of the Data Base Organization and Maintenance Processor will provide support for input of Bill of Material Processor master files organized by the currently supported Controlled Sequential Access Method and output under the new alternate technique, Separate Index Access Method.
4. Users may upgrade to the new program (including conversion from Controlled Sequential Access Method to Separate Index Access Method) without alteration to user-written source programs. Under certain conditions, recompilation or reassembly will be required.

Use: The Data Base Organization and Maintenance Processor is a set of programs designed for disk file organization and access to be used in conjunction with user-written application programs. While its primary use will be in the DOS background batch environment, the new input/output module architecture will support retrieval from the files in a foreground teleprocessing environment, even concurrent with background retrieval and update against the same files. File update from the foreground is not recommended; it is absolutely inadvisable with concurrent updating in another partition.

Customer Responsibilities:

- The initial approach to an information system should include a broad view of the information processing requirements of all areas of the organization involved.
- Design file structure.
- Design external systems to cover activity beyond the boundaries of the data processing department.
- Transform the file structure design into specific parameters for generation of a custom-tailored Data Base Organization and Maintenance Processor system.
- Generate a Data Base Organization and Maintenance Processor system.
- Write and test application programs.
- Firm operating procedures.
- Prepare data for initial files.
- Load files.
- Cutover. A conversion period where the new system is operating in parallel to the old system is recommended.
- Operate.

Depending on the application area chosen, and the degree of sophistication, installation may take from two weeks to three years.

Programming Systems: DOS/360 is used as the control system for the Data Base Organization and Maintenance Processor. The following components of DOS are used: (1) System Control and Basic IOCS, 360N-CL-453, (2) Direct Access Method IOCS Macros, 360N-IO-454, (3) Assembler Basic Modules, 360N-AS-465, (4) Unit Record and Disk Utilities, Group 1, 360N-UT-461, and (5) Disk/Tape Sort/Merge, 360N-SM-483.

In addition to the above DOS/360 components, the following IBM System/360 modules may be employed at the user's option: (1) COBOL, 360N-CB-452, (2) PL/I, 360N-PL-464, and (3) Consecutive Tape Input/Output Control System Macros, 360N-IO-456.

The Data Base Organization and Maintenance Processor itself is written in Assembler Language. The programs can be customized to run on a minimum configuration with a DOS/360 supervisor of 8K bytes. User application programs may be written in Assembler Language, COBOL or PL/I.

Minimum System Requirements:

Device or Features	For S/360 Model 25	For S/360 Model 30
System/360 Central Processing Unit, 32K bytes	2025E	2030E
Decimal Arithmetic Special Feature	Standard	3237
Control Unit for 1052 Printer-Keyboard	- - - -	1051 N1
Console Printer-Keyboard	1052 Model 7	1052 Model 8
Card Reader/Punch (see Note 1)	2540	Any
Printer	1403 Model 7	Any with at least 120 print positions
Storage Control	- - - -	2841 Model 1
Disk Storage Drives (see Note 2) or	2311 Model 1	2311 Model 1
Direct Access Storage Facility (see Note 2)	- - - -	2314 - A series

NOTES:

1. A System/360 card punch is required for system preparatory procedures. In an operational system, user application programs control unit record input/output where required. The application mainline program included in the package for the four specific manufacturing files provides options of 2540, 1442, or 2520 and 1403 or 1443. The sample problem is generated for a 1403 and 2540.

2. Direct access storage capacity is required to contain DOS system residence and user data files. Two drives are minimum. Chain file reorganization requires enough capacity for twice the size of the chain file itself plus one associated master file. To customize the system or to execute the sample problem on 2311, the Data Base Organization and Maintenance Processor requires one full disk pack exclusive of DOS system residence, DOS system work files, and private libraries. To customize the system or to execute the sample problem on 2314, the Data Base Organization and Maintenance Processor requires the first 103 cylinders of a pack exclusive of DOS system residence, DOS system work files, and private libraries.

Basic Program Product Offering:

Unlicensed Documentation: One copy of each of the following - Program Description Manual* ... Operations Manual*.

Licensed Machine Readable Material: One copy of Machine Readable Material consisting of source code plus special utility programs and a sample problem available on one magnetic tape or disk pack. To order, select one of the following specify numbers:

	Specify Number 2311 User	2314 User	Track/Density	Description	Qty.
Customer Supplied	9026	9226	7 DC/800	2400' MT	1 reel
	9028	9228	9/800	2400' MT	1 reel
	9029	9229	9/1600	2400' MT	1 reel
	9052		1316	Disk Pack	1 pack
Order from IBM	9126	9326	7 DC/800	2400' MT	1 reel
	9128	9328	9/800	2400' MT	1 reel
	9129	9329	9/1600	2400' MT	1 reel
	9152		1316	Disk Pack	1 pack

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	XX4	B	$100

Optional Support Package (no additional charge): To order, use feature #7040.

Licensed Documentation: One copy of the System Manual*.

Related Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0771) ... Program Product Design Objectives GH20-4063.

Reference Material (available only from Mechanicsburg): Production Information and Control System, GE20-0280 ... Bill of Material Processor - Maintenance and Retrieval System, GE20-0114 ... System/360 Inventory Control - Application Description, GH20-0471 ... System/360 Requirements Planning - Application Description, GH20-0487 ... System/360 Capacity Planning System - Application Description Manual, GH20-0627.

For further information contact your local Manufacturing Industry Marketing Representative.

*Prices and the feature number to use (licensed documentation) when ordering additional copies of documentation will be announced when the program is available. Form numbers for unlicensed documentation will also be announced at availability time.

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[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

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[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

IBM World Trade **Data Processing** **Program Product Announcement**

NEW PROGRAM PRODUCT FEATURE EXTENDS CUSTOMER INFORMATION CONTROL SYSTEM

Today, IBM announces a new feature for use with the well accepted, performance-oriented Customer Information Control System:

- **COBOL and PL/I Compiler capabilities, in addition to the available assembler language.**
- **Additional communications support.**

• • •

This new Language and Terminal feature available for the Customer Information Control System program product (5736-U11) supports both COBOL and PL/I Languages to ease the writing of application programs. The wide range of terminal support already available is expanded to include:

- 1030 Data Collection System
- 2741 Communication Terminal
- Binary Synchronous Communication support for the 2780 Data Transmission Terminal, System/360 and 1130 Data Processing Systems
- Dial-up feature for the 2740 Communication Terminal, 2741 Communication Terminal and the 1050 Data Communication System.

Planned Availability ... December 7, 1970
Monthly Charge ... $85.
Program Service Classification ... B

Sales Opportunities:

- Now sell Customer Information Control Systems to your COBOL and PL/I customers and prospects.
- Sell your present Customer Information Control System users the advantages of these new features.
- Significant NSRI potential. Customer Information Control System sales can produce orders for core storage, disk files, transmission control units and terminals.

Program Product Design Objectives (GH20-4066) are available from Mechanicsburg; each branch office has been sent a limited supply.

Availability of the Application Description Manual will be announced in a Publications Release Letter.

The sales manual write-up for this feature is on the reverse side. See page PPA 360.1 in the program product section of the sales manual for a description of the Customer Information Control System.

No RPQs will be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Customer Information Control System (5736-U11) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTS Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90K

Language and Terminal Feature:

The Language and Terminal feature contains the following additional capabilities for the Customer Information Control System:

1. Support of the PL/I and COBOL languages for use in writing application programs to operate under the Customer Information Control System. The application programs must be compiled by one of the following language processors: IBM System/360 Operating System ANS COBOL (360S-CB-545)... PL/I (F) (360S-NL-511). Programs written in these languages must utilize the facilities provided in this feature to meet the quasi-reentrant requirements of the Customer Information Control System. In addition, the use of the PL/I on-condition statement is limited and shared libraries are not supported.

2. Support of the following terminals and features:

   - 1030 Data Collection System with 1031 input station models A1-A7, B1-B7 and with, optionally: 1032 Digital Time Unit equipped with Digital Time Read-out Control 2702 (3273), 1033 Printer, 1035 Badge Reader, and the following features on the 1031 Input Station: 1033 Printer Attachment (1279), Common Carrier Adapter (2068), IBM Line Adapter (4647), 1035 Attachment (7961), and 1035 Control (7962).
   - 2741 Communication Terminal, switched or non-switched lines, optionally with Dial-up (3255).
   - Binary Synchronous Communication support for System/360 on non-switched lines (EBCDIC OR ASCII), System/360 Model 20 on non-switched lines (EBCDIC or ASCII), 1130 Computing System on non-switched lines (EBCDIC), 2780 Data Transmission Terminal on non-switched lines (EBCDIC, ASCII or TRANSCODE). Additional features supported are:

     S/360 Model 20-Binary Synchronous Communications Adapter (2074), Station Selection (7477); 1130 Synchronous Communications Adapter (7690); 2780 Multiple Record Transmission (5010), Horizontal Format Control (5800), 120 Character Print Line (5820), 144 Character Print Line (5821), and Multipoint Line Control (5020).
   - Dial-up Feature-Switched line support for 2740 Communication Terminal Model 1, 2741 Communication Terminal, and 1050 Data Communication System; Feature supported Dial-up (3255) for 2740 and 2741.

To order the Language/Terminal Feature offering, select one of the following feature numbers:

Feature Number	Track/Density	Description
6006	7 DC/800	DTR
6004	9/800	DTR
6005	9/1600	DTR

Charge:

Description	Feature No.	Programming Service Classification	Monthly Charge
Language Terminal Feature for 5736-U11	6004 or 6005 or 6006	B	$85

General Documentation (available only from Mechanicsburg): Application Description Manual (availability and form number will be announced in a future Publications Release Letter).

Notes: 1. If the Language and Terminal feature is used, 750 bytes of core are required in addition to the 15,000 bytes of core storage required for the basic control system modules.

2. Terminals which are equivalent to those explicitly supported may also function satisfactorily. The customer is responsible for establishing equivalency. IBM assumes no responsibility for the impact that any changes to the IBM supplied products or programs may have on such terminals. (This is in reference to the Common Carrier Teletypewriter Exchange (TWX) Stations Model 33/35 type with B-level codes at 110 bps on Common Carrier Switched 150 Baud networks.)

3. If the user's terminal configuration contains S/360 or 1130, he must develop, write, and test the programs necessary to use those devices as a terminal.

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• ORDERING INSTRUCTIONS FOR INTERACTIVE TERMINAL FACILITY PROGRAM PRODUCTS

The Interactive Terminal Facility (ITF) provides conversational PL/I and/or BASIC programming capability under DOS/360 and OS/360 (see P70-48B), or under the Time Sharing Option of OS/360 MVT (see P70-48C).

The Basic Program Product Offering for any version of ITF consists of a Shared Language Component (SLC) joined to either a PL/I or a BASIC component. Program numbers have been assigned to the various versions of ITF as follows:

5736-RC1	DOS-ITF:	SLC + PL/I
5736-RC2	DOS-ITF:	SLC + BASIC
5734-RC1	OS-ITF:	SLC + PL/I
5734-RC3	OS-ITF:	SLC + BASIC
5734-RC2	TSO-ITF:	SLC + PL/I
5734-RC4	TSO-ITF:	SLC + BASIC

The monthly charge for any one version of ITF is $120. A second language component may be added to any version of ITF by ordering the appropriate special feature. The monthly charge for a second language component is $60.

• ORDERING INSTRUCTIONS FOR TSO PROGRAM PRODUCTS INCLUDING CODE AND GO FORTRAN AS A BATCH PROCESSOR

Complete ordering instructions for the following program products, which operate under the Time Sharing Option of OS/360 MVT (see P70-48C), and Code and Go FORTRAN as a Batch Processor (see P70-48A).

5734-CP2	TSO Assembler Prompter
5734-FO1	Code and Go FORTRAN
5734-FO2	FORTRAN IV (G1) Compiler
5734-CP3	TSO FORTRAN Prompter
5734-LM1	FORTRAN IV Library (Mod I)
5734-CB1	Full ANS COBOL Version 3 Compiler
5734-CP1	TSO COBOL Prompter
5734-UT1	TSO Data Utilities
5734-RC2	TSO-ITF: PL/I
5734-RC4	TSO-ITF: BASIC

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

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IBM World Trade **Data Processing**

Program Product Announcement

NEW PROGRAM PRODUCT HELPS TO PROVIDE EFFECTIVE FARM MANAGEMENT

Note to World Trade Readers

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The IBM Agribusiness Management Information System (AMIS), program product 5736-D51, is a set of programs and procedures which makes available financial, tax, and management information to the agribusiness industry.

AMIS is designed for operation by large ranches or farms, by agricultural cooperatives and others who provide accounting services. The IBM Agribusiness Management Information System produces reports which provide for effective farm management.

The advantages of AMIS are:

- It allows each member the facility of a computer.
- It generates useful reports with minimum input.
- It permits individual definition of report content.
- It provides an economical system of record-keeping to the member.

Planned Availability ... August 20, 1970
Monthly Charge ... $225.
Programming Service Classification ... B

The Program Product Design Objectives are available from Mechanicsburg (GH20-4059); each branch office librarian has been sent a limited supply.

No RPQs will be accepted at this time.

Detailed information is in the sales manual write-up on the reverse side.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Agribusiness Management Information System (5736-D51) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90M

Agribusiness Management Information System (AMIS) (5736-D51): AMIS assists in making business decisions by providing accounting information on a timely basis. Input to this system consists of the member subscriber's business documents, such as checks, deposit slips and production reports. Output from this system consists of management reports about all phases of farm activity.

Description: The IBM Agribusiness Management Information System is a set of programs and procedures, which makes available financial, tax, and management information to the agribusiness industry. AMIS is designed for operation by large ranches or farms, by agricultural cooperatives, and others who provide accounting services. The IBM Agribusiness Management Information System produces reports which provide for effective farm management. The objectives of this system are to make available information on farm operations that can be used to:

- increase production efficiency
- control variable expenses
- control tax liability
- strengthen credit potential
- organize the recording and reporting of financial data
- improve reporting of agricultural operations to facilitate long range planning

The system is started by (1) entering the member subscriber's balance sheet amounts and accounts and (2) periodically updating these items through the use of input transactions. The balance sheet information is accumulated on the Agribusiness Management Information System master files. Ten different master file records are created from the subscriber-supplied information. An additional master file is used by all subscribers. The current period transactions are matched against the appropriate master file and updating occurs. The last programs in the system use the updated master files to prepare the action reports. The component programs of the system are:

Master File Setup Program - the master file setup program performs two functions -- generation of the master file zero records specified by control card input and generation of table code entry records if the table code file is specified by control card input. This program is run only once for every master file pack to be created. It generates master file zero records, that is, records to be used to facilitate the creation of actual master file records by other programs in the system. The second function, the generation of table code entry records, is the loading of descriptions used in translating codes submitted by the subscriber. Each table code entry card contains a three digit code and a ten-character alphameric description.

Master File Reorganization Program - the purpose of the master file reorganization program is to reorganize all master files, placing all data in prime data areas, eliminating overflow records, to delete farms from each master file as specified by control card input, and to delete records from all files, except the table code master file, as indicated by a delete character at the end of each record. This program reads the old master files and reorganizes them onto a new master file pack. The old master file pack is saved for backup purposes.

Transaction Capture Program - the purpose of the transaction capture program is to load the punched card transaction input onto a disk pack, and to list these records as they are created.

After all transaction cards have been loaded onto the disk pack, the cards are sorted into sequence for updating the master files. The sequence is firm number and type code.

Master File Maintenance Program - the main functions of the master file maintenance program are:

- To validate the data on all input master file image records; if corrections to an existing master file are entered, this program validates the correction.
- To validate the firm number on current period transactions; this means that the current period transaction must have a central master file record.
- To process transaction records, generating new master file records or altering existing records; if the current period transaction is valid, this program validates other portions of the transaction.
- To produce the new-codes-and-accounts reports; this program produces the first report, listing any new codes or accounts for each firm and flagging any errors encountered.

Transaction Build Program - this program generates financial account numbers from the financial master file and builds 142-character financial account records which are output to the work file disk.

After all transaction detailed records have been built, these records are sorted into sequence for processing by the financial file maintenance and transaction verification programs. The records are sorted into firm number and account number sequence.

Financial File Maintenance Program - the main function of the financial file program is to perform maintenance functions to the financial master file by adding new accounts and/or updating existing accounts. Any additions to the file are inserted in their proper sequence.

Transaction Verification Program - the functions of the transaction verification program are: to validate financial account records, flagging any errors, and to produce the transaction reference report, which is a listing of all transactions by type (expense, receipt, sales). This program completes the validation of the input records. Any errors found during the validation phase are noted in the record itself. At the same time this program produces the transaction reference report, listing all transactions in their proper category. Totals are accumulated and printed on the transaction reference report.

Transaction Validation and Generation Program - the functions of the transaction validation and generation program are:

- To convert the alphabetic coding to numeric for reports, testing expense, receipt and class codes where necessary to generate the proper accounts for each transaction entry; the program converts any alphabetic coding encountered into numeric by use of the table code master file.
- To generate account numbers for the input report numbers; this program assigns the valid account number after analyzing the financial master file.
- To check capital and resale master file items; any transaction data involving the capital and resale master files are completely validated by this program.
- To generate detail transactions and employee and checkbook records for other programs in the system; the input transactions are split into several different transaction types for easy processing.
- To flag errors and to prepare the accuracy check list report; this program receives the transaction input validated by the transaction verification program. It counts the errors discovered in the transaction verification program and lists those transactions in error with an asterisk on the accuracy check list report.
- To check the error tolerance in the central master file record to determine whether or not to continue processing. After counting the number of correct transactions within the subscriber-supplied group, this program computes the percentage of transactions submitted that were error free. It then compares the computed percentage with a subscriber-supplied standard. If the computed percentage is less than the supplied standard, processing for this firm is discontinued and any transaction records generated are deleted from the output files. If the computed percentage is equal to or greater than the supplied standard, the firm continues processing.

  After all firms have been processed, the transaction detail and employee and bank detailed transaction records are sorted into sequence for processing by subsequent programs.

Employee File Maintenance and Checkbook Report Generation Program - the functions of the employee file maintenance and checkbook report generation program are:

- For the checkbook report, to list all current month deposits and checks written and compute the balance in the cash bank account. The sorted bank detailed records produce the checkbook report by listing deposits and written checks with totals. The new balance should be in agreement with the bank account on the balance sheet report.
- For the employee report, to list all current month payroll transactions, accumulate current month and year-to-date totals for gross pay, net pay, and deductions, and update the employee master file records. This program uses the sorted employee detail records to produce the employee report and to update the employee master file.

Current Financial Summaries Generation Program - the functions of the current financial summaries generation program are to generate current financial summaries transactions from the input transaction detail records. Each active account has built a current financial summary transaction. These transactions are passed to the financial file posting, cash summary, and net worth reports generation program for further processing.

Main File Maintenance and Summaries Generation Program - the main functions of the main file maintenance and summaries generation program are:

- To produce the production enterprise/service department reports showing current and year-to-date expenses, receipts, costs of sales, and comments; these reports are the heart of the Agribusiness Management Information System as they present a profit or loss for an individual income producing item.
- To update or generate year-to-date master file summary records; from the sorted transaction detail records, this program updates or generates year-to-date master file records.
- To generate current activity detail summary records; this program generates current activity summary records for every account which has current activity.

Capital and Resale File Maintenance Program - the main function of the capital and resale file maintenance program is to update the capital and resale master files.

Financial File Posting, Cash Summary and Net Worth Reports Generation Program - the functions of the financial file posting, cash summary and net worth reports generation program are:

- To update the financial master file records for active firms having current financial summary transaction records.
- To generate print records for the balance sheet and profit and loss statement report; this program produces both the balance sheet report and the profit and loss statement report.
- To accumulate information for the cash summary and net worth reports; this program also produces the cash summary reports and the net worth reports.

. To update the net worth and depreciation master files if requested by the subscriber.

Production Data Analysis Program - the main functions of the production data analysis program are to provide a facility to use data stored within the system, to manipulate factors in calculating information desired by the subscriber, or to allow the use of constants to be entered to manipulate data within the system to be used to obtain subscriber-designated information. This program allows the subscriber to supply instructions to compute his production efficiency on a variable basis. The production data analysis program produces the production data analysis report.

Production Usage Reports Program - the main functions of the production usage reports program are to analyze the usage of machine, labor, and water expense by production enterprise. The reports produced allow either dollars or hours to be the analytical basis and show percentage of total usage for each analyzed enterprise for the firm. This program computes the percentage of machine, labor and water expense used by each production enterprise/service department and produces the machine usage, labor usage and water usage reports by enterprise.

Full Firm and Enterprise Budgets Report - the main function of the full firm and enterprise budgets report program is to provide a comparison of actual expenses and budgeted expenses, with an absolute difference and percentage against budget calculated. This calculation can be performed for current month figures and year-to-date figures or just year-to-date figures. The program compares actual expenses and budgeted expenses and calculates the difference and the percentage over or under budget for a firm or a production enterprise/service department or both.

Full Firm and Enterprise Analysis Program - the main functions of the full firm and enterprise analysis program are to analyze the year-to-date expenses and receipts for several enterprises and for the total operation, to categorize receipts as cash or non-cash on the basis of tax class codes and to provide for economic evaluation of the performance of an enterprise or the total firm. This program analyzes year-to-date expenses and receipts into various categories for an enterprise, several enterprises, or for a total firm.

Capital Gains and Resale Inventory File Analysis Reports Program - the main functions of the capital gains and resale inventory file analysis reports program are to list and analyze all purchases and sales, by item, and give a profit or loss figure for each sale, to list all items in the capital master file and to calculate the book value of these items, reflecting the current information entered. If a capital item is sold, this program calculates the gain or loss on the sale. This program prepares the capital gains report and the resale inventory report.

Income Tax Reports Program - the income tax reports program analyzes every year-to-date master file record for its effect upon taxes. Records in the production enterprise/service department accounts are analyzed as business records. Those in the net worth area are considered personal records. Receivables and payables are analyzed as affecting accrual accounting records. Capital accounts and non-cash classes are summarized for user convenience. This program summarizes all the above information on two pages and four supplemental pages, if necessary.

Depreciation Schedule Program - the main functions of the depreciation schedule program are to validate the information in the capital master file; calculate depreciation for capital items according to the subscriber's depreciation method, which can be straight line, sum of the years digits, double declining balance, or 150% declining balance; calculate 20% depreciation where applicable, and the tentative amount of investment credit; build depreciation master file records to hold monthly depreciation amounts, if requested by the subscriber; create internal depreciation transactions which are processed during the next regular system cycle; and produce five reports reflecting the effect of the above functions. The reports include an input code sheet to enter information, summaries of depreciation and investment credit, as an aid in preparing federal tax returns, and a detailed print-out of the capital master file. The subscriber can request actual depreciation amounts to be posted to his master files. This causes a file of input transactions to be built, and recycles these transactions through the main system, updating the files and producing the standard reports.

Reports Lister Program - the main functions of the reports lister program are to deblock the print files and print the action reports in descending firm and report number sequence, to delete or duplicate the reports for a specific firm initiated by control card or console input, and to generate a report showing the number of lines and pages per firm, and the number of copies printed for each firm on the file. All reports produced by previous programs in the system are placed on the print file during the processing of the Agribusiness Management Information System. This program prints all reports.

Year-End Reports Program - the function of this program is to produce status reports. This program should be executed twice, once during the cycle preceding closeout (pre-closeout cycle) and once after closeout. During the pre-closeout cycle, the status of the subscriber's master files is printed. From the nine reports produced by this program, the subscriber can make decisions concerning the status of his master files. After the closeout processing, this program should be executed to determine if the conversion was processed according to the subscriber's request.

Year-End Edit Program - the main function of this program is to edit the input transactions submitted by the subscriber. At least two transactions must be input to this program. The first is a transaction which initiates conversion processing. The second transaction contains the net worth account that is charged with the profit or loss for the year. Other transactions can be input and they are validated. Output from this program consists of validated conversion transactions.

Year-End Maintenance Program - the main function of this program is to close the profit and loss accounts and to adjust the subscriber's master file records to make it possible for him to begin processing the new year's transactions. Based upon the status reports produced during the pre-closeout cycle, the subscriber can submit transactions to adjust his master files. After these transactions are validated, the year-end maintenance program processes the transactions. The year-end maintenance program closes all profit and loss accounts to net worth and then converts all master files per the subscriber's input transactions. The output from this program is converted master files ready for a new year of processing.

The Agribusiness Management Information System is an accounting system based on enterprise accounting. The main responsibility of the subscriber is determining his income producing items and setting up each item as a separate account. This allows the system to determine the actual profit or loss for each income producing item.

Use: The Agribusiness Management Information System performs the detailed record-keeping and prepares the specified management reports. The subscriber furnishes his normal business papers or journals to the farm cooperative or other servicing organization. The data from these documents are then keypunched, verified, and read into the system. The Agribusiness Management Information System uses this current data to update the subscriber's year-to-date data. Management reports are then prepared and returned to the subscriber.

The system, after reading in the transaction data, validates this data and updates the necessary master files. Once the updating has been completed, the remaining programs prepare the action reports from these files.

Customer Responsibility: Before the Agribusiness Management Information System is installed, the customer must train his system analysts, programmers, and operators in DOS/360 ... he must analyze and study the Agribusiness Management Information System ... and he must design the forms necessary for this system from the examples provided.

Programming Systems: AMIS is written in DOS/360 Assembler Language. Generation, operation, and maintenance of the system requires the following DOS/360 programs - Supervisor (6K) ... Systems Control and Basic IOCS ... Indexed Sequential File Management System IOCS Macros (ISFMS) ... Group 1 Utilities (Unit Record and Disk) ... Sort/Merge-Disk ... Assembler. In addition, the distribution tape contains two BPS/360 programs, Initialize Disk and Copy Disk to Tape and Restore Tape to Disk, that are used to create the Agribusiness Management Information System private source library.

Minimum Machine Configuration: AMIS can be run on a System/360 Model 25 or larger. The minimum machine configuration for a System/360 Model 25 includes one 2025 Processing Unit Model E (32,768 bytes) ... three 2311 Disk Drives Model 1 ... one 2540 Card Read Punch Model 1 ... one 1403 Printer Model 2.

Basic Program Product Offering:

Unlicensed Documentation: One copy each of Program Description Manual* and Operations Manual*.

Licensed Documentation: One copy of the System Manual*.

Licensed Machine Readable Material: One copy of machine readable materials consisting of a private source library and sample problems, available on a DTR or a 1316 Disk Pack. To order, select one of the following specify numbers:

	Specify Number	Track/ Density	Description
Customer Supplied	9026	7DC/800	MT/2400'
	9028	9/800	MT/2400'
	9029	9/1600	MT/2400'
Order from IBM	9126	7DC/800	MT/2400'
	9128	9/800	MT/2400'
	9129	9/1600	MT/2400'

OR

	Specify Number	Description
Customer Supplied	9052	1316 Disk Pack
Order from IBM	9152	1316 Disk Pack

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	D51	B	$225.00

Related Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0764) ... Program Product Design Objectives (GH20-4059).

*Prices and form numbers (feature number) for copies of documentation will be announced when the program is available.

For further information, contact your local Distribution Industry Marketing Representative.

12-53

A NEW DOS TAPE AND DISK SORT/MERGE PROGRAM BETTERS PERFORMANCE

DOS customers are prime candidates for DOS-SM1, a new Sort/Merge program product (5736-SM1).

Improved performance and compatibility with the SM-483 Sort make SM1 an attractive product for users of SM-483. Users of the SM-450 Sort should consider SM1 for its additional features and options. For those customers who now use both the SM-450 and the SM-483 Sorts, this program product makes it attractive to standardize with one sort package in their shops. Propose SM1 to your DOS users and to all new prospects.

Performance Improvements ... The performance improvements demonstrated when compared with SM-483 have been:

- 18-42% for 10K DASD sorts
- 11-16% for 22K DASD sorts
- 6- 9% for 52K DASD sorts
- 4-13% for 80K DASD sorts
- 4-11% for 116K DASD sorts
- 13% for 10K tape sorts

Monthly Charge ... $80.

Programming Service Classification ... B

An initial supply of the Program Product Design Objectives for DOS-SM1 (GC28-6752) has been sent to each DP branch office librarian.

Use the material in this letter to justify SM1 to your DOS customers. Orders submitted now will result in early sell and install credits and enable your customers to start realizing the benefits of SM1 as soon as it is available. Supporting information and ordering instructions are on the following pages.

RPQs will not be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM DOS-SM1 (5736-SM1) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... This Program Product may be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90N

The 5736-SM1 Tape and Disk Sort/Merge Program Product enables the user to arrange multiple files of logical data records according to a predetermined collating sequence, or merge files of previously sequenced records. Input files may consist of fixed-length or variable length records, and these records may be blocked or unblocked.

The sequence of a file is determined by the contents of a control word, which may contain 1 to 12 control fields. These fields must occupy the same position in each record. Either ascending or descending sequence may be specified for each of the control fields. The control field data may be zoned decimal, packed decimal, floating-point, fixed-point integer, character, or binary data.

The program can link to user-written routines at points in the Sort/Merge program called program exits. At these exits, the user-written routines may write or check labels, open or close files, take checkpoints, insert, modify, or delete records, read the input file, write the output file, or process I/O errors.

Highlights ...

The 5736-SM1 program product utilizes the latest technology to provide performance enhancements to the existing 360N-SM-483 direct access sorts.

Improved performance is distributed across storage environments, particularly in the 10K and 22K core storage sizes. Although not as significant, performance improvements were also demonstrated in other core storage environments.

Moderate tape performance improvements are realized in the 10K core storage environment.

When either a sort or merge is executed using magnetic tape input and/or output, an additional parameter is now available at User Modification Exits 11, 17, 31, and 37. This parameter will allow the user to maintain block counts in the trailer labels of his files.

This program has been designed to operate under the most current and subsequent releases of the IBM Disk Operating System/360.

Features ...

The 5736-SM1 program product is compatible with the existing Type I 360N-SM-483 Sort/Merge program and provides all of the features and options of that program among which are:

- Support of COBOL SORT Verb.
- The ability to operate in both Foreground and Background partitions.
- Expanded user exit capabilities.
- The ability to sort on control fields with mixed data formats.
- The facility for the user to tailor the program to meet his specific requirements and thereby minimize library requirements.

Users of 360N-SM-450 will find that the features and performance characteristics of DOS-SM1 make this program product an attractive candidate for their consideration.

System Configuration ...

In addition to the minimum Disk Operating System configurations described in the IBM System/360 Disk Operating System: System Control and System Service Programs Publication, GC24-5036, the following are required:

- A minimum partition size of 10K for all merge-only applications or for sorting applications using the 2311 Disk Storage Drive or 2400 Series Magnetic Tape Units.
- A minimum partition size of 22K for sorting applications using the 2314 Direct Access Storage Facility.
- One 2311 or 2314 direct access device attached to one selector channel for system residence. (If disk is used for sort input, output, and intermediate storage, an additional direct access device or devices may be required. For planning purposes, the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL GC28-6676 may be used to calculate disk storage requirements until the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL for DOS-SM1 is available.)
- One 1403, 1404 or 1443 Printer, or one 1052 Printer-Keyboard. (A magnetic tape unit or direct access device may be used as the SYSLST device.)
- One 1442, 2501, 2520, or 2540 Card Reader, or one 2400 Series Magnetic Tape Unit, or one 2311 Disk Storage Drive, or one 2314 Direct Access Storage Facility assigned to SYSIPT and SYSRDR.
- Three 2400 Series Magnetic Tape Units for intermediate storage if tape units are to be used as work files.

Performance ...

Comparison runs between 5736-SM1 and 360N-SM-483 (Type I) indicate that 5736-SM1 yields significant performance improvements. Improvements are especially significant for direct access sorts in the 10K and 22K core storage environments.

Since variables such as file size, record length, blocking, and user options affect performance, a series of twelve typical user test cases were run in various environments to compile the data for Table 1. The twelve test cases are:

- 80 byte records/blocked 1
  - File sizes of 2, 10, and 20 thousand records.

80 byte records/blocked 10
File sizes of 2, 5, 10, 20, 50 and 100 thousand records.

240 byte records/blocked 5
File sizes of 2, 10, and 20 thousand records.

All test cases consist of fixed length records in random order with two binary control fields. The control fields are in lengths of four and twelve bytes.

Test Environment ...

Test cases were run on a Release 21 version of System/360 Disk Operating System with a 12K Supervisor and the console buffering feature. Input and output for all cases were on 90 KB magnetic tape units. Work devices were assigned to either one or two channels as indicated in Table 1. For one channel cases, input and output were on a channel other than the work devices. In all cases, for both 5736-SM1 and 360N-SM-483, optimum work extents were determined through the use of the CALCAREA facility, as defined in the DOS/360 Tape and Disk Sort/Merge Program SRL which will be available with DOS-SM1. In multi-unit test cases, equal size extents were used. The compiled times are from the job Duration Time supplied by the System/360 Disk Operating System.

Test Results ...

The percentages shown in Table 1 were compiled by taking the sum of duration times for the test cases of each group for which capacity was not exceeded (at least nine of the twelve test cases were run in each environment). In all situations, for both 5736-SM1 and 360N-SM-483, each group contained an equal number of test cases. The percentages shown in Table 1 indicate 5736-SM1 improvement percentages over 360N-SM-483 in all tested environments. These percentages were compiled on a Release 21 system, as specified above, and may be subject to change on subsequent releases.

[The sales manual text is

TABLE 1 - 5736-SM1 Performance Improvement
5736-SM1 vs. 360N-SM-483

	Device →	2311			2314	
	Channel→	1		2	1	
	Units →	1	2	2	1	4
	Part. size (core)↓					
Mdl.30	10K	39%	18%			
	22K		14%			
	52K			9%	9%	
Mdl.40	10K	42%	21%	21%		
	22K		15%	16%	11%	
	52K	6%				6%
	80K	13%	4%		7%	
	116K			11%		4%

Note: Sorts using 2400 Series Magnetic Tape Units as intermediate storage show moderate performance improvements. For example, using three 90 KB work tapes on one selector channel, in a 10K Model 40 environment, test cases run indicated an average performance improvement of 13 percent. (Test cases run were the same as defined above.)

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Tape and Disk Sort/Merge (5736-SM1): This program product enables the user to arrange multiple files of logical data records according to a predetermined collating sequence, or merge files of previously sequenced records. Input files may consist of fixed-length or variable length records, and these records may be blocked or unblocked.

The sequence of a file is determined by the contents of a control word, which may contain 1 to 12 control fields. These fields must occupy the same position in each record. Either ascending or descending sequence may be specified for each of the control fields. The control field data may be zoned decimal, packed decimal, floating-point, fixed point integer, character, or binary data.

The program can link to user-written routines at points in the Sort/Merge program called program exits. At these exits, the user-written routines may write or check labels, open or close files, take checkpoints, insert, modify, or delete records, read the input file, write the output file, or process I/O errors.

Highlights: The 5736-SM1 program product utilizes the latest technology to provide performance enhancements to the Type I 360N-SM-483 direct access sort.

Improved performance is distributed across storage environments, particularly in the 10K and 22K core storage sizes. Although not as significant, performance improvement was also demonstrated in other core storage environments.

Moderate tape performance improvements are realized in the 10K core storage environment.

When either a sort or merge is executed using magnetic tape input and/or output, an additional parameter is now available at User Modification Exits 11, 17, 31, and 37. This parameter allows the user to maintain block counts in the trailer labels of his files.

Features: The 5736-SM1 program product is compatible with the Type I 360N-SM-483 Sort/Merge program and provides all of the features and options of that Type I program among which are:

Support of COBOL SORT Verb.

The ability to operate in both Foreground and Background partitions.

Expanded user exit capabilities.

The ability to sort on control fields with mixed data formats.

The facility for the user to tailor the program to meet his specific requirements and thereby minimize library requirements.

Compatibility and Conversion Considerations: All functions, facilities, and options available in Type I 360N-SM-483 have been incorporated into the 5736-SM1 program product. There are no requirements for modifications to user written routines unless the user elects to take advantage of the additional block count parameter available at Exits 11, 17, 31, and 37.

The 360N-SM-483 program cannot, however, reside in the Core Image Library of the same system residence pack with the 5736-SM1 program product.

When using direct access devices as intermediate storage for sorting applications, the optimum and minimum number of work tracks may vary between the Type I 360N-SM-483 program and the 5736-SM1 program product. These variations can be determined by use of the CALCAREA facility, as defined in the IBM System/360 Disk Operating System, Tape and Disk/Merge Program SRL which will be available with the program.

Programming Systems: The 5736-SM1 program product is written in IBM System/360 Disk Operating System Assembler Language utilizing the macro language facility and operates under the IBM System/360 Disk Operating System.

System Configuration: In addition to the minimum Disk Operating System configuration, described in the IBM System/360 Disk Operating System: System Control and System Service Programs Publication, GC24-5036, the following are required:

A minimum partition size of 10K is required for all merge-only applications or for sorting applications using the 2311 Disk Storage Drive or 2400 Series Magnetic Tape Units.

A minimum partition size of 22K for sorting applications using the 2314 Direct Access Storage Facility.

One 2311 or 2314 direct access device attached to one selector channel for system residence. (If disk is used for sort input, output, and intermediate storage, an additional direct access device or devices may be required. For planning purposes, the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL GC28-6676 may be used to calculate disk storage requirements until the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL for DOS-SM1 is available.)

One 1403, 1404 or 1443 Printer, or one 1052 Printer-Keyboard. (A magnetic tape unit or direct access device may be used as the SYSLST device.)

One 1442, 2501, 2520, or 2540 Card Reader, or one 2400 Series Magnetic Tape Unit, or one 2311 Disk Storage Drive, or one 2314 Direct Access Storage Facility assigned to SYSIPT and SYSRDR.

Three 2400 Series Magnetic Tape Units for intermediate storage if tape units are to be used as work files.

Basic Program Product Offering:

Unlicensed Documentation: One copy IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program, System Information Manual, Program Product Specification Sheet.

Licensed Machine Readable: One copy machine readable material consisting of Object Program Load modules and Sample Problems available on a DTR (Distribution Tape Reel) or Cards.

To order the basic package select one of the following specify numbers:

Specify No.	Track/Density	Description
9015		Cards
9025	7 DC/800	DTR
9027	9/800	DTR
9030	9/1600	DTR

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	SM1	A	$80

Optional Support Package: (no additional charge).

Licensed Documentation: One copy of the Program Logic Manual and Microfiche for Program Listings.

To order the Optional Support Package use Specify Number 7040.

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature Numbers	Single Charge/Copy
8013 (PLM)	**
8035 (Microfiche)	**

For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number, when available, only from Mechanicsburg.

Unlicensed Documentation: **(order from Mechanicsburg)**

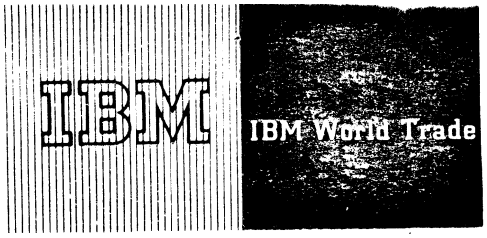
	Selling Price/Copy
IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program	**
IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program System Information Manual	**
Program Product Specification Sheet	**

Related Documentation: (available only from Mechanicsburg ... no charge.)

IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program General Information Manual GC28-6754

IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program Product Design Objectives GC28-6752

** Prices and form numbers of the manuals will be available when the program is available



Data Processing

Program Product Announcement

A NEW DOS TAPE AND DISK SORT/MERGE PROGRAM BETTERS PERFORMANCE

DOS customers are prime candidates for DOS-SM1, a new Sort/Merge program product (5736-SM1).

Improved performance and compatibility with the SM-483 Sort make SM1 an attractive product for users of SM-483. Users of the SM-450 Sort should consider SM1 for its additional features and options. For those customers who now use both the SM-450 and the SM-483 Sorts, this program product makes it attractive to standardize with one sort package in their shops. Propose SM1 to your DOS users and to all new prospects.

Performance Improvements ... The performance improvements demonstrated when compared with SM-483 have been:

- 18-42% for 10K DASD sorts
- 11-16% for 22K DASD sorts
- 6- 9% for 52K DASD sorts
- 4-13% for 80K DASD sorts
- 4-11% for 116K DASD sorts
- 13% for 10K tape sorts

Monthly Charge ... $80.

Programming Service Classification ... A

An initial supply of the Program Product Design Objectives for DOS-SM1 (GC28-6752) has been sent to each DP branch office librarian.

Use the material in this letter to justify SM1 to your DOS customers. Orders submitted now will result in early sell and install credits and enable your customers to start realizing the benefits of SM1 as soon as it is available. Supporting information and ordering instructions are on the following pages.

RPQs will not be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM DOS-SM1 (5736-SM1) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... This Program Product may be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

CORRECTED COPY
P70-90N

The 5736-SM1 Tape and Disk Sort/Merge Program Product enables the user to arrange multiple files of logical data records according to a predetermined collating sequence, or merge files of previously sequenced records. Input files may consist of fixed-length or variable length records, and these records may be blocked or unblocked.

The sequence of a file is determined by the contents of a control word, which may contain 1 to 12 control fields. These fields must occupy the same position in each record. Either ascending or descending sequence may be specified for each of the control fields. The control field data may be zoned decimal, packed decimal, floating-point, fixed-point integer, character, or binary data.

The program can link to user-written routines at points in the Sort/Merge program called program exits. At these exits, the user-written routines may write or check labels, open or close files, take checkpoints, insert, modify, or delete records, read the input file, write the output file, or process I/O errors.

Highlights ...

The 5736-SM1 program product utilizes the latest technology to provide performance enhancements to the existing 360N-SM-483 direct access sorts.

Improved performance is distributed across storage environments, particularly in the 10K and 22K core storage sizes. Although not as significant, performance improvements were also demonstrated in other core storage environments.

Moderate tape performance improvements are realized in the 10K core storage environment.

When either a sort or merge is executed using magnetic tape input and/or output, an additional parameter is now available at User Modification Exits 11, 17, 31, and 37. This parameter will allow the user to maintain block counts in the trailer labels of his files.

This program has been designed to operate under the most current and subsequent releases of the IBM Disk Operating System/360.

Features ...

The 5736-SM1 program product is compatible with the existing Type I 360N-SM-483 Sort/Merge program and provides all of the features and options of that program among which are:

- Support of COBOL SORT Verb.
- The ability to operate in both Foreground and Background partitions.
- Expanded user exit capabilities.
- The ability to sort on control fields with mixed data formats.
- The facility for the user to tailor the program to meet his specific requirements and thereby minimize library requirements.

Users of 360N-SM-450 will find that the features and performance characteristics of DOS-SM1 make this program product an attractive candidate for their consideration.

System Configuration ...

In addition to the minimum Disk Operating System configurations described in the IBM System/360 Disk Operating System: System Control and System Service Programs Publication, GC24-5036, the following are required:

- A minimum partition size of 10K for all merge-only applications or for sorting applications using the 2311 Disk Storage Drive or 2400 Series Magnetic Tape Units.
- A minimum partition size of 22K for sorting applications using the 2314 Direct Access Storage Facility.
- One 2311 or 2314 direct access device attached to one selector channel for system residence. (If disk is used for sort input, output, and intermediate storage, an additional direct access device or devices may be required. For planning purposes, the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL GC28-6676 may be used to calculate disk storage requirements until the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL for DOS-SM1 is available.)
- One 1403, 1404 or 1443 Printer, or one 1052 Printer-Keyboard. (A magnetic tape unit or direct access device may be used as the SYSLST device.)
- One 1442, 2501, 2520, or 2540 Card Reader, or one 2400 Series Magnetic Tape Unit, or one 2311 Disk Storage Drive, or one 2314 Direct Access Storage Facility assigned to SYSIPT and SYSRDR.
- Three 2400 Series Magnetic Tape Units for intermediate storage if tape units are to be used as work files.

Performance ...

Comparison runs between 5736-SM1 and 360N-SM-483 (Type I) indicate that 5736-SM1 yields significant performance improvements. Improvements are especially significant for direct access sorts in the 10K and 22K core storage environments.

Since variables such as file size, record length, blocking, and user options affect performance, a series of twelve typical user test cases were run in various environments to compile the data for Table 1. The twelve test cases are:

- 80 byte records/blocked 1
  - File sizes of 2, 10, and 20 thousand records.

80 byte records/blocked 10
File sizes of 2, 5, 10, 20, 50 and 100 thousand records.

240 byte records/blocked 5
File sizes of 2, 10, and 20 thousand records.

All test cases consist of fixed length records in random order with two binary control fields. The control fields are in lengths of four and twelve bytes.

Test Environment ...

Test cases were run on a Release 21 version of System/360 Disk Operating System with a 12K Supervisor and the console buffering feature. Input and output for all cases were on 90 KB magnetic tape units. Work devices were assigned to either one or two channels as indicated in Table 1. For one channel cases, input and output were on a channel other than the work devices. In all cases, for both 5736-SM1 and 360N-SM-483, optimum work extents were determined through the use of the CALCAREA facility, as defined in the DOS/360 Tape and Disk Sort/Merge Program SRL which will be available with DOS-SM1. In multi-unit test cases, equal size extents were used. The compiled times are from the job Duration Time supplied by the System/360 Disk Operating System.

Test Results ...

The percentages shown in Table 1 were compiled by taking the sum of duration times for the test cases of each group for which capacity was not exceeded (at least nine of the twelve test cases were run in each environment). In all situations, for both 5736-SM1 and 360N-SM-483, each group contained an equal number of test cases. The percentages shown in Table 1 indicate 5736-SM1 improvement percentages over 360N-SM-483 in all tested environments. These percentages were compiled on a Release 21 system, as specified above, and may be subject to change on subsequent releases.

TABLE 1 - 5736-SM1 Performance Improvement
5736-SM1 vs. 360N-SM-483

	Device →	2311			2314	
	Channel→	1		2	1	
	Units →	1	2	2	1	4
	Part. size (core)↓					
Mdl.30	10K	39%	18%			
	22K		14%			
	52K			9%	9%	
Mdl.40	10K	42%	21%	21%		
	22K		15%	16%	11%	
	52K	6%				6%
	80K	13%	4%		7%	
	116K			11%		4%

Note: Sorts using 2400 Series Magnetic Tape Units as intermediate storage show moderate performance improvements. For example, using three 90 KB work tapes on one selector channel, in a 10K Model 40 environment, test cases run indicated an average performance improvement of 13 percent. (Test cases run were the same as defined above.)

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

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[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

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[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

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Tape and Disk Sort/Merge (5736-SM1): This program product enables the user to arrange multiple files of logical data records according to a predetermined collating sequence, or merge files of previously sequenced records. Input files may consist of fixed-length or variable length records, and these records may be blocked or unblocked.

The sequence of a file is determined by the contents of a control word, which may contain 1 to 12 control fields. These fields must occupy the same position in each record. Either ascending or descending sequence may be specified for each of the control fields. The control field data may be zoned decimal, packed decimal, floating-point, fixed point integer, character, or binary data.

The program can link to user-written routines at points in the Sort/Merge program called program exits. At these exits, the user-written routines may write or check labels, open or close files, take checkpoints, insert, modify, or delete records, read the input file, write the output file, or process I/O errors.

Highlights: The 5736-SM1 program product utilizes the latest technology to provide performance enhancements to the Type I 360N-SM-483 direct access sort.

Improved performance is distributed across storage environments, particularly in the 10K and 22K core storage sizes. Although not as significant, performance improvement was also demonstrated in other core storage environments.

Moderate tape performance improvements are realized in the 10K core storage environment.

When either a sort or merge is executed using magnetic tape input and/or output, an additional parameter is now available at User Modification Exits 11, 17, 31, and 37. This parameter allows the user to maintain block counts in the trailer labels of his files.

Features: The 5736-SM1 program product is compatible with the Type I 360N-SM-483 Sort/Merge program and provides all of the features and options of that Type I program among which are:

- Support of COBOL SORT Verb.
- The ability to operate in both Foreground and Background partitions.
- Expanded user exit capabilities.
- The ability to sort on control fields with mixed data formats.
- The facility for the user to tailor the program to meet his specific requirements and thereby minimize library requirements.

Compatibility and Conversion Considerations: All functions, facilities, and options available in Type I 360N-SM-483 have been incorporated into the 5736-SM1 program product. There are no requirements for modifications to user written routines unless the user elects to take advantage of the additional block count parameter available at Exits 11, 17, 31, and 37.

The 360N-SM-483 program cannot, however, reside in the Core Image Library of the same system residence pack with the 5736-SM1 program product.

When using direct access devices as intermediate storage for sorting applications, the optimum and minimum number of work tracks may vary between the Type I 360N-SM-483 program and the 5736-SM1 program product. These variations can be determined by use of the CALCAREA facility, as defined in the IBM System/360 Disk Operating System, Tape and Disk/Merge Program SRL which will be available with the program.

Programming Systems: The 5736-SM1 program product is written in IBM System/360 Disk Operating System Assembler Language utilizing the macro language facility and operates under the IBM System/360 Disk Operating System.

System Configuration: In addition to the minimum Disk Operating System configuration, described in the IBM System/360 Disk Operating System: System Control and System Service Programs Publication, GC24-5036, the following are required:

- A minimum partition size of 10K is required for all merge-only applications or for sorting applications using the 2311 Disk Storage Drive or 2400 Series Magnetic Tape Units.
- A minimum partition size of 22K for sorting applications using the 2314 Direct Access Storage Facility.
- One 2311 or 2314 direct access device attached to one selector channel for system residence. (If disk is used for sort input, output, and intermediate storage, an additional direct access device or devices may be required. For planning purposes, the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL GC28-6676 may be used to calculate disk storage requirements until the IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program SRL for DOS-SM1 is available.)
- One 1403, 1404 or 1443 Printer, or one 1052 Printer-Keyboard. (A magnetic tape unit or direct access device may be used as the SYSLST device.)
- One 1442, 2501, 2520, or 2540 Card Reader, or one 2400 Series Magnetic Tape Unit, or one 2311 Disk Storage Drive, or one 2314 Direct Access Storage Facility assigned to SYSIPT and SYSRDR.
- Three 2400 Series Magnetic Tape Units for intermediate storage if tape units are to be used as work files.

Basic Program Product Offering:

Unlicensed Documentation: One copy IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program, System Information Manual, Program Product Specification Sheet.

Licensed Machine Readable: One copy machine readable material consisting of Object Program Load modules and Sample Problems available on a DTR (Distribution Tape Reel) or Cards.

To order the basic package select one of the following specify numbers:

Specify No.	Track/Density	Description
9015		Cards
9025	7 DC/800	DTR
9027	9/800	DTR
9030	9/1600	DTR

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	SM1	A	$80

Optional Support Package: (no additional charge).

Licensed Documentation: One copy of the Program Logic Manual and Microfiche for Program Listings.

To order the Optional Support Package use Specify Number 7040.

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature Numbers	Single Charge/Copy
8013 (PLM)	**
8035 (Microfiche)	**

For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number, when available, only from Mechanicsburg.

Unlicensed Documentation: **(order from Mechanicsburg)**

	Selling Price/Copy
IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program	**
IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program System Information Manual	**
Program Product Specification Sheet	**

Related Documentation: (available only from Mechanicsburg ... no charge.)

IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program General Information Manual GC28-6754

IBM System/360 Disk Operating System, Tape and Disk Sort/Merge Program Product Design Objectives GC28-6752

** Prices and form numbers of the manuals will be available when the program is available

PROGRAM TO CONVERT CFO 1401 AUTOCODER TO S/360 ASSEMBLER READY TO SHIP

- **Program Product 5736-XX2**

A new program product, CFO Autocoder to Assembler Language Instruction Set Translator (CATALIST), for use in the ordinary life insurance field is ready for shipment.

• • •

CATALIST helps convert the '62 CFO 1401 Autocoder source programs to System/360 Assembler Language source programs. The '62 CFO, a Type II program, performs a complete contract maintenance function for the ordinary life insurance company.

The monthly charge is $1,200. The programming service classification is B.

Highlights ...

- Protects investment in customized CFO programs
- Permits retention of original statement labels and comments
- Supports 1401 special features
- Permits operation in native System/360 mode.

Specifications (GH20-4015) are available from Mechanicsburg; each branch office has been sent a limited supply.

See the reverse side for more details and ordering instructions.

No RPQs will be accepted at this time.

SE Service Classification

SE Services, identified with and related to the installation and use of the IBM Tariff Publishing System (5736-T21) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

Marketing Compensation Plan

Because of the relatively short expected average installation life of CATALIST, you should enter orders on a temporary basis.

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

CFO Autocoder to Assembler Language Instruction Set Translator (CATALIST) (5736-XX2): CATALIST is a very effective conversion aid for the job of upgrading from a 1401 IBM '62 CFO System to System/360. (The Type II Consolidated Functions Ordinary system ('62 CFO) performs a complete contract maintenance function for the ordinary life insurance company.) Through the use of CATALIST, the user can protect his investment in his customized CFO programs while obtaining the advantages of operating in native System/360 mode. The IBM '62 CFO 1401 Autocoder programs are translated, at the source level, into System/360 Assembler Language programs, retaining the original statement labels and comments.

Description: The program represents an interpretive approach to automated CFO conversion, where the differences between data, instructions, and index registers are recognized and Assembler instructions are generated accordingly. Constants are generated into the Assembler Language program to facilitate object time simulation of wordmarks used as program switches and variable-position data delimiters. Address constants are generated into the Assembler Language program to allow modification of the A and B operand equivalents of 1401 instructions. CATALIST correctly handles single character instruction chaining and most multiple character instruction chaining. Most uses of address constants are translated correctly.

All standard 1401 CFO Autocoder instructions and instructions for tape, card read/punch and printer I/O devices are processed. The index register, high-low-equal compare, multiply-divide, sense switch, store-address register, and expanded print edit special features of the 1401 are also supported. Translation of 1401 IOCS macros is not supported.

Highlights: Retention of original CFO statement labels and comments ... highly readable output ... alphabetical symbol/attribute table ... program interrupt handler to enable complete translation in spite of unexpected input ... diagnostics pointing out assumptions, errors, warnings, and instructions where hand translation is required ... pseudo-wordmarks generated into Assembler Language program, along with necessary logic ... instruction modification implemented through the use of generated address constants ... signs after arithmetic operations are exactly as they were in CFO on 1401 ... tape I/O handled exactly as in CFO on the 1401 ... implementation of expanded print edit feature of 1401 ... local optimization of Assembler Language instructions ... high percentage of correct translation ... nearly 100% error-free assembly ... core-resident tables and binary search techniques.

Customer Responsibilities: A knowledge of Autocoder and Assembler Language, and, ideally, a knowledge of the CFO program being converted ... evaluation of warning diagnostics produced by CATALIST ... hand translation of instructions flagged as requiring such action ... removal, either before or after translation, of areas of coding which performed system functions (such as label and tape error handling) currently performed by DOS ... incorporation of the suggested DTFs in the final link edited version of the program ... removal, after translation, of blocks of coding generated to handle the pseudo-wordmarks which, in fact, will never be utilized ... evaluation through testing of areas of translation not otherwise noticeable as incorrect.

Sample tests have shown that 90-95% of the CATALIST generated CFO Assembler Language instructions require no modification to obtain a tested program. However, the amount of manual effort to complete the conversion will vary among customers and may be substantial. The Application Description Manual (GH20-0813) contains information to help evaluate this effort. The System/360 CFO programs require approximately 1.5 - 1.75 times the core storage of the original 1401 programs.

This program product has not been evaluated for use with 1401 programs outside of the CFO area.

Use: CATALIST, while quite powerful, is extremely simple to use. Input to the program is 1401 CFO source coding, representing either one program or several programs stacked one after another. Translation is performed on one program at a time. On its first pass of the input program, CATALIST lists the program, numbers each statement, maintains the equivalent of an instruction location counter, and develops a symbol table and wordmark table. On its second pass, CATALIST analyzes special programming techniques (such as subroutine references, instruction modification, wordmark manipulation, etc.) and modifies the symbol table accordingly. Pass three performs the actual translation and generates the listings, diagnostics, and card decks.

Programming Systems: CATALIST operates under DOS/360. While the program is written entirely in PL/1, the PL/1 compiler is not required to generate the CATALIST system as all the modules required for execution are distributed in object form.

Minimum System Requirements: A 2030F Processing Unit (64K) with at least 52K bytes available for program, data, and access method storage with Decimal Arithmetic (#3237), Storage Protection (#7520), Interval Timer (#4760) Selector Channel (#6960), 1051 Attachment (#7915) ... 1051 Control Unit Model N1 with CPU Attachment (#3130), Systems Console Attachment (#9708), First Punch (#4410), First Reader (#4411) and First Printer (#4409) Attachments controlling one 1052 Printer-Keyboard Model 8 ... 2841 Storage Control ... 2311 Disk Storage Drive ... 2803 Magnetic Tape Control Unit Model 1 ... two 2401 Magnetic Tape Units Model 1 ... 2821 Control Unit ... 1403 Printer Model 2 ... 2540 Card Read Punch Model 1.

Basic Material:

Unlicensed Documentation: One copy of the Program Description and Operations Manual (SH20-0814) ... Program Product Specifications (GH20-4015).

Licensed Machine Readable Material: One copy machine readable material consisting of CATALIST relocatable object modules -- sample problem. The user may order a 64K version, a 128K version, or a 256K version depending on his requirement.

Basic Package #1 - 64K User. To order, select one of the following specify numbers:

Specify Number	Track/Density	Description
9225	7 DC/800	DTR
9227	9/800	DTR
9230	9/1600	DTR

Basic Package #2 - 128K User. To order, select one of the following specify numbers:

Specify Number	Track/Density	Description
9325	7 DC/800	DTR
9327	9/800	DTR
9330	9/1600	DTR

Basic Package #3 - 256K User. To order, select one of the following specify numbers:

Specify Number	Track/Density	Description
9425	7 DC/800	DTR
9427	9/800	DTR
9430	9/1600	DTR

Related Optional Material (no additional charge):

Licensed Machine Readable: One copy of machine readable material consisting of CATALIST PL/1 source decks only. To order, select one of the following feature numbers:

Feature Number	Track/Density	Description
7025	7 DC/800	DTR
7027	9/800	DTR
7030	9/1600	DTR

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	XX2	B	$1,200

Charges for Additional Copies of Documentation:

Unlicensed Documentation (order from Mechanicsburg; customers will be billed by Mechanicsburg through A00):

	Selling Price/Copy
Program Description and Operations Manual (SH20-0814)	$2.00

General Documentation: Application Description Manual (GH20-0813).

For further information contact your regional Insurance Industry Marketing Representative.

Note to World Trade Readers

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[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

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NEW DOS VERSION OF FASTER LC STREAMLINES ON-LINE DATA RETRIEVAL AND FILE UPDATING

• Program Product 5736-G22

Today IBM announces that DOS FASTER LC will be available as a program product.

• • •

FASTER LC is based on the widely used FASTER (Type III) program and emphasizes reduced storage requirements. It can operate on a S/360 Model 25 ED (48K) or larger S/360. FASTER LC offers you an opportunity to easily and quickly upgrade your batch customers to on-line, real-time information systems.

Monthly Charge ...$100

Planned Availability ... November 2, 1970

Programming Service Classification ... B

Highlights:

- Operates on a S/360 Model 25 ED (48K) or larger S/360.
- Permits use of symbolic field naming which simplifies programming, coding, and maintenance.
- Supports 1050, 2740 Model 1, 2260 local and remote terminals.
- Supports a 1053 printer attached to a 2848.
- Supports 2314 direct access storage.
- Maintains high degree of compatibility with prior Type III version.
- Can exceed performance of former version when operated in non-overlay mode. (In this mode, the system has a comparable storage requirement.)
- Supports unblocked ISAM records.

FASTER LC can be proposed as the teleprocessing programming language in many DOS situations involving an initial terminal-based system. The program is the foundation on which the user can build terminal-based applications for ISAM files. The easy-to-use macro language can assist in installing teleprocessing applications in a minimum of time.

Prior releases of FASTER proved successful in:

- **Airlines** - Air taxi service reservations.
- **Banking/Finance** - Credit card authorization, customer master files.
- **Distribution** - Purchase order preparation, credit authorization, order entry.
- **Education** - Student records, budget and accounting, class space availability.
- **Insurance** - Claims processing follow-up, coverage checks.
- **Medical** - Hospital patient census, patient records.
- **State and Local Government** - Welfare authorization, case records, tax collection, police information, court records, job matching.
- **Manufacturing** - Order entry, production file inquiry.

Some of the major functions supported by the macro-language include: retrieval of records from indexed sequential files, modifications and additions of ISAM records, data manipulation and Boolean logic capability, formatting of responses to the selected terminals (including paging commands), message routing with predefined program control or by terminal operator specification within programmed limits, and recording of audit data on a system logging device.

The Program Product Design Objectives (GH20-4065) are available from Mechanicsburg. Each branch office has been sent a limited supply.

No RPQs will be accepted at this time.

The sales manual write-up is on the reverse side.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM DOS Version of Faster LC (5736-G22) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90Q

Program Product use during Customer Pre-Installation Testing ... This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

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[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Filing and Source Data Entry Techniques for Easier Retrieval - Low Core (FASTER LC) (5736-G22): A system designed to facilitate the implementation of terminal-based systems.

Description: FASTER LC is a teleprocessing monitor for development and implementation of terminal oriented systems. Terminals supported are 1050, 2740 Model 1, 2260 remote and 2260 local. The FASTER LC system incorporates the capabilities to install inquiry, update, message routing and data entry applications. The system employs a set of macro-instructions, which generate the line control, interface, and message processing functions, thereby eliminating the need for detailed knowledge of terminal communications control or BTAM. The system is designed to operate in a minimum 32K partition of a Model 2025 ED or larger System/360.

The system includes support for data files under ISAM and operates within the environment of System/360 DOS as a user program in one partition.

Any conventional batch processing requirements associated with the user's data files, such as batch update or file load, are the user's responsibility.

Highlights: The FASTER LC system is modular and may be tailored by the user to fit the needs of his communications based system. FASTER LC emphasis is in support of communications systems in which users inquire into single or multiple files, update existing records, or add records to existing files.

- An easily learned set of macros is provided for the user to define the requirements for processing his transactions.
- The application programmer is concerned only with the processing requirements of his application - not the problems of communications control. Line control functions are generated by means of simple macro instructions.
- A TEST module facilitates testing and debugging applications using a card reader and printer in place of on-line terminals.

  Pertinent audit data can be recorded on a system logging device.
- Aids to insure file security are included.
- Dynamic Maintenance of system environment allowing the user to activate or deactivate lines, open or close files and allow or prohibit processing of specific transactions.
- Presentation of system usage statistics on demand.
- Routing of responses to designated terminals.
- Formatting of single or multiple responses to the requesting and/or selected terminals.
- Operator controlled paging and transaction chaining including the ability to page within chains.
- Data manipulation and complete Boolean logic capability.
- Retrieval of a unique record, a specified number of records from a similarly keyed group and a specified number of "best qualified" records from a similarly keyed group - all according to selection criteria specified by the user.
- Blocked and Unblocked ISAM file support.
- Message routing under program control or by terminal operator specification within programmer limits may be designed to include time stamping, sequence numbering, storing for later retrieval, etc.
- Complete flexibility is allowed in data entry formatting and the addition and deletion of terminals and lines.
- Additions or changes to applications are greatly simplified by FASTER LC's [illegible].

Special Sales Information: FASTER LC may be used to implement a variety of [illegible] for inquiry, update and record addition. Specific applications include Police Information, Welfare, Credit Card Authorization, Personnel and Payroll, Inventory/Order Status, Educational Student and Staff Records, Medical Records, Accounting, and Real Estate.

Operating Environment: FASTER LC system consists of line control, interface and message processing routines. Macros are provided for the user to describe the system environment and transaction processing requirements. Assembly and linkage editing of the user defined environment and processing requirements produces the operational system which is executed as a job under DOS/360.

Customer Responsibilities: Customer responsibilities include the definition of system configuration and terminal arrangement, plus processing logic and formats not furnished by the application. The user must create data files in a direct access storage device under ISAM (IBM Type I support), and establish file reorganization, system backup and recovery procedures relevant to his operations.

Program Logic Systems: FASTER LC operates under IBM System/360 Disk Operating System (DOS/360). All FASTER LC routines are coded using Assembler Language (IBM 360N-AS-465). Type I support is utilized throughout containing all normal diagnostic and serviceability aids inherent therein.

Minimum System Configuration: System/360 Model 2025 ED with facilities to run under DOS/360 BTAM (360N-CQ-469), Decimal Arithmetic, Interval Timer, two 2311 Disk Drives or one 2311 and one magnetic tape drive, Card Reader/Punch combination (either 2540/1403 or 1442/1443) and a 1052 Printer-Keyboard. Supported terminals include 1050 (keyboard request is desirable to simplify terminal operation), 2740 (station control and record checking features are required), 2260 attached local or remote 2848. Dial-up terminals are not supported. If batch processing programs are to run in conjunction with FASTER LC, a Model 2050F will probably be required. The minimum partition size is 32K; if record addition and/or "best qualified" record retrieval is required, the partition size may increase by 2K or 4K. One multidropped communication line is supported in 32K. Additional communication lines will require a larger partition size.

DOS requirements include a 10K supervisor, sufficient DASD space for system libraries (CL, RL, SL, and private RL and SL) and user selected SYSIN/SYSOUT devices.

Application requirements will vary according to installation needs but will include a 2540/1403 or 1442/1443 if the test system is to be utilized (highly recommended). DASD space is required for ISAM files, for the DAM paging file (if required by user), and for the SAM logging file (logging is a user selected function and may be to a magnetic tape instead of a disk). The 1052 console typewriter is required for printing the system initialization/termination messages and for DOS system error messages and job control statements.

Additional core storage gives the user more latitude in specifying the physical and logical record sizes, the size of system buffers and work areas, and a choice of overlay or non-overlay system operation.

Basic Material:

Unlicensed Documentation: One copy each of the Application Directory ... Program Description Manual* ... Operator's Guide*.

Licensed Machine Readable Material: One copy of machine readable materials consisting of system macros for source library, FASTER routines for relocatable library and sample problem.

To order basic material, select one of the following specify numbers:

	Specify Number	Track/Density	Description
	9025	7 DC/800	DTR
	9027	9/800	DTR
	9030	9/1600	DTR
		OR	
Customer Supplied	9052		1316 Disk Pack
Order from IBM	9152		1316 Disk Pack

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	G22	B	$100

Related Optional Material:

Licensed Documentation: One copy of the System Manual*

Licensed Machine Readable Material: One copy of machine readable material containing FASTER source modules.

To order the optional material, select one of the following feature numbers:

Feature Number	Track/Density	Description
7025	7 DC/800	DTR
7027	9/800	DTR
7030	9/1600	DTR

General Documentation (available from Mechanicsburg): Application Description Manual (availability will be announced in a PRLO) ... Program Product Design Objectives (GH20-[illegible]).

* Prices and feature numbers to use for ordering additional copies of documentation (licensed) will be announced when material is available. Form numbers will also be provided for unlicensed documentation at availability time.

For further information, contact your Field Systems Center.

IBM World Trade Data Processing

Program Product Announcement

CONSTRUCTION INDUSTRY TOOL READY FOR SHIPMENT

- **Program Product 5711-M61**

The 1130 Construction Estimating Program is ready for shipment to help builders arrive at fast, accurate cost estimates.

• • •

A contractor uses the program as a tool to extend line item estimating take-offs from the building plans and specifications and to produce summaries of estimated labor, material, and equipment costs for appropriate divisions of work for a given job.

Monthly Charge $50
Programming Service
Classification . . . . . B

Examples from three of the 16 divisions (concrete, masonry, and steel) set forward in the AGC Manual (Uniform System for Construction Specifications, Data Filing, and Cost Accounting: Title One - Buildings) have been provided with this package. Linkages are provided for the remaining 13 divisions.

This AGC Standard Divisional Code meets the Standards Specification established by The American Institute of Architects (AIA), The Construction Specifications Institute, Inc. (CSI), American Society of Landscape Architects (ASLA), Council of Mechanical Specialty Contracting Industries, Inc., and National Society of Professional Engineers (NSPE).

This standard coding system has been developed in response to processing needs for better and more rapid classification of technical data. Current technology has created these needs by introducing new materials and techniques at a rate that threatens to outstrip contractors' ability to assimilate essential new information and correlate it with the old.

The ability to produce and update estimates quickly, more accurately, and in a more systematic fashion is inherent in this coding system, and the 1130 Construction Estimating Program implements it.

Specifications (GH20-4018) are available from Mechanicsburg; each branch office has been sent a limited supply.

No RPQs will be accepted at this time.

See the reverse side for ordering information. For other details, see the program product section of the sales manual (PP 1130.2).

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM 1130 Construction Estimating Program (5711-M61) Program Product, is available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing. A signed license agreement must be obtained prior to customer use of this Program Product.

John Fahey
WTC Director of DP Marketing

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-90R

Basic Material:

Unlicensed Documentation: One copy each of the Program Description and Operations Manual (SH20-0797) ... Program Product Specifications (GH20-4018).

Licensed Machine Readable: One copy machine readable material consisting of object program load modules and sample problem.

To order basic material, specify feature #9015 (cards).

Charge:

Type	Program & DPMO Number	Programming Service Classification	Monthly Charge
5711	M61	B	$50

Related Optional Material (no additional charge):

Licensed Documentation: One copy System Manual (LY20-0557).

Licensed Machine Readable: One copy machine readable material consisting of distributed source decks.

To order the optional material, use one of the following feature numbers:

Feature Number	Track/Density	Description
7027	9/800	DTR
7030	9/1600	DTR

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form Number	Single Charge/Copy
System Manual	8000 (LY20-0557)*	$8.60

Unlicensed Documentation:

	Selling Price/Copy
Program Description and Operations Manual (SH20-0797)**	$2.40

General Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0742).

Reference Material: PLAN Application Description Manual (GH20-0490) ... PLAN Program Description Manual (GH20-0594) ... 1130 PLAN Operations Manual (GH20-0595).

Program Dependency: This program requires the 1130 Problem Language Analyzer (1130-CX-25X). See P1130.22 in the programming section of the sales manual for ordering information.

*For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg and bill customer.

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

RIGID FRAME SELECTION PROGRAM PRODUCTS (5734-EC1 AND 5736-EC1) MAY BE ORDERED

Finding least-weight designs for members of different types of structures are the objectives of the Rigid Frame Selection program products (5734-EC1 and 5736-EC1). The programs operate in a highly modular fashion.

Program product 5734-EC1 operates under OS/360 Problem Language ANalyzer (PLAN) which, in turn, operates under Operating System/360 PCP (Primary Control Program), MFT (Multiprogramming with a Fixed Number of Tasks) or MVT (Multiprogramming with a Variable Number of Tasks).

Program product 5736-EC1 operates under Disk Operating System/360 in conjunction with Problem Language ANalyzer (DOS/360 PLAN).

The design procedures apply to two- and three-hinged frames in steel, reinforced concrete or laminated wood. Material inventory, optimization, member segmentation, analysis and design calculation and preparation of a cutting list are performed for these frames.

Monthly Charge
Rigid Frame Selection-OS 5734-EC1 . . . . . $25
Rigid Frame Selection-DOS 5736-EC1 . . . . $25

Programming Service Classification . . . . . B

Highlights are:

- Direct design of least-weight two- and three-hinged frames by automatic, successive iteration, using outside building dimensions and applied loads.
- Allow several inventory policies to be evaluated for a product line, by creating section economy tables from various inventory specifications.
- Provide a convenient language for users to specify design and inventory variables.
- Calculate dimensions and weights of frames and their components.
- Allow for the design of members of other structures, given the results of a structural analysis.

The specification sheets may be reproduced and given to customers.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Rigid Frame Selection (5734-EC1 and 5736-EC1) Program Products, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing. A signed license agreement must be obtained prior to customer use of this Program Product.

The sales manual text on the reverse side provides you with prices and other detailed information.

John Fahey
WTC Director of DP Marketing

Rigid Frame Selection Program (RFSP) (5734-EC1 and 5736-EC1): RFSP operates in a highly modular fashion to find least-weight designs for members of different types of structures. Its design procedures apply to two- and three-hinged frames in steel, reinforced concrete or laminated wood. Material inventory, optimization, member segmentation, analysis and design calculations and preparation of a cutting list are performed for these frames.

Highlights:

- Direct design of least-weight two- and three-hinged frames by automatic, successive iterations using outside building dimensions and applied loads.
- Allow several inventory policies to be evaluated for a product line, by creating section economy tables from various inventory specifications.
- Provide a convenient language for users to specify design and inventory variables.
- Calculate dimensions and weights of frames and their components.
- Allow for the design of members of other structures, given the results of a structural analysis.

Use: Inventory calculations are made once for each different choice of material types and sizes. Design calculations are made for each different structure, for each different combination of dead, live and wind loads.

Users describe inventory choices, external structure dimensions and applied loads in a convenient free-form language, implemented under the IBM Problem Language ANalyzer (OS/360 PLAN for 5734-EC1 and DOS/360 PLAN for 5736-EC1). These statements determine which program modules and subroutines are executed. Results are printed for inspection and may be stored on disk for modification and recalculation.

Customer Responsibilities: Users must be familiar with structural analysis and design. No programming or classroom training is required unless the customer decides to alter or extend the features of RFSP. In this case he must be familiar with Operating System/360 (if he is using 5734-EC1) or Disk Operating System/360 (if he is using 5736-EC1), FORTRAN, PLAN and Structural Analysis and Design.

Special Sales Information: RFSP is designed to aid the structural designer in optimizing prefabricated building frames and other building members in steel, reinforced concrete or laminated wood. Use of the program should provide a two-way cost reduction benefit. First, in economical use of material inventory and, also, in individual optimal designs per the inventory.

Programming System (for OS/360): RFSP OS/360 operates under the IBM Problem Language ANalyzer (OS/360 PLAN) which, in turn, operates under the Operating System/360.

RFSP OS/360 is written in FORTRAN.

The program operates under PCP (Primary Control Program), MFT (Multiprogramming with a Fixed Number of Tasks) or MVT (Multiprogramming with a Variable Number of Tasks).

The following IBM programs are required to install and run RFSP OS/360:

PCP	360S-CI-505
or	
MFT	360S-CI-505
or	
MVT	360S-CI-535
OS/360 Utilities	360S-UT-506
FORTRAN Library	360S-LM-501
FORTRAN E, G, or H	360S-FO-092, 520 or 500
Linkage Editor E or F	360S-ED-510 or 521
Sequential and Partioned Access Method	360S-DM-508
Basic Direct Access Method	360S-DM-509
OS/360 PLAN	360A-CX-27X

Programming System (for DOS/360): RFSP DOS/360 operates under the Disk Operating System/360 Problem Language ANalyzer (PLAN). It is written in FORTRAN.

The following IBM programs are required to install and run RFSP DOS:

DOS/360 Supervisor	360N-SV-474, 475, 473, 486, 487, or 488
Basic IOCS	360N-CL-453
DOS/360 Utilities	360N-UT-461 or 462
DOS/360 PLAN	360A-CX-26X

Minimum Machine Configuration (for OS/360): RFSP OS/360 requires 60K of core storage for its largest module. A System/360 Model 2040G is required for program execution with one 24XX Magnetic Tape Unit (any 2400 series) ... one 2841 Storage Control Unit ... two 2311 Disk Storage Drives or one 2314 Direct Access Storage Facility ... one 1052 Printer Keyboard Model 7 ... one printer, one card reader, one card punch supported by OS/360.

Minimum Machine Configuration (for DOS/360): RFSP DOS/360 requires a System/360 Model 2030E with the Floating Point Feature for execution ... one 24XX Magnetic Tape Unit (any 2400 series) ... one 2841 Storage Control Unit ... two 2311 Disk Storage Drives ... any printer, card reader and card punch supported by DOS/360 and one 1052 Printer Keyboard Model 7.

Basic Program Product Offering:

Unlicensed Documentation: One copy each of the Program Description Manual (H20-0613), Operations Manual (H20-0612) and Program Description Manual (H20-0580) with TNLs N20-1993, N20-1997, and N20-2125.

Licensed Machine Readable Material: One copy of machine readable materials containing the program subroutines and program modules in object form, in itialization files and sample problems, and PLAN RFSP phrases. To order, select one of the following specify numbers:

	Specify Number	Track/ Density	Description	Quantity
Customer Supplied	9026	7/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
	9052†	1316	Disk Pack	1 disk
Order from IBM	9126	7/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel
	9152†	1316	Disk Pack	1 disk

†DOS/360 only

Charges:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5734	EC1	B	$25.00
5736	EC1	B	25.00

Optional Program Product Offering:

Unlicensed Documentation: One copy of System Manual Volume 1 (Y20-0316) with TNL N20-2126, flowcharts and flowchart narratives.

Licensed Documentation: One copy of System Manual Volume 4, Listings of Compiled Code (feature #8501).

Licensed Machine Readable Material: One copy of machine readable materials containing the RFSP OS/360 source cards or RFSP DOS/360 source cards for both the subroutines and programs. To order, select one of the following specify numbers:

	Feature Number	Track/ Density	Description	Quantity
Customer Supplied	7500	7/800	2400' MT	1 reel
	7502	9/800	2400' MT	1 reel
	7504	9/1600	2400' MT	1 reel
Order from IBM	7501	7/800	2400' MT	1 reel
	7503	9/800	2400' MT	1 reel
	7505	9/1600	2400' MT	1 reel

There is no charge for the Optional Support Package.

Charges for Additional Copies of Documentation:

Unlicensed Documentation (order from Mechanicsburg; customer will be billed by Mechanicsburg through A00):

	Selling Price/Copy
Program Description Manual (SH20-0613)	$ .50
Operations Manual (SH20-0612)	3.30
System Manual - Volume 1 (GY20-0316 and TNL N20-2126)	NC
Program Description/Operations Manual (GH20-0580)	NC

Licensed Documentation:

Feature Number	Single Charge/Copy
8501 (LY20-0473 for OS/360)*	$16.50
8501 (LY20-0474 for DOS/360)*	16.00

Related Documentation for OS/360 (available only from Mechanicsburg): Application Description Manual (GH20-0598) ... System Summary (GA22-6810) ... Concepts and Facilities (GC28-6535)

Related Documentation for DOS/360 (available only from Mechanicsburg): Application Description Manual (GH20-0598) ... System Summary (GA22-6822) ... Concepts and Facilities (GC24-5030).

For further information contact Industry Marketing, Manufacturing, DPD HQ.

*For customer, order by feature number from PID and bill customer; for IBM internal use, order by form number from Mechanicsburg.

Publication Support: The availability of the publications will be announced in a future Publications Release Letter. Initial DAPS quantities will be shipped at that time and additional copies will be made available at the IBM Distribution Center, Mechanicsburg, Penna.

Rigid Frame Selection Program Product 5734-EC1

The Rigid Frame Selection Program (RFSP OS/360) must be used with the IBM System/360 Operating System (OS). RFSP OS/360 performs computations on data representing structure geometry, loads, member shapes, structure behavior and materials. From a user's inventory and material specifications, RFSP selects the most economical members of that inventory to use. It operates in a highly modular fashion to find least-weight designs for members of different types of structures. RFSP design procedures apply to two- and three-hinged frames in steel, reinforced concrete or laminated wood. Material inventory, optimization, member segmentation, analysis and design calculations and preparation of a cutting list are performed for these frames.

Inventory calculations are made once for each different choice of material types and sizes. Design calculations are made for each different structure, for each different combination of dead, live and wind load. Users describe inventory choices, external structure dimensions and applied loads in a convenient free form language, implemented under the IBM Problem Language ANalyzer (PLAN). These statements determine which program modules and sub-routines are executed. Results are printed for inspection and may be stored on disk for modification and recalculation.

Users of RFSP OS/360 must be familiar with structural analysis. No programming or classroom training is required unless the user decides to alter or extend the RFSP OS/360 system. In this case, he must be familiar with OS/360 FORTRAN, OS/360 PLAN, and structural analysis and design.

System Configuration: RFSP OS/360 requires a System/360 Model 2040G (131,072 bytes) as a minimum. The largest module of RFSP OS/360 requires a 60K core region.

Minimum essential I/O devices for RFSP OS/360 system generation, maintenance and operation include one 2841 Storage Control Unit, two 2311 Disk Storage Drives or one 2314 Direct Access Storage Facility, a 1052 Printer-Keyboard Model 7, and a printer, card reader, card punch and one magnetic tape unit supported by OS/360.

Programming System Requirements: RFSP OS/360 subroutines and modules are written in FORTRAN and require no further coding by the user.

The Programming Service Classification is B.

The Programming Service Classification assigned to any licensed program may be changed by IBM upon six months notice. Some reclassifications may constitute a discontinuance of service.

RFSP OS/360 requires the following IBM programs:

PCP	360S-CI-505
or	
MFT	360S-CI-505
or	
MVT	360S-CI-535
OS/360 Utilities	360S-UT-506
FORTRAN Library	360S-LM-501
FORTRAN E, G, or H	360S-FO-092, 520, or 500
Linkage Editor E or F	360S-ED-510 or 521
Sequential and Partitioned Access Method	360S-DM-508
Basic Direct Access Method	360S-DM-509
OS/360 PLAN	360A-CX-27X

Rigid Frame Selection Program (RFSP DOS/360) Program Product 5736-EC1

The Rigid Frame Selection Program (RFSP DOS/360) used with the IBM Problem Language ANalyzer for DOS/360 (DOS/360 PLAN) operates under control of the System/360 Disk Operating System (DOS/360). RFSP DOS/360 performs computations on data representing structure geometry, loads, member shapes, structure behavior and materials. From a user's inventory and material specifications, RFSP DOS/360 selects the most economical member of that inventory to use. It operates in a highly modular fashion to find least-weight designs for members of different types of structures. RFSP DOS/360 design procedures apply to two- and three-hinged frames in steel, reinforced concrete or laminated wood. Material inventory, optimization, member segmentation, analysis and design calculations and preparation of a cutting list are performed for these frames.

Inventory calculations are made once for each different choice of material types and sizes. Design calculations are made for each different structure, for each different combination of dead, live and wind load. Users describe inventory choices, external structure dimensions and applied loads in a convenient free form language, implemented under DOS/360 PLAN. These statements determine which program modules and subroutines are executed. Results are printed for inspection and may be stored on disk for modification and recalculation.

Users of RFSP DOS/360 must be familiar with structural analysis. No programming or classroom training is required unless the user decides to alter or extend RFSP DOS/360. In this case, he must be familiar with DOS/360, FORTRAN, PLAN and structural analysis and design.

System Configuration: RFSP DOS/360 requires a System/360 Model 2030E (32,768 bytes) as a minimum, with the Floating Point Feature.

Minimum essential I/O devices for RFSP DOS/360 include a 2841 Storage Control Unit, two 2311 Disk Storage Drives, a 1052 Printer-Keyboard Model 7 and a printer, card reader, card punch supported by DOS/360 and any 2400 magnetic tape unit.

Programming System Requirements: RFSP DOS/360 subroutines and program modules are written in FORTRAN and require no further coding by the user.

Programming Service Classification is B.

The Programming Service Classification assigned to any licensed program may be changed by IBM upon six months notice. Some reclassifications may constitute a discontinuance of service.

RFSP DOS/360 requires the following IBM programs:

DOS/360 Supervisor	360N-SV-474, 475, 473, 486, 487 or 488
Basic IOCS	360N-CL-453
DOS/360 Utilities	360N-UT-461 or 462
DOS/360 PLAN	360A-CX-26X

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

IBM World Trade Data Processing

Program Product Announcement

ADVANCED LIFE INFORMATION SYSTEM (DOS) VERSION 2 PROGRAM PRODUCT 5736-N11 MAY NOW BE ORDERED

The Advanced Life Information System (DOS) Version 2 (5736-N11) may now be ordered. The new version contains the following additions and improvements over the previous version: six new valuation programs have been added to provide most items required in both the U. S. and Canadian Annual Statements pertaining to policy exhibit, valuation, and financial balances. The facility is also included to produce reserves released and a policy exhibit on a daily basis. The inclusion of these programs is a significant extension to the previous version.

The ALIS Program represents a new insurance information systems approach to the maintenance processing and servicing of individual life insurance contracts. It provides for immediate direct access inquiry and a base for a teleprocessing communications network.

The system uses a modular programming technique to process all scheduled and non-scheduled transactions, to provide figures for annual and interim statement purposes, to update policies with cash values, dividends, and other forms of participation, and to update policies with renewable term premiums on or just before anniversary.

The Home Office Inquiry feature of the Advanced Life Information System provides the facility to display on the 2260 or 1050 a partial image of the policy master record (plan, face value, mode premium, issue, paid-to and billed-to dates, etc.), the name and address of the insured, payor and other; and the results of the following quotation transactions: cash surrender, conversion to nonforfeiture option, withdraw par values on deposit, withdraw paid-up additions, maximum loan, loan payoff, and mode premium.

On the reverse side is the Program Product Specification sheet which may be reproduced and given to customers.

No RPQs will be accepted at this time.

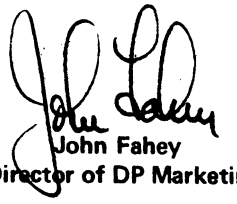
Detailed information is in the sales manual write-up on page 3 of this announcement.

Monthly Charge ... $500.

Programming Service Classification ... B

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Advanced Life Information System (DOS) Version 2 (5736-N11) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)



John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

P70-90U

PROGRAM PRODUCT SPECIFICATION

Advanced Life Information System (DOS) Version 2 (5736-N11)

The IBM Advanced Life Information System (ALIS) is a transaction oriented application Program Package representing a comprehensive systems approach to the maintenance, processing and servicing of individual life insurance contracts. The system satisfies the major requirements for ordinary life insurance from the point in time immediately following policy issue, through maturity, expiry, or termination of the contract. ALIS provides the program logic for either a cash or revenue accounting system, as well as certain accident and health processing.

ALIS provides the capability to perform the following ordinary life insurance company data processing tasks:

1. Balance, sort, and edit input for the daily file maintenance run.
2. Process on a daily basis scheduled and non-scheduled activity.
3. Each policy year, update on the policy master record cash values, dividends, renewable term rates, reserves and net premiums.
4. Perform daily accounting control and prepare a daily policy accounting journal.
5. Print (a) a transaction register, (b) status forms to answer inquiries, give error notification and indicate automatic processing, (c) error register, (d) termination register, and (e) issue register.
6. Update policy exhibits.
7. Perform policy valuation.
8. Perform periodic file reorganization.
9. Answer in-house inquiries to allow quotation of loan value, cash surrender value, modal premium amounts and policy status information.
10. Produce extracts on a daily basis for user-written programs to handle commissions, internal revenue reporting, check-writing, loan activity, and the printing of premium notices.

Modular programming techniques and user-constructed tables and constants are used extensively in ALIS to enable the user to tailor the system to his individual company requirements and practices. For ease of modification, insurance logic programming is written in COBOL. For full utilization of System/360, environmental logic programming is written in System/360 Assembler Language.

Programming Systems: ALIS operates under DOS/360 and uses the System Control and Basic IOCS, Consecutive Tape IOCS, Direct Access Method, Indexed Sequential File Management System, Group I, II, and III Utilities, Disk/Tape Sort/Merge or Tape Sort/Merge, Assembler Language, COBOL, Compiler Input/Output Modules, and BTAM (Basic Telecommunications Access Method). Users must become familiar with these components of the Disk Operating System.

Minimum System Requirements: Daily Cycle and Valuation Programs - 2030F Processing Unit (64K) with at least 56K bytes available for program, data, and access method storage and the Decimal Arithmetic (#3237), Storage Protection (#7520), Interval Timer (#4760), Selector Channel (#6960), and 1051 Attachment (#7915) ... 1051 Control Unit Model N1 with CPU Attachment (#3130), Systems Console Attachment (#9708), First Punch (#4410), First Reader (#4411), and First Printer (#4409) Attachments controlling one 1052 Printer-Keyboard Model 8 ... 2841 Storage Control with 2321 Attachment Feature (#8079) ... 2321 Data Cell Drive Model 1 and 2311 Disk Storage Drive Model 1 ... four 2401 Magnetic Tape Units Model 1 ... 2803 Tape Control Unit Model 1 ... 2821 Control Unit with a 1403 Printer Model 2 and one 2540 Card Read Punch Model 1.

Alternate input/output units supported by DOS/360 may be substituted to satisfy individual company requirements. Consideration must be given to volumes of input and output in light of required throughput speeds ... off-line system availability ... sorting capability in this or another system ... requirements of programming systems for other user applications.

Home Office Inquiry - 2030F Processing Unit (64K) with 44K bytes available for program, data, and access method storage. In addition to the features required for the daily cycle and valuation programs, Home Office Inquiry requires a 2848 Display Control Model 2 with Display Adapter (#3356), Line Addressing (#4787), Non-destructive Cursor (#5340), and Non-destructive Cursor Adapter (#5341) controlling a 2260 Display Station Model 2 ... a 2701 Data Adapter Unit Model 1 with Line Adapter (#4636) and Terminal Adapter (#4645) ... a 1051 Control Unit Model 1 with Line Adapter (#4790), First Printer Attachment (#4408), and Keyboard Request (#4770) ... a 1052 Printer-Keyboard Model 1.

Advanced Life Information System (DOS) Version 2, 5736-N11: The system satisfies the major processing requirements for ordinary life insurance from the point in time immediately following policy issue through maturity, expiry, or termination of the contract. The logic for certain accident and health processing is already part of ALIS.

Description: This system represents a new insurance information systems approach to the maintenance, processing, and servicing of individual life insurance contracts. It provides for immediate direct access inquiry and a base for a teleprocessing communications network.

The system uses a modular programming technique to process all scheduled and non-scheduled transactions, to provide figures for annual and interim statement purpose to update policies with cash values, dividends, and other forms of participation, and to update policies with renewable term premiums on or just before anniversary.

The Home Office Inquiry feature of ALIS provides the facility to display on the 2260 or 1050 a partial image of the policy master record (plan, face value, mode premium, issue, paid-to and billed-to dates, etc.); the name and address of the insured, payor and other; and the results of the following quotation transactions: cash surrender, conversion to nonforfeiture option, withdraw par values on deposit, withdraw paid-up additions, maximum loan, loan payoff, and mode premium.

Features: COBOL for all insurance logic ... separation of insurance and environmental logic ... tabular techniques for edit and print runs ... modularly structured ... open-ended policy master record structure ... single run concept ... inquiry to policy master file ... cash and revenue accounting systems ... extensive participation processing ... special frequency premium billing ... loan reduction billing ... automatic notification of pending lapse or termination at premium billing ... automatic retention of suspense entries on the policy master file ... facility to include reserves and net premiums on policy master file ... annual and interim valuation and policy exhibit reports.

Customer Responsibilities: A thorough knowledge and understanding of the system before implementation ... design conversion procedures to generate policy master records in a form acceptable to the system ... generate dividend, renewable term premiums, cash value, net premiums, benefit and terminal reserve rate tables ... generate beginning policy exhibit & valuation files ... develop adequate procedures and programs to generate policy master records for all new business, exchange, conversion, and re-instatement contracts ... write programs to print premium notices and other forms of notification except where notification by automatic status is adequate ... prepare Commission statements and Agents Accounting from system generated output.

Use: ALIS is an extremely comprehensive system, but it still must be modified or "tailored" to conform to the unique business practices of each user; therefore, the first step in using ALIS is to determine these modifications. The next is to implement these modifications and generate a policy master record file containing all of the information required by ALIS. The policy master record file and unscheduled transactions are then input and processed by the ALIS programs; scheduled transactions require no external input other than the information contained on the policy master record. Output from this processing is then analyzed by an output analysis program and routed to various programs for final printing. Intermediate files are also produced for use by the policy exhibit and valuation programs. The Home Office Inquiry feature of ALIS may be used as soon as a policy master record file has been generated.

Programming Systems: ALIS operates under DOS/360 and uses the System Control and Basic IOCS, Consecutive Tape IOCS, Direct Access Method, Indexed Sequential File Management System, Group I, II, and III Utilities, Disk/Tape Sort/Merge or Tape Sort/Merge, Assembler Language, COBOL, Compiler Input/Output Modules, and BTAM (Basic Telecommunications Access Method). Users must become familiar with these components of the Disk Operating System.

Minimum System Requirements: Daily Cycle and Valuation Programs - 2030F Processing Unit (64K) with at least 56K bytes available for program, data, and access method storage and the Decimal Arithmetic (#3237), Storage Protection (#7520), Interval Timer (#4760), Selector Channel (#6960), and 1051 Attachment (#7915) ... a 1051 Control Unit Model N1 with CPU Attachment (#3130), Systems Console Attachment (#9708), First Punch (#4410), First Reader (#4411), and First Printer (#4409) Attachments controlling one 1052 Printer-Keyboard Model 8 ... 2841 Storage Control with 2321 Attachment Feature (#8079) ... a 2321 Data Cell Drive Model 1 and 2311 Disk Storage Drive Model 1 ... four 2401 Magnetic Tape Units Model 1 ... 2803 Tape Control Unit Model1 ... 2821 Control Unit with a 1403 Printer Model 2 and one 2540 Card Read Punch Model 1.

Alternate input/output units supported by DOS/360 may be substituted to satisfy individual company requirements. Consideration must be given to volumes of input and output in light of required throughput speeds ... off-line system availability ... sorting capability in this or another system ... requirements of programming systems for other user applications.

Home Office Inquiry - 2030F Processing Unit (64K) with 44K bytes available for program, data, and access method storage. In addition to the features required for the daily cycle and valuation programs, Home Office Inquiry requires a 2848 Display Control Model 2 with Display Adapter (#3356). Line Addressing (#4787), Non-destructive Cursor (#5340), and Non-destructive Cursor Adapter (#5341) controlling a 2260 Display Station Model 2 ... a 2701 Data Adapter Unit Model 1 with Line Adapter (#4636) and Terminal Adapter (#4645) ... a 1051 Control Unit Model 1 with Line Adapter (#4790), First Printer Attachment (#4408), and Keyboard Request (#4470) features ... a 1052 Printer-Keyboard Model 1.

Basic Program Product Offering:

General Documentation: One copy of each of the following -- Operations Manual (H20-0517) ... Program Description Manual (H20-0518) ... Utility Program Description Manual (H20-0519) ... Home-Office Inquiry Program Terminal Operations Manual (H20-0588 ... Policy Master Record Code Book (H20-0483) ... Miscellaneous Volume System Manual (H20-0648) ... File Maintenance Run Executive System Manual (H20-0649) ... Data Cell Reorganization Program, Policy Master Record Merge Program Data Cell Reconstruction Program, and Data Cell Restore Program System Manual (H20-0650) ... File Maintenance Issues, Additions, Complex Changes, and Terminations System Manual (H20-0655) ... File Maintenance 36xx Financial Transactions --- Payments System Manual (H20-0657) ... File Maintenance Financial Transactions --- Accouting Entries System Manual (H20-0658) ... File Maintenance Status Transactions --- Process and Quote Terminations System Manual (H20-0659) ... File Maintenance Status Transactions --- Process and Quote Miscellaneous, Loan Values, and Participation Values System Manual (H20-0660) ... File Maintenance Billing Transactions System Manual, (H20-0661) ... File Maintenance Premium Due, Overdue and Anniversary Processing Transactions System Manual (H20-0662) ... File Maintenance Rate File Extract and Anniversary Extract Update Transactions System Manual (H20-0663) ... File Maintenance Contractual Changes and Notifications System Manual (H20-0664) ... Output Analysis System Manual (H20-0665) ... Transaction Register System Manual (H20-0666) ... Status Print System Manual (H20-0667) ... Policy Accounting Journal System Manual (H20-0668) ... Accounting Control System Manual (H20-0669) ... Error Register System Manual (H20-0670) ... Rate File System Manual (H20-0671) ... Home Office Inquiry Program System Manual (H20-0672) ... Batch Edit System Manual (H20-0645) ... Input Edit System Manual (H20-0646) ... Frequently Used Record Formats System Manual (H20-0647) ... File Maintenance Include (R) Routines (Narratives) System Manual (H20-0651) ... File Maintenance Include (R) Routines (Flowcharts) System Manual (H20-0652) ... File Maintenance Call (S) Routines (Narratives) System Manual (H20-0653) ... File Maintenance Call (S) Routines (Flowcharts) System Manual (H20-0654) ... File Maintenance Simple Changes Transactions System Manual (H20-0656).

Licensed Machine Readable Material: One copy each of Machine Readable Materials containing -

Tape 1:

ALIS File Maintenance source code

Tape 2:

File 1 - Input/Output, Valuation, and ALIS Utility programs source code
File 2 - Source Tape ALIS Maintenance Program (STAMP) source code
File 3 - Sample problem

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9028	9/800	2400' MT	2 reels
	9029	9/1600	2400' MT	2 reels
Order from IBM	9128	9/800	2400' MT	2 reels
	9129	9/1600	2400' MT	2 reels

Prices:

Type	Program Number	DPMO	Programming Service Classification	Monthly Charge
5736	N11	N11	B	$ 500.00

Special Features:

Licensed Documentation: One copy each of the following systems manuals -- Policy Exhibit Update Program (Feature #8809) ... Valuation Update Program (Feature #8810) ... Policy Master Record File Inventory Program (Feature #8811) ... Financial Values Program (#8812) ... Valuation Summary Program (Feature #8813) ... Policy Exhibit Balance Program (Feature #8814) ... Policy Exhibit and Valuation Include (R) and Call (S) Routines (Feature #8815).

Additional Documentation:

Single Use Charge for Licensed Documentation: (Available to licensees from Area Program Library only, order by feature code)

Feature Number	Use Key	Single Use Charge/Copy
8809 (Y20-0415*)	D	$ 5.40
8810 (Y20-0416*)	D	2.90
8811 (Y20-0417*)	D	5.00
8812 (Y20-0418*)	D	2.10
8813 (Y20-0419*)	D	3.45
8814 (Y20-0420*)	D	2.10
8815 (Y20-0421*)	D	15.70

*Order by form number from Mechanicsburg for IBM Internal Use Only.

Related Program Product Documentation: (available only from Mechanicsburg ... no charge)

Application Description Manual (H20-0126) Use Key G

For further information contact an Insurance Industry Marketing Representative.

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comperable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

IBM World Trade Data Processing

Program Product Announcement

SYSTEM/360 ARRAY PROCESSING SUBROUTINE PACKAGES, PROGRAM PRODUCTS 5736-P71 AND 5736-P72, MAY NOW BE ORDERED

System/360 Array Processing Subroutine Package - PS, Program Product (5736-P71), and System/360 Array Processing Subroutine Package - OS, Program Product (5736-P72), may now be ordered.

The Array Processing Subroutine Package gives the user convenient access to the operations available in the IBM 2938 Array Processor (RPQ) and provides a set of analytical routines for use in digital signal analysis.

The 2938 Array Processor is an RPQ peripheral processor attachable to System/360 Model 44 or System/360 Model 65 or 75. The Array Processor performs a basic set of arithmetic operations on arrays of data. Its primary purpose is to reduce significantly the time required to perform arithmetic operations on arrays of data.

The subroutines are divided into two basic groups. The first group, designated the "Array Processor Access Method" (APAM), provides the user with convenient access to the operations of the Array Processor. By providing the access through simple 'CALL' statements, the user is relieved of the burden of detailed system programming. By interfacing with the control programs of Operating System/360 on Model 44 Programming System, APAM provides the user with all the services offered by these control programs.

The second group of subroutines is designated Signal Processing Subroutines. These subroutines provide a series of analytical methods for use in digital signal analysis in many areas (e.g., seismic exploration, vibration analysis, turbulence research, image enhancement). These routines are designed to utilize the features of the Array Processor and APAM. All of these routines are computational modules that can be combined with a user's input, output, or computational routines to meet his individual needs.

The combination of these two groups of subroutines provides a modular and efficient set of subroutines which greatly facilitates the use of the Array Processor. The package can be applied to the solution of problems in signal analysis, matrix arithmetic, mathematical statistics, numerical solution of differential equations and many other areas requiring the processing of arrays of data. It is particularly well suited to application areas such as the processing of digital seismic data, where very large quantities of data must be processed rapidly and accurately.

No Program Product RPQs will be accepted at this time.

On the reverse side and page 2 are the Program Product Specification Sheets which may be reproduced and given to customers. Detailed information is in the sales manual write-up on page 4.

Monthly Charge:
System/360 Array Processing Subroutine Package - PS ... $300.
5736-P71
System/360 Array Processing Subroutine Package - OS ... $300.
5736-P72

Program Service Classification ... B

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Array Processing Subroutine Package (5736-P71) and 5736-P72) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

Program Product use during Customer Pre-Installation Testing--This Program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

P70-90V

PROGRAM PRODUCT SPECIFICATION

SYSTEM/360 ARRAY PROCESSING SUBROUTINE PACKAGE - PS PROGRAM PRODUCT 5736-P71

The Array Processing Subroutine Package - PS (APSP-PS) contains the Array Processor Access Method and a set of Signal Processing Subroutines.

The Array Processor Access Method (APAM) provides an interface between the user program and the Model 44 Programming System to give the FORTRAN and Assembler Language users access to the operations available in the IBM 2938 Array Processor. The user communicates with APAM through CALL statements that provide the information required to construct and execute a channel program on the Array Processor. APAM may be used to build and execute one Array Processor operation at a time, or it may be used to build several operations for chaining into a single channel program. The parameters in the CALL statements specify the operations to be performed and the data to be used, and they also specify how APAM is to build and execute the operations.

The Signal Processing Subroutines provide the user with a set of tools for use in signal enhancement in one and two dimensions. Included in the package are subroutines to synthesize low-pass, high-pass, band-pass, and band-reject recursive digital filters, routines to aid the user in analyzing the performance of filters, and a set of routines designed specifically for the one and two dimensional processing of petroleum seismic exploration data. These subroutines provide the user with the capability to solve some of the common problems encountered in signal enhancement.

The Array Processing Subroutine Package - PS operates under the Model 44 Programming System. The minimum machine configuration includes a 2044 Processing Unit with special interface (RPQ 885047), a 2938 Array Processor Model 1 (RPQ W24563), and the machine configuration for the Model 44 Programming System with FORTRAN IV and Assembler Language. The Difference Equation in the Array Processor, optional RPQ 813270, is also supported.

The source language for the Array Processor Access Method is Assembler Language and the source language for the Signal Processing Subroutines is FORTRAN.

SYSTEM/360 ARRAY PROCESSING SUBROUTINE PACKAGE - OS PROGRAM PRODUCT 5736-P72

The Array Processing Subroutine Package - OS (APSP-OS) contains the Array Processor Access Method and a set of Signal Processing Subroutines.

The Array Processor Access Method (APAM) provides an interface between the user program and Operating System/360 to give the FORTRAN and Assembler Language users access to the operations available in the IBM 2938 Array Processor. The user communicates with APAM through CALL statements that provide the information required to construct and execute a channel program on the Array Processor. APAM may be used to build and execute one Array Processor operation at a time, or it may be used to build several operations for chaining into a single channel program. The parameters in the CALL statements specify the operations to be performed and the data to be used, and they also specify how APAM is to build and execute the operations.

The Signal Processing Subroutines provide the user with a set of tools for use in signal enhancement in one and two dimensions. Included in the package are subroutines to synthesize low-pass, high-pass, band-pass, and band-reject recursive digital filters, routines to aid the user in analyzing the performance of filters, and a set of routines designed specifically for the one and two dimensional processing of petroleum seismic exploration data. These subroutines provide the user with the capability to solve some of the common problems encountered in signal enhancement.

The Array Processing Subroutine Package - OS operates under Operating System/360. The minimum machine configuration includes a 2065 or 2075 Processing Unit, a 2938 Model 2 Array Processor (RPQ 815188), and a machine configuration suitable for Operating System/360 with FORTRAN IV and Assembler Language. The Difference Equation in the Array Processor, optional RPQ M40538, is also supported.

The source language for the Array Processor Access Method is Assembler Language and the source language for the Signal Processing Subroutines is FORTRAN.

Array Processing Subroutine Packages (OS--5736-P72; PS--5736-P71): Array Processing Subroutine Packages (OS and PS) are designed with two major objectives: (1) give the user convenient access to the operations available in the IBM 2938 Array Processor (RPQ) and (2) provide a set of analytical routines for use in digital signal analysis.

The packages are made of the Array Processor Access Method (APAM) and a set of Signal Processing Subroutines.

Description: The OS APAM provides the interface between the user program and OS/360 and the PS APAM provides the interface between the user program and the 44PS to give the user convenient access to the operations available in the Array Processor. APAM reduces the need for detailed systems programming by the user. Through APAM, the user may call upon the Array Processor to perform the arithmetic operations required in functions such as time series analysis, correlation analysis, and matrix arithmetic.

The Signal Processing Subroutines provide the user with a set of tools for signal enhancement in both one and two dimensions. Included in the packages are subroutines to synthesize filters according to performance criteria specified by the user, routines to aid the user in analyzing the performance of the filters, and routines for identifying and extracting a signal from the combination of signal and noise. The goal is to provide the user with the capability to solve many of the common problems encountered in signal enhancement. Most of the subroutines fit a wide variety of signal processing applications. However, some of the methods are strongly oriented toward the processing of seismic data obtained in petroleum exploration.

APAM Features:

- Provide the FORTRAN and Assembler Language user with control of the Array Processor with an emphasis on minimum execution time.
- Provide basic 2938 support so APAM can be used for many applications.
- Provide error checking of user parameter list.
- Provide access methods comparable to EXCP, basic, and queued levels of programming to interface with OS/360 or 44PS.
- Provide conditional assembly parameters so the user may tailor APAM to his own needs.
- OS only -- provide concurrent access to the Array Processor to several users under the multiprogramming capabilities of OS/360.

Signal Processing Subroutines Features:

- Specific techniques for the processing of petroleum seismic exploration data.
- Extensive use of recursive difference equations for filter implementation to improve the speed of processing and to obtain a high quality filter.
- Direct synthesis procedures in the design of frequency selective filters to insure that the filters obtained satisfy the user's initial specifications.

Use: The user may combine the Array Processing Subroutines with his own input, output, or computational routines to meet his individual needs. All of the subroutines are invoked by a FORTRAN CALL statement or by an Assembly Language standard Type I linkage.

Customer Responsibilities: To use APAM, the user must understand the operations performed by the 2938 Array Processor. For the Signal Processing Subroutines, the user must understand his application well enough to select the proper subroutine for use in his program and judge the acceptability of the final results.

Programming System: The Array Processing Subroutine Package - OS operates under Operating System/360, and the PS package operates under Model 44 Programming System. To execute the Signal Processing Subroutines the FORTRAN library must be available. System/360 FORTRAN IV and Assembler Language are the source languages.

OS Machine Configuration: The minimum machine configuration for the Array Processing Subroutine Package - OS includes a 2065 or 2075 Processing Unit, a 2938 Model 2 Array Processor (RPQ 815188), and the minimum machine configuration required for Operating System/360. The Difference Equation in the Array Processor, optional RPQ M 40538, is also supported.

PS Machine Configuration: The minimum machine configuration for the Array Processing Subroutine Package - PS includes a 2044 Processing Unit with special interface (RPQ 885047), a 2938 Model 1 Array Processor (RPQ W24563), and the minimum machine configuration required for the Model 44 Programming System with FORTRAN IV and Assembler Language. The Difference Equation in the Array Processor, optional RPQ 813270, is also supported.

Basic Program Product Offering:

OS Unlicensed Documentation: One copy each of Program Description Manual (H20-0619) ... Operations Manual (H20-0621).

PS Unlicensed Documentation: One copy each of Program Description Manual (H20-0619) ... Operations Manual (H20-0620).

Licensed Machine Readable Material: One copy of Machine Readable Materials containing the Array Processor Access Method Source Program Modules, Signal Processing Subroutines Object Program Modules, and Sample Problem.

Specify Number	Track/Density	Description
9027	9/800	DTR
9030	9/1600	DTR

Prices:

Type	Program Number	DPMO	Programming Service Classification	Monthly Charge
5736	P72	P72	B	$ 300.00
5736	P71	P71	B	$ 300.00

Special Features:

Modification Support Package

Licensed Documentation: One copy of Systems Manual - Feature #8101.

Licensed Machine Readable Material: One copy of Machine Readable Materials containing the Signal Processing Subroutines Source Program Modules.

Feature Number	Track/Density	Description
7027	9/800	DTR
7030	9/1600	DTR

There will be no additional charge for the Modification Support Package.

Additional Documentation:

Single Use Charge for Licensed Documentation: (Available to licensees from PID only, order by feature number, bill customer).

	Use Key	Single Use Charge/Copy
OS System Manual 8101 (Y20-0406*)	D	$23.60
PS System Manual 8101 (Y20-0407*)	D	7.80

*Order by form number from Mechanicsburg for IBM Internal Use Only.

Selling Prices for Unlicensed Documentation: (order from Mechanicsburg, bill customer)

	Use Key	Selling Price/Copy
Program Description Manual (H20-0619)	D	$2.25
PS Operations Manual (H20-0621)	D	.55
OS Operations Manual (H20-0620)	D	.55

Additional Program Product Documentation: (order from Mechanicsburg ... no charge)

Application Description Manual (H20-0558-1) Use Key G

Reference Material: (order from Mechanicsburg ... no charge)

Custom Feature (A24-3519) Use Key G

For further information contact your Process Industry Marketing Representative.

Note to World Trade Readers

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[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

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[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

SYSTEM/360 GRAPHIC ANALYSIS OF THREE-DIMENSIONAL DATA PROGRAM PRODUCT (5734-XX2) MAY BE ORDERED

With GATD, geologists, engineers, and other professional problem analysts are able to use an IBM 2250 man-machine oriented system with facilities for on-line graphic analysis of three-dimensional data.

Many industries are concerned with the quantitative description of three-dimensional surfaces as approximated by field or laboratory observations. Since it is usually difficult to obtain a sufficient number of measurements to adequately define a surface, a numerical model of the surface is developed. The numerical model is used to predict the value of the surface where observations are not present.

By means of light pen interaction with a series of 2250 displays, the professional problem analyst can:

- Define, delimit, and access both original and intermediate data.
- Enter parameters that control operation of individual programs.
- Select any desired sequence of available programs for execution.
- Make logical decisions on the basis of program generated displays.
- Examine and, if necessary, add, delete, or modify data values.
- Build numerical models of three-dimensional surfaces from irregularly spaced input points.
- Display three-dimensional data in the form of contour maps, perspective diagrams, cross-sections, and "fence" diagrams.

GATD operates under OS/360 in conjunction with Problem Language ANalyzer (360A-CX-27X) and PLAN Graphic Support (360A-CX-34X). The user of GATD has access to all the functional capabilities in Problem Language ANalyzer and PLAN Graphics Support.

On the following pages are the Program Product Specification sheet, which may be reproduced and given to customers, and the sales manual write-up, for IBM internal use only.

Monthly Charge ... $300.

Programming Service Classification ... B

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Graphic Analysis of Three-Dimensional Data (5734-XX2) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

System/360 Graphic Analysis of Three-Dimensional Data Program Product (5734-XX2)

Graphic Analysis of Three-Dimensional Data (GATD) is an IBM 2250 man-machine oriented system with powerful facilities for on-line graphic analysis of three-dimensional data. It can be used by geologists, engineers, and other professional problem analysts.

Here's how it operates ... the user views a series of IBM 2250 displays called panels ... by light pen interaction with graphic elements on these panels, the user can define, delimit, and access data; control disposition of intermediate and final data; select and enter program parameters; select programs to be executed; and make logical decisions on the basis of program generated displays. The light pen is used to guide the entire solution path from selecting of data through processing of data to final disposition of data.

The user supplies his own file read and search routines, as well as routines supporting his specific plotting device for final output. A group of GATD subroutines is provided which facilitates the interfacing between user files and GATD internal files. In addition, GATD provides for virtually open-ended user additions and modifications to the system.

Programming Systems: The GATD system modules are coded in FORTRAN G and require the Graphic Programming Services for FORTRAN. The system operates under Operating System/360. In addition, the Problem Language ANalyzer (360A-CX-27X) and PLAN Graphic Support (360A-CX-34X) are required. Programming Service Classification is B.

Minimum Machine Configuration: System/360 Model 40H with Floating Point Arithmetic is required, having a minimum of 256K bytes of storage when used as a dedicated system. The minimum partition size is 150K when certain PLAN modules, graphic access methods, and PLAN Graphic Support subroutines are placed in the RAM or LINKPAC areas. GATD requires the following additional system facilities beyond those for normal OS/360 operation.

- Two IBM 2311 Disk Storage Drives or equivalent for PLAN, PLAN Graphic Support, and GATD system functions.
- One magnetic tape for each of the following options: save tape, restore tape, plotter interface file, user data interface file. These options may be used in any combination for a given run. A minimum of one magnetic tape is recommended for saving and restoring GATD data.
- One 2250 Display Unit Model 1 or one 2250 Display Unit Model 3 with one 2840 Display Control Model 2 and Absolute Vectors (1002)*, Alphameric Keyboard (1245), 8K Buffer (1499)*, Character Generator (1880)*, Light Pen (4785)*, and Function Keyboard (5855).

* Standard features on 2250 Model 3.

Graphic Analysis of Three-Dimensional Data (5734-XX2): Graphic Analysis of Three-Dimensional Data (GATD) is an IBM 2250 man-machine oriented system with powerful facilities for on-line graphic analysis of three-dimensional data. It can be used by geologists, engineers, and other professional problem analysts.

Description: Many industries are concerned with the quantitative description of three-dimensional surfaces as approximated by field or laboratory observations. Since it is usually difficult to obtain a sufficient number of measurements to adequately define a surface, a numerical model of the surface is developed. The numerical model is used to predict the value of the surface where observations are not present.

Features: By means of light pen interaction with a series of 2250 displays, the professional problem analyst can:

- Define, delimit, and access both original and intermediate data.
- Enter parameters that control operation of individual programs.
- Select any desired sequence of available programs for execution.
- Make logical decisions on the basis of program generated displays.
- Examine and, if necessary, add, delete, or modify data values.
- Build numerical models of three-dimensional surfaces from irregularly-spaced input points.
- Display three-dimensional data in the form of contour maps, perspective diagrams, cross-section, and "fence" diagrams.

Use: The user views a series of 2250 displays called panels. By light pen interaction with graphic elements on these panels, the user can define, delimit, and access data; control disposition of intermediate and final data; select and enter program parameters; select programs to be executed; make logical decisions on the basis of program generated displays. Therefore, the light pen is used to guide the entire solution path from selecting of data through processing of data to final disposition of data.

Customer Responsibility: The user supplies his own file read and search routines, as well as routines supporting his specific plotting device for final output. A group of GATD subroutines is provided which facilitates the interfacing between user files and GATD internal files. In addition, GATD provides for virtually open-ended user additions and modifications to the system.

Programming Systems: The GATD system modules are coded in FORTRAN G and require the Graphic Programming Services for FORTRAN. The system operates under Operating System/360. In addition, the Problem Language ANalyzer (360A-CX-27X) and PLAN Graphic Support (360A-CX-34X) are required. Refer to the application directory for further information.

Special Sales Information: GATD uses specific "know-how" of professional problem analysts to reduce problem solution time from days and weeks to minutes and hours. GATD can be applied whenever analysis of three-dimensional data is facilitated by man-machine communications. Some of the primary application areas are petroleum exploration and production, mining, civil engineering, oceanography, meteorology, medical research, and manufacturing.

Minimum Machine Configuration: System/360 Model 40H with Floating Point Arithmetic is required, having a minimum of 256K bytes of storage when used as a dedicated system. The minimum partition size is 150K when certain PLAN modules, graphic access methods, and PLAN Graphic Support subroutines are placed in the RAM or LINKPAC areas. GATD requires the following additional system facilities beyond those for normal OS/360 operation.

- Two IBM 2311 Disk Storage Drives or equivalent for PLAN, PLAN Graphic Support, and GATD system functions.
- One magnetic tape for each of the following options: save tape, restore tape, plotter interface file, user data interface file. These options may be used in any combination for a given run. A minimum of one magnetic tape is recommended for saving and restoring GATD data.
- One 2250 Display Unit Model 1 or one 2250 Display Unit Model 3 with one 2840 Display Control Model 2 and Absolute Vectors (*1002)*, Alphameric Keyboard (*1245), 8K Buffer (*1499)*, Character Generator (*1880)*, Light Pen (*4785)*, and Function Keyboard (*5855).

* Standard features on 2250 Model 3

Basic Program Product Offering:

Unlicensed Documentation: One copy each of Program Description Manual (H20-0678) ... Operations Manual (H20-0679) ... Terminal Operations Manual (H20-0680).

Licensed Machine Readable Material: One copy of Machine Readable Materials consisting of GATD Object Program Modules, Sample Problem, Panel Data, Job Stream to initialize GATD, prepare Panel File, and execute the Sample Problem.

To order Basic Machine Readable Material, use one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
Order from IBM	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel

Price:

Type	Program No.	DPMO	Programming Service Classification	Monthly Charge
5734	XX2	XX2	B	$300.00

Optional Support Package:

Licensed Documentation: One copy of Systems Manual (feature #8101) and one copy of Microfiche listing (feature #8301).

Licensed Machine Readable Material: One copy of Machine Readable Materials containing the GATD Source Program Modules.

Feature Number	Track/Density	Description
7027	9/800	DTR
7030	9/1600	DTR

There will be no additional charge for the Optional Support Package.

Prices for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Use Key	Price/Copy
8101 (Y20-0455)*	L	$8.00
8301 (YB0-0465)*	L	2.50

***For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.**

Unlicensed Documentation (order from Mechanicsburg, billing to customer by A00):

	Use Key	Price/Copy
Program Description Manual (H20-0678)	D	$3.80
Operations Manual (H20-0679)	D	1.10
Terminal Operations Manual (H20-0680)	D	2.00

Related Documentation (available only from Mechanicsburg; no charge): Application Description Manual (H20-0539) - Use Key G.

For further information contact your Process Industry Marketing Representative.

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

SYSTEM/360 ORDER ALLOCATION SYSTEM PROGRAM PRODUCT (5736-D41) IS NOW AVAILABLE

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

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[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

The Order Allocation System Program Product 5736-D41, originally announced for availability March 2, 1970, is now available.

Order Allocation is a highly flexible system that will assist apparel and shoe manufactuers in the tasks of assigning available inventory to open orders and determining which shipments should be made.

Input to the system consists of the user's order and inventory files and the conditions and rules that govern the allocation and shipping functions. Output consists of printed picking documents and updated order and inventory files, as well as listings, reports, and control totals.

The Order Allocation System runs under DOS/360 on System/360 Models 25 and larger.

Monthly Charge ... $125.

Programming Service Classification ... B

The program product specification sheet may be reproduced and given to customers.

No RPQs will be accepted at this time.

Detailed information is in the sales manual write-up on the inside pages.

SE Skill Classification ...SE Services, identified with and related to the installation and use of the IBM System/360 Order Allocation System Program Product (5736-D41) are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

Release Date: July 1, 1970
Distribution: Selected European Countries

Order Allocation System Program Product (5736-D41)

The IBM Order Allocation System is designed to assist apparel manufacturers in the task of assigning or allocating available inventory to open orders in a manner consistent with management objectives and direction

The Order Allocation System is distributed in the form of a private DOS/360 source library The system also includes a private DOS/360 relocatable library containing the calling modules (sets of linkage editor statements) required to linkage edit assembled modules into operating programs. The program service classification is B. However this classification may be changed by IBM upon six months' notice.

The component programs of the system are:

Condense inventory program - creates a condensed version of the user's inventory file for use by the other programs of the Order Allocation System.

Order selection program - selects the orders on the user's order file that are to be processed during the next cycle, assigns them priority values, and creates a selected order file for use by the other programs of the Order Allocation System. The conditions for priority assignment and order selection are submitted on control cards.

Allocation program - allocates stock from the condensed inventory file to the orders on the selected order file and updates the files. The conditions and rules for allocating stock are submitted on control cards

Shipping program - determines which previously allocated orders and units are to be shipped and updates the selected order and condensed inventory files. The conditions and rules for determining shipments are submitted on control cards.

Print picking slips program - prints a picking slip for each order "shipped" by the shipping program.

Adjustment program - adjusts the selected order and condensed inventory files to reflect variances between the "shipments" made by the shipping program and the shipments actually made by the user's shipping department

Update orders program - updates the user's order file using the selected order file as input. Shipment history cards are punched for all shipped orders and shipped line items.

Expand inventory program - updates the user's inventory file using the condensed inventory file as input.

Order report program - prints inquiries and listings of groups of orders on the selected order file. The criteria for including orders on the listings are submitted on control cards.

Programming systems: The Order Allocation System is written in System/360 Assembler Language and operates under the control of DOS/360. Assembly, operation, and maintenance of the system are dependent upon the following programs:

DOS/360 Supervisor (6K)	360N-SV-474
DOS/360 System Control and Basic IOCS	360N-CL-453
DOS/360 Consecutive Disk IOCS Macros	360N-IO-455
DOS/360 Direct Access Method IOCS Macros	360N-IO-454
DOS/360 Group 1 Utilities (Unit Record and Disk)	360N-UT-461
DOS/360 Sort/Merge - Disk	360N-SM-450
DOS/360 Assembler	360N-AS-465

Minimum machine configuration: The Order Allocation System can be run on a System/360 Model 25 or larger. The minimum machine configuration for a System/360 Model 25 includes:

- A 2025 Processing Unit Model DC (24,576 bytes)
- Two 2311 Disk Drives Model 1
- A Card Reader (2540, 1442*, 2501*, 2520*)
- A Card Punch (2540, 1442*, 2520*)
- A Printer (1403, 1443*)
- A 1052 Printer - Keyboard

*These devices require an MPX or Selector channel.

In a multi-programming environment, an 18K background partition is required. Some users with large record block sizes and core tables may require a larger partition.

Order Allocation System (5736-041): Assists apparel and shoe manufacturers in the tasks of assigning or allocating available inventory to open orders and determining which shipments are to be made against the orders. Input to the system consists of the user's order and inventory files and the rules to be followed in accomplishing the allocation and shipping functions. Output from the system consists of picking documents and updated order and inventory files, as well as listings, reports, and control totals.

Description: The allocation and shipping objectives of apparel firms are widely varied, depending upon the type of firm, customer ordering patterns, merchandising philosophy, the season or portion of a season involved, and the balance between inventory and open orders. Some of the more common objectives desired, either singly or in combination, are:

- Better management control of the shipping function.
- Increase in units shipped per period.
- Reduction of inventory levels.
- Better utilization of shipping facilities and personnel.
- Better overall customer service.
- Shipment of more merchandisable packages.

The Order Allocation System is a set of programs and related documentation designed to assist apparel firms in the accomplishment of these, and similar, objectives. The component programs of the system are:

Order selection program: The order selection program performs two functions -- order selection and priority assignment. Priority assignment consists of assigning a numeric priority value to each order on the user's order file. The priority value is calculated based upon sets of order characteristics and values that are submitted on control cards. Order selection is based upon the relationship between the assigned priority value for each order and a selection threshold value submitted via a control card called the select card. The threshold value specifies the minimum priority value that is acceptable for processing. All orders with priority values equal to or higher than the threshold value are written from the user's order file onto the selected order file for further processing by the Order Allocation System. All other orders are bypassed. An optional audit listing (order selection audit listing) is available.

After the orders to be processed have been selected and priorities assigned, the orders are sorted into priority sequence so that the highest priority (most important) order is processed first, the next highest priority order second, and so on.

Condense inventory program: The condense inventory program reads the user's inventory file and creates the condensed inventory file, a direct access file suitable for use by other programs in the Order Allocation System. An inventory status report, the condense inventory audit listing, is printed.

Allocation program: The allocation program allocates stock to orders and updates the selected order and condensed inventory files according to allocation rules supplied by the user. The orders are sequentially accessed in priority sequence and matched against the condensed inventory file. Each unit on an order is checked for open (unshipped and unallocated) status and, if it is open, the corresponding condensed inventory record is checked for available units. If an inventory unit is available, the order unit is coded as allocated and the available quantity field of the condensed inventory record is reduced by one unit.

The allocation of inventory to an order is guided by user-supplied allocation rules and limitations. User-supplied rules, submitted at execution time, are used to test the "degree of completion" of the order. If an order, or a portion of an order, fails to meet the rules, the allocated units are recorded as open units and dumped back into the available quantity fields of the corresponding condensed inventory record so that they will be available to the next order. If the completion tests are passed, the units are retained as allocated units on the order. This process of allocation continues until all orders on the selected order file have been processed.

Shipping program: The shipping program determines which orders and units are to be shipped, based upon user-supplied rules, and updates the selected order and condensed inventory files. The program cannot ship any units that have not been previously allocated by the allocation program. Allocated units that are not shipped remain allocated.

Print picking slips program: The print picking slips program prints a picking slip for each order that was coded as being shipped by the shipping program. The sequence in which the picking slips are printed can be controlled by sorting the selected order header file prior to this step.

The picking slips are then sent to the shipping department so that the actual garments can be picked, packed, and shipped. During the picking operation any variances between the shipments shown on the picking slips and actual shipments are noted for later entry into the system.

Adjustment program: The adjustment program updates the condensed inventory and selected order files to reflect any variances between the picking slips generated by the Order Allocation System and the shipments actually made by the shipping department. Provision is made for two types of input cards, adjustments and reversals. An audit listing of all changes, the adjustment audit listing, is printed by the program.

Update orders program: The update orders program updates the user's order file with the results of the allocation cycle, punches shipment history cards for shipped orders and purges shipped units from order detail records.

Expand inventory program: The expand inventory program reads matching records on the user's inventory file and the condensed inventory file and updates the user's inventory file with the results of the allocation cycle. An inventory status report, the expand inventory audit listing, is printed by the program.

Order report program: The order report program can be used at any point in the allocation cycle to produce a listing of selected orders, the order report audit listing. It can generate listings of any class or group of orders in the selected order files and is useful for establishing intermediate results of the system.

As the name implies, the Order Allocation System is order oriented rather than inventory oriented. The sequence in which orders are processed and the rules governing the allocation and shipping programs are based upon the characteristics of the orders themselves. This approach is particularly appropriate for order-oriented style and semi-style apparel houses.

Highlights:

- Standard control system for decision-making programs.
- Priority assignment based on user-defined order characteristics.
- Order selection based on the priority value of each order.
- Interfaces provided between user's files and system.
- Multiple sets of rules are available during a single allocation or shipping run; application of a particular rule to an order is based on user-defined order characteristics.
- Special handling codes on-order and inventory records are supported.
- Complete audit trail is available.
- All programs provide end-of-job totals.
- Allocation and shipping functions are separated; stock can be accumulated for important orders.
- Maximum limit can be placed on daily shipments; limit can be changed based on capacity of shipping department.
- All programs are self-modifying to accommodate variances in line item identification codes and the number of sizes on each line item.
- Rules for allocation and shipping include minimum requirements for each level within an order ... maximum limitation on units shipped for an order ... specification of coordination requirements ... ability to override special handling codes ... ability to ignore fringe sizes ... specification of size balancing requirements.

Use: The Order Allocation System performs only a limited set of functions within the customer's "front-end" system. The customer must create and update order and inventory files that are then passed to the system via two user-to-system file interface programs (condense inventory, order selection).

As the order file is passed to the system, priorities are assigned to each selected order and the selected order file is then sorted into priority sequence for processing. Stock is allocated from the condensed inventory file to the selected order file (allocation program). Selected orders with allocated stock are processed to determine which orders are to be shipped (shipping program) and picking slips are printed (print picking slips program).

The picking slips are used to fill orders. All changes from the printed slips are entered into the system and like files are adjusted (adjustment program) to reflect the changes. The user's order and inventory files are updated by two system-to-user file interface programs (update orders, expand inventory), and an allocation cycle is completed.

Selection of orders, assignment of priority codes, allocation of stock, determination of shipments, and the printing of tailored order file reports are controlled by a standardized control technique that allows different types of processing for each user-defined class of orders.

Customer Responsibilities: Before the Order Allocation System is installed the customer must train system analysts, programmers, and operators in DOS/360 ... analyze and study the Order Allocation System ... design, write, and test an order entry system that creates and updates suitable order files ... design, write, and test an inventory entry system that creates and updates a suitable inventory file ... describe the files to be used in the system ... modify the interface programs if the user's files are not compatible with the system ... provide the parameters for assembling the system ... develop suitable backup and bypass procedures.

Before the start of each allocation cycle, the user must provide updated user's inventory and user's order files and the control cards necessary to control the programs in the system.

Programming Systems: The Order Allocation system is written in DOS/360 Assembler Language. The program generation operation and maintenance of the system requires the following DOS/360 programs -- Supervisor (6K) ... System Control and Basic IOCS ... Consecutive Disk IOCS ... Direct Access Method ... Group 1 (Unit Record and Disk) Utilities ... Disk Sort/Merge ... Assembler. In addition, the distribution tape contains two BPS/360 programs, Initialize Disk and Disk-to-Tape Copy/Restore, that are used to create the Order Allocation System disk pack.

Minimum Machine Configuration: The Order Allocation System can be run on a System/360 Model 25 or larger. The minimum machine configuration for a Model 25 includes a 2025 Processing Unit Model DC (24,576 bytes) ... two 2311 Disk Drives Model 1 ... a Card Reader (2540, 1442*, 2501*, 2520*) ... a Card Punch (2540, 1442*, 2520*) ... a Printer (1403, 1443*) ... a 1052 Printer-Keyboard. Devices marked with an asterisk require a MPX or Selector Channel.

In a multi-programming environment, an 18K background partition is required. Some users with large record block sizes and core tables may require a larger partition. DOS core image requirements in addition to system residence requirements are approximately 20 cylinders. The balance of the available cylinders on a two-drive system must be available for order and inventory records. Users with large order and inventory files may require more than two drives.

Basic Program Product Offering

Unlicensed Documentation: One copy of Program Description Manual (SH20-0726) ... Operations Manual (SH20-0728).

Licensed Documentation: One copy of System Manual Feature *8700*

Licensed Machine Readable Material: One copy of Private Source Library, Private Relocatable Library, and Sample Problem Files.

To order, select one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
	9052		1316 Disk Pack	1 disk
Order from IBM	9126	7DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel
	9152		1316 Disk Pack	1 disk

Charge:

Type	Program and DPMO Number	Program Service Classification	Monthly Charge
5736	D41	B	$125.00

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Single Charge/Copy
8700 (LY20-0496)*	$16.00

* For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

Unlicensed Documentation (order from Mechanicsburg):

	Selling Price/Copy
Program Description Manual (SH20-0726)	$12.00
Operations Manual (SH20-0728)	2.00

Related Program Product Documentation (Order from Mechanicsburg): Application Description Manual (GH20-0604).

For further information contact your Distribution Industry Marketing Representative.

Publication Support: The availability of the publications will be announced in a future Publications Release Letter. Initial DAPS quantities will be shipped at that time and additional copies will be made available at the IBM Distribution Center, Mechanicsburg, Penna.

IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

SYSTEM/360 ORDER ALLOCATION SYSTEM PROGRAM PRODUCT (5736-D41) IS NOW AVAILABLE

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

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[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

The Order Allocation System Program Product 5736-D41, originally announced for availability March 2, 1970, is now available.

Order Allocation is a highly flexible system that will assist apparel and shoe manufacturers in the tasks of assigning available inventory to open orders and determining which shipments should be made.

Input to the system consists of the user's order and inventory files and the conditions and rules that govern the allocation and shipping functions. Output consists of printed picking documents and updated order and inventory files, as well as listings, reports, and control totals.

The Order Allocation System runs under DOS/360 on System/360 Models 25 and larger.

Monthly Charge ... $125.

Programming Service Classification ... B

The program product specification sheet may be reproduced and given to customers.

No RPQs will be accepted at this time.

Detailed information is in the sales manual write-up on the inside pages.

SE Skill Classification ... SE Services, identified with and related to the installation and use of the IBM System/360 Order Allocation System Program Product (5736-D41) are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

Release Date: July 1, 1970
Distribution: Selected European Countries

Reprinted Copy
P70-90X

Order Allocation System Program Product (5736-D41)

The IBM Order Allocation System is designed to assist apparel manufacturers in the task of assigning or allocating available inventory to open orders in a manner consistent with management objectives and direction

The Order Allocation System is distributed in the form of a private DOS/360 source library The system also includes a private DOS/360 relocatable library containing the calling modules (sets of linkage editor statements) required to linkage edit assembled modules into operating programs. The program service classification is B However this classification may be changed by IBM upon six months' notice

The component programs of the system are:

Condense inventory program - creates a condensed version of the user's inventory file for use by the other programs of the Order Allocation System.

Order selection program - selects the orders on the user's order file that are to be processed during the next cycle, assigns them priority values, and creates a selected order file for use by the other programs of the Order Allocation System. The conditions for priority assignment and order selection are submitted on control cards.

Allocation program - allocates stock from the condensed inventory file to the orders on the selected order file and updates the files. The conditions and rules for allocating stock are submitted on control cards

Shipping program - determines which previously allocated orders and units are to be shipped and updates the selected order and condensed inventory files. The conditions and rules for determining shipments are submitted on control cards.

Print picking slips program prints a picking slip for each order "shipped" by the shipping program.

Adjustment program - adjusts the selected order and condensed inventory files to reflect variances between the "shipments" made by the shipping program and the shipments actually made by the user's shipping department

Update orders program updates the user's order file using the selected order file as input. Shipment history cards are punched for all shipped orders and shipped line items.

Expand inventory program - updates the user's inventory file using the condensed inventory file as input

Order report program - prints inquiries and listings of groups of orders on the selected order file. The criteria for including orders on the listings are submitted on control cards.

Programming systems: The Order Allocation System is written in System/360 Assembler Language and operates under the control of DOS/360 Assembly, operation, and maintenance of the system are dependent upon the following programs:

DOS/360 Supervisor (6K)	360N-SV-474
DOS/360 System Control and Basic IOCS	360N-CL-453
DOS/360 Consecutive Disk IOCS Macros	360N-IO-455
DOS/360 Direct Access Method IOCS Macros	360N-IO-454
DOS/360 Group 1 Utilities (Unit Record and Disk)	360N-UT-461
DOS/360 Sort/Merge Disk	360N-SM-450
DOS/360 Assembler	360N-AS-465

Minimum machine configuration: The Order Allocation System can be run on a System/360 Model 25 or larger The minimum machine configuration for a System/360 Model 25 includes:

- A 2025 Processing Unit Model DC (24,576 bytes)
- Two 2311 Disk Drives Model 1
- A Card Reader (2540, 1442*, 2501*, 2520*)
- A Card Punch (2540, 1442*, 2520*)
- A Printer (1403, 1443*)
- A 1052 Printer - Keyboard

*These devices require an MPX or Selector channel.

In a multi-programming environment, an 18K background partition is required. Some users with large record block sizes and core tables may require a larger partition.

Order Allocation System (5736-D41): Assists apparel and shoe manufacturers in the tasks of assigning or allocating available inventory to open orders and determining which shipments are to be made against the orders. Input to the system consists of the user's order and inventory files and the rules to be followed in accomplishing the allocation and shipping functions. Output from the system consists of picking documents and updated order and inventory files, as well as listings, reports, and control totals.

Description: The allocation and shipping objectives of apparel firms are widely varied, depending upon the type of firm, customer ordering patterns, merchandising philosophy, the season or portion of a season involved, and the balance between inventory and open orders. Some of the more common objectives desired, either singly or in combination are.

- Better management control of the shipping function.
- Increase in units shipped per period.
- Reduction of inventory levels.
- Better utilization of shipping facilities and personnel.
- Better overall customer service.
- Shipment of more merchandisable packages.

The Order Allocation System is a set of programs and related documentation designed to assist apparel firms in the accomplishment of these, and similar, objectives. The component programs of the system are:

Order selection program: The order selection program performs two functions -- order selection and priority assignment. Priority assignment consists of assigning a numeric priority value to each order on the user's order file. The priority value is calculated based upon sets of order characteristics and values that are submitted on control cards. Order selection is based upon the relationship between the assigned priority value for each order and a selection threshold value submitted via a control card called the select card. The threshold value specifies the minimum priority value that is acceptable for processing. All orders with priority values equal to or higher than the threshold value are written from the user's order file onto the selected order file for further processing by the Order Allocation System. All other orders are bypassed. An optional audit listing (order selection audit listing) is available.

After the orders to be processed have been selected and priorities assigned, the orders are sorted into priority sequence so that the highest priority (most important) order is processed first, the next highest priority order second, and so on.

Condense inventory program. The condense inventory program reads the user's inventory file and creates the condensed inventory file, a direct access file suitable for use by other programs in the Order Allocation System. An inventory status report, the condense inventory audit listing, is printed.

Allocation program: The allocation program allocates stock to orders and updates the selected order and condensed inventory files according to allocation rules supplied by the user. The orders are sequentially accessed in priority sequence and matched against the condensed inventory file. Each unit on an order is checked for open (unshipped and unallocated) status and, if it is open, the corresponding condensed inventory record is checked for available units. If an inventory unit is available, the order unit is coded as allocated and the available quantity field of the condensed inventory record is reduced by one unit.

The allocation of inventory to an order is guided by user-supplied allocation rules and limitations. User-supplied rules, submitted at execution time, are used to test the "degree of completion" of the order. If an order, or a portion of an order, fails to meet the rules, the allocated units are recorded as open units and dumped back into the available quantity fields of the corresponding condensed inventory record so that they will be available to the next order. If the completion tests are passed, the units are retained as allocated units on the order. This process of allocation continues until all orders on the selected order file have been processed.

Shipping program: The shipping program determines which orders and units are to be shipped, based upon user-supplied rules, and updates the selected order and condensed inventory files. The program cannot ship any units that have not been previously allocated by the allocation program. Allocated units that are not shipped remain allocated.

Print picking slips program: The print picking slips program prints a picking slip for each order that was coded as being shipped by the shipping program. The sequence in which the picking slips are printed can be controlled by sorting the selected order header file prior to this step.

The picking slips are then sent to the shipping department so that the actual garments can be picked, packed, and shipped. During the picking operation any variances between the shipments shown on the picking slips and actual shipments are noted for later entry into the system.

Adjustment program: The adjustment program updates the condensed inventory and selected order files to reflect any variances between the picking slips generated by the Order Allocation System and the shipments actually made by the shipping department. Provision is made for two types of input cards, adjustments and reversals. An audit listing of all changes, the adjustment audit listing, is printed by the program.

Update orders program: The update orders program updates the user's order file with the results of the allocation cycle, punches shipment history cards for shipped orders and purges shipped units from order detail records.

Expand inventory program: The expand inventory program reads matching records on the user's inventory file and the condensed inventory file and updates the user's inventory file with the results of the allocation cycle. An inventory status report, the expand inventory audit listing, is printed by the program.

Order report program: The order report program can be used at any point in the allocation cycle to produce a listing of selected orders, the order report audit listing. It can generate listings of any class or group of orders in the selected order files and is useful for establishing intermediate results of the sytem.

As the name implies, the Order Allocation System is order oriented rather than inventory oriented. The sequence in which orders are processed and the rules governing the allocation and shipping programs are based upon the characteristics of the orders themselves. This approach is particularly appropriate for order-oriented style and semi-style apparel houses.

Highlights:

- Standard control system for decision-making programs.
- Priority assignment based on user-defined order characteristics.
- Order selection based on the priority value of each order.
- Interfaces provided between user's files and system.
- Multiple sets of rules are available during a single allocation or shipping run; application of a particular rule to an order is based on user-defined order characteristics.
- Special handling codes on-order and inventory records are supported.
- Complete audit trail is available.
- All programs provide end-of-job totals
- Allocation and shipping functions are separated; stock can be accumulated for important orders.
- Maximum limit can be placed on daily shipments; limit can be changed based on capacity of shipping department.
- All programs are self-modifying to accommodate variances in line item identification codes and the number of sizes on each line item.
- Rules for allocation and shipping include minimum requirements for each level within an order .. maximum limitation on units shipped for an order ... specification of coordination requirements ... ability to override special handling codes .. ability to ignore fringe sizes ... specification of size balancing requirements.

Use. The Order Allocation System performs only a limited set of functions within the customer's "front-end" system. The customer must create and update order and inventory files that are then passed to the system via two user-to-system file interface programs (condense inventory, order selection).

As the order file is passed to the system, priorities are assigned to each selected order and the selected order file is then sorted into priority sequence for processing. Stock is allocated from the condensed inventory file to the selected order file (allocation program). Selected orders with allocated stock are processed to determine which orders are to be shipped (shipping program) and picking slips are printed (print picking slips program).

The picking slips are used to fill orders. All changes from the printed slips are entered into the system and like files are adjusted (adjustment program) to reflect the changes. The user's order and inventory files are updated by two system-to-user file interface programs (updated orders, expand inventory), and an allocation cycle is completed.

Selection of orders, assignment of priority codes, allocation of stock, determination of shipments, and the printing of tailored order file reports are controlled by a standardized control technique that allows different types of processing for each user-defined class of orders.

Customer Responsibilities: Before the Order Allocation System is installed the customer must train system analysts, programmers, and operators in DOS/360 .. analyze and study the Order Allocation System ... design, write, and test an order entry system that creates and updates suitable order files ... design, write, and test and inventory entry system that creates and updates a suitable inventory file ... describe the files to be used in the system .. modify the interface programs if the user's files are not compatible with the system ... provide the parameters for assembling the system ... develop suitable backup and bypass procedures.

Before the start of each allocation cycle, the user must provide updated user's inventory and user's order files and the control cards necessary to control the programs in the system.

Programming System: The Order Allocation system is written in DOS/360 Assembler Language. The program generation operation and maintenance of the system requires the following DOS/360 programs -- Supervisor (6K) .. System Control and Basic IOCS ... Consecutive Disk IOCS ... Direct Access Method ... Group 1 (Unit Record and Disk) Utilities ... Disk Sort Merge .. Assembler. In addition, the distribution tape contains two BPS/360 programs, initialize Disk and Disk-to-Tape Copy/Restore, that are used to create the Order Allocation System disk pack.

Minimum Machine Configuration. The Order Allocation System can be run on a System/360 Model 25 or larger. The minimum machine configuration for a Model 25 includes a 2025 Processing Unit Model DC (24, 576 bytes) ... two 2311 Disk Drives Model 1 ... a Card Reader (2540, 1442*, 2501*, 2520*) ... a Card Punch (2540, 1442*, 2520*) .. a Printer (1403, 1443*) .. a 1052 Printer-Keyboard. Devices marked with a asterisk require a MPX or Selector Channel.

In a multi-programming environment, an 18K background partition is required. Some users with large record block sizes and core tables may require a larger partition. DOS core image requirements in addition to system residence requirements are approximately 20 cylinders. The balance of the available cylinders on a two-drive system must be available for order and inventory records. Users with large order and inventory files may require more than two drives.

Basic Program Product Offering

Unlicensed Documentation: One copy of Program Description Manual (SH20-0726) . . Operations Manual (SH20-0728)

Licensed Documentation. One copy of System Manual Feature #8700

Licensed Machine Readable Material: One copy of Private Source Library, Private Relocatable Library, and Sample Problem Files

To order, select one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
	9052		1316 Disk Pack	1 disk
Order from IBM	9126	7DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel
	9152		1316 Disk Pack	1 disk

Charge:

Type	Program and DPMO Number	Program Service Classification	Monthly Charge
5736	D41	B	$125.00

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Single Charge/Copy
8700 (LY20-0496)*	$16.00

*For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

Unlicensed Documentation: (order from Mechanicsburg):

	Selling Price/Copy
Program Description Manual (SH20-0726)	$12.00
Operations Manual (SH20-0728)	2.00

Related Program Product Documentation (Order from Mechanicsburg):
Application Description Manual (GH20-0604)

For futher information contact your Distribution Industry Marketing Representative.

Publication Support: The availability of the publications will be announced in a future Publications Release Letter. Initial DAPS quantities will be shipped at that time and additional copies will be made available at the IBM Distribution Center, Mechanicsburg, Penna.

IBM World Trade **Data Processing**

Program Product Announcement

TARIFF PUBLISHING SYSTEM READY FOR USE IN TRANSPORTATION APPLICATIONS

•Program Product 5736-T21

The Tariff Publishing System (bound tariffs) is now ready for shipment to S/360 users with transportation applications.

• • •

The program offers ...

- A computerized technique for converting, publishing, and maintaining bound freight tariffs.
- A mechanized approach to satisfy the tariff publishing and maintenance requirements of the surface transportation industries (i.e., railroads, motor freight carriers, bargelines, pipelines and freight forwarders).
- For the tariff publisher, composition efficiencies and economies and the capabiltiy to produce tariffs in machine-processable (magnetic tape), as well as printed form.
- For shippers, carriers, and other tariff users, standardized machine-processable tariff tapes which can be of significant value in connection with their rate retrieval, analysis, and research efforts.

Highlights ...

- Produces camera-ready tariffs conforming to industry specifications in regard to page size, type size, and the arrangement of characters and graphics.
- Records tariffs on magnetic tape (9/1600 bpi) in machine-processable format.
- Meets the standards adopted by the railroad industry for data representation in its tariffs (i.e., abbreviations, codes, and formats). A special 135-character print train (RPQ), customized to satisfy the requirements of various regulatory agencies is available.
- Processes the wide range of data formats found in typical tariffs and converts them to magnetic tape.

The program operates under DOS/360; the application programs are written in Assembler language.

The monthly charge is $200 with a programming service classifiction of B.

The program product specifications are available from Mechanicsburg (GH20-4016); each branch office has been sent a limited supply.

Programming RPQs will be considered at this time.

Ordering information is on the reverse side.

See program product section of your sales manual (PPA 360.15) for other details.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Tariff Publishing System (5736-T21) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... This program Product will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

Basic Material:

Unlicensed Documentation: One copy each of the Data Preparation Manual (SH20-0798), the Program Description/Operations Manual (SH20-0812), the Tariff Format and Standard Codes Manual (SH20-0792) ... Program Product Specifications (GH20-4016).

Licensed Machine Readable Material: One copy of machine readable material containing object program modules and sample problem.

To order basic material, select one of the following specify numbers:

Specify No.	Track/Density	Description
9027	9/800	DTR
9030	9/1600	DTR

Charge:

Type	Program & DPMO Number	Programming Svc. Classification	Monthly Charge
5736	T21	B	$200

Related Optional Material (no additional charge):

Licensed Documentation: One copy of Systems Manual (LY20-0559).

Licensed Machine Readable Material: One copy of source program modules.

To order optional material, select one of the following feature numbers:

Feature No.	Track/Density	Description
7028	9/800	MT
7029	9/1600	MT

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form No.	Single Charge/Copy
Systems Manual	8003 (LY20-0559)*	$21

Unlicensed Documentation:

	Selling Price/Copy
Data Preparation Manual (SH20-0798)**	$3.20
Program Description/Operations Manual (SH20-0812)**	2.20
Tariff Format and Standard Codes Manual (SH20-0792)**	4.60

General Documentation (available only from Mechanicsburg): Application Description Manual (GH20-0730).

*For customer use, order by feature number from Area Program Library; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg.

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

SYSTEM/360 GENERALIZED INFORMATION SYSTEM (GIS) PROGRAM PRODUCT (5736-CX1) READY FOR SHIPMENT

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[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

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[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

GIS significantly reduces the time required to produce application procedure. It also relieves the procedure writer from concern about the physical organization or location of his data. The program product operates in a variety of OS/360 environments supporting batched and remote input and response. System requirements range upward from System/360 Model 40 with 128K bytes of core storage.

GIS provides a powerful high level language to ease and enhance the preparation and execution of both repetitive (pre-planned) and special purpose (spontaneous) information processing tasks. GIS provides Data Description and Procedural language facilities in addition to an extensive set of system capabilities.

GIS is particularly well suited to providing executive information processing capabilities in an installation with existing OS/360 Sequential and Indexed Sequential data files, including installations employing COBOL or PL/I as their base programming language. GIS provides an easy to install system on which the user can build a total management information system.

The GIS Data Description capabilities permit description of existing files, together with facilities for describing new master and summary data files to be created and maintained within GIS. Procedural processing is accomplished through a flexible and concise and easy to learn high level language, designed for programmers and non-programmers alike. Procedural capabilities include data file creation and maintenance, as well as data retrieval and report production. Up to sixteen data files can be processed in GIS retrieval and modification procedures, permitting extensive cross-file correlation control and reports.

Note: This program product consists of GIS and GIS (Basic) which were previously announced as separate programs.

Monthly Charge ... $1,500

The Programming Service Classification is B.

SE Skill Classification ... SE Services, identified with and related to the installation and use of the IBM System/360 Generalized Information System (GIS) (5736-CX1) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTE Director of DP Marketing

Release Date: July 1, 1970
Distribution: Selected European Countries

PROGRAM PRODUCT SPECIFICATION

Generalized Information System (GIS) Program Product 5736-CX1

- Operation using OS/360 PCP, MFT, or MVT
- In MVT optional terminals supported by QTAM
- Data set modification, retrieval (query) with up to 16 files
- Field Access Control

The IBM System/360 Generalized Information System (GIS) supports a wide variety of information processing activities by providing the facilities for defining, maintaining, and processing data files required in many commercial and governmental application areas. GIS provides general processing modules which are adapted to perform a given task on the basis of fixed and variable task parameters, identified at the time the task is introduced and on the basis of comprehensive stored data definitions and controls.

In addition to data maintenance and general processing capabilities, GIS provides monitoring and utility programs which provide significant additional capabilities. GIS permits the retention and subsequent recall of user-entered task specifications in their external form. With this capability, single short queries or complete data descriptions may be saved by the system for subsequent use. GIS also provides for the retention and subsequent recall of user task specifications in their verified executable form. GIS makes available diagnostic reporting of real or potential errors in procedure specification and also makes available recording of system response and activity at file processing time. Included in the recording options are capabilities to provide an audit trail of transaction activity against any or all files and the ability to detect and record real or potential data errors at file processing time. The system provides security controls to restrict access to and modification of sensitive data.

The Generalized Information System is a user-oriented system. This is achieved through a language, which can be entered from remote terminals, that (a) permits the description of data files as collections of interrelated elements in logical structures and (b) expresses the processing requirements without concern for the devices, data formats, or mechanical operations involved in manipulating the data. The routines which constitute the Generalized Information System are written in System/360 Operating System Assembler Language and require no modification by the system user.

System Configuration: GIS requires a System/360 Model 2050I (524,288 bytes) as a minimum, OS/360 with MVT -- Multi-programming Variable number of Tasks -- and OS/360 Utilities. Additionally, the OS/360 Sort and Link Edit functions must be available.

The dynamic main storage requirement for GIS is 153,600 bytes when operating under control of OS/360 MVT without terminals. A further allocation is necessary for access methods (BSAM, QSAM, BDAM, BPAM, and optionally--ISAM). Additional available core storage may permit multiprogramming with procedural execution(s) overlapped with one procedural compilation. If terminals are to be used, an additional region of main storage will be required for the user-written QTAM message control program.

In PCP, GIS (Basic), incorporated with GIS, operates on System/360 configurations ranging upward from a Model 2040G with the decimal arithmetic feature and direct-access secondary storage. The minimum machine configuration satisfies the GIS (Basic) requirement for a dynamic main storage of 90,112 bytes.

In MFT a Model 2040GF (196,608 bytes) is recommended. This model allows in addition to the MFT control program and system tasks, the 90,112 bytes of dynamic main storage required for GIS (Basic), and a partition for other installation work.

While the dynamic main storage allocation of 90,112/153,600 bytes does include space for all the necessary parameter tables to support 16-file operation, it does not necessarily guarantee successful compilation of a 16-file procedure. In addition to the parameter tables, sufficient core must be available to hold, concurrently, the key Data Description Table (DDT) information for each file. A reserved area of 15,000 bytes is included in the 90,112/153,600 bytes for this purpose. The actual space requirement for multi-file compilation is, however, highly dependent on file capacity, not only on the number of files involved, including the number of unique field and segment names, the actual number of fields and segments, the quantity of edit, encode, and decode specifications, field redefinitions, and field security specifications. For this reason, it is not possible to set a fixed maximum (other than the system limit of 16) on the number of files which can be used in one procedure. A GIS utility is provided with the system to calculate the core requirements for key Data Description Table information during compilation for any specific combination of files described to GIS.

In addition to OS/360 secondary storage requirements, a minimum of three IBM 2311s, or their equivalent, is recommended. Secondary storage requirements depend on the size and number of user files.

Minimum essential I/O devices for GIS system generation, maintenance, and operation include a system input unit, one IBM 2400 tape unit, and a system output unit.

Programming Systems: GIS programs are written in the OS/360 Assembler Language and require no further coding by the system user.

GIS requires the following components and options of the System/360 Operating System:

Primary Control Program (PCP)	360S-CI-505
or	
Multi-programming with a Fixed number of Tasks (MFT)	360S-CI-505
or	
Multi-programming with a Variable number of Tasks (MVT)	360S-CI-535
Input/Output Support for BDAM	360S-DM-509
Utilities	360S-UT-506
Sort/Merge	360S-SM-023
Linkage Editor E	360S-ED-510
Primary Data Management	360S-DM-508
BSAM	360S-DM-508
BPAM	360S-DM-508
QSAM	360S-DM-508
QTAM (optional) - MVT only	360S-CQ-519

Note: The following ISAM Data Management Facilities are required if the optional use of GIS Data Management is to include OS/360 indexes:

QISAM	360S-IO-526
BISAM	360S-IO-526

Generalized Information System (GIS) (5736-GX1): GIS, in conjunction with the System/360 Operating System (OS/360), provides a powerful technique for addressing specific customer needs for data processing, as well as many of the requirements of executive management information systems. In response to spontaneous and changing requirements, GIS provides sets of generalized routines which enable data set creation, maintenance, and retrieval. With this program, existing or new files are described and then user-selected symbolic names serve to identify and locate both the appropriate file and the fields of data within it as needed by a GIS procedure

GIS (Basic) has been incorporated with GIS. Differences between GIS and GIS (Basic) are in the System/360 configuration required, the Operating System/360 control program options selected, and GIS control programs. Where GIS (Basic) requirements differ significantly from GIS the difference is noted by use of GIS (Basic) or Generalized Information System (Basic).

Description: Implementing a particular application ordinarily entails coding a multitude of routines. Once implemented, however, the system requirements usually prove unstable. Additional routines are needed to extend capabilities; revised coding is needed to produce reports not anticipated when the application was initially defined. Accordingly, a dynamic operational environment imposes a significant continuing demand on programmers to maintain existing programs.

In contrast to conventional practices, the GIS user describes his new or existing files in a procedure that does not involve detailed programming. As a result of processing by a GIS program component, these file descriptions enable the user to address the contents of his files by means of symbolic names. No longer must the user repeat, in every procedure, the size of each field, its unit, relative location, and other data management parameters.

When the system user employs GIS techniques to create, maintain, and query his files, his procedures will be compiled by another GIS program component after diagnostic testing to ensure their validity. The compiled, executable procedure code may then be applied to the file data or stored for later use and re-use when called from the GIS library by the procedure's symbolic name.

As necessitated by the task being performed, GIS procedures can link to non-GIS routines referenced in the procedure specification. User routines written in other languages, such as PL/I or COBOL, can access (with some limitations) GIS files.

A design provision enables a GIS installation to invoke restrictions on the accessibility of sensitive data. Another provision enables selective recording of the occurrence of processing errors and the alternative actions to be taken.

In short, GIS is a structured-file, information handling system designed for use in cross-industry applications. The system's design provides for a dynamic operational environment.

Features:

- GIS operation using OS/360 Multi-programming with a Variable number of Tasks (MVT) and optionally, terminals supported by Queued Telecommunication Access Method (QTAM).

  Program-assisted definition of simple and complex data set structures. All data locations identified by user-assigned symbolic names.

- Data base creation simplified by automatic field mapping and input/output control. Data insertion may be conditioned by logical tests. Audit trail available.

- Multi-file retrieval - independent data files can be searched by a single query, and the resulting "hits" in each file can be used to condition the next file's search or consolidated into a single report or output file.

- Multiple output (reports) in response to user selection logic.

  Arithmetic computation, counts, and averages, as well as maximum, minimum detection.

- Multi-field sort control for both data files and reports.

- Automatically formatted and customized report capabilities.

- Storage and recall of reusable task information which can be amended while in storage.

- Field level security control for data retrieval and file maintenance.

- Automatic logging (recording) of error conditions; specifiable and default selection of alternative processing options in case of error.

  Provision for up to 16 files in a retrieval or file modification (change to content of existing record) procedure.

Special Sales Information: GIS offers a technique to implement an information system having multiple System/360 data sets as its data base. These data sets, comprising the information system data base, may be either existing Operating System/360 data sets generated, for example, by PL/I, COBOL, OS/360 Assembler Language programs or OS/360 Utilities -- or may have been specially created using the facilities of GIS. In either case, all data sets to be processed by GIS must first be described by using the data description feature of GIS.

Since procedures and files described to GIS (Basic) are completely compatible with GIS, the improved throughput and terminal support (via QTAM) are significant advantages supporting the transition of GIS (Basic) installation to the larger systems required by GIS.

GIS, in MVT, operates exclusively in a teleprocessing mode or in a non-teleprocessing mode. In the first instance, GIS accepts input from terminals supported by QTAM. In the non-teleprocessing mode, GIS accepts input from the installation's normal OS/360 SYSIN device.

GIS (Basic), operating under MFT, requires that a job class be assigned to the GIS (Basic) jobs and a user-assigned transient reader operating in the partition defined for that job class. With a single jobstream, this user-assigned transient reader accepts GIS and non-GIS job classes. The non-GIS jobs are directed to partitions previously defined to accept those jobs (by class). With two or more jobstreams, GIS jobs must be read by the user-assigned transient reader.

Use: As its initial input, the program accepts file descriptions reflecting an actual or proposed organization of data. These descriptions become permanent reference tables in storage until replaced as the operational requirements dictate. The system user then writes a series of procedure specifications and enters them with or without transaction data to create and maintain his data files. Similarly, a set of procedure statements is entered to select, manipulate and retrieve data residing in the files.

Fields of data are addressed by their user-assigned names. Entire files also have symbolic names by which they are addressed.

Task information such as data or specifications can be saved in secondary storage and recalled as part or all of a procedural input specification.

Customer Responsibilities: All persons installing, operating, or maintaining GIS must have a working knowledge of OS/360. No customer should attempt to implement GIS until the installation has achieved proficiency in the use of OS/360 with other application programs.

With GIS, as with other systems, considerable attention should be given to pre-installation systems design and analysis. The resulting choice of data organization and record design will affect processing speed, as well as each file's value in the overall information system.

As with other systems, the customer is responsible for providing adequate protection against accidental loss or misuse of his data. This includes an adequate review of the system's security provisions by the user.

Note: The customer must provide the QTAM program, describing the teleprocessing network, to interface with GIS. An outline of the user's responsibilities to provide this interface is included in the Application Description Manual.

Education: Education of customer personnel is necessary to the successful installation of this program product. A further announcement on GIS education availability will be made.

Customer System Programmers, Application Programmers, and Analysts responsible for either implementing new GIS applications, or supporting GIS as a program product which provides response to random management requests for information require detailed knowledge of organization and use of system control and procedural languages. Additional knowledge in data description, file structuring, and file concepts should be gained such that the application designer may use the data description language techniques of GIS.

Customer System Programmer responsible for describing existing OS/360 files to GIS or designing files to be created by GIS require in depth knowledge of the file structures, OS/360 Data Management Organizations acceptable to GIS, and the Data Description language employed by GIS.

Branch Office Responsibilities: The branch office must inform the customer of the importance of adequate education. It is recommended that no customer should attempt to implement GIS until the installation has achieved proficiency in the use of OS/360 and QTAM if the teleprocessing mode of GIS operation is to be used.

Test experience has shown successful QTAM operation to be highly dependent on the installation maintaining EC level and OS/360 PTFs. A thorough review of these items, as applicable to your customer's system, is required prior to installation of GIS in the teleprocessing mode.

If the intended application of GIS involves extensive remote teleprocessing, system serviceability requirements become especially significant. The branch office must address the system's serviceability requirements for the specific needs and use of GIS in the customer installation. Customer Engineering review of the proposed installation is recommended.

The customer must be advised that the security provision in GIS does not prevent access to the protected files by other programs. Also, as with other systems, data integrity and provision of adequate recovery data becomes the responsibility of the customer installation.

At the point of initial availability, GIS (Basic) will have been tested under control of the Primary Control Program (PCP) and Multiprogramming with a Fixed Number of Tasks (MFT), as contained in OS/360 Release 17.

The initial release of GIS (Basic), however, will not have completed test under the MFT Checkpoint/Restart Facility release of OS/360. Customers planning to use that release of OS/360 and install GIS (Basic) should wait until this test has been completed. Although no changes or modifications to GIS (Basic) are anticipated, this cannot be assured until the testing is complete. Completion of the testing will be announced via SECOM.

Programming Systems: GIS programs are written in the OS/360 Assembler Language and require no further coding by the system user.

GIS requires the following components and options of the System/360 Operating System:

Multiprogramming with a Fixed Number of Tasks Version 2	360S-CI-505
or	
Primary Control Program	360S-CI-505
or	
Multiprogramming with a Variable number of Tasks (MVT)	360S-CI-535
Input/Output Support for BDAM	360S-DM-509
Utilities	360S-UT-506
Sort/Merge	360S-SM-023
Linkage Editor E	360S-ED-510
Primary Data Management	360S-DM-508
BSAM	360S-DM-508
BPAM	360S-DM-508
QSAM	360S-DM-508
QTAM (optional)	360S-CQ-519

Note: The following BISAM Data Management Facilities are required if the optional use of GIS Data Management is to include OS/360 indexes:

QISAM	360S-IO-526
BISAM	360S-IO-526

System Configuration: GIS requires a System/360 Model 2050I (524,288 bytes) as a minimum, OS/360 with MVT -- Multiprogramming with a Variable number of Tasks -- and OS/360 Utilities. Additionally, the OS/360 Sort and Link Edit functions must be available.

In PCP, GIS (Basic) operates on System/360 configurations ranging upward from a Model 2040G with the decimal arithmetic feature and direct-access secondary storage. The minimum machine configuration satisfies the GIS requirement for a dynamic main storage of 90,112 bytes.

In MFT a Model 2040GF (196,608 bytes) is recommended. This model allows, in addition to the MFT control program and system tasks, the 90,112 bytes of dynamic main storage required for GIS (Basic), and a partition for other installation work.

The dynamic main storage requirement for GIS is 153,600 bytes when operating under control of OS/360 MVT without terminals. A further allotment is necessary for access methods (BSAM, QSAM, BDAM, BPAM, and -- optionally -- ISAM). For multiprogramming where procedural execution(s) overlap procedural compilation, GIS, through OS/360, may utilize additional core storage by dynamically creating procedural execution regions. If terminals are to be used, an additional region of main storage will be required for the user-written QTAM Message Control Program (15 to 30K). In addition to OS/360 secondary storage requirements, a minimum of three IBM 2311 Disk Storage Drives, or equivalent, is recommended for GIS use. Further secondary storage requirements depend on the size and number of user files.

While the dynamic main storage allocation includes space for all the necessary parameter tables to support 16-file operation, it does not necessarily guarantee successful compilation of a 16-file procedure. In addition to the parameter tables, sufficient core must be available to hold, concurrently, the key Data Description Table (DDT) information for each file. A reserved area of 15,000 bytes is included. The actual space requirement for multi-file compilation is, however, highly dependent on file complexity, not only on the number of files involved, including the number of unique field and segment names, the actual number of fields and segments, and the quantity of edit, encode and decode specifications, file redefinition and field security specifications. For this reason, it is not possible to set a fixed maximum (other than the system limit of 16) on the number of files which can be used in one procedure. A GIS utility is provided with the system to calculate the core requirements for key DDT information during compilation for any specific combination of files described to GIS.

Minimum essential peripheral devices include a card reader for input and system generation, a 2400 magnetic tape drive for system generation and maintenance, a tape unit or printer for output, and provision for sorting data sets.

Basic Program Product Offering

Basic Licensed Program Product Machine Readable Material: One copy of machine readable materials containing program load modules, sample problem - GIS (Basic), sample problem - GIS

Basic Unlicensed Program Product Documentation: Three copies program description manuals -- GIS - System Overview and Control (H20-0630) with TNL (N20-2032), GIS (Basic) System Overview and Control (H20-0622) with TNL (N20-2027), GIS and GIS (Basic) Data Description (H20-0623) with TNL (N20-2028), GIS Procedural Language (H20-0631), GIS (Basic) Procedural Language (H20-0624) with TNL (N20-2029); ... three copies operations manual (H20-0632) and GIS (Basic) Operations Manual (H20-0625) with TNL (N20-2030).

General Product Documentation: One copy GIS - Application Description Manual (H20-0574) with TNL (N20-2031, 2008, and 2035) and one copy GIS (Basic) Application Description Manual (H20-0521-1) with TNL (N20-2026).

Specify Number	Track/Density	Description
9025	7/800 DC cpi	DTR
9027	9/800 bpi	DTR
9030	9/1600 bpi	DTR

No tape submittal required, DTRs provided by Area Program Library

Optional Program Product Offering:

Modification Support Package

Related Optional Licensed Program Product Machine Readable Material: One copy machine readable material -- one reel flowcharts, one reel source code, three reels each of Assembly Listings.

Related Optional Licensed Program Product Documentation: One copy Systems Manual -- GIS (Basic), Feature (#8801), GIS Feature (#8802), GIS and GIS (Basic) Feature (No.8803), and GIS and GIS (Basic) Feature (No.8804).

	Feature Number	Track Density	Description
Order from IBM	7013	7/800 DC cpi	2400' tape reels
	7014	9/800 bpi	" " "
	7015	9/1600 bpi	" " "

One (2400') reel required for each feature number ordered. Five (2400') reels required for the entire modification support package.

Prices:

Type	Program No.	DPMO	Programming Systems Class.	Charge
5736	CX1	CX1	B	$1,500

Additional copies of the documentation are available at charges listed below.

Unlicensed Documentation (order from Mechanicsburg, bill customer.

Program Description Manuals:	Selling Price/copy
GIS - System Overview and Control (H20-0630) with appropriate TNL	$5.75
GIS (Basic) - System Overview and Control (H20-0622) with appropriate TNL	7.10
GIS and GIS (Basic) Data Description (H20-0623) with appropriate TNL	3.35
GIS Procedural Language (H20-0631) with appropriate TNL	8.35
GIS (Basic) Procedural Language (H20-0624) with appropriate TNL	10.15

Operation Manuals:	
GIS Operation Manual (H20-0632)	6.30
GIS (Basic) Operation Manual (H20-0625) with appropriate TNL	6.10

Licensed Documentation (order by feature code)

Modification Support Documentation Systems Manual
- GIS (Basic) - Volume 1 (No.8801) (Y20-0422)* with TNL (Y20-0440)*
GIS - Volume 1 (No.8802) (Y20-0425)*
GIS and GIS (Basic) Volume 2 (No.8803) (Y20-0423)* TNL (Y20-0441)*
GIS and GIS (Basic) Volume 3 (No.8804) (Y20-0424)*

*Order by form number for IBM Internal Use Only

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

OS/360 ENHANCED BY RELEASE 19

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Published by DP Publications Services, WTHQ
1 North Broadway
White Plains, New York 10601

Operating System/360 Release 19 (MFT and MVT) is ready for shipment at PID.

This release is another significant step in the continuing enhancement of OS, providing improvements in FUNCTION, PERFORMANCE, and RELIABILITY. Included in Release 19 are items announced for June and September availability, plus, over 50 incremental improvements.

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Release 19 availability was delayed due to IBM's decision to delete CRJE from Operating System/360 and its publications until the litigation now pending has been resolved.

Highlights ...

- SMF for MFT/M65 MP/RJE (P69-62)
- SMF Extensions (P69-124)
- I/O RMS for MVT, MFT and M65 MP (P70-8)
- ANS COBOL Version II - Restriction Removal (P69-88)
- DIDOCS (P69-104)
- Data Set Copy Utility (P69-123)
- BTAM Improvements and Additional Device Support (P69-93, 94, 95, 110, 126)
- M65 MP Support for 2816/2844 (P69-14)
- 2495 Tape Cartridge Utility (P69-64)
- 1285, 1287, 1288 Optical Reader Support (P69-101)
- 1419 Reader Support (P69-116)
- Volume Statistics for Tape (****Sales Manual Item)

Installation Planning ...

Installing a new release of OS requires good planning and coordination. Marketing representatives and systems engineers providing marketing assistance are to participate with the customer in planning for the installation of initial orders and subsequent releases of Operating System/360. Reference IBM Marketing Announcement 270-50.

See inside pages for release planning information and description of incremental improvements not previously announced.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: August 5, 1970
Distribution: **All Areas**

NOTE: This release has been designated as 19.1 in the RELNO field of system printouts. APARs and other communications pertaining to this release should specify Release 19.1.

Release 19 Update

It is planned that an updated Release 19 (19.6) containing PTFs will be made available some three to five months after the initial availability of Release 19. There are no plans for a component release prior to the Release 19 update. Customers who install Release 19 need not order the 19 Update because the appropriate PTFs should have been applied to their systems. The recent announcement (P70-53) on Extended OS/360 Release Support makes it reasonable for some customers **to skip releases or updates and still retain support. The OS/360 support policy (stated specifically for** Release 19) is: Release 19 (Initial and update) will be considered current (supported) for three months after the availability of the Release 21 update release. The support includes both FE (PTF and Emergency Bypass Support) and Central Programming Service for OS components with programming service classification A.

Release 17 current through initial availability of Release 19 update + 3 months
Release 18 current through initial availability of Release 20 update + 3 months
Release 19 current through initial availability of Release 21 update + 3 months

Release 19 PCP Availability

PCP code is included in Release 19, but because IBM testing has not been completed the PCP option will not be supported initially. PCP support including the 2495 utility will be provided by September 30. If necessary a new level of Release 19 will be made available from PID which incorporates changes to PCP.

Users who planned to install the PCP option should defer ordering Release 19 until support of this option is announced. Those users who require PCP support prior to September 30, and do not already have Release 18, should contact their Regional Programming Systems Representative.

Release Independent Components

Many components such as compilers, sorts and utilities are release independent and may be used with and will be supported on the prior release. This will enable the Release 18 user to obtain the maintenance in these components, thus, providing him with an improved system until he decides to install Release 19 or the updated Release 19. Release 19 components that will be supported on Release 18 include:

ALGOL	**PL/I F**
COBOL E & F	**ANS COBOL****
FORTRAN G & H	**RPG**
Assembler F	**Linkage Editor F**
LOADER	**Sort/Merge**
OS/360 Utilities*	**Independent**
TESTRAN	**Utilities**

Information on how these components are to be used and restrictions that apply are listed in the "Memo to Users" section of the Release Guide.

***except IEHMOVE, IEHLIST, IEHPROGM & IEBTCRIN**
****with spanned record restrictions**

System Generation Planning

Field Engineering representatives should meet with the customer prior to system generation to review known restrictions, PTF and EC requirements. Appropriate PTFs should be installed before attempting customer operations. Information sources for this review include the announcement documentation, RETAIN, Installation Newsletters **and the Release 19 Programming Systems Memorandum (G220-2004). The FE technical organization should be informed of any programming problems that prevent an OS/360 installation from advancing to Release 19.**

Programming Service Classification C Components

The following components are under Service Classification C and are no longer distributed as part of the OS/360 libraries:

Assembler E	360S-AS-036
Linkage Editor E	360S-ED-510
FORTRAN E	360S-FO-092

These components may be transferred from the user's Release 18 Library to his Release 19 system. The new user of OS/360 may order these components from PID and include them in his system through a separate installation process.

Announcement Documentation

The documentation listed below is sent with the program order form to current OS/360 users of record. It is provided to enable the user to decide if he wishes to order Release 19, and, if so, to enable him to prepare for

installing the release prior to receiving it from PID.

. OS/360 Release Guide (GC28-6733)

A combination of the Consolidated Document and Release Guide describing new and changed system features and information pertaining to Release 19.

- New and changed system parameters (JCL)
- Planning for System Generation
- Program Material and Publications List
- List of APARs and PTFs resolved
- Hardware EC Change Levels
- Release 19 Ordering Instructions
- List of modules changed, added or deleted

. OS/360 System Programmers' Guide (GC28-6550) plus TNL GN28-2427
. OS/360 Storage Estimates (GC28-6551)
. OS/360 System Generation (GC28-6554) plus TNL GN28-2428.

Copies of the above documentation are available to IBM locations through DAPS.

Programming Systems Memorandum

The OS/360 PSMs (G220-2004) will contain the same information currently available to the customer engineer, in their Early Warning System Microfiche. This includes a program symptom index, descriptions of APARs, a list of available PTFs, Release 19 EC Requirements, plus other information pertinent to OS/360. The PSMs will be updated frequently, thus, providing current release status to both IBMers and customers.

PSMs will be distributed as outlined in the Branch Manual Revision Letter 069-293, dated 12/16/69. Customers will receive PSMs through SL/SS and IBM personnel will use DAPS.

Release 18 Publications Availability

Publication Support for Release 18 will be provided until Release 20. Those accounts requiring additional copies of Release 18 publications may order them through the use of temporary numbers. Detailed ordering procedures are provided in the Accumulated Index of Publications GN20-0360. The ordering procedure for Release 19 publications is the same as for prior releases.

1285, 1287, 1288 Support

With the availability of 1285, 1287, 1288 Type I support, the Type III program "IBM 1285/1287 OCR programming support (OS)" is no longer required. As announced in P69-101, maintenance of that program will terminate. To allow for an orderly transition to Type I support, this termination will not take place until November 15, 1970.

System Management Facilities (SMF) for MFT/M65MP/RJE

The support offered in the first release of System Management Facilities for MVT (Release 18) has been extended to users of MFT, M65 Multiprocessing, and RJE.

SMF provides "automatic data collection" by gathering and recording information associated with the use of the computing system. Provided as a SYSGEN option, SMF can be used to control the activity within OS/360 multiprogramming systems and to optimize and plan the orderly growth of installations.

Automatic data collection is provided to record:

. CPU time of processing programs
. Start and stop times for jobs and steps
. Start and stop times for readers and writers for each job
. Region or partition size used by the program
. Priority of the job when executed
. Counts of SYSOUT, DD*, and DD DATA logical records
. Job, step and program names
. Status of job and/or step at termination
. Identification of devices allocated to each step and, for each device, a count of EXCP's issued for each data set processed using the devices
. Maximum main storage required by each step
. User exits at key points

System Management Facilities (SMF) Extensions

SMF has been expanded to provide OS/360 MFT, MVT and M65MP users with the basis for more effective control of data sets, volumes and DASD space. The extended support gathers, formats, and records basic data set, volume and direct access space information.

Collection of data set related information
. Frequency of use
. Amount of direct access space used
. A record of change in status as a result of scratch and rename functions

Collection of volume related information
- Frequency of use
- Amount of unallocated space
- A record of tape volume usage

I/O Recovery Management Support for MFT/MVT/M65MP

The availability and reliability of OS has been improved by the addition of Alternate Path Retry and Dynamic Device Reconfiguration techniques to the I/O error recovery capability. System throughput is enhanced by reducing the possibility that an I/O failure situation would require a rerun.

ANS COBOL Version II Restriction Removal

The ANS COBOL compiler has been expanded to provide the BLOCK CONTAINS clause where logical record size is greater than physical record size, physical REWIND/NOREWIND interpretation, label processing at CLOSE time, and the USE BEFORE/AFTER STANDARD LABEL clause.

OS/360 Data Set Copy Utility Replacement

The new version of the IEBCOPY utility creates new partitioned data sets or merges existing PDSs into one. It can be used for selectively creating system or application libraries and maintaining existing PDSs. This replacement can yield a performance increase of 6 to 1 over previous IEBCOPY and IEHMOVE applications including the copy phase of Stage II of SYSGEN where it is now utilized. Information on how this affects user driven SYSGENs can be found in the OS/360 Release 19 Guide.

OS Volume Statistics for Tape

OS Volume Statistics provides the user with information regarding the number of read/write errors on tape files. It consists of Error Statistics by Volume, a recording facility, and Error Volume Analysis for real time monitoring of I/O error activity.

BTAM Improvement and New Device Support

The Basic Telecommunication Access Method has been expanded to support BSC ID Verification, device independent SYSGEN options, the 1800 Communications Adapter, the 2715 Transmission Control Unit, the 2770 Data Communication Terminal and the 2972-8 and 2972-11 General Banking Stations.

Incremental Improvements

- Control Program Improvements

Scheduler Allocation Performance
System performance has been increased by a rearrangement of ENQ/DEQ logic during allocation causing a higher degree of interaction between allocation, SYSOUT writers and termination in all OS/360 multiprogramming environments.

Direct System Output Processing
The facility is provided to process system output directly to the final output device, thus eliminating spooling of output data and saving direct access space and processing time.

MFT with Subtasking Capability
(Attach in MFT)
The OS/360 user now has asynchronous processing capabilities within a partition of MFT. The ability to multi-task within a partition allows the user to overlap I/O time with processing time, thus enhancing performance.

DISPLAY ACTIVE and Checkpoint/Restart in Decimal
To provide greater ease to the user in determining storage locations, two system messages, the output caused by the DISPLAY ACTIVE command in MVT and the indication of the main storage addresses requested for a checkpoint/restart job, have been modified to produce decimal representation of the addresses.

Checkpoint/Restart Parallel Repositioning
Performance in the tape respositioning function of Restart has been improved by the overlapping of the I/O operations involved.

MFT Transient Area Contention
The handling of transient area contention in MFT has been redesigned in order to eliminate existing problems of performance degradation, possible program checks and interlock possibilities.

Extensions to MVT Main Storage Hierarchy Support
Users of the MVT control program with Main Storage Hierarchy Support now have greater control over the allocation of main storage including the capability of running programs or system tasks exclusively in Hierarchy One.

DD DUMMY Substitution at Restart
In doing a deferred checkpoint/restart, the user may now specify DUMMY for data sets that were open at checkpoint time if they were being processed by the basic or queued sequential access methods.

In-Stream Procedures
A set of JCL cards needed for the execution of a program can be placed in the input stream. The procedure can

then be invoked by a single JCL statement (EXEC) any number of times during the job.

Express Cancel
An improvement has been made to the method of removing a job from the system when it is failed or cancelled. When such a situation occurs, the queue entry will be automatically deleted and the data sets will be scratched.

Extended Asymmetric I/O
Users of Model 65 multiprocessing systems are now provided with I/O device support for all devices supported in MVT systems. All the devices may be supported asymmetrically. Additionally, a new operator command provides a display of the status of system resources at any time.

M65MP Time Slicing
The time-slicing facility is now extended to users of Model 65 multiprocessing systems. This will provide improved performance in a graphics environment or in any application of a conversational nature.

Write to Programmer
Both problem programs and system tasks now have the ability to route messages to the system message class data set which enables the system to provide the user more descriptive information regarding abnormal occurrences.

Explicit ATTACH
Tasks operating in an MVT or M65MP environment may now fully describe the characteristics of a subtask being attached through the use of additional keyword parameters.

MVT Initiator/System Task Control Consolidation
An internal design change involving the MVT initiator and System Task Control provides a higher degree of data set integrity for system tasks, improved system design and increased system reliability.

MCS Device Status Consolidation
MFT and MVT systems containing Multiple Console Support now have consolidated in one control block all the bits which together specify status of a device.

Reduction of Device Name Table and Device Mask Table Storage Requirements
Improved design for the use of the device name and device mask tables reduces the external storage requirements of the system.

CCH Dynamic Loading (Mod 65 up)
The Channel-Check Handler now includes the dynamic loading feature which enables the main channel and model independent portion of CCH to link to the various channel-dependent analysis routines.

MCS Extension to 2703 TCU
Multiple Console Support is now available for 2740 terminals attached to 2703 Transmission Control Units.

Unit Status Display
Support is provided to MVT and MFT users for the graphic display at any system console of the status of the I/O devices attached to the system.

- Data Management Improvements

ISAM Improvements
Four functional improvements are available to users of the indexed sequential access method. The performance of ISAM during load mode is improved by a full track index write option. The capabilities of the SETL macro are increased by allowing specification of a high or equal search. Previously allocated space in an ISAM data set may be reused without scratching. Space can be allocated for Independent Overflow on a device type different from that of prime data.

Reduction of DASD ERP Storage Requirements
The resident ERP for direct access devices is tailored at System Generation time to fit the needs of the user's system.

Catalog Performance Improvement
Performance has been improved for the LOCATE function of the catalog routines.

Seven Track Tape Default - 800 BPI
The default density for 7-track magnetic tape has been changed from 200 BPI to 800 BPI, providing more efficient use of tapes without specific user effort.

Write to Programmer - 001 ABEND
Utilizing WTP, Data Management provides the user with more clarification regarding the cause of program failure.

Recognition of EOF on Input
The user now has the ability to disregard the end-of-file on Standard Label tapes as indicating end-of-data. Thus he has the means of concatenating tape volumes to produce one data set.

Diagnostic for Missing DD Card
When a programmer attempts to OPEN a DCB for which he has not provided a DD statement, a diagnostic message will be issued.

DADSM Interrupt Recording Facility
Premature DADSM terminations are recorded in the format 4 DSCB so that the resulting VTOC errors can be more accurately diagnosed.

Blocksize Adjustment
Users of OS/360 MVT or MFT systems can now make better use of their available direct access space. The sequential access methods maximize blocking of

SYSOUT data sets with a minimum of user effort.

. System Generation Improvements

SYSGEN in a Multiprogramming Environment
SYSGENs can now be performed in a true multiprogramming environment. Users can even multiprogram any number of SYSGENs.

Multiple Address Generation in UNITNAME
Users may now name collections of I/O devices in the UNITNAME macro in a manner consistent with the multiple addressing facility in the IODEVICE macro.

Write to Operator Buffer Default Reduction
Overall system performance is improved by reducing the number of WTO buffers assigned by default.

Centralization of System Generation Function
The support required for I/O Device SYSGENs has been dispersed among appropriate macros so that total support for a particular function is centralized. MCS can be added to an existing system via an I/O Device SYSGEN.

SYSGEN Macro Identification
A dynamic trace through Stage 1 of the System Generation process is provided.

. Utility Improvements

ATLAS SVC (86) and IEHATLAS-Recover/Replace
The ATLAS SVC (86) provides the means to dynamically recover from certain hard I/O errors for direct access devices with software assignable alternates. Where dynamic recovery is impossible, the IEHATLAS utility can be used in a subsequent step to assign an alternate track and replace the data.

IEHMOVE Support of BDAM VRE
The IEHMOVE utility now has the capability of operating on BDAM data sets containing variable length spanned records.

IEHLIST Improvement
A FORMAT option has been added to the LISTPDS function of the IEHLIST utility for use on partitioned data sets whose members have been created by the Linkage Editor.

IEHDASDR Improvement
Improvements to the IEHDASDR utility enable the programmer to more quickly prepare volumes for system use and more easily diagnose and correct I/O errors in his data sets and libraries.

IEHUCSLD Withdrawal
The UCS buffer loading utility, IEHUCSLD is withdrawn from OS/360 and functionally replaced by the dynamic support of UCS functions delivered with Release 16.

. Service Aids and Reliability Improvements

OS/360 Service Aids

The OS/360 Service Aids are a group of programs designed to improve the serviceability of the Operating System. They provide several previously unavailable methods for diagnosing and correcting problems.

SER Support of the System Wait State
System Environment Recording has added features which aid in eliminating unnecessary system wait states.

. Remote Job Entry Improvements

2770 for Remote Job Entry
Support is now available for the IBM 2770 terminal to be utilized as a remote job entry work station. Note the restriction on the 2770 and 2780 sharing the same non-switched multipoint line or switched connection with processor work stations (1130, Mod 20, S/360) is removed.

Reverse Interrupt Support for Remote Job Entry
RJE provides intermix of supported terminals on a switched line and on a non-switched multipoint line plus extended ID verification for RJE terminals.

. Graphics Improvements

Graphic Programming Support
The 2250 terminal operator now has the option of dynamic dumping of the 2250 buffer with or without a core dump.

. Compiler and Language Improvements

PL/I Step ABEND Facility
PL/I users can obtain STEP ABENDs after an abnormal termination from any task, when the termination is caused by the ERROR condition and no ERROR ON-UNIT is established.

FORTRAN H Storage Allocation
The FORTRAN H compiler has a new method of obtaining main storage which provides greater flexibility.

FORTRAN Library STAE Support
The FORTRAN Library utilizing the STAE macro gains control in the event of an ABEND situation and performs several functions before the program is terminated.

Linkage Editor/Loader WCON Support
The Linkage Editor and Loader now support the facility to specify within a source language that certain external references are not to be resolved by automatic library call.

PL/I Syntax Check Option
Users of PL/I are able to terminate compilation of their programs after Syntax Checking is completed, according to the severity of errors encountered and the value specified for Syntax Checking termination.

Sort/Merge Support of MCS and I/O RMS
If MCS is present in the system, Sort/Merge will utilize its facilities of message routing. Sort/Merge supports I/O RMS for its workfiles.

COBOL E Support of MCS
The COBOL E compiler has been modified to take advantage of Multiple Console Support when present in the system.

Release Compatibility

An unmodified Release 19 System will be compatible with the equivalent unmodified Release 18 System with the following exceptions:

SYSGEN
The user must allocate an additional utility data set, SYS1.UT4 prior to SYSGEN. This is necessitated by the use of IEBCOPY in SYSGEN.

IEBCOPY
1. The new version cannot be used to reblock track overflow format PDSs.
2. The new version may require an additional work file when copying large PDSs in a minimum size region/partition.

PL/I
The PL/I compiler option 'M91/NOM91' has been replaced by 'OBJIN/OBJOUT'.

IOS
IOS no longer supports burst mode devices on multiplexer channels.

MVT/LCS
1. Users requiring hierarchy Ø storage must explicitly specify an HØ segment through their REGION parameter.
2. The presence of a REGION parameter on the JOB card causes any subsequent EXEC card REGION parameter to be ignored. (Previously there existed an undocumented interaction - hierarchy segments specified on EXEC cards were allocated in addition to those on the JOB card.)

DIDOCS
Since DIDOCS replaces the previous 2250 support, the Display Command List function which was unique to that support is no longer available.

INITIATOR
All user procedures previously specifying PGM=IEFSDØ6Ø to start an initiator should be changed to specify PGM=IEFIIC.

SAM
1. A data set to be retrieved with standard record format (FS, FBS) must have been created as a standard record format data set, otherwise unpredictable results will occur.
2. A Ø13 ABEND will be issued from IGGØ191A if the DCB MACRF field is inconsistent with the OPEN option.

RESET
The RESET command as of Release 19 is keyword dependent as opposed to positionally dependent.

See following pages for basic program material, optional program material, ordering information and additional program material.

BASIC PROGRAM MATERIAL

The following SRL publications and documentation appropriate to the components ordered will be shipped by PID with each initial order. Machine readable material is distributed as indicated below.

Order Number		
GC28-6733-1**		Release 19 Guide
GC33-4000-2		ALGOL Programmer's Guide
GC26-3756-4		Assembler F Programmer's Guide TNL GN33-8075**
GC28-6380-3		COBOL F Programmer's Guide TNLs GN28-0249, GN28-0250, GN28-0265**
GC28-6399-1*		ANS COBOL Programmer's Guide TNL GN28-0408**
GC28-6535-7*		Concepts and Facilities
GC28-6550-8*	1	System Programmer's Guide
GC28-6551-10*	1	Storage Estimates
GC28-6554-8*	1	System Generation
GC28-6628-5*		System Control Blocks
GC28-6631-9*		Messages and Codes
GC28-6691-1*		Operator's Reference
GC28-6670-3*		Programmer's Guide to Debugging
GC28-6692-0**		Operator's Procedure
GC28-6703-0**		Job Control Language User's Guide
GC28-6704-0**		Job Control Language Reference
GC28-6708-3*		Advanced Checkpoint/Restart
GC24-5029-3		COBOL E Programmer's Guide TNLs GN28-0247, GN28-0248, GN28-0264**
GC30-2004-4*		BTAM
GC30-2003-3		QTAM Message Control Processing Program TNL GN30-2532
GC30-2005-2		QTAM Message Control Programs TNL GN30-2526
GC21-5004-1**		1285, 1287, 1288 Data Management Macro Instructions and Services TNL GN21-5124**
GC21-5006-1**		1419/1275 Data Management Macros and Services TNLs GN21-5125, GN21-5127
GC28-6646-3*		Supervisor and Data Management Services
GC28-6647-4*		Supervisor and Data Management Macro Instructions
GC28-6650-3*		On Line Test Executive Program
GC28-6719-0**		OS/360 Service Aids
GC28-6538-8		Linkage Editor and Loader TNL GN28-0272*
GC28-6817-2*		FORTRAN G and H Programmer's Guide TNL GN28-0590**
GC27-6909-5		Graphic Programming Services for IBM 2250 Display Unit TNL GN27-1328**
GC27-6912-7		Graphic Programming Services for IBM 2260 Display Station
GC28-6818-0		FORTRAN Library Sub-Programs TNL GN28-0589**
GC28-6590-2		PL/I Comp. Routines
GC27-6932-3		GSP for FORTRAN IV, COBOL and PL/I TNL GN27-1313
GC26-3709-4		1130 System Introduction
GC26-3717-6*		1130 Programmer's and Operator's Guide
GC26-5929-5*		1130 Subroutine Library
GC27-6937-1		Data Transmission for FORTRAN TNL GN27-1316
GC28-6594-6*		PL/I F Programmer's Guide
GC28-6648-1		TESTRAN
GC30-2006-4*		RJE
GC27-6933-3*		User's Guide for Job Control from the IBM 2250 Display Unit
GC27-6938-1		SGJP User's Guide TNLs GN27-1315, GN27-1330*
GC28-6543-5		Sort/Merge TNLs GN33-8054, GN33-8070**
GC27-6918-3*		Maintenance
GC28-6586-11*		Utility Programs

If only the order number manuals or additional manuals are required, order them from the IBM Distribution Center, Mechanicsburg - - not PID.

Machine Readable: The complete OS/360 is distributed:

For the 2311 User -- On two 2400 foot reels of magnetic tape, either 9-track (800 bpi), or two 7-track (800 cpi Data Conversion feature required), or one 9-track magnetic tape (1600 bpi), or five 1316 Disk Packs.

For the 2314 User -- Two 2400 fool reels of magnetic tape, either 9-track (800 bpi), or two 7-track (800 cpi, Data Conversion feature required), or one 9-track magnetic tape (1600 bpi).

A branch office unable to arrange for tape-to-2316 Disk Pack conversion should contact the regional manager of Programming Systems Marketing for assistance.

Program components may be selected from the following list. Each component for which program documentation and maintenance material is required must appear on the program order form.

ALGOL	360S-AL-531 *
Assembler F	AS-037 *
COBOL F	CB-524 *
ANS COBOL	CB-545 *
Primary Control Program/MFT	CI-505 *
Starter System (2311 SYSRES)	CI-514 *
Starter System (2314 SYSRES)	CI-534 *
MVT	CI-535 *
COBOL E	CO-503 *
Basic Telcom Access Method	CQ-513 *
Queued Telcom Access Method	CQ-519 *
Primary Data Management	DM-508 *
Basic Direct Access Method	DM-509 *
SER 0, SER 1 and EREP for Mods 40, 50, 65, 75	DN-527 *
On Line Test Exec. Program	DN-533 *
Recovery Management Mod/65	DN-539 *
OS/360 Service Aids	DN-554**
Linkage Editor F	ED-521 *
FORTRAN H	FO-500 *
FORTRAN G	FO-520 *
Graphic Program Services	IO-523 *
Index Seq. Access Method	IO-526 *
Loader	LD-547 *
FORTRAN Library	LM-501 *
COBOL E Library	LM-504 *
PL/I F Subroutine Library	LM-512 *
ALGOL Library	LM-532 *
COBOL F Library	LM-525 *
Graphic Subroutine Program	LM-537 *
1130/360 Data Transmission	LM-542 *
ANS Standard COBOL Library	LM-546 *
PL/I F	NL-511 *
TESTRAN	PT-516 *
Remote Job Entry	RC-536 *
Graphic Job Processor	RC-541 *
Satellite Graphic Job Processor	RC-543 *
Report Program Generator	RG-038 *
Sort/Merge	SM-023 *
OS/360 Utilities	UT-506 *
Independent Utilities	UT-507 *

1 Provided with announcement material to OS/360 users of record.

* Change from prior release. ** New with this release.

Ordering Instructions

For new users the branch office must have the Program Order Form (Z120-1957-2). Current users of OS/360 will receive a preprinted Program Order Form and a letter announcing availability of Release 19 instructing them to order the release through the branch office using this form. Complete ordering instructions are provided in the OS/360 Release Guide (GC28-6733-1).

The preprinted order form must contain the program number of each OS/360 component (if being ordered for the first time) that requires program documentation and maintenance material.

Special Note for 2314 Direct Access Storage Facility Users

Tapes will be in the dump/restore format. A 2314 user having two or more 2311 Disk Drives but not tape may order the 2311-resident system using the 1316 Disk Pack as the distribution medium. System configurations which do not include either 2311s or tape must make local arrangements for a system with both 2314 and tape to perform the tape-to-2316 Disk Pack restore operation.

OPTIONAL PROGRAM MATERIAL

The Optional Program Material is distributed with a condensed Symbolic Library. It is available from PID on 9-track magnetic tape (800 or 1600 bpi) or 7-track magnetic tape (800 cpi) with the Data Conversion feature. Magnetic tape is the only distribution media.

The requester may forward or order magnetic tapes following the current ordering procedures in the Branch Office Manual, DP Sales Activity. The external tape label must show the distribution volume number as well as the information required under the current procedures.

Any assemblies done using OS/360 symbolics must have SYSI.MODGEN concatenated to SYSI.MACLIB and SYSI.SYMLIB.MACRO. SYSI.MODGEN contains Stage II SYSGEN macros, some of which are called by other modules in the system.

Note 1: The Sequence Number of the desired file must be placed in the Label Parameter.

The SYSUT2 data set must be a PDS. The space allocated to the PDS must be calculated using the following tables with consideration for the blocking factor desired. When creating a 1316 PDS, many large files will not fit on one disk unless 3360 is used as the blocking factor.

See GI 14.2 for complete information before ordering additional program support material.

Distribution Volume Number	Program Component Name	Program Number
1	PL/I F	360S-NL-511
2	PL/I F	NL-511
3	PL/I Subroutine Library	LM-512
	1130/360 Data Transmission	LM-542
4	FORTRAN G	FO-520
	FORTRAN H	FO-500
	FORTRAN Library	LM-501
5	ANS COBOL	CB-545
	ANS Standard COBOL Library	LM-546
6	COBOL E	CO-503
	COBOL F	CB-524
	COBOL F Library	LM-525
	COBOL Library	LM-504
	ALGOL	AL-531
	ALGOL Library	LM-532
7	Sort/Merge	SM-023
8	Assembler F	AS-037
	Link Editor F	ED-521
	Private Macros	LD-547
	Loader	
	OS/360 Utilities	UT-506
9	TESTRAN	PT-516
	Basic Telecommunication Access Method	CQ-513
	Queued Telecommunication Access Method	CQ-519
	Basic Direct Access Method	DM-509
	Indexed Sequential Access Method	IO-526
10	Graphic Program Service	IO-523
	Graphic Subroutine Program	LM-537
	Primary Data Management	DM-508
11	DNSERX	DN-527
	On-Line Test Executive Program	DN-533
	Recovery Mangement Mod/65	DN-539
	OS/360 Service Aids	DN-554**
12	Primary Control Program	CI-505
13	Primary Control Program	CI-505
	MVT	CI-535
14	Remote Job Entry	RC-536
	Graphic Job Processor	RC-541
	SGJP	RC-543
	Report Program Generator	RG-038

All of the above have been changed with this release.

ORDERING INFORMATION: System Number 360S

Note: Basic machine readable material for this system is ordered by specifying a "System Line" (Columns 1-7, 15-24) and "Component Lines" (Columns 8-12) of the Program Order Form. Enter a separate Component Line for each component desired. Respecify the System Line for each different Program Number Extension.

If your customers are no longer a user of OS, please return the pre-printed order form to PID with a "D" in section 1, Line 1 of column 14. This will help us eliminate unnecessary distribution.

	Program Number Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	2311	MT 7 DC/800	26	02
		MT 9/800	28	02
		MT 9/1600	29	01
		1316	52	05
	2314	MT 7 DC/800	26	02
		MT 9/800	28	02
		MT 9/1600	29	01
Optional†	VOL 1 - VOL 14	MT 7 DC/800	26	01
		MT 9/800	28	01
		MT 9/1600	29	01

† For each program number extension, VOL 1 to VOL 14, that is specified a separate reel of magnetic tape is required.

ADDITIONAL PROGRAM SUPPORT MATERIAL

Program Logic Manuals (available from the IBM Distribution Center, Mechanicsburg)

		Order Number
COBOL E		GY24-5009-1
	TNL	GY28-6385
	TNL	GY28-6398
	TNL	GY28-6393
ALGOL F Compiler		GY33-8000-0
	TNL	GY33-8001
	TNL	GY33-8003
ASSEMBLER E		GY26-3598-0
ASSEMBLER F		GY26-3700-1
	TNL	GY33-8028 **
RPG		GY26-3704-0
	TNL	GY21-0006
	TNL	GY21-0011
Graphic Problem Oriented Routines		GY27-7110-1
Graphic Access Method		GY27-7113-5*
Control Program with MFT		GY27-7128-5*
Graphic Subroutine Package for FORTRAN		GY27-7152-1
Graphic Job Processor		GY27-7159-1*
Data Transmission for FORTRAN		GY27-7161-0
	TNL	GY27-7194
Job Proc. from a Rem. 1130/2250 Subsystem		GY27-7166-0
	TNL	GY27-7192
Mach. Check Handler for Mod 85		GY27-7184-0
	TNL	GN27-1332 **
Mach. Check Handle for Mod 65		GY27-7155-2
	TNL	GN27-1333 **
COBOL F		GY28-6382-2
Sort/Merge		GY28-6597-3
	TNL	GY33-8030 **
FORTRAN E		GY28-6601-2
	TNL	GY28-6383
	TNL	GY28-6819
	TNL	GY28-6827
	TNL	GY28-6828
Sequential Access Method		GY28-6604-3*

* Denotes change with this release. ** Denotes new with this release.

Introduction to Control Program Logic		GY28-6605-4
	TNL	GY28-2392
	TNL	GN28-2422 **
Catalog Management		GY28-6606-2*
	TNL	GN26-8006 **
Direct Access Device Space Management		GY28-6607-6*
Input/Output Support (OPEN/CLOSE/EOV)		GY28-6609-4*
Linkage Editor F		GY28-6667-0
	TNL	GY28-2357
	TNL	GY28-6401
	TNL	GY28-6404 **
TESTRAN		GY28-6611-0
	TNL	GY28-2371
Fixed Task Supervisor		GY28-6612-4
	TNL	GY27-7189
	TNL	GN27-1337 **
	TNL	GY27-7188
Job Management		GY28-6613-5*
Utilities		GY28-6614-6*
Input/Output Supervisor		GY28-6616-6*
Basic Direct Access Method		GY28-6617-4*
Indexed Sequential Access Method		GY28-6618-3
	TNL	GN26-8001 **
FORTRAN G		GY28-6638-1
	TNL	GY28-6826
	TNL	GY28-6829
FORTRAN H		GY28-6642-4*
On Line Test Executive		GY28-6651-2
MVT Logic Summary		GY28-6658-4*
MVT Supervisor		GY28-6659-4
	TNL	GN27-1338 **
MVT Job Management		GY28-6660-5*
Initial Program Loader and Nucleus Initialization Program		GY28-6661-3*
PL/I (F)		GY28-6800-4
	TNL	GN33-6018 **
PL/I (F) Subroutine Library		GY28-6801-5
	TNL	GN33-6017 **
Update Analysis		GY28-7106-0
Basic Telecommunications Access Method		GY30-2001-4*
QTAM		GY30-2002-2
	TNL	GY30-2527
Remote Job Entry		GY30-2005-4*
Master Index		GY28-6717-1*
ALGOL to PL/I LCP		GY33-7006-0
COBOL to PL/I LCP		GY33-7007-0
FORTRAN to PL/I LCP		GY33-7000-0
USA Standard COBOL		GY28-6395-0
	TNL	GN28-0400 **
Loader		GY28-6714-0
	TNL	GY28-2401
	TNL	GY28-6405 **
COBOL to USA Standard COBOL LCP		GY28-6397-0
	TNL	GN28-0401 **
IBM 1285, 1287, 1288 Data Management Device Dependent Macro Instructions and Services		GY21-0013-0**
	TNL	GN21-5123 **
IBM 1419 Magnetic Character Reader and IBM 1275 Optical Reader Sorter Devices Dependent BSAM		GY21-0012-0**
	TNL	GN21-5128 **
IBM 1275 Optical Reader Sorter Devices Dependent BSAM		GY21-0012-0**

* Denotes changed with release.

** Denotes new with this release.

*** Denotes new group codes only; changed with this release.

Program Listings: NOTE CHANGE IN ORDERING. Operating System/360 program listings are available on microfiche by ordering through Mechanicsburg on order form number Z120-1399-2. Use the following group codes in ordering:

	Order Number
S/360 OS Primary Control Programs	GJDI-1010*
S/360 OS Data Management	1013***
S/360 OS Basic Direct Access Method	1014***
S/360 OS OLTEP	1018***
S/360 OS ISAM	1020***
S/360 OS Utilities	1021***
S/360 OS MVT	1012*
S/360 OS Remote Job Entry	1015*
S/360 OS BTAM	1016*
S/360 OS QTAM	1017*
S/360 OS ALGOL Compiler F	1025*
S/360 OS ALGOL Library	1026***
S/360 OS Assembler F	1035*
S/360 OS COBOL Compiler E	1040*
S/360 OS ANS COBOL	1042*
S/360 OS ANS COBOL Library	1043***
S/360 OS COBOL Compiler F	1045*
S/360 OS COBOL F Library	1044*
S/360 OS COBOL Library	1048*
S/360 OS FORTRAN G	1052*
S/360 OS FORTRAN H	1055*
S/360 OS FORTRAN Library	1058*
S/360 OS PL/I Compiler F	1060*
S/360 OS PL/I Library F	1068*
S/360 OS Linkage Editor; Loader	1072*
S/360 OS Linkage Editor F	1075*
S/360 OS SERO, SER1	1076*
S/360 OS Recovery Management	1077*
S/360 OS Sort/Merge	1080*
S/360 OS TESTRAN	1085*
S/360 OS Graphic Programming Services	1090*
S/360 OS Graphic Subroutine Program	1091***
S/360 OS Graphic Job Processor	1093***
S/360 OS Satellite Graphic Job Processor	1092*
S/360 OS Report Program Generator	1095*
S/360 OS Service Aids	1062**
S/360 OS SYSGEN Listing and MODGEN Macros	1099***

PROGRAMMING SERVICE CLASSIFICATION "C" COMPONENTS ORDERING PROCEDURE

Assembler E •

Basic Program Material

Documentation: One copy of Assembler E Programmer's Guide (GC28-6595-2); Assembler E Installation Guide (GC33-4014-0 Including Basic Program Material List.

Machine Readable Material: Object material for Assembler E.

Optional Program Material

Documentation: One copy of the optional program material list.

Machine Readable Material: Source material for Assembler E.

Ordering Information: Program Number 360SAS036

	Program Number Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none
Optional	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none

Linkage Editor E •

Basic Program Material

Documentation: One copy of Linkage Editor and Loader (GC28-6538-8); Linkage Editor and Loader Installation Guide (GC28-6429-0 Including Basic Program Material List).

Machine Readable Material: Object material for Linkage Editor E.

Optional Program Material

Documentation: One copy of the Program Logic Manual (GY28-6601-2) and the Optional Program Material List.

Machine Readable Material: Source material for Linkage Editor E.

Ordering Information: Program Number 360SED510.

	Program Number Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none
Optional	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none

FORTRAN E •

Basic Program Material

Documentation: One copy of FORTRAN E Programmer's Guide (GC28-6603-3); FORTRAN IV Installation Guide (GC28-6430-0 including Basic Program Material List); Basic FORTRAN IV Language (GC28-6629-2).

Machine Readable Material: Object material for Fortran E.

Optional Program Material

Documentation: One copy of the Optional Program Material List.

Machine Readable Material: Source material for FORTRAN E

Ordering Information: Program Number 360SF0092

	Program Number Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none
Optional	none	DTR 7 DC/800	26	none
		DTR 9/800	28	none
		DTR 9/1600	29	none

IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

PROJECT MANAGEMENT SYSTEM/360 VERSION 3 PROGRAM PRODUCT 5734-XP1 MAY NOW BE ORDERED

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any reference made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] Reference made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Version 3 of Project Management System/360 (PMS/360) extends the scope of PMS/360 by offering its users the facility of Resource Allocation.

Resource Allocation is achieved through a fourth processor called the Resource Allocation Processor. This processor is dependent on the other processors of PMS/360, the Network Processor, the Cost Processor and the Report Processor.

No Program Product RPQs will be accepted at this time.

Version 3 of PMS/360 may now be ordered.

On the reverse side is the Program Product Specification sheet which may be reproduced and given to customers.

Monthly Charge ... $300

Programming Service Classification ... B

SE Skill Classification ...SE Services, identified with and related to the installation and use of the IBM Project Management System/360 Version 3 (5734-XP1) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

P70-91A

PROGRAM PRODUCT SPECIFICATION

Project Management System/360 Version 3 (5734-XP1)

The IBM System/360 Project Management System (PMS/360) is a collection of computer program modules that can be combined to form the data processing elements of various management system applications for cost and scheduling planning and control. PMS/360 modules provide for:

- critical path and general cost analyses
- PERT and PERT COST capability
- resource allocation
- flexible report generation

PMS/360 can handle subnets ranging in size from 1,000 activities in a 44K region up to 32,000 in a 1004K region. Up to 253 subnets may be contained in a network and up to a combined total of 254 different networks and subnets can be held on one masterfile. Over 32,000 different resources are allowed and up to 25 resources may be specified per activity. The work breakdown structure allows up to 32,765 charge numbers at each of nine levels.

System Configuration: PMS/360 with the Resource Allocation Processor requires a minimum of 128K bytes of core storage including OS/360 requirements and at least two 2311 Disk Storage Drives. PMS/360, without the Resource Allocation Processor, requires a minimum of 44K bytes of core storage over and above the requirement of OS/360. The standard instruction set and the decimal feature instruction set are used. If the system's output device is a printer, it must have 132 print positions.

I/O Device Requirements: Peripheral devices supported by PMS/360 include all devices supported by OS/360 where QSAM is an accepted access method. PMS is generally device independent. However, in the Report Processor (for cost reports), ORDFILE must be a tape as it is read backwards. Also, in the Resource Allocation Processor, the file QFILE must be on a direct access device. Minimally PMS/360 needs one tape and two direct access devices over and above OS/360 requirements.

Programming Systems: PMS/360 is written in OS/360 Assembler language and operates under the control of OS/360 using QSAM and BDAM data access methods. PMS/360 requires the Sort/Merge and Utilities components of the System/360 Operating System.

Project Management System (5734-XP1): This program, an integrated collection of computer program modules, has been developed to meet the challenging managerial requirements of today's complex research, engineering, and fabrication programs. Projects of all types in construction, special products manufacture, large scale R & D, etc., have been growing incrdibsingly complex. Effective management requires up-to-date knowledge of job status and financial performance. Even more important, management needs to determine the probable schedule and cost impact of contemplated changes in plan. The System/360 PMS provides management with tools needed for making more accurate delivery promises, spotting out-of-line conditions, meeting schedules, and controlling costs. System/360 PMS will help your customers plan and control the use of their valuable resources: man, machines, money, and material.

Incorporated within this system is a comprehensive set of data processing programs that make available to the user some of the most advanced management techniques utilized both by government and industry. Initially the system provides critical path and general cost analyses, PERT and PERT COST capabilities, as well as Resource Allocation. A principal design objective provides a flexible add-on and substitution capability that allows for a growing library of management-oriented routines, and permits the user to tailor the program to the specific requirements of his installation A variety of applications, some far removed from the aerospace and military development projects for which PERT was originally designed, are feasible. Some of these applications are:

In the Manufacturing and Distribution Industries -- network techniques have been used to schedule construction operations, the use of mining equipment, crude petroleum manufacturing, natural gas operations, construction repair and maintenance, pulp mill operations, paper and paperboard manufacturing, book preparation and printing, blast furnace maintenance, and meat packing operations.

In the Science Industries -- network techniques have been used to schedule aerospace research and development projects, test production of biological products, experimentation with drugs, university and college curricula and facilities usage, library operations, and farm planting.

In the Service Industries -- network techniques have been used to schedule freight forwarding operations, terminal and service facilities, power plant operations, bank clearing-house operations, dividend check distribution, insurance report preparation, judicial functions, and urban development.

In Government Accounts -- PERT and PERT/COST are used for internal management control as well as for contractor control. Additional uses include highway design and development, urban renewal, and transportation planning. Of course, these project management techniques are extensively used for controlling the design and implementation of data processing systems in virtually all industries

Description and Features: PMS/360 is a collection of computer program modules that can be combined to form the data processing elements of various management systems applications for cost and schedule planning and control. These modules support critical path analysis, project cost and progress control, and flexible report preparation. Brief descriptions of these application techniques and their salient features are:

PMS/360 - Network Processor -- This processor is the key program module for executing the Program Evaluation and Review Technique (PERT), and other critical path analyses. Developed in 1958 by the Navy Special Projects Office under Admiral William F. Raborn, Jr., PERT has evolved into a versatile management system. Its recommended implementation includes a work-sequencing operation that treats a project as a series of interrelated activities, some can be done in parallel, others must be done serially. A project's work when displayed in this fashion forms a network. The longest time path through this network determines the time required to complete the project. This path is called the critical path. All other paths through the network have some slack with respect to this critical path. The job of project management then becomes one of scheduling both critical and non-critical work so that it takes best advantage of available resources while making the critical path as short as feasible.

PMS/360 is an extremely versatile computer program for implementing pert-type techniques. Its features include variable size data fields . . variable ordering of input elements on data cards ... flexible calendar capable of specifying holidays and vacation periods ... activities can be tagged for work on holidays . . optional use of master files ... networks may contain up to 254 subnets; subnet size ranges from 1,000 to 32,000 activities, depending on core memory, disk memory, the size of other data elements, operating systems, etc., ability to process either the network or the subnet approach to PERT ... ability to accept activity time durations in hours, days, weeks, or months ... nine levels of milestone summarization ... two methods of milestone summarization ... one level of activity summarization that allows the summary activities to be specified explicitly .. a description of up to 99 characters for activities and milestone events that may be subdivided and operated upon in the PMS/360 - Report Processor ... output through the PMS/360 Report Processor can be formatted and tailored to individual needs ... user control of program logic through modular design ... programmed for easy modification.

PMS/360 - Cost Processor -- This program module is a collection of project-oriented manpower, material and cost planning and control subroutines. It can be used in conjunction with PERT, or in a completely separate "companion" application. When used with the other major modules of PMS/360 to implement the DOD/NASA PERT COST technique, it can produce the reports required for internal control and the total management cycle. Its features include an accounting calendar for variable cost period reporting ... rate tables for budgets, actuals, estimates, commitments and obligations ... Charge Number rate tables for application of factors such as general and administrative expenses and special fees ... Nine-level Work Breakdown Structure for product-oriented cost reporting ... Nine-level Organization Breakdown Structure for function-oriented cost reporting ... optional use of master file ... approximately 32,000 charge numbers and organization codes permitted at each level of both the Work Breakdown Structure and the Organization Breakdown Structure ... grouping factors for summary resource reporting ... variable card format ... variable field size for many data elements ... description field for use as a user option ... user control of program logic through the modular design ... programmed for easy modification ... additional "customized" reports possible through the PMS/360 Report Processor.

PMS/360 - Report Processor -- The Report Processor is designed for use in output report preparation for the other PMS/360 modules, or as an independent module within the framework of PMS. Its features include a set of PERT reports (similar to those produced by IBM PERT COST II 7090-CP-02X) ... selected DOD/NASA PERT COST reports ... Resource Allocation reports ... statements that allow a user to define his own reports without the aid of a programmer ... ability to read a wide range of input tapes other than those prepared by other PMS/360 modules ... programmed for easy modification ... arithmetic and logical procedures permit analysis of data to be reported ... selectivity of data for processing.

PMS/360 Resource Allocation Processor -- This processor is a dependent module of PMS/360. It must take its input from the Network Processor and can only produce printed output by means of the Report Processor. The input from the Network Processor gives the earliest and latest dates on which each activity can start if the project is to be finished on time, together with the resources required for each activity and the resources available for the whole project. RAP schedules the actual start of every activity, so that all activities start as soon as possible, commensurate with efficient utilization of specified resource availabilities. By means of the Report Processor the user can then output the scheduled start of any activity, and the utilization of any resource at any time during the project. Its features include: Fixed Time or Fixed Resource scheduling . . secondary levels . . full compatibility with the other processors of PMS/360 . . serial-parallel allocation technique ... allocation for one or more subnets, which may or may not be in the same network ... wide variety of possible priority rules for choosing the most important of a set of activities competing for a resource ... alternative resources . . up to 25 resources per activity (or 18 if each has an alternative) . . activities may be split (stopped and restarted later) . . the time-now clock can be stepped up by any number of time-units, so that approximate schedules can be quickly obtained ... more than 32,000 different resources allowed .. scheduling cut-off at any user-defined date . . cyclic or dated changes in resource levels . . "customized" reports possible through the PMS/360 Report Processor . . regular checkpoint facility.

Customer Responsibility: The user must be familiar with the fundamentals of critical path, PERT, and PERT-COST techniques. Helpful references are given in the PMS/360 Application Description Manual (H20-0690). In addition, users must have access to personnel familiar with OS/360 job control language to install the system in their organization. Thorough reading of the PMS/360 Program Description and Operations Manual is also necessary before attempting implementation.

Programming Systems: PMS is written in OS/360 Assembler Language, operates under the control of OS/360, and uses QSAM and BDAM data access methods and the OS/360 Sort/Merge utility.

System Configuration: PMS/360 with the Resource Allocation Processor will require a minimum of 128K data bytes of core storage including the requirements of OS/360 and at least two 2311 Disk Storage Drives. The Standard Instruction Set and the Decimal Feature Instruction Set are used. If the system's output device is a printer it must have 132 print positions. PMS/360 without the Resource Allocation Processor (a users' choice) will require a minimum of 44K data bytes over and above the requirements for OS/360. For large networks, larger core sizes will result in greatly improved program performance.

I/O Device Requirements: Peripheral devices supported by PMS/360 include all devices supported by OS/360 where QSAM is an accepted access method. Although PMS/360 is device independent, the Management Summary Report supplied by PMS/360 reads a file named ORDFILE backwards. Hence, this file must be assigned to a 9-track tape.

The table below illustrates the core storage and peripheral storage byte requirements for a Network Processor and Report Processor run with one subnet for which a master file is created and detail reports are produced. Input is through a card reader and output is directly on a printer.

No. of Activities in the subnet	Core Required by PMS/360	Peripheral Storage Byte Requirements
1000	44K	700K
3560	108K	2,492K
8680	236K	6,076K
18920	492K	13,244K
32000	1004K	22,400K

Essentially, this table is based on a peripheral storage byte requirement of 700 bytes per activity

Basic Program Product Offering:

Unlicensed Documentation: One copy of PMS/360 Program Description and Operations Manual (H20-0677)

Licensed Machine Readable Material: One copy each of program load modules, sample problems, and assembly macros

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
Order from IBM	9126	7DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel

Price:

Type	Program Number	DPMO	Monthly Charge	Programming Service Classification
5734	XP1	XP1	$300.00	B

Optional Support Package:

Licensed Documentation: One copy each of Network Processor System Manual Feature (#8101) ... Cost Processor System Manual (#8102) ... Report Processor System Manual (#8103) ... Resource Allocation Processor System Manual (#8104) ... Flowchart Manual (#8105) ... Microfiche Listings (#8301).

Licensed Machine Readable Material: One copy of source Listings.

	Feature Number	Track/Density	Description	Quantity
Customer Supplied	7026	7DC/800	2400' MT	1 reel
	7028	9/800	2400' MT	1 reel
	7029	9/1600	2400' MT	1 reel
Order from IBM	7126	7DC/800	2400' MT	1 reel
	7128	9/800	2400' MT	1 reel
	7129	9/1600	2400' MT	1 reel

There will be no charge for the Optional Support Package.

Prices for Additional Copies of Documentation:

Unlicensed Documentation (order from Mechanicsburg, bill customer):

	Use Key	Price/Copy
Program Description and Operations Manual (H20-0677)	D	19.00
Licensed Documentation (order by feature code from PID):		
Network Processor System Manual (#8101) (Y20-0457*)	D	8.20
Cost Processor System Manual (#8102) (Y20-0459*)	D	4.60
Report Processor System Manual (#8103) (Y20-0467*)	D	8.20
Resource Allocation Processor System Manual (#8104) (Y20-0456*)	D	4.70
Flowchart Manual (#8105) (Y20-0460*)	D	22.80
Microfiche Listings (#8301) (Y80-0454*)	D	122.00

*For IBM Internal Use, order by form number.

Related Documentation (available only from Mechanicsburg ... no charge): PMS/360 Application Description Manual (H20-0690) Use Key G.

For further information contact your local Industry Marketing Representative.

IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

LINEAR PROGRAMMING SYSTEM/1130 (LPS/1130) PROGRAM PRODUCT 5711-CO1 READY FOR SHIPMENT

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C. Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Release Date: July 1, 1970

Distribution: Selected European Countries

Linear Programming System/1130 (LPS/1130), Program Product 5711-CO1, is ready for shipment. It provides easy-to-use and easy-to-understand means of solving linear programming problems. LPS/1130 offers many significant advantages over LP-MOSS/1130. Performance is substantially better than LP-MOSS/1130 and, in addition, LPS/1130 will take advantage of additional core storage and input-output devices. Input data for LPS/1130 are compatible with those of LP-MOSS/1130 and LPS/360.

Description ... Mathematical optimization is any mathematical technique for determining the optimum use of various resources -- such as capital, raw materials, manpower, plant, or other facilities -- to attain a particular objective (for example, minimum cost or maximum profit) when there are alternate uses for the resources. Linear programming is the most widely used of these techniques. It is used to allocate, assign, schedule, select, or evaluate the uses of limited resources for such jobs as blending, mixing, cutting, trimming, bidding, pricing, purchasing, planning, and the transportation and distribution of raw materials and finished products.

Configuration Information ... When using the minimum 8K configuration, LPS/1130 has a logical processing capacity for 500 rows; over 600 disk sectors are available for data storage on this single disk system.

LPS/1130 has a logical processing capacity of 1,500 rows on a 16K or larger 1130; 3,120 disk sectors are available for data storage if three disks are used.

Since problem capacity is limited by disk storage space available, more than one disk may be required to process larger problems. For example, many 500 row problems will require two disks, and many 1,500 row problems will require three disks The system scaling procedures and inversion methods are designed to produce accurate, reliable solutions within the limit of a 31-bit mantissa.

Programming System ... The system is written almost entirely in FORTRAN with some Assembler language routines.

Monthly Charge ... $30

Programming Service Classification ... B

SE Skill Classification ... SE Services, identified with and related to the installation and use of the IBM Linear Programming System/1130 (LPS/1130) (5711-CO1) Program Product, are available for a charge at the applicable skill classification rate as determine; by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

P70-91B

PROGRAM PRODUCT SPECIFICATION

Linear Programming System/1130 (LPS/1130) Program Product 5711-C01

LPS/1130 is composed of procedures which are stored on disk. Use of these procedures is governed by procedure control cards which specify the execution sequence. LPS/1130 procedures provide for:

- Solution of Linear Programming (LP) problems with bounded variables and range constraints.
- Specification of a starting solution basis.
- Discrete parametric analysis of all problem data.
- Determination of Activity-Cost-Bound relationships for all variables.
- Combination of problems to form master problems.

LPS/1130 has a logical processing capacity of 500 rows on an 8K 1130 and 1,500 rows on a 16K or larger 1130. Other factors limiting actual problem capacity are the amount of disk storage available, arithmetic accuracy, and time required to solve large problems.

Input data may originate on cards and be stored on disk for subsequent processing. A disk may contain one or more problems, which can be updated and rerun. Disk-stored data can be referenced for new-problem preparation. A problem may contain alternate objectives and may include alternate sets of problem bounds.

Input data to LPS/1130 are compatible with those of LP-MOSS/1130 and LPS/360.

Output reports are available on cards or printer. Output options include a solution report, a solution analysis report, and parametric reports.

LPS/1130 execution requires at least an 1130 Model 2B (8,192 core storage and one disk storage device) and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader
- 1134 Paper Tape Reader

LPS/1130 system generation and maintenance requires at least an 1130 Model 2B and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader and 1442 Card Punch Model 5
- 2501 Card Reader and 1442 Card Read Punch Model 6 or 7

The 1130 system used to generate LPS/1130 must have at least as much core storage and at least as many disk storage drives as the 1130 system on which LPS/1130 will be used.

A paper-tape-only configuration may not be used for system generation and maintenance. To run the sample problem on a paper-tape-only LPS/1130 system, the cards must be put on paper tape. To do this a 1055 Paper Tape Punch is required in addition.

Compilation of LPS/1130 source decks requires at least an 1130 Model 2B and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader

LPS/1130 can use up to 32,768 words of core storage and up to three disk storage drives. LPS/1130 can also use an 1132 Printer, 1403 Printer, 1442 Card Punch Model 5, and a 1055 Paper Tape Punch.

LPS/1130 versions can be generated for three core sizes: 8K, 16K, and 32K (K=1,024). When executing, LPS/1130 uses all of the core for which it was generated, except for the amount used by the 1130 Monitor. The programs for the 16K and 32K versions use the same amount of core as the programs for the 8K version (except for several programs which use locals on the 8K version). The extra core on the 16K and 32K versions is used for larger data storage.

The source language of LPS/1130 is primarily FORTRAN with some Assembler Language routines. LPS/1130 operates under the control of the IBM Disk Monitor System Version 2.

Linear Programming System (5711-CO1): The Linear Programming System/1130 (LPS/1130) provides 1130 Disk Monitor Version 2 users with a simple, easy-to-use and easy-to-understand means of solving linear programming problems. It offers many significant advantages over LP-MOSS/1130. Performance is substantially better than LP-MOSS/1130 and, in addition, LPS/1130 will take advantage of additional core storage and input-output devices. Input data for LPS/1130 are compatible with those of LP-MOSS/1130 and LPS/360.

Description: Mathematical optimization is any mathematical technique for determining the optimum use of various resources to attain a particular objective (such as minimum cost or maximum profit) when there are alternate uses for resources. Linear programming is the most widely used of these techniques and has been used to allocate, assign, schedule, select, or evaluate the uses of limited resources for such jobs as blending, mixing, cutting, trimming, bidding, pricing, purchasing, planning, and the transportation and distribution of raw materials and finished products.

LPS/1130 has a logical processing capacity for 500 rows on an 8K 1130 and 1,500 rows on a 16K or larger 1130. Since problem capacity is limited by disk storage space available, more than one disk may be required to process larger problems. For example, many 500 row problems will require two disks, and many 1,500 row problems will require three disks. Problem size is also limited by the arithmetic accuracy of the 1130

Features: Large problem capacity (500 rows on an 8K 1130 and 1,500 rows on a 16K or larger 1130) ... flexible processing control (optional conditional control of processing sequence) ... simple problem definition (easy-to-use format and extensive data maintenance functions, specifications of starting solution basis, combination of problems to form master problems) ... advanced mathematical methods -- automatic iterative input scaling for accuracy, revised simplex method (product form of inverse), bounded variable feature for range ($\leq$ and $\geq$) constraints and bounded variables to simplify problem description and to increase problem capacity and solution speed ... multiple pricing ... efficient triangularization inversion method for accuracy ... extensive post optimal analysis options (discrete parametric analysis for all problem data and activity-cost-bound relationships for all variables) ... extensive checking (input check for duplicate entries, solution processing check to test for need of early inversion and automatic solution check).

Use: LPS/1130 is governed by procedure control cards which specify the solution sequence. Input data may originate on cards and be stored on disk for subsequent processing. Several problems may be stored on the disk and updated, rerun, or combined. For example, a corporate model can be formed from divisional models or a total production plan from the plans for individual products.

Reports may be on cards or printer. Output options include a full solution report, a solution analysis report, and parametric analysis reports

Special Sales Information: On a minimum 1130 System (8K, 1 disk, 3.6 microsec), LPS/1130 is generally 1.5 to 2.0 times faster during the optimization phase than LP-MOSS/1130 for all but very small problems (under 30 rows). Further improved performance over the minimum system can be gained by the use of faster core (2.2 microsec), larger core sizes (16K or 32K), or more disks. Further details on LPS/1130 timing can be found in the Timing Estimates section of the LPS/1130 Application Description Manual or the LPS/1130 Program Description Manual.

To use the LPS sample problem for a short demonstration see the Time Requirements for Generation section in the LPS/1130 Operations Manual.

To process the optional machine readable tape (source code) a System/360 with one 2400 series tape drive is required.

Customer Responsibility: A working knowledge of the 1130 Disk Monitor System Version 2 is recommended for installation. Since the LPS documentation is written in a tutorial fashion, little mathematical background or linear programming experience is needed.

Programming Systems: The source language of LPS/1130 is primarily FORTRAN with some Assembler Language routines. LPS/1130 operates under the control of the IBM 1130 Disk Monitor System Version 2.

Machine Configuration: LPS/1130 execution requires at least an 1130 Model 2B (8,192 core storage and one disk storage device) and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader
- 1134 Paper Tape Reader

LPS system generation and maintenance requires at least an 1130 Model 2B and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader and 1442 Card Punch Model 5
- 2501 Card Reader and 1442 Card Read Punch Model 6 or 7

The 1130 system used to generate LPS must have at least as much core storage and at least as many disk storage drives as the 1130 system on which LPS will be used.

A paper-tape-only configuration may not be used for system generation and maintenance. To run the sample problem on a paper-tape-only LPS system, the cards must be put on paper tape. To do this a 1055 Paper Tape Punch is required in addition.

Compilation of LPS source decks requires at least an 1130 Model 2B and one of the following:

- 1442 Card Read Punch Model 6 or 7
- 2501 Card Reader

LPS can use up to 32,768 words of core storage and up to three disk storage drives. LPS can also use an 1132 Printer, 1403 Printer, 1442 Card Punch Model 5, and a 1055 Paper Tape Punch.

The recommended 1130 system for good performance and easy operation includes a Model 2C (16,384 core storage and one disk storage device), a 2310 Disk Storage Device Model B1, a 1442 Card Read Punch Model 6 or 7 (or a 2501 Card Reader) and an 1132 Printer (or a 1403 Printer).

LPS versions can be generated for three core sizes: 8K, 16K and 32K (K=1,024). When executing, LPS uses almost all of the core for which it was generated, except for approximately 530 words used by the 1130 Monitor. The programs for the 16K and 32K versions use the same amount of core as the programs for the 8K version (except for several programs which use locals on the 8K version). The extra core on the 16K and 32K versions is used for larger data storage.

Basic Program Product Offering

Basic Licensed Program Product Machine Readable: One copy machine readable material consisting of Object Program Load Modules, Mainline Source Programs, and Sample Problem available on one 2315 Disk Cartridge.

Basic Unlicensed Program Product Documentation: One copy Program Description Manual (H20-0633) ... One copy Operations Manual (H20-0637) with TNL (N20-2037).

General Product Documentation: One copy Application Description Manual (H20-0562-1) with TNL (N20-2033.

	Feature No.	Track Density	Description
Order from IBM	7014	9/800	2400' reel

Prices:

Type	Program No.	DPMO	Programming Service Class.	Monthly Charge
5711	CO1	CO1	B	$30

Additional Documentation:

Licensed Documentation

Systems Manual (Feature No.8806) (Y20-0445)*
Compilation/Assembly Listings
(Feature No. 8807) (Y20-0438)*

Unlicensed Documentation (order from IBM Distribution Center, Mechanicsburg, and bill customer).**

	Selling Price/Copy
Program Description Manual (H20-0633).	$ 3.55
Operations Manual (H20-0637).	1.15

Reference Material: Introduction to Linear Programming (E20-8171) ... Aluminum Alloy Blending (E20-0127) ... Electric Arc Furnace Steelmaking Manual (E20-0147)... Feed Manufacturing (E20-0148) ... Ice Cream Blending (E20-0156) ... Blast Furnace Burdening (E20-0160) ... Cotton Blending (E20-0164) ... Gasoline Blending (E20-0168) ... Linear Programming System/360 Application Description Manual (H20-0613).

For further information contact your Scientific Marketing Representative.

* Order by form number for IBM Internal Use Only.

IBM World Trade Data Processing

Program Product Announcement

THREE MANUFACTURING INDUSTRY PROGRAM PRODUCTS READY FOR SYSTEM/360 USERS

- Capacity Planning - Infinite Loading 5736-M11
- Capacity Planning - Finite Loading 5736-M12
- Requirements Planning Interface 5736-M13

CAPACITY PLANNING - INFINITE LOADING produces a manpower and machine load report that projects hours required by time period for each work center. It determines load hours without regard to available capacity - called "infinite capacity loading." The program highlights potential production bottlenecks, but makes no attempt to correct overload or underload conditions.

CAPACITY PLANNING - FINITE LOADING handles infinite loading plus adjusting order start dates to resolve overload and underload conditions - called "scheduling to finite capacity."

REQUIREMENTS PLANNING INTERFACE is used with a Type II program, Requirements Planning, to create the connection records for Capacity Planning - Finite Loading.

• • •

For Highlights, Prices, Marketing Compensation Plan, and other details, turn the page.

No RPQs will be accepted at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Capacity Planning - Infinite Loading (5736-M11), Capacity Planning - Finite Loading (5736-M12), and Requirements Planning Interface (5736-M13) Program Products, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... These Program Products will not be provided in Test Centers free of charge for customer use during testing.

John Fahey
WTC Director of DP Marketing

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970

Distribution: Australia, Canada, New Zealand, Selected European Countries and South Africa.

P70-9[illegible]

System/360 Capacity Planning - Infinite Loading

The Capacity Planning - Infinite Loading produces a manpower and machine load report that projects hours required by time period for each work center. It determines load hours without regard to available capacity (called infinite capacity loading). The program highlights potential production bottlenecks but makes no attempt to correct overload or underload conditions.

Highlights:

- Calculates setup, labor or machine hours for each planned and open order and loads these hours by time period.
- Highlights overloaded and underloaded work centers with easy to read graphical output reports.
- Allows the number and size of time periods to be varied.
- Allows work center capacities to be varied.
- Permits move and queue times to be furnished in several ways.
- Provides for operations to be overlapped for work centers which generally operate in this manner.
- Provides a load analysis report which identifies those work centers which are very lightly loaded or heavily overloaded.
- Optionally interfaces with S/360 Shop Floor Control (5736-M31) data files for information on partially completed orders.

Monthly Charge ... $75

Programming Service Classification ... B

The Program Product Specifications (GH20-4014) are available from Mechanicsburg; each branch office has been sent a limited supply.

For other details, see the program product section of the sales manual (PPA 360.20).

Basic Material:

Unlicensed Documentation: One copy each of the Program Description Manual (SH20-0796) ... Operations Manual (SH20-0795) ... Program Product Specifications (GH20-4014).

Licensed Machine Readable Material: One copy of Machine Readable Material consisting of source code plus a sample problem available on one magnetic tape or disk pack (2311 users).

To order the basic material, select one of the following specify numbers:

	Specify No.	Track/Density	Description	Qty.
Customer Supplied	9026	7 DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
	9052	1316	Disk Pack	
Order from IBM	9126	7 DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel
	9152	1316	Disk Pack	

Charge:

Type	Program & DPMO Number	Programming Svc. Classification	Monthly Charge
5736	M11	B	$75

Related Optional Material (no additional charge): To order, use feature 7040.

Licensed Documentation: One copy of Systems Manual (LY20-0535).

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form No.	Single Charge/Copy
System Manual	8021 (LY20-0535)*	$4.90

Unlicensed Documentation:

	Selling Price/Copy
Program Description Manual (SH20-0796)**	$6.60
Operations Manual (SH20-0795)**	1.60

General Documentation (order from Mechanicsburg): Application Description Manual (GH20-0627).

Reference Material (order from Mechanicsburg): Production Information and Control System (GE20-0280) ... System/360 Bill of Material Processor - Application Description Manual (GH20-0197) ... System/360 Bill of Material Processor, Programmer's Manual (GH20-0246) ... System/360 Requirements Planning - Application Description Manual (GH20-0487) ... System/360 Requirements Planning Program Description Manual (GH20-0584).

*For customer use, order by feature number from Area Program Library; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg; customer will be billed by Mechanicsburg through AOO.

System/360 Capacity Planning - Finite Loading

The Capacity Planning - Finite Loading program adjusts order start dates to resolve overload and underload conditions (i.e., scheduling to finite capacity). Output consists of realistic start dates depending on capacity and material availability.

The material availability is determined by a technique called single level pegging.

The program has similar capabilities as System/360 Capacity Planning - Infinite Loading (5736-M11).

Highlights:

- Calculates the earliest order start date based on raw material availability or availability of lower level orders.
- Calculation of order priorities to allow more important orders to be scheduled first.
- Loading based on one of several finite loading techniques.
- Rerouting of work to alternate or substitute work centers if overloads are encountered.
- Compression of transit times to meet original order schedule.
- Selection by the user of scheduling options that contribute to less work in process or more on-schedule deliveries.
- Optionally interfaces with S/360 Shop Floor Control (5736-M31) data files for information on partially completed orders.

Monthly Charge ... $225

Programming Service Classification ... B

The Program Product Specifications (GH20-4013) are available from Mechanicsburg; each branch office has been sent a limited supply.

For other details, see the program product section of the sales manual (PPA 360.21).

Basic Material:

Unlicensed Documentation: One copy each of Program Description Manual (SH20-0796) ... Operations Manual (SH20-0795) ... Program Product Specifications (GH20-4013).

Licensed Machine Readable Material: One copy of Machine Readable Material consisting of source code plus a sample problem available on one magnetic tape or disk pack (2311 users).

To order the basic material, select one of the following specify numbers:

	Specify No.	Track/Density	Description	Qty.
Customer Supplied	9026	7 DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
	9052	1316	Disk Pack	
Order from IBM	9126	7 DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel
	9152	1316	Disk Pack	

Charge:

Type	Program & DPMO Number	Programming Svc. Classification	Monthly Charge
5736	M12	B	$225

Related Optional Material (no additional charge): To order, use feature 7040.

Licensed Documentation: One copy of Systems Manual (LY20-0536).

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form No.	Single Charge/Copy
System Manual	8022 (LY20-0536)*	$12.50

Unlicensed Documentation:

	Selling Price/Copy
Program Description Manual (SH20-0796)**	$6.60
Operations Manual (SH20-0795)**	1.60

General Documentation (order from Mechanicsburg): Application Description Manual (GH20-0627).

Reference Material (order from Mechanicsburg): Production Information and Control System (GE20-2080) ... System/360 Bill of Material Processor - Application Description Manual (GH20-0197) ... System/360 Bill of Material Processor - Programmer's Manual (GH20-0246) ... System/360 Requirements Planning - Application Description Manual (GH20-0487) ... System/360 Requirements Planning Program Description Manual (GH20-0584).

*For customer use, order by feature number from Area Program Library; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg; customer will be billed by Mechanicsburg through AOO.

System/360 Requirements Planning Interface

The System/360 Requirements Planning Interface program is an extension of the System/360 Requirements Planning, a Type II program which mechanizes the approach to detailed requirements planning for many manufacturing customers. This extension creates connection records used by System/360 Capacity Planning (5736-M12) to link component orders with parent orders.

Customers planning to use S/360 Requirements Planning must order 360A-MF-05X. Customers planning to use S/360 Capacity Planning - Finite Loading (5736-M12) must order 5736-M13 in addition to program 360A-MF-05X.

Additional information regarding the connection record facility is in the System/360 Capacity Planning Application Description Manual (GH20-0627 and TNL GN20-2016). This manual updates the System/360 Requirements Planning Application Description Manual (GH20-0476).

Monthly Charge ... $25

Programming Service Classification ... B

Specifications (GH20-4012) are available from Mechanicsburg; each branch office has been sent a limited supply.

For more details, see the program product section of the sales manual (PPA 360.19).

Basic Material:

Unlicensed Documentation: One copy each of the Program Description Manual (SH20-0790) ... Operations Manual (SH20-0791) ... Program Product Specifications (GH20-4012).

Licensed Machine Readable Material: One copy of Machine Readable Material consisting of source code.

To order the basic material, use specify number 9015 (cards).

Charge:

Type	Program & DPMO Number	Programming Svc. Classification	Monthly Charge
5736	M13	B	$25

Related Optional Material (no additional charge): To order, use feature 7040.

Licensed Documentation: One copy of Systems Manual (LY20-0537).

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form No.	Single Charge/Copy
System Manual	8023 (LY20-0537)*	$1.10

Unlicensed Documentation:

	Selling Price/Copy
Program Description Manual (SH20-0790)**	$1.20
Operations Manual (SH20-0791)**	.55

General Documentation (order from Mechanicsburg): Application Description Manual (GH20-0487).

Reference Material (order from Mechanicsburg): Production Information and Control System (GE20-0280) ... System/360 Bill of Material Processor - Application Description Manual (GH20-0197) ... System/360 Bill of Material Processor, Programmer's Manual (GH20-0246) ... System/360 Requirements Planning - Application Description Manual (GH20-0487) ... System/360 Requirements Planning Program Description Manual (GH20-0584) ... TNL GN20-2016, which updates System/360 Requirements Planning Application Description Manual.

*For customer use, order by feature number from Area Program Library; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg; customer will be billed by Mechanicsburg through AOO.

1130 CHARGE MATERIALS ALLOCATION PROCESSOR (CMAP) PROGRAM PRODUCT 5711-P11 MAY BE ORDERED

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

The 1130 Charge Materials Allocation Processor (1130 CMAP), program product 5711-P11, may be ordered. It provides a means for foundries and other metal melting facilities to achieve significant savings by calculating a least-cost initial charge of raw materials for the furnace.

Users ... Potential users include both ferrous and nonferrous foundries which have a wide variety of raw materials (blend to a wide variety of metallurgical specifications) or have rigid metallurgical tolerances.

Here's how it works ... An input translator accepts problem data in formats familiar to melt shop personnel, and then uses the Linear Programming System/1130 (LPS/1130), program product 5711-CO1, for calculation. The output writer prints problem solutions in formats planned for easy use by foundry personnel. An inventory control option permits automatic updating of inventory data on the disk.

Advantages to Users ... This program aids in minimizing the cost of initial charges, evaluating operating practices, purchasing more economically, establishing a materials inventory policy ... and it is easy to use.

Monthly Charge ... $20

Programming Service Classification ... B

SE Skill Classification ... SE Services, identified with and related to the installation and use of the IBM 1130 Charge Materials Allocation Processor (CMAP), Program Product 5711-P11, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

On the reverse side is the Program Product Specification sheet which may be reproduced and given to customers. More information is in the sales manual write-up on the inside page.

No RPQs will be accepted at this time.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

Charge Materials Allocation Processor (1130 CMAP) Program Product (5711-P11)

CMAP is composed of procedures which are stored on disk. Use of these procedures is controlled by procedure control cards (prepared by the user) specifying the execution sequence.

CMAP procedures use the subroutines and programs of LPS/1130 (program product 5711-CO1). No modification of LPS/1130 is required and none is made by CMAP. The procedures of LPS/1130 may be called independent of CMAP execution.

CMAP procedures provide for generation of a raw material inventory file and the storing of this file on disk ... data maintenance of the material file stored on disk including modification of stored data, addition of new data and deletion of data no longer needed ... generation of data files representing heat or target specifications and the storing of these files on disk ... modification of disk stored heat specification data ... calculation of a least-cost initial furnace charge using the data of the material file and the data of one heat specification ... automatic adjustment of inventory amounts following a successful charge calculation ... automatic rounding of solution amounts to the nearest multiple of weighing units specified by the user for each raw material ... minor user modification to solution amounts after rounding has been performed ... automatic calculation of successive charges for the same heat specifications, each calculation using an inventory that has been adjusted for previous charges.

CMAP has the logical processing limits of 20 chemical elements in the material file and the heat specification files ... 51 raw material weight constraints, specifying the constraint in pounds ... 20 raw material weight constraints, specifying the constraint in percentage of total charge weight ... 20 percentage constraints on simple linear combinations of elements or materials to be used in the charge.

The other factor limiting problem capacity is the amount of disk storage available for data storage and calculation processing.

Input data may originate on cards or from the console keyboard. A disk may contain *one* material file and one or more heat specification files. Output reports are available on the console printer or line printer. Output options include reports on data included in the material file and in the heat specification files, least-cost charge reports including a report on the chemical analysis of the least-cost charge, rounded solution reports including a report on the chemical analysis of the rounded charge, a charge specification report and a report on material usage.

CMAP *execution* requires at least an 1130 Model 2B (8,192 core storage and one disk storage device) and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

LPS-CMAP system generation and maintenance require at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7, one 2501 Card Reader and 1442 Card Punch Model 5, or one 2501 Card Reader and 1442 Card Read Punch Model 6 or 7.

The 1130 system used to generate LPS-CMAP must have at least as much core storage and at least as many disk storage drives as the 1130 System on which CMAP will be used.

A configuration recommended for flexibility, ease of generation and operation, and improved performance consists of an 1130 Model 2B, a 1442 Card Read Punch Model 6 or 7, and an 1132 Printer.

Compilation of CMAP source decks requires at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

CMAP will run on a system with up to 32,768 words of core storage. Additional disk storage (up to a total of three disk storage drives) and the 1403 Printer may be used. Additional core storage, above the 8,192-word minimum, is used only by LPS/1130 and results in only a slight improvement in the performance of CMAP. Use of an additional disk storage drive will allow more efficient storage of programs and data. Addition of a third disk storage drive may be made, but does not result in significant improvement in CMAP performance. Minor modifications to the CMAP system generation and execution procedures are required when using additional disk storage or the 1403 Printer. A 2315 Disk Cartridge must be dedicated to the CMAP-LPS system.

The source language of CMAP is FORTRAN. CMAP operates under the control of the IBM Disk Monitor System Version 2 and uses the subroutines and programs of LPS/1130 (program product 5711-CO1) which must be ordered separately.

Programming Service Classification is B.

Charge Materials Allocation Processor (5711-P11): The Charge Materials Allocation Processor (CMAP) provides a means for ferrous and non-ferrous foundries and other metal melting and blending facilities to achieve significant savings by calculating a least-cost initial charge of raw materials for a melting furnace. This program is particularly useful to foundries and other metal melting operations which have a wide variety of raw materials (blend to a wide variety of metallurgical specifications) or have rigid metallurgical tolerances.

Description: There may be many possible combinations of raw materials which may be used to produce metal to given metallurgical specifications. CMAP determines which combination of raw materials results in the lowest cost initial furnace charge, consistent with good operating practice and meeting the metallurgical specifications input by the user.

A linear programming technique is used to solve the problem by calling the routines of the Linear Programming System/1130 (LPS/1130), program product 5711-C01. An input translator accepts the problem data in a format familiar to and convenient for metallurgists and melt shop personnel. An output writer prepares and prints reports in a format familiar to foundry personnel.

The program may be executed as often as necessary to analyze the effect of changes in materials, costs, and specifications, providing data not readily available through manual calculations. An inventory control feature of CMAP will maintain raw material inventory data, giving a user the first phase of an inventory control system.

Features:

- Minimize the cost of initial charges
- Purchase more economically
- Evaluate operating practices
- Establish a material inventory system
- Use terminology familiar to the user

Customer Responsibility: A basic knowledge of the generation and operation of 1130 Disk Monitor System Version 2 is recommended for ease of CMAP installation. Both 1130 Disk Monitor System Version 2 and Linear Programming System/1130 (program product 5711-C01) must be ordered separately.

Use: The user of an installed CMAP system does not need to be well experienced with computers or linear programming techniques to use the basic features of CMAP.

Input to CMAP consists of a description of the chemical content of each raw material, the cost of each raw material, the available amount of each raw material, and the metallurgical specifications and the weight of the heat to be melted.

A solution is calculated and reports may be printed for the user expressing the solution in shop terminology. The customer may make certain adjustments to fit his special operation practices, if necessary. The adjustments are analyzed by CMAP and additional reports prepared showing the effect of the adjustments. Materials used in the solution may be automatically deducted from the inventory file on disk.

Programming Systems: The source language of CMAP is FORTRAN. CMAP operates under the control of the IBM Disk Monitor System Version 2 and uses the subroutines and programs of LPS/1130 (program product 5711-C01).

Machine Configuration: CMAP execution requires at least an 1130 Model 2B (8,192 core storage and one disk storage device) and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

LPS/1130-CMAP system generation and maintenance require at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7, one 2501 Card Reader and 1442 Card Punch Model 5, or one 2501 Card Reader and 1442 Card Read Punch Model 6 or 7.

The 1130 system used to generate LPS-CMAP must have at least as much core storage and at least as many disk storage drives as the 1130 system on which CMAP will be used.

A configuration recommended for flexibility, ease of generation and operation, and improved performance consists of at least an 1130 Model 2B, a 1442 Card Read Punch Model 6 or 7, and an 1132 Printer.

Compilation of CMAP source decks requires at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

To list or punch the optional machine readable material for CMAP (source code tape), a System/360 with one 2400 series tape drive is required.

CMAP will run on a system with up to 32,768 words of core storage. Additional disk storage (up to a total of three disk storage drives) and the 1403 Printer may be used. Additional core storage, above the 8,192-word minimum, is used only by LPS/1130 and results in only a slight improvement in the performance of CMAP. Use of an additional disk storage drive will allow more efficient storage of programs and data. Addition of a third disk storage drive may be made, but does not result in significant improvement in CMAP performance. Minor modifications to the CMAP system generation and execution procedures are required when using additional disk storage or the 1403 Printer. A 2315 Disk Cartridge must be dedicated to the CMAP-LPS system.

When installed on a minimum 8K system, several CMAP programs require the use of the LOCAL and SOCAL facility of the Disk Monitor System due to core requirements. Increase in the core requirements of either 1130 Disk Monitor or LPS/1130 may require additional CMAP LOCALS. Instructions regarding these additional LOCALS will be provided, as required, in the form of a modification change letter for CMAP.

Basic Program Product Offering:

Unlicensed Documentation: One copy Program Description Manual (H20-0687) ... one copy Operations Manual (H20-0688) and TNL (N20-2115).

Licensed Machine Readable Material: One copy each of monitor system control cards, object program load modules, and sample problem.

Specify Number	Description
9015	Cards

Price:

Type	Program Number	DPMO	Monthly Charge	Programming Service Classification
5711	P11	P11	$20.00	B

Optional Support Package:

Licensed Documentation: One copy System Manual (Feature #8801) and one Compilation Listing Manual (Feature #8802).

Licensed Machine Readable Material: One copy of source decks.

Feature Number	Track/Density	Description
7001	9/800	1 DTR

There will be no additional charge for the Optional Support Package.

Prices for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Use Key	Single Charge/Copy
8801 Y20-0468*	L	$11.50
8802 Y20-0469*	L	10.00

*For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

Unlicensed Documentation (order from Mechanicsburg):

	Use Key	Price/Copy
Program Description Manual H20-0687, Operations Manual (H20-0688)	G	$2.40
TNL (N20-2115)	S	2.10

Related Documentation (available from Mechanicsburg, no charge): Application Description Manual (H20-0546-1) Use Key G.

Reference Material: Introduction to Linear Programming (E20-8171) ... Aluminum Alloy Blending (E20-0127) ... Electric Arc Furnace Steelmaking Manual (E20-0147) ... Linear Programming System/1130 Application Description Manual (H20-0562) ... Linear Programming System/1130 Program Description Manual (H20-0633) ... Linear Programming System/1130 Operations Manual (H20-0...

For further information see Process Industry Marketing representative.

Publication Support: The availability of the publications will be announced in a future Publications Release Letter. Initial DAPS quantities will be shipped at that time and additional copies will be made available at the IBM Distribution Center, Mechanicsburg, Penna.

IBM World Trade Data Processing

Program Product Announcement

MISP VERSION 2 READY FOR SHIPMENT

• Program Product 5736-H11

Medical Information Systems Program (MISP Version 2) is ready for shipment. MISP is a data communications interface between Disk Operating System/360 and user-written application programs. It meets the requirements of most on-line, real-time medical systems.

• • •

System generation options provide the user with the ability to tailor this data base/data communications program to the operating environment. Special support for implementing a hospital information system can be selected at generation time.

MISP provides ...

- A highly responsive data communications executive requiring minimal teleprocessing knowledge.
- A comprehensive set of macros for application programs to communicate service requests to the executive.
- A comprehensive set of macros to build interpretive tables for control of the 2760 Optical Image Unit and an application program to interpret the tables.
- Macros to implement a wide range of common application program functions.
- Various system utilities to facilitate file generation and maintenance.

Major Functions of the MISP Executive are ...

- Terminal management.
- File management.
- Multiple application program execution areas.
- Resident and transient application program management.
- System initiation, termination and suspension.
- Time management.
- Program check protection.

Monthly Charge ... $50.

Programming Service Classification ... B

Specifications (GH20-4019) are available from Mechanicsburg; each branch office has been sent a limited supply.

No RPQs will be accepted at this time.

For detailed information, see the reverse side.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM MISP Version 2 (5736-H11) Program Product, are available for a charge at the applicable skill classification rate as determined by the host system or its system operations environment. (See Sales Manual SE Section 2 for details.)

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

Medical Information Systems Program (MISP) Version 2 (5736-H11): MISP is a data communications interface between the Disk Operating System/360 and user written application programs with functions, selectable at generation time, to facilitate implementation of a medical management or hospital information system. MISP, which is distributed as assembler language source modules and macros, provides the user with the facilities to generate a system configuration applicable to the environment in which the system is to operate, a macro facility through which to communicate application program service requests, a macro facility to aid in implementing application program functions, a macro facility to generate interpretive tables for control of the 2760 Optical Image Unit, an interpretive application program to use the tables so generated and system utilities to facilitate file generation and maintenance.

MISP provides:

- A data communication executive that requires minimal teleprocessing knowledge.
- Macro facilities for message processing programs (application programs) to communicate service requests to the executive.
- Macro facilities to build interpretive tables for control of the 2760 Optical Image Unit.
- An application program to interpret the 2760 interpretive tables.
- A set of system application programs for system control and general use.
- Library macros to implement a wide range of common application program functions.
- System utilities to facilitate file generation and maintenance.
- Ability to have multi-thread operation with resident or transient application programs.

The MISP executive includes the following facilities:

- Terminal Management - provides polling and addressing of terminals as specified by the user at generation, as well as user requested reading and writing. Testing is facilitated by the ability to place a terminal in a test status, allowing updates of only test data sets and redirection to the entering station of all messages that would normally be transmitted to other stations.
- Time Management - provides the ability to initiate programs based upon time of day, monitors application program execution intervals, allows suspension of system operations during slack periods and controls polling intervals for stations being time-polled.
- File Management - provides a data base control facility requiring minimal knowledge of the features of a data set to be built into application programs. This function allows direct access of data base records by relative location or an identification number.
- Program Check Protection - the executive intercepts all program checks and provides for the application program to continue operation or be terminated.
- System initialization, termination and suspension - provides for opening of all assigned devices, lines and data sets with an initial message to all stations. Allows operator control of system termination or suspension.
- Program Management - provides for initiation of standard application programs on a time basis, or to process messages and specification of program initiation sequence by application programs based upon programmed decisions. The application programs may be defined as resident or transient and may execute in one or more application program execution areas. Protection against simultaneous update of files and intermixing of unsolicited messages to terminals are not provided.

Use: In planning the successful implementation of an information system, a prerequisite is that the users understand the complexity of system design and be prepared to develop solutions to problems inherent in such an undertaking. Most information systems incorporate three major equipment elements. They are -- (1) terminals through which inquiry and order data are passed, (2) communication facilities for the transmission of the data, and (3) a communication-oriented central computer with large direct access storage and transmission capabilities. Quite often, external characteristics, such as variable input rate of messages, multiple input message types, fast response to terminal inputs, and priority for message processing needs, place additional requirements on the system.

In the past, the user has had to design and program a control system with these characteristics. The MISP will virtually eliminate this requirement. Control system design is accomplished by selecting a group of modules during a system generation process, and control system programming is reduced to the writing of macro instructions.

The MISP is a group of program modules selected by the user during system generation procedure. Communication between the user and the control system is via macro instructions that are expanded during program assembly.

The activity within the central processing system is triggered by the data from the terminals on the system or the user generated Time-Call Table. All user-written processing program requests for additional terminal and file read-writes and system services are processed by DOS/360 through the MISP.

The control system is designed to handle system requests that the user-written processing programs will make. It uses the supervisor and data management services provided by DOS/360. The control system incorporates features which assist in the serviceability of components of the system to provide maximum system availability.

Each module of the control system -- (1) decodes the specified requests of the processing programs and other control system modules, (2) communicates requests for services to DOS/360 through macro instructions, (3) retains the status of each request until the request is fulfilled and (4) performs some control type processing upon selected requests.

Customer Responsibilities: Before installing the MISP, the customer must order and satisfactorily install all required communication equipment for the initial system ... have a thorough knowledge of the information system application ... train system analysts, programmers and operators in DOS/360 ... have installed DOS/360 successfully ... design and create master files ... train system analysts, programmers and operators in the MISP design terminal formats ... develop a terminal-oriented application training program for terminal operators ... develop, write, and test the inquiry and transaction processing programs using the control system macro facilities ... develop procedures to assure adequate security for data in the system ... develop backup procedures for the information system application ... develop terminal conversion procedures and schedules.

Advantages: The MISP provides services necessary in an on-line information system environment. These services will reduce the programming effort during implementation and provide a program structure to which the user can attach his programs. Each individual module of the control system contains integral functions that must be implemented in an information system. The control system allows the user to direct his resources to the transaction modules in the application area. For example, although it is the responsibility of the user to know the access method which supports his terminals (BTAM) the terminal control module performs terminal functions within the system making it unnecessary for the user to develop and debug these functions.

Programming Systems: MISP is written in DOS/360 Assembler Language and operates under the control of DOS/360. It requires the DOS/360 supervisor to be generated to allow for operator communications, program check interception, interval timing and BTAM teleprocessing. Additional DOS/360 options, such as BTAM Communication Serviceability Features, may be selected.

MISP operates as one task in one partition of DOS/360 and may operate in a dedicated environment or in one partition of a multiprogramming environment. The selection of multiprogramming or dedicated operation is the user's responsibility, as are the selection of system options beyond those required for the operation of MISP.

User written application programs reside in the DOS/360 Core Image Library and communicate directly with MISP via the macro interfaces provided.

This program product is released to operate with DOS/360 Release 21 and all subsequent releases, versions and modifications unless so stated in a future revision of this document.

System Configurations: The execution configuration requirements are similar to those necessary to support the DOS/360. Decimal arithmetic feature, interval timer, direct access storage devices to contain the application data sets, the necessary core storage and the terminal configurations necessary to support the new application are the only additional features and devices required.

The system may have all supported terminals (on non-switched lines) of a specific type or a combination of:

1050 Data Communication System with a 1051 Control Unit Model 2 with any standard 1050 components attached.

2740 Communications Terminal Model 1 with Record Checking (#6114) and with or without 2760 Model 1 Optical Image Unit (requires a 2760 attachment #8301).

The 1050 system may have the 1092 Programmed Keyboard or the 1092/1093 Programmed Keyboards in tandem as an attached feature. Such a configuration can be treated as a normal 1050 configuration or have Special 1092 Support. If Special 1092 Support is to be used, the 1092 or 1092/1093 tandem units must include RPQ #E38484.

The appropriate line adapters and telecommunication control units must be included in the configuration.

Direct access storage devices may be 2311 Disk Storage Drives or the 2314 Direct Access Storage Facility.

Systems generation requires one nine-track tape drive and the minimal DOS/360 requirements for cataloging to a library (private or system).

The minimum core storage requirements stated below for MISP exclude the following core storage areas: the fixed core storage requirements for the DOS/360 configuration, core storage for the necessary BTAM logic modules and user processing programs. The basic executive modules of MISP require 23,200 bytes of core storage. The tables and areas used with the system are variable and dependent upon the user's requirements. For example, a system supporting ten 2740 or 2740/2760 terminals, ten data sets, and 50 programs requires approximately 6,550 bytes for tables and work areas.

Basic Material:

Unlicensed Documentation: One copy of Program Description Manual (SH20-0808) ... Operations Manual (SH20-0805) ... Programmers Manual (SH20-0809) ... Program Product Specifications (GH20-4019).

Licensed Machine Readable Material: One copy of source program modules.

To order the basic material, select one of the following specify numbers:

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
Order from IBM	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	H11	B	$50

Related Optional Material (no additional charge): To order, specify feature #7040.

Licensed Documentation: One copy of MISP System Manual (LY20-0561).

Charges for Additional Copies of Documentation:

Licensed Documentation:

	Feature/Form Number	Single Charge/Copy
Systems Manual	8500 (LY20-0561)*	$20.00

Unlicensed Documentation:

	Form Number	Selling Price/Copy
Operations Manual	SH20-0805**	$7.20
Installation Aid Manual	SH20-0807**	1.70
Program Description Manual	SH20-0808**	5.80
Programmers Manual	SH20-0809**	6.00
Application File Description Manual	SH20-0815**	3.80

General Documentation (available from Mechanicsburg): Application Description Manual (GH20-0806).

For further information, contact Medical Industry Marketing, GEM Region.

*For customer, order by feature number from Area Program Library and bill customer; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg.

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[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

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[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

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IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

BASIC PROGRAM MATERIAL FOR POWER SYSTEM PLANNING (PSP) PROGRAM PRODUCT (5736-U12) MAY BE ORDERED

Power System Planning (5736-U12) may now be ordered. The release plan is:

- Basic program material may now be ordered. This material, which consists of object program, Operations Manual, and Program Description Manual, provides the information necessary to prepare data and install the Program Product.
- Maintenance and modification package available June, 1970. This material, which consists of source code, System Manual, and flowcharts, provides the information necessary to modify the Program Product.
- The mutual impedance feature of the Short Circuit component available June, 1971. A review of this schedule will be made to determine if the availability can be improved. You will be notified by June, 1970 of any improvement.
- The minimum partition size for the execution of PSP is increased from 131K. It will require 190K to 220K bytes depending on which simulation programs are being used.
- The retained bus feature of the Short Circuit component is reduced from 200 retained buses to 100.
- The maximum capacity within a 220K partition of the Transient Stability component is reduced from 800 buses and 200 generators to 700 buses and 150 generators. However, with additional memory larger problems may be solved.

Using PSP, the electrical utility planning engineer can obtain solutions to electrical network problems. PSP also allows the engineer to study the steady state and transient operational characteristics of present and projected power networks including interconnections.

Components of PSP are:

- Engineering Data Management Service -- provides data validation, cataloging, storing, and retrieval services to assist the engineer in organizing and maintaining the data required by the PSP simulation programs.
- Power Flow -- using modern accepted techniques such as Newton-Raphson and sparse matrix manipulation, simulates the steady state operating conditions of actual or proposed power system.
- Short Circuit -- using a Z matrix approach simulates the performance of specified portions of a system under various abnormal operating conditions (faults).
- Transient Stability -- simulates the operation of specified generating facilities during periods of possible unstable operation.

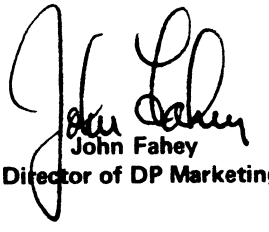
On the reverse side is the program product specification sheet which may be reproduced and given to customers.

Monthly Charge ... $300

Programming Service Classification ... B

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM Power System Planning (5736-U12) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).



John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

P70-91G

PROGRAM PRODUCT SPECIFICATION

Power System Planning Program (5736-U12)

Using the Power System Planning (PSP) Program Product, the electrical planning engineer can obtain solutions to electrical network problems.

PSP provides, through the Engineering Data Management Service (EDMS), programs to validate, organize, load, and retrieve electrical power systems data for use by three simulation programs. These three programs simulate steady state line flows and station conditions (Power Flow), three-phase and single-phase line-to-ground faults (Short Circuit), and transient analysis of synchronous machine swings during predicted electrical system disturbances (Transient Stability).

Once information regarding a particular network has been correctly formatted and entered into the EDMS master data bank, base case studies or change case studies may be conducted on an electrical network. This is accomplished by entering control information indicating the network configuration to be studied and the simulation program to be imposed upon that network. The specified network is then retrieved from the master data bank, subjected to the study and results both printed and stored on a direct access file for future use.

Engineering Data Management Service (EDMS) loads, validates, updates, and maintains a common data bank for the three electrical network simulation programs. Initially, it checks data for reasonableness, validates and loads this data into the data bank and, when the simulation is required, retrieves the pertinent data. Significant features are: reasonability checks ... disk/printer utilities ... one data set for each device type ... change case function for ease of network modification ... audit trail of additions or changes to the master data bank ... automatic numbering of buses.

Power Flow component of PSP produces the results of a steady state performance calculation on an electrical power network under load. These results specifically include real and reactive power flows in transmission networks and tielines as well as complex voltages throughout the network. The use of the Newton-Raphson solution technique provides the advantages of ease of solution for large networks and direct representation of circuit elements. Significant features of the Power Flow component are: Newton-Raphson solution technique ... automatic transformer tap changing ... exception reporting capability ... automatic interchange control ... optional tolerance limits ... load tap changing limits ... representation of bus tie breakers.

Short Cicruit component of PSP calculates the three-phase and line-to-ground fault conditions of electrical transmission networks. Significant features are: automatic sequencing (ranking) ... provision for changing of network characteristics ... Z matrix method (driving point and transfer impedance) ... open circuit analysis ... line end analysis.

Transient Stability component of PSP is used to study turbine-generator behavior during and shortly after electrical system disturbance. The Transient Stability component simulates specified system disturbances and determines new system voltages and synchronous machine swings. Significant features are: classical or refined generator representation ... direct solution of network equations ... saturation effect on generators ... IEEE excitation system models ... speed governor model ... swing curve ... case restart with new switching schedule.

Programming Systems: PSP is written in PL/1 and operates under the control of Operating System/360, PCP (Primary Control Program), or MFT (Multiprogramming with fixed number of tasks). PSP uses the basic direct access method (BDAM), index sequential access method (BISAM and QISAM), and queued sequential access method (QSAM).

Minimum Machine Configuration: In addition to normal OS/360 machine requirements, the minimum machine configuration for the PSP is a 256K System/360 with a universal instruction set, two 2311 Disk Storage Drives, optionally one 2400 series magnetic tape unit, and, if the system output device is a printer, it must have 132 print positions. The optional tape unit specified is for backup and results file storage. A 2400 series magnetic tape drive (9- or 7-track with Data Conversion feature) must be available for program distribution and maintenance. Based on a maximum simulation problem capacity of 1,000 buses (700 for Transient Stability), the partition size and DASD requirements (the DASD requirements specify the number of cylinders of a 2316 Disk Pack) are:

PSP Component	Partition Size	DASD Requirements: Load Module Library	Work Space (temporary)	Results File	Master Data Bank
EDMS File Load & Val.	130K	20	9		
EDMS Retr.	130K	20	7		
EDMS Maint.	145K	30	5		
Power Flow	195K	30	19	5	31
Short Circuit	190K	49	12	3	
Transient Stability	220K	15	25	5	

The partition sizes given above represent the number of bytes required. In a partition of 150K, the Power Flow component can simulate a network of up to approximately 600 buses with 850 connecting devices.

Power System Planning (PSP) Program Product (5736-U12): Using PSP the electrical planning engineer can obtain solutions to electrical network problems.

Description: PSP provides, through the Engineering Data Management Service (EDMS), programs to validate, organize, load, and retrieve electrical power system data for use by three simulation programs. These three programs simulate steady state line flows and station conditions (Power Flow), three-phase and single-phase line-to-ground faults (Short Circuit), and transient analysis of synchronous machine swings during predicted electrical system disturbances (Transient Stability).

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Customer Responsibilities: The planning department of the electric utility should be organized to take full advantage of the PSP in the following ways:

1. Initially, all pertinent network data (for example, information on loads, buses, generators, etc.) must be collected, correctly formatted, and loaded into the EDMS master data bank.
2. An efficient procedure must be established for the control, collection, and formatting of additional or change data which must be entered into the EDMS master data bank.
3. The electric utilities system planning personnel responsible for preparing job control cards should be familiar with the IBM Operating System/360.
4. The user is responsible for providing adequate protection from accidental loss or misuse of data.

Programming Systems: PSP is written in PL/I and operates under the control of Operating System/360, PCP (Primary Control Program), or MFT (Multiprogramming with fixed number of tasks). PSP uses the basic direct access method (BDAM), index sequential access method (BISAM and QISAM), and queued sequential access method (QSAM).

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Short Circuit	190K	49	12	3	31
Transient Stability	220K	15	25	5	31

The partition sizes given above represent the number of bytes required. In a partition of 150K, the Power Flow component can simulate a network of up to approximately 600 buses with 850 connecting devices. Transient stability can solve larger networks in a partition size greater than 220K.

Basic Program Product Offering

Unlicensed Documentation: One copy of Program Description Manual (H20-0675), and one copy of Operations Manual (H20-0676).

Licensed Machine Readable Material: One copy of machine readable material consisting of Object Instructions, Link Edit Control Cards, Job Control Language and Sample Problem.

	Specify Number	Track/Density	Description	Quantity
Customer Supplied	9026	7DC/800	2400 MT	1 reel
	9028	9/800	2400 MT	1 reel
	9029	9/1600	2400 MT	1 reel
Order From IBM	9126	7DC/800	2400 MT	1 reel
	9128	9/800	2400 MT	1 reel
	9129	9/1600	2400 MT	1 reel

Prices:

Type	Program Number	DPMO	Programming Service Classification	Monthly Charge
5736	U12	U12	B	$300.00

Additional Documentation

Selling Prices for Unlicensed Documentation (Order from Mechanicsburg, bill customer.)

	Use Key	Selling Price/Copy
Program Description Manual (H20-0675)	D	$10.00
Operations Manual (H20-0676)	D	$ 1.60

Related Program Product Documentation: (Available only from Mechanicsburgh ... no charge).

Application Description Manual (H20-0532-1) Use Key G

For further information contact a Public Utility Industry Marketing Representative.

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[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

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IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

TRAFFIC PROFILE ANALYSIS SYSTEM FOR TRANSPORTATION APPLICATIONS

● Program Product 5736-T22

The Traffic Profile Analysis System (point-to-point tariff item selection) is ready for shipment. It uses magnetic tape tariffs produced by the Tariff Publishing System to provide a computerized method for tariff users to select and analyze rate items based on a profile of user interests.

● ● ●

The interest profile identifies the commodities a tariff user ships, the carriers via which freight may be transported and the points which are of interest to the user. To create and maintain this interest profile, the facilities of the Tariff Publishing System are required.

Highlights ...

Selects rate items of interest to the user from the Tariff Publishing System magnetic tape tariffs distributed by the publishing agents.

Provides customized tariffs as defined by the user's interest profile.

Prints the selected rate items in the same format as the original tariff issue.

A prerequisite for the use of the Traffic Profile Analysis System is the Tariff Publishing System (5736-T21). Both systems operate under DOS/360. The application programs are written in Assembler Language.

Monthly Charge $300
Programming Service
Classification . . . . . B

Specifications (GH20-4020) are available from Mechanicsburg. each branch office has been sent a limited supply

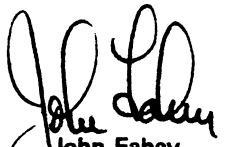
Ordering information is on the reverse side. For other details see PPA 360.18 in your sales manual.

Programming RPQs will be considered at this time.

SE Skill Classification

SE Services, identified with and related to the installation and use of the Traffic Profile Analysis System (5736-T22) Program Product, are available for a charge at the appropriate skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

Program Product use during Customer Pre-Installation Testing ... These Program Products will not be provided in Test Centers free of charge for customer use during testing.



John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-91H

Basic Material:

Unlicensed Documentation: One copy each of the Program Description/Operations Manual (SH20-0811) ... Program Product Specifications (GH20-4020).

Licensed Machine Readable Material: One copy of machine readable material containing Traffic Profile Analysis System object program modules and sample problem.

To order basic material, use the following specify number:

Specify Number	Track/Density	Description
9030	9/1600	DTR

Charge:

Type	Program and DPMO Number	Programming Service Classification	Monthly Charge
5736	T22	B	$300

Related Optional Material (no additional charge):

Licensed Documentation: One copy of Systems Manual (LY20-0560).

Licensed Machine Readable Material: One copy of the Traffic Profile Analysis System Source program modules.

To order optional material, use the following feature number:

Feature Number	Track/Density	Description
7030	9/1600	DTR

General Documentation (order from Mechanicsburg): Application Description Manual (GH20-0730).

Charges for Additional Copies of Documentation:

Licensed Documentation:

Feature/Form Number	Single Charge/Copy
Systems Manual 8004 (LY20-0560)*	$3.40

Unlicensed Documentation:

	Selling Price/Copy
Program Description/Operations Manual (SH20-0811)**	$2.80

*For customer, order by feature number from PID and bill customer; for IBM internal use, order by form number from Mechanicsburg.

**Order from Mechanicsburg; customer will be billed by Mechanicsburg through A00.

Publication Support: The availability of the publications will be announced in a future Publications Release Letter. Initial DAPS quantities will be shipped at that time and additional copies will be made available at the IBM Distribution Center, Mechanicsburg, Penna.

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Program Product Announcement

IBM PROGRAM PRODUCTS FOR THE 1130 AND SYSTEM/360

IBM announces Program Products for the 1130 Computing System and System/360. The Program Products listed on the reverse side, originally announced as Application Programs (Type II), will be available to anyone under the License Agreement for Program Products.

These application-oriented Program Products are directly usable or easily adaptable to meet your customer's specific requirements in supporting his data processing system.

See the sales manual for additional information about an individual Program Product, the License Agreement, Program Product licenses, and terms and conditions.

SE Skill Classification

SE Services, identified with and related to the installation and use of these Program Products are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

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FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

P70-91J

Program Product Name	Program Number	Initial Availability	Monthly Use Charge	Service Classification	Reference
1130 Computing System - Program Products					
Charge Materials Allocation Processor	5711-P11	Now	$ 20.00	B	P68-126
Linear Programming System	5711-CO1	Now	30.00	B	P68-125
System/360 - Program Products					
Advanced Life Information System (DOS), Version 2	5736-N11	Now	500.00	B	P69-21
Array Processing Subroutine (M44)	5736-P71	Now	300.00	B	P68-169
Array Processing Subroutine (OS)	5736-P72	Now	300.00	B	P68-169
Customer Information Control System (OS)	5736-U11	Now	600.00	B	P69-36
Generalized Information System (OS)	5736-CX1	Now	1500.00	B	P68-66
Graphic Analysis of Three Dimensional Data (OS)	5736-CX2	Now	300.00	B	P68-125
Information Management System (OS)	5736-CX3	Now	600.00	B	P68-66
Medical Information System Programs (DOS), Version 2	5736-H11	Now	50.00	B	P68-127
Order Allocation System (DOS)	5736-D41	Now	125.00	B	P69-40
Power System Planning (OS)	5736-U12	Now	300.00	B	P68-90
Project Management System (OS), Version 3	5736-CP1	Now	300.00	B	P69-37
Property and Liability Information System (DOS), Version 2	5736-N21	Now	300.00	B	P69-32
Rigid Frame Selection Program (DOS/OS)	5736-EC1	Now	25.00	B	P68-172
Text Processor - EDIT/360 (DOS)	5736-K11	Now	250.00	B	P68-173
Text Processor - PAGINATION/360 (DOS)	5736-K12	12/70	450.00	B	P69-56

IBM World Trade Data Processing

Program Product Announcement

IBM PROGRAM PRODUCTS FOR THE 1130 AND SYSTEM/360

IBM announces Program Products for the 1130 Computing System and System/360. The Program Products listed on the reverse side, originally announced as Application Programs (Type II), will be available to anyone under the License Agreement for Program Products.

These application-oriented Program Products are directly usable or easily adaptable to meet your customer's specific requirements in supporting his data processing system.

See the sales manual for additional information about an individual Program Product, the License Agreement, Program Product licenses, and terms and conditions.

SE Skill Classification

SE Services, identified with and related to the installation and use of these Program Products are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

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[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

Release Date: September 1, 1970
Distribution: Australia, Canada, New Zealand, Selected European Countries
South Africa, Japan

CORRECTED COPY

P70-91J

Program Product Name	Program Number	Initial Availability	Monthly Use Charge	Service Classification	Reference
1130 Computing System - Program Products					
Charge Materials Allocation Processor	5711-P11	Now	$ 20.00	B	P68-126
Linear Programming System	5711-CO1	Now	30.00	B	P68-125
System/360 - Program Products					
Advanced Life Information System (DOS), Version 2	5736-N11	Now	500.00	B	P69-21
Array Processing Subroutine (M44)	5736-P71	Now	300.00	B	P68-169
Array Processing Subroutine (OS)	5736-P72	Now	300.00	B	P68-169
Customer Information Control System (OS)	5736-U11	Now	600.00	B	P69-36
Generalized Information System (OS)	5736-CX1	Now	1500.00	B	P68-66
Graphic Analysis of Three Dimensional Data (OS)	5736-XX2	Now	300.00	B	P68-125
Information Management System (OS)	5736-CX3	Now	600.00	B	P68-66
Medical Information System Programs (DOS), Version 2	5736-H11	Now	50.00	B	P68-127
Order Allocation System (DOS)	5736-D41	Now	125.00	B	P69-40
Power System Planning (OS)	5736-U12	Now	300.00	B	P68-90
Project Management System (OS), Version 3	5736-XPI	Now	300.00	B	P69-37
Property and Liability Information System (DOS), Version 2	5736-N21	Now	300.00	B	P69-32
Rigid Frame Selection Program (DOS/OS)	5736-EC1	Now	25.00	B	P68-172
Text Processor - EDIT/360 (DOS)	5736-K11	Now	250.00	B	P68-173
Text Processor - PAGINATION/360 (DOS)	5736-K12	12/70	450.00	B	P69-56

IBM World Trade Data Processing

Program Product Announcement

PALIS ADDITIONAL FUNCTIONS PROGRAM PRODUCT (5736-N21) MAY BE ORDERED

PALIS Additional Functions (Program Product 5736-N21) may be ordered. It consists of Homeowners, Texas Automobile Rating and Automobile Master Record Recreate Features.

PALIS stands for Property and Liability Information System.

PALIS Type II Program Basic (360A-IF-10X) Modification Level 2 is required for execution for all functions. In addition, PALIS Type II Program Automobile (360A-IF-11X) Modification Level 2 is required for execution of Texas Rating and Master Record Recreate. (Refer to P69-114).

The functions performed are:

Homeowners -- Rates and/or processes new business ... renewals ... endorsements, both premium and non-premium ... cancellations ... reinstatements ... claims ... recreates portions of Master Record. Rating is based on the 1968 MLIRB Plan.

Automobile -- Rates and writes new business ... renewals ... premium endorsements for insured residing in the State of Texas.

Automobile Master Record Recreate -- Recreates portions of the Master Record based on a specific date and other previously entered historical information.

Monthly Charge $300.00
Programming Service
Classification . . . . . B

No Program Product RPQs will be accepted at this time.

On the reverse side is the Program Product Specification Sheet; on the following page, the sales manual write-up.

Note that minimum core memory required for PALIS is now 128K.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM PALIS Additional Functions (5736-N21) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

FOR IBM INTERNAL USE ONLY

Release Date: July 1, 1970
Distribution: Selected European Countries

Program Product use during Customer Pre-Installation Testing–This Program Product will not be provided in Test Centers free of charge for customer use during testing. A signed license agreement must be obtained prior to customer use of this Program Product.

John Fahey
WTC Director of DP Marketing

Note to World Trade Readers

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[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

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[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

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PROGRAM PRODUCT SPECIFICATION

PALIS Additional Functions (5736-N21)

These PALIS Additional Functions are designed to provide for processing of both internal and external activity by property and liability insurance companies against a policy master file for Homeowners and Texas Automobile. PALIS stands for Property And Liability Information System.

The following capabilities are provided:

Homeowners

1. Rates and processes new business, renewals and premium endorsements.
2. Updates and creates history on the master record located on the IBM 2321 Data Cell Drive for premium and non-premium endorsements.
3. Processes claims transactions.
4. Provides facilities for handling reinstatements and cancellations.
5. Where rating is performed, it is accomplished based on IBM's understanding and interpretation of the MLIRB rules.
6. Recreates as of a specified date the affected portions of the Master Record based on previously processed historical information.

Automobile

1. Rates and processes new business, renewals, and premium endorsements based on IBM's understanding and interpretation of the bureau regulations for the State of Texas.
2. Recreates as of a specified date the affected portions of the Master Record based on previously processed historical information.

Since users must supply accurate rate tables, IBM does not warrant the premiums calculated.

Programming System: Processing is performed under DOS/360 and uses System Control and Basic IOCS ... Consecutive Tape IOCS ... Direct Access Method ... Group I, II, and III Utilities ... Tape Sort/Merge ... Assembler Language ... COBOL ... DOS Supervisor (6K) ... and RPG.

Type II Programs: For processing, PALIS Type II Basic (360A-IF-10X) Modification Level 2 is required for all functions. In addition, PALIS Type II Program Automobile (360A-IF-11X) Modification Level 2 is required for executing Texas Rating and Master Record Recreate.

Minimum Machine Requirements: System 360/Model 40G with Decimal Arithmetic (#3237), Selector Channel (#6980) and 1052 Attachment (#7920) ... a 1052 Printer Keyboard Model 7 ... a 2841 Storage Control with 2321 Attachment (#8079) ... a 2321 IBM Data Cell Model 1 ... 2311 Disk Storage Drive Model 1* ... four 2400 series Magnetic Tape Units (at least three of the magnetic tape units must be 9-track) ... a 2821 Control Unit with a 1403 Printer Model 2 and a 2540 Card Read/Punch Model 1.

The Homeowner's application requires 87K core for program, data and access method storage.

*One or two additional 2311s will be required if the user rates Homeowners in all states.

PALIS Additional Functions (5736-N21): Consists of modules that will create and maintain policy master files for insured homeowners and automobiles garaged in Texas; recreate automobile master record.

Description: Functions performed are:

Homeowners - Rates and/or processes new business ... renewals ... endorsements both premium and non-premium, and provides facilities to process cancellations, reinstatements, and claims ... recreates portions of the Master Record.

Automobile - Rates and/or processes new business ... renewal and premium endorsements for vehicles garaged in Texas. It recreates portions of the master record as of a specified date utilizing previously entered historical information.

Features: When used in conjunction with other PALIS (Property And Liability Information System) programs, the system takes advantage of the powerful features of IBM System/360 ... the system functions in a Disk Operating System environment ... the flexibility of the system design allows for user defined configurations when processing loads exceeding the capacity of the minimum configuration ... both the insurance logic and run linkages provide the flexibility required to make the system adaptable to most companies ... the policy master file is stored on the IBM 2321 Data Cell Drive.

Use: The program creates and maintains a detailed policy file for homeowners and provides the facility to rate automobile policies for Texas.

The customer must provide a program to interface user data capture and data coding procedures with the system edit. Output programs must be written to format and, in some cases, further process the contents of the generalized output records.

During implementation and conversion, interface programs between PALIS output and user accounting and statistical systems must be provided.

Customer Responsibilities: A thorough knowledge and understanding of the system before installation ... write conversion programs to create the master file ... write programs to format output for printing, punching and entry into other systems ... write all routines to satisfy special company policies such as underwriting criteria, loss reserving standards, accounting procedures, etc. ... write any programming required to effect user changes to record format; e.g., expand contract routines, additional programming to handle new fields, etc., generate and maintain tables for private passenger automobile and homeowners according to the specifications provided; write programs and procedures to provide adequately edited input transactions to PALIS ... maintain the programs and documentation as changes to bureau requirements dictate changes in logic ... provide additional logic to format replies to inquiries beyond that supplied by PALIS.

Special Sales Information: The Property and Liability Information System substantially reduces the customer programming effort and provides a basis for uniformity and system design througout the industry ... the meaningful insurance-oriented documentation provided by System/360 COBOL greatly aids in the full understanding of the package ... the modular concept used to develop this system provides the means for the user to expand into a total management information system for all lines of business ... the Property and Liability Information System takes advantage of the advanced capabilities of the Disk Operating System/360.

Programming Systems: The insurance logic program modules are written in Disk Operating System/360 COBOL. The use of System/360 COBOL allows for ease of modifications to the various programs and simplifies program maintainance.

The following components of the Disk Operating System are used -- System Control and Basic IOCS ... Consecutive Tape IOCS ... Direct Access Method ... Group I, II, and III Utilities ... Tape Sort/Merge ... Assembler Language ... COBOL ... DOS Supervisor (6K) ... and RPG.

In addition, PALIS uses IBM System/360 FLOWCHART (360A-SE-22X) for printing of PALIS Flowcharts.

Also, these functions must operate with PALIS Basic (360A-IF-10X). In addition, PALIS Automobile (360A-IF-11X) is required for Texas Automobile and Automobile Master Record Recreate.

Minimum Machine Configuration: System/360 Model 40G with Decimal Arithmetic (#3237), Selector Channel (#6980) and 1052 Attachment (#7920) ... 1052 Printer Keyboard Model 7 ... 2841 Storage Control with 2821 Attachment (#8079) ... 2321 Data Cell Model 1 ... 2311 Disk Storage Drive Model 1* ... four 2400 series Magnetic Tape Units (at least three of the magnetic tape units must be 9-track) ... 2821 Control Unit with a 1403 Printer Model 2 and a 2540 Card Read/Punch Model 1.

The Homeowners application requires 87K of core for program, data and access method.

*One or two additional 2311's will be required if the user rates Homeowners in all states.

Basic Program Product Offering:

Licensed Documentation: One copy each of Homeowner's Premium Processing Program Description and Systems Manual (feature #8001), Homeowner's Claims Processing Program Description and Systems Manual (feature #8002).

Licensed Machine Readable Material: One copy containing source program modules, flowcharts and formats.

	Specify No.	Track/Density	Description	Quantity
Customer Supplied	9026	7DC/800	2400' MT	1 reel
	9028	9/800	2400' MT	1 reel
	9029	9/1600	2400' MT	1 reel
Order from IBM	9126	7DC/800	2400' MT	1 reel
	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel

Prices:

Type	Program No.	DPMO	Programming Service Classification	Monthly Charge
5736	N21	N21	B	$300.00

Additional Copies of Licensed Documentation - (order from PID by Feature Number, bill customer)

Feature Numbers	Use Key	Single Charge/Copy
8001 (Y20-0461*)	L†	$9.00
8002 (Y20-0462*)	L†	$2.10

*Order by Form Number from Mechanicsburg (Restricted Distribution - see GI section of Sales Manual.)

Reference Material (Order from Mechanicsburg, no charge): Application Description Manual, (H20-0283-2) ... Overview Program Description Manual (H20-0501) ... Basic Program Description and Systems Manual (H20-0497-1) ... Basic Operations Manual (H20-0498-1) ... Automobile Premium Processing Program Description and Systems Manual (H20-0499-1) ... Automobile Claims Processing Program Description and Systems Manual (H20-0500-1) ... Other Lines Premium Processing Program Description and Systems Manual (H20-0503-1) ... Other Lines Claims Processing Program Description and Systems Manual (H20-0504-1).

Contact your local insurance industry marketing representative for additional information.

†Use Key L replaces Use Key D. This will appear in the General Information section of the sales manual.

IBM World Trade Data Processing

PROGRAM PRODUCT ANNOUNCEMENT

SYSTEM/360 CUSTOMER INFORMATION CONTROL SYSTEM PROGRAM PRODUCT (5736-U11) READY FOR SHIPMENT

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[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

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[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

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[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

The Customer Information Control System Program Product 5736-U11 is ready for shipment at PID.

It is a highly responsive, transaction oriented, data base, data communication interface between Operating System/360 and user-written application programs.

In addition to providing programs necessary for inquiry and conversational data entry applications, the system has functions for many standard terminal applications, including message switching, broadcasting, data collection, and order distribution.

The Customer Information Control System was designed for the very demanding customer information system environment; however, it has been found to be applicable to most on-line real-time data base systems.

Major functions provided by the Customer Information Control System are:

- **Task Management**
- **Storage Management**
- **Program Management**
- **Terminal Management**
- **File Management**
- **Transient Data Management**
- **Temporary Storage Management**

In addition to the management functions, the Customer Information Control System provides the following system service programs:

- **Sign on/Sign off**
- **Master Terminal Function**
- **Supervisory Terminal Function**
- **System Statistics**
- **System Termination**

Monthly Charge ... $600.

Programming Service Classification ... B.

SE Skill Classification

SE Services, identified with and related to the installation and use of the IBM System/360 Customer Information Control System (5736-U11) Program Product, are available for a charge at the applicable skill classification rate as determined by the host System or its System Operating Environment (see Sales Manual SE Section 2 for details).

John Fahey
WTC Director of DP Marketing

Release Date: July 1, 1970

Distribution: Australia, Canada, New Zealand, Selected European Countries, South Africa

PROGRAM PRODUCT SPECIFICATION

Customer Information Control System 5736-U11

The IBM Customer Information Control System is a general purpose data base, data communication interface between Operating System/360 and user-written application programs. The system, which is distributed as Assembler Language Source and Macro Libraries, provides the user with the facilities to generate a system configuration applicable to his needs, to define the environment in which the system is to execute and a macro facility through which to communicate application program service requests.

Functions necessary to support a data base, data communication system plus functions required to support other standard terminal applications (such as message switching, data collection, and order distribution) are provided by the Customer Information Control System through the following management facilities:

- Task Management - provides multitasking facilities necessary for concurrent transaction processing. Other required functions satisfied by this important program include priority scheduling, transaction synchronization, and serially reusable facility control.
- Storage Management - provides the control of main storage. Storage acquisition, disposition, initialization, and request queuing are among the services and functions performed by this essential component of the system.
- Program Management - provides a multiprogramming capability through dynamic program management while offering a program fetch capability as well as OS/360 fetch protection.
- Terminal Management - provides polling under user specified line traffic control as well as user requested reading and writing. This facility supports automatic task initiation to process new transactions. The testing of application programs is accommodated by the simulation of terminals through sequential devices such as card readers, line printers, disk, tape, etc.
- File Management - provides a data base facility using Operating System/360 direct access and indexed sequential data management. This function supplies support for symbolic storage (updates and additions) and selective retrieval of logical file data.
- Transient Data Management - provides the optional queuing facility for the management of data in transit to and from user defined destinations. This function has been included to facilitate the implementation of message switching, data collection, and logging.
- Temporary Storage Management - provides the optional general purpose "scratch pad" facility. The facility is intended for video display paging, broadcasting, data collection suspension, conservation of main storage, and retention of control information, etc.

In addition to the management functions described, the Customer Information Control System provides the following system service programs:

- Sign On/Sign Off - provides the means of terminal operator identification (security).
- Master Terminal Function - provides dynamic user control of the system. It is through this facility that the master terminal operator can change the status and values of data used by the control system and thereby alter the operation of the system.
- Supervisory Terminal Function - performs the same services as the Master Terminal except they are limited to terminals under a given supervisor's jurisdiction.
- System Statistics - provides the ability to dynamically display system statistics.
- System Termination - allows the user to close the system down by gathering summary statistics, closing data sets, and returning control to OS/360.

Programming Systems: The Customer Information Control System is written in OS/360 Assembler Language and operates under the control of OS/360. It requires the following OS/360 control program options -- Multiple Wait ... Interval Timing ... Resident SPIE ... SER1 ... Graphic Programming Services (if 2260 Display Station is attached locally) ... Input/output support for applicable access methods such as Index Sequential Access Method, Basic Direct Access Method, Basic Telecommunications Access Method with the Communication Serviceability Features.

The Customer Information Control System may be used with the OS/360 Primary Control Program (PCP) if the only terminals on the system are the locally attached 2260 Display Stations. One of the OS/360 configurations, Multiprogramming with a Fixed number of Tasks (MFT) or Multiprogramming with a Variable number of Tasks (MVT), must be used in support of any system that includes other terminals. The selection of PCP, MFT or MVT, is the user's responsibility. The control system operates within one partition of MFT or as one task within one region of MVT.

User-written programs are to directly communicate with the control system via a combination of its macro instructions and Assembly Language instructions.

Minimum Machine Configuration: The configuration requirements are similar to those necessary to support the OS/360. The direct access storage devices to contain the application data sets and the terminal configurations necessary to support the new application are the only additional devices required.

The minimum machine configuration includes a 2040 (or larger) Processing Unit Model G for the OS/360 PCP configuration with only locally attached 2260 Display Stations, the OS/360 MFT or MVT configurations with all other terminals. The Decimal Arithmetic, Storage Protection is a desirable feature on PCP, MVT, and MVT OS/360. Appropriate I/O units to satisfy the OS/360 requirements for system console, system input, system output, system residence, and system data sets ... and sufficient direct access storage devices, either 2311 Disk Storage Drives, 2321 Data Cell Drives, or 2314 Direct Access Storage facilities (or all three) to satisfy customer information storage requirements. (The 2841 Storage Control must have the record overflow feature.) The Customer Information Control System will be distributed on magnetic tape only. A 2400 Series Tape Drive (9- or 7-track with Data Conversion feature) must be available for program distribution and maintenance.

The minimum system may have all terminals (features which are not mentioned are not supported) of a single type or combinations of:

2260 Display Station (local attachment or remote attachment on non-switched lines) with optionally -- Alphameric Keyboard (#4766) or Numeric Keyboard (#4767), through a 2848 Display Control Model 1, 2, or 3 with the following optional features -- Line Addressing (#4787) and/or Non-destructive Cursor (#5340) and Non-destructive Cursor Adapter (#5341) and/or 1053 Adapter (#7927, 7928) and 1053 Printer Model 4.

2265 Display Station (on non-switched lines) with optionally -- Alphameric Keyboard (#4766) through a 2845 Display Control with the following optional features -- Destructive Cursor (#3301) and/or Line Addressing (#4801, 4802) and/or 1053 Adapter (#7927, 7928) and 1053 Printer Model 4.

1050 Data Communication System (on non-switched lines) with a 1051 Control Unit Model 1 or 2 with a 1052 Printer Keyboard, and with a 1056 Card Reader (optional).

2740 Communication Terminal Model 1 (on non-switched lines) with the following optional features -- Record Checking (#6114) and/or Station Control (#7479).

2740 Communication Terminal Model 2 (on non-switched lines) with Record Checking (#6114) which is optional.

Common Carrier TeletypewriterExchange (TWX) Stations Model 33/35 Type with 8-level codes at 110 bps on Common Carrier Switched 160 Baud networks.

Appropriate line adapters and telecommunication control units must be included in the configuration. The Auto Poll feature (#1319) on the 2702 Transmission Control or the standard auto poll feature on the 2703 is supported for the non-switched lines with the 1050 Data Communication System and the 2740 Communication Terminal with the Station Control Feature.

The access methods of OS/360 are used by the Customer Information Control System in communication with devices on the system. Consequently, the control system only operates with devices supported by OS/360.

The minimum core storage requirements stated below for the Customer Information Control System exclude the following core storage areas: the fixed core storage requirements for the OS/360 configuration, the core storage for the necessary OS/360 Access Methods, the input/output areas, and user processing programs. The basic control system modules require up to 15,000 bytes of core storage. The tables and areas used with the system are variable and dependent on the user's requirements. An example of a system supporting 50 hard copy terminals, three file data sets, 100 programs, 50 transaction types, and 50 queues would require approx. 20,000 bytes for the tables and work areas. See the Customer Information Control System Program Description Manual for further information.

Customer Information Control System (5736-U11): The Customer Information Control System is a highly responsive transaction oriented, data base-data communication interface between Operating System/360 and user-written application programs. In addition to the inquiry and conversational data entry capabilities, this system provides the facilities necessary for many of the standard terminal applications including message switching, broadcasting, data collection, and order distribution.

The IBM Customer Information Control System, as its name implies, was designed for the very demanding customer information system environment; however, it has been found to be applicable to most on-line real-time data base systems.

Features: This program performs its functions as a data base-data communication interface and supports the standard terminal applications through the following management facilities:

- Task Management - provides multitasking facilities necessary for concurrent transaction processing. Other required functions satisfied by this important program include priority scheduling, transaction synchronization, and serially reusable facility control.
- Storage Management - provides the control of main storage. Storage acquisition, disposition, initialization, and request queuing are among the services and functions performed by this essential component of the system.
- Program Management - provides a multiprogramming capability through dynamic program management while offering a program fetch capability, as well as OS/360 fetch protection.
- Terminal Management - provides polling under user specified line traffic control, as well as user requested reading and writing. This facility supports automatic task initiation to process new transactions. The testing of application programs is accommodated by the simulation of terminals through sequential devices such as card readers, line printers, disk, tape, etc.
- File Management - provides a data base facility using Operating System/360 direct access and indexed sequential data management. This function supplies support for symbolic storage (updates and additions) and selective retrieval of logical file data.
- Transient Data Management - provides the optional queuing facility for the management of data in transit to and from user defined destinations. This function has been included to facilitate the implementation of message switching data collection, and logging.
- Temporary Storage Management - provides an optional general purpose "scratch pad" facility. The facility is intended for video display paging, broadcasing, data collection suspension, conservation of main storage, and retention of control information, etc.

In addition to the management functions described, the Customer Information Control System provides the following system service programs:

- Sign On/Sign Off - provides the means of terminal operator identification (security).
- Master Terminal Function - provides dynamic user control of the system. It is through this facility that the master terminal operator can change the status and values of data used by the control system and thereby alter the operation of the system.
- Supervisory Terminal Function - performs the same services as the Master Terminal except they are limited to terminals under a given supervisor's jurisdiction.
- System Statistics - provides the ability to dynamically display system statistics.
- System Termination - allows the user to close the system down by gathering summary statistics, closing data sets, and returning control to OS/360.

Use: In planning the successful implementation of an information system, a prerequisite is that the users understand the complexity of system design and be prepared to develop solutions to problems inherent in such an undertaking. Most information systems incorporate three major equipment elements. They are -- (1) terminals through which inquiry and order data are passed, (2) communication facilities for the transmission of the data, and (3) a communication oriented central computer with large direct access storage and transmission capabilities. Quite often, external characteristics such as variable input rate of messages, multiple input message types, fast response to terminal inputs, and priority for message processing needs place additional requirements on the system.

In the past, the user has had to design and program a control system with these characteristics. The Customer Information Control System will virtually eliminate this requirement. Control system design is accomplished by selecting a group of modules during a system generation process, and control system programming is reduced to the writing of macro instructions.

The Customer Information Control System is a group of program modules selected by the user during a system generation procedure. Each of these modules is core resident during execution of the user's information system. Communication between the user and the control system is via user-written macro instructions that are expanded during program assembly. The control system macro definitions are linked together with the OS/360 macro library to produce the Customer Information Control System macro expansions.

The activity within the central processing system is triggered by the data from the terminal on the system. All user-written processing program requests for additional terminal and file read-writes and system services are processed by OS/360 through the Customer Information Control System.

The control system is designed to handle system requests that the user-written processing programs will make. It uses the supervisor and data management services provided by OS/360. Basic access methods are used to retain control within one partition or region. The control system incorporates features which assist in the serviceability of components of the system to provide maximum system availability.

Each module of the control system -- (1) decodes the specified requests of the processing programs and other control system modules, (2) communicates requests for services to OS/360 through macro instructions, (3) retains the status of each request until the request is fulfilled, (4) performs some control type processing upon selected requests, and (5) maintains statistical information that can be used to evaluate system performance.

Customer Responsibilities: Before installing the Customer Information Control System, the customer must order and satisfactorily install all required communication equipment for the initial system ... have a thorough knowledge of the information system application ... train system analysts, programmers and operators in OS/360 ... have installed OS/360 successfully ... design and create master files ... train system analysts, programmers and operators in the Customer Information Control System ... design terminal formats ... develop a terminal-oriented application training program for terminal operators ... develop, write, and test the inquiry and transaction processing programs using the control system macro facilities ... develop procedures to assure adequate security for data in the system ... develop backup procedures for the information system application ... develop terminal conversion procedures and schedules.

Advantages: The Customer Information Control System provides services necessary in an on-line information system environment. These services will reduce the programming effort during implementation and provide a program structure to which the user can attach his programs. Each individual module of the control system contains integral functions that must be implemented in an information system. The control system allows the user to direct his resources to the transaction modules in the application area. For example, although it is the responsibility of the user to know the access method which supports his terminals (either BTAM or Graphic), the Terminal Control module performs terminal functions within the system making it unnecessary for the user to develop and debug these functions.

New transactions and programs can be added through symbolic description cards and tested independently from the terminal network. For testing purposes, terminals can be simulated through the use of card readers, printers, and other sequential devices.

Programming Systems. The Customer Information Control System is written in OS/360 Assembler Language and operates under the control of OS/360. It requires the following OS/360 control program options -- Multiple Wait ... Interval Timing Resident SPIE ... SER1 Graphic Programming Services (if 2260 display station is attached locally) ... Input/Output support for applicable access methods (such as Index Sequential Access Method, Basic Direct Access Method; Basic Telecommunications Access Method with the Communication Serviceability Features).

The Customer Information Control System may be used with the OS/360 Primary Control Program (PCP) if the only terminals on the systems are the locally attached 2260 Display Stations. One of the OS/360 configurations, Multiprogramming with a Fixed number of Tasks (MFT) or Multiprogramming with a Variable Number of Tasks (MVT) must be used in support of any system that included other terminals. The selection of PCP, MFT or MVT is the user's responsibility. The control system operates within one partition of MFT or as one task within one region of MVT.

User-written programs are to directly communicate with the control system via a combination of its macro instructions and Assembly Language instructions.

Minimum Machine Configuration: The configuration requirements for the Customer Information Control System are similar to those necessary to support the OS/360. The Direct Access Storage Devices to contain the application data sets and the terminal configurations necessary to support the new application are the only additional devices required.

The minimum configuration includes a 2040 (or larger) Processing Unit Model G for the OS/360 PCP configuration with only locally attached 2260 Display Stations, or Model H (or larger) for the OS/360 MFT or MVT configurations that include other terminals. The Decimal Arithmetic, Storage Protection is a desirable feature on the OS/360 (PCP, MFT and MVT). Appropriate I/O units to satisfy the OS/360 requirements for system console, system input, system output, system residence, and system data sets ... and sufficient Direct Access Storage Devices, either 2311 Disk Storage Drives, 2321 Data Cell Drives, or 2314 Direct Access Storage Facilities (or all three) to satisfy customer information storage requirements. (The 2841 storage control must have the record overflow feature.) The Customer Information Control System will be distributed on magnetic tape only. A 2400 Series Tape Drive (9-track or 7-track with Data Conversion feature) must be available for program distribution and maintenance.

The minimum system may have all terminals (features which are not mentioned are not supported) of a single type or combination of:

2260 Display Station (local attachment or remote attachment on non-switched lines) with the following optional features -- Alphameric Keyboard (#4766) or Numeric Keyboard (#4767), through a 2848 Display Control Model 1, 2, or 3 with the following optional features:

Line Addressing (#4787) and/or Non-destructive Cursor (#5340) and Non-destructive Cursor Adapter (#5341) and/or 1053 Adapter (#7927, 7928) and 1053 Printer Model 4.

2265 Display Station (on non-switched lines) with optionally: Alphameric Keyboard (#4766) through a 2845 Display Control with the following optional features:

Destructive Cursor (#3301) and/or Line Addressing (#4801, 4302) and/or 1053 Adapter (#7927, 7928) and 1053 Printer Model 4.

1050 Data Communication System (on non-switched lines) with a 1051 Control Unit Model 1 or 2, with a 1052 Printer Keyboard, and with a 1056 Card Reader (optional).

2740 Communication Terminal Model 1 (on non-switched lines) with the following optional features:

Record Checking (#6114) and/or Station Control (#7479).

2740 Communication Terminal Model 2 (on non-switched lines) with Record Checking (#6114) (optional).

Common Carrier Teletypewriter Exchange (TWX) Stations Model 33/35 Type with 8-level codes at 110 bps on Common Carrier Switched 150 Baud networks.

The appropriate line adapters and telecommunication control units must be included in the configuration. The Auto Poll feature (#1319) on the 2702 Transmission Control or the standard auto poll feature on the 2703 is supported for the non-switched lines with the 1050 Data Communication System and the 2740 Communication Terminal with the Station Control feature.

The access methods of OS/360 are used by the Customer Information Control System in communication with devices on the system. Consequently, the control system only operates with devices supported by OS/360.

The minimum core storage requirements stated below for this program product exclude the following core storage areas -- the fixed core storage requirements for the OS/360 configuration, the core storage for the necessary OS/360 Access Methods, the input/output areas, and user processing programs. The basic control system modules require up to 15,000 bytes of core storage. The tables and areas used with the system are variable and dependent upon the user's requirements. An example of a system supporting 50 hard copy terminals, three file data sets, 100 programs, 50 transaction types and 50 queues would require approximately 20,000 bytes for the tables and work areas. See the Customer Information Control System Program Description Manual for further information.

Basic Program Product Offering

Basic Licensed Program Product Material: One copy Machine Readable Material consisting of Assembly Language Macro Library and Assembly Language Source Library available on one 2400' reel of magnetic tape . . one copy System Manual (Feature #8805).

Basic Unlicensed Program Product Material: Two copies of Program Description Manual (H20-0605) with TNL (N20-2024) and two copies of Operations Manual (H20-0606) with TNL (N20-2025).

General Product Documentation: One copy of Application Description Manual (H20-0318) with TNL (N20-2023).

To order basic machine readable material, use the following specify numbers.

	Specify Number	Track/Density	Description
Order from IBM	9126	7/800 DC cpi	2400' reel
	9128	9/800 bpi	2400' reel
	9129	9/1600 bpi	2400' reel

Service Classification: B

Additional copies of the unlicensed documentation are available from the IBM Distribution Center, Mechanicsburg.

For further information contact a Public Utility Industry Marketing Representative.

Type	Program No.	DPMO	Service Class
5736	U11	U11	B

Additional copies of the unlicensed documentation listed below are available from Mechanicsburg. **

	Selling Price/Copy
Program Description Manual (H20-0605)	$5.00
Operation Manual (H20-0606)	1.30

Additional copies of the licensed documentation listed below are available from PID

	Features
System Manual	8805 (Y20-0369)*

* Order by form number for IBM Internal Use Only.
** Please reference DP letter 70-217.

For further information contact a Public Industry Marketing Representative.

CP-67/CMS (SNOBOL/BRUIN)

The Control Program-67/Cambridge Monitor System (CP-67/CMS) Version 2 contains several languages including SNOBOL (a string processing language) and BRUIN (Brown University Interpreter). These languages and CP-67/CMS are currently available as a single orderable package from PID.

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Effective with the planned availability (October 30, 1970) of CP-67/CMS Version 3, SNOBOL and BRUIN will be separately packaged and available only as separately orderable programs with Programming Service Classification C.

Ordering instructions for SNOBOL and BRUIN, including program numbers, will be provided in the Installation Newsletter at the time of availability.

Users of CP-67/CMS Version 2 who plan to use SNOBOL or BRUIN with Version 3 of CP-67/CMS should be notified that they will be required to order SNOBOL and BRUIN separately from PID.

As previously announced in Program Announcement P70-66, for programming services purposes, CP-67/CMS Version 2 will be considered current for three months following the availability of Version 3.

John Fahey
WTC Director of DP Marketing

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P70-92,93,94 NOT USED

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

HASP

HASP REMOTE JOB ENTRY TERMINAL SUPPORT EXPANDED

360D-05.1.014

HASP Remote Job Entry terminal capabilities are expanded to provide support for the Remote Terminals listed below.

HASP REMOTE JOB ENTRY SUPPORT FOR 2770 ANNOUNCED

The HASP Remote Terminal Access Method Binary Synchronous Hardware Interface will be expanded to support the IBM 2770 Data Communication System. The support provided will be similar to that now provided by HASP for the IBM 2780 Data Transmission Terminal.

Highlights ... The supported card reader, printer and punch may be attached in any combination. Additionally, the standard keyboard will be supported as an input device. Either ASCII or EBCDIC codes will be supported utilizing any type of transmission line available for the 2770.

HASP SYSTEM/3 MULTI-LEAVING WORKSTATION PROGRAM ANNOUNCED

A MULTI-LEAVING workstation program similar to the MULTI-LEAVING workstation program now available for System/360 Model 20 and 1130 will be provided for the System/3.

Highlights ... This program will support the full range of MULTI-LEAVING services provided by HASP including simultaneous operation of all types of card readers, card punches, printers and keyboard consoles in any combination which can be attached to the System/3.

Other highlights include:

- Optional EBCDIC Transparency support
- 80- and 96-column card support
- HASP Remote Console Support
- Full text compression/expansion
- OS object deck support on 96-column cards
- Standard HASP SIGN-ON and security features
- Support for all available line speeds
- Built-in maintenance facilities
- Full capabilities on 8K card system

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An Extension to OS for System/360 and System/370

Planned Availability ... February 26, 1971 with programming service classification A. As stated on June 30, 1970 in P70-71, the HASP SYSTEM will be supported on the System/370 within three months after the availability of the corresponding OS Support.

No RPQs will be accepted at this time.

See the reverse side for more information.

John Fahey
WTC Director of DP Marketing

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HASP/2770 Remote Job Entry (360D-05.1.014): The IBM 2770 Data Communication System may be utilized as a Remote Job Entry Terminal to the HASP System, providing the following basic functions:

- Job Input -- The ability to submit OS jobs from the 2770 to the HASP System for OS job processing. No changes in the Job Control Language or input stream data sets are required to submit jobs through the 2770.
- Job Printing -- The ability to receive and print output from any job processed by HASP which has its printed output directed to the 2770. Special forms may be specified either on a job basis or by individual data set.
- Job Punching -- The ability to receive and punch output from any job processed by HASP which has its punched output directed to the 2770.
- Remote Terminal Sign-on/Sign-off -- The ability to initiate and terminate a session from the Remote Terminal. Password security may optionally be used to preclude unauthorized use of the central processor.
- Terminal Control -- The ability of the Remote Terminal operator to establish the function (i.e., input, printing or punching) of the 2770.

Minimum 2770 Requirements: A 2772 Control Unit with either EBCDIC or ASCII code is required. No special features are required.

Supported Features: The following features are not required but will be supported if present.

- #1490 - Buffer Expansion -- Recommended for optimum performance.
- #3650 - EBCDIC Transparency -- Required if OS object decks are to be transmitted or punched.
- #4690 - Keyboard correction.
- #7705 - Synchronous Clock.
- #7950 - Transmit - Receive Monitor Print

Prohibited Feature: #5010 - Multi-point Data Link Control -- This feature is incompatible with HASP support and should not be specified.

Unsupported Features: All features not specifically prohibited may be attached to the 2772 but will not be supported by HASP.

Supported Input/Output Units:

- 2213 Model 2 Printer
- 2502 Model A1 or A2 Card Reader
- 545 Model 3 or 4 Card Punch

Unsupported Input/Output Units: All other Input/Output units may be attached to the 2772 but will not be supported by HASP.

HASP System/3 MULTI-LEAVING Workstation Program (360D-05.1.014): This program allows the System/3 to be utilized as a MULTI-LEAVING Remote Job Entry Terminal to the HASP System. It supports, in a System/3 with 8K bytes of storage, all types of card devices, line printers and keyboard consoles which can be attached to the System/3. Its basic functions are:

- Job Input -- The ability to read and transmit OS job streams. No changes to a job's input stream data sets or Job Control Language are required to submit it through the System/3. The Workstation Program is capable of simultaneously reading and transmitting as many job streams as the System/3 has card hoppers.
- Job Printing -- The ability to receive and print output from any job processed by HASP which has its printed output directed to the System/3. Printing may take place simultaneously with job input. Special forms may be specified either on a job basis or by individual data set.
- Job Punching -- The ability to receive and punch output from any job processed by HASP which has its punched output directed to the System/3. With transparency, the System/3 will recognize card images of OS object decks and will punch these images with full EBCDIC characteristics. The cards punched can then be used as an input stream data set. Punching may take place simultaneously with job input and job printing.
- HASP Operator Commands -- The ability to issue any of a subset of HASP operator commands, to receive responses to these commands and to communicate directly with the central computer operator.
- Asynchronous Device Support -- The ability to operate asynchronously, and thus simultaneously, all supported devices.
- Remote Terminal Sign-on/Sign-off -- The ability to initiate and terminate a session from the Remote Terminal. Password security may optionally be used to preclude unauthorized use of the central processor.

Highlights: This powerful Remote Job Entry capability is augmented by the following features:

- Virtually all line errors will be processed without operator intervention.
- Any available card hopper can be used for either reading or punching, and is automatically set for one or the other according to whether it is loaded with non-blank cards or blank cards.
- Each 96-column card that is punched is also interpreted.
- Support is provided for the 1442 card read/punch, an RPQ device for the System/3.
- All text transmitted on the communication line is first compressed to obtain maximum line throughput.
- The operator can, via HASP commands, route printed or punched output to any other HASP Remote Terminal or to the central system.
- The stand-alone System/3 workstation program is custom-generated as part of the standard HASP generation process under OS.

Minimum System/3 Requirements:

- 5410 - Central Processing Unit (any model).
- 5424 - Multi-Function Card Unit (any model).
- 5203 - Printer (any model).
- 2074 - Binary Synchronous Communications Adapter with EBCDIC code.

Supported Features:

- 1442 Card Read/Punch (RPQ).
- 5471 Printer/Keyboard or 5475 Keyboard.
- 8639 - Universal Character Set for 5203 Printer.
- 5558 or 5560 - Additional print positions for 5203 Printer.
- 1315 - Auto Call
- 7850 - Text Transparency.
- Any type or speed transmission line available for System/3.

Recommended Features:

- 24 or 36 extra print positions on 5203 Printer (to provide for standard OS print lines).
- UCS and PN Chain on 5203 Printer (to provide for standard OS character set).
- Text Transparency (to allow full use of the EBCDIC character set).
- 5471 Printer/Keyboard (as a remote operator console).

Prohibited Features: The following features are incompatible with HASP support and should not be specified:

- 9482 - Multi-Point Network Attachment.
- 9061 - ASCII Transmission Code.
- 7477 - Station Selection.

Unsupported Features: All features not specifically prohibited may be attached to the System/3 but will not be supported by the HASP System/3 Workstation Program.

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

OS AND DOS ACCESS METHOD SUPPORT FOR THE IBM 2947 CHECK COLLECTION CONTROLLER, MODEL 4

Provides the user with the I/O routines that control the 2947-4 data streams. These routines are the interface between the user's program and the I/O schedulers of OS (MFT, or MVT) or DOS (multiprogramming environment).

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The Access Method support includes a comprehensive set of macro-instructions for user control over the following host CPU/2947-4 data transfer operations:

Each Reader Sorter

Write Specifications Data
Write Sort Control Word Pattern
Write Image Processing Stream
Read Document Stream

Each Printer

Write Control Data
Write Page Heading
Write Page Body
Write Page Trailer

Record blocking/deblocking facilities are included to efficiently utilize all of the systems' data processing resources.

Features ... Special macro instructions for specifying I/O operations ... User control of document format ... Easy to install ... Relieves S/360 of time dependent and repetitive operation.

Customer Responsibilities ... The customer is responsible for specifying the I/O requests in his S/360 program and including the ACCESS Method routines in his system.

Programming Systems ... The IBM 2947-4 operates under OS (MFT or MVT) or under DOS in a multiprogramming environment.

Minimum System Requirements ... For OS/360 – a 2947-4 (RPQ 888264) with attached I/O, and the minimum machine configuration required for Operating System/360.

For DOS/360 – a 2947-4 (RPQ 888264) with attached I/O, and the minimum machine configuration required for the Disk Operating System/360 (24K bytes).

Availability ... December 1971 with programming service classification of A.

Basic Program Material:

Unlicensed Material: One copy of each of the following:

Program in Source Code*
User's Manual*
Internal Logic Manual*
Program Listing (on microfiche)*

To order the Basic Material for 5799-WAG or 5799-WAF select one of the following specify numbers:

Specify Number	Track/Density	Description
9025	7 DC/800	DTR
9027	9/800	DTR
9030	9/1600	DTR

Ordering Information:

	Type	Program and DPOW Number
For OS	5799	WAG
For DOS	5799	WAF

John Fahey
WTC Director of DP Marketing

*Prices and form numbers will be announced when program is available.

SEE REVERSE SIDE FOR "NOTE TO WORLD TRADE READERS".

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1800 MPX VERSION 3 IS AVAILABLE

MPX Version 3 can now be ordered. It includes support of the 2790 Data Communications System, in addition to significant programming enhancements.

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Highlights ...

Up to two 2790 adapters can be attached to an 1800, each with a maximum of 100 area stations (2791 and/or 2793 in any combination). Up to 32 data entry units (2795 and/or 2796 in any combination) may be attached to each area station (2791-1 or 2793). A maximum of 1024 data entry units may be attached per 2790 adapter.

Programming Highlights ...

- The user can request a cross reference listing of all the symbols in a given assembly.
- The user can use symbols defined anywhere in an assembly as variables in COMMON and INSKEL COMMON.

Advantages ... The addition of the 2790 features and the programming enhancements provide growth capability for existing 1800 installations. New installations can be sold in the plant communications environment.

Classification ... Type I program with programming service classification A.

Maintenance ... MPX Version 3 replaces Version 2. Version 2 will be considered current until December 11, 1970. (3 months)

See the reverse side for program materials and ordering instructions.

John Fahey
WTC Director of DP Marketing

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[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

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Distribution: **All Areas**

P70-107 AND P70-108
NOT USED

Reference Material: MPX System Introduction GC26-3718-4 ... MPX Planning Guide GC26-3731-0 ... 1800 Reference Summary System Reference Data GX26-5624-3 ... 1800 Reference Summary MPX Control Statements GX26-1594-1 ... 1800 MPX System Program Logic Manual GY26-3726-1 with TNLs GN26-8000 and GN26-8005.

Basic Program Material:

SRL Publications -- 1800 Multiprogramming Executive Operating System, Programmer's Guide, GC26-3720-3 with TNL GN26-0604; 1800 Multiprogramming Executive Operating System, Operating Procedures, GC26-3725-2 with TNL GN26-0606; 1800 Multiprogramming Executive Operating System, Error Messages and Recovery Procedures, GC26-3727-2 with TNL GN26-0607; 1800 Multiprogramming Operating System, Subroutine Library, GC26-3724-2 with TNL GN26-0605; 1800 Assembler Language GC26-5882-4 with TNLs GN33-8045, GN33-8079 and GN26-0609; 1130/1800 Macro-Assembler Programming, GC26-3733-0 with TNL GN26-0610; 1130/1800 Basic FORTRAN IV Language, GC26-3715-6; 1800 Multiprogramming Operating System Communications Adapter Programming, GC26-3757-0; 1800/2790 Multiprogramming Executive Operating System, Data Communications System Programming GC26-3732-0.

Documentation -- Program Material List ... Attachment to Users.

Machine Readable -- MPX is available on either one 1316 Disk Pack (2311 users), two or three 2315 Disk Cartridges (1810 users), or one 2400 foot reel of magnetic tape which can be restored to a 1316 Disk Pack. Both 2311 and 1810 users will also receive a small deck of cards to assist cold start in addition to the disk distribution. The Communications Adapter and 2790 Adapter Support for 1810 users are contained on the third 2315.

The program number extension OPT1 is for the 2311 user. The complete MPX system is available on one 1316 Disk Pack.

The program number extension OPT2 is for the 1810 user. The MPX system, except for the Communications Adapter and 2790 Adapter Support, is available on two 2315 Disk Cartridges.

The program number extension OPT3 is for the 1810 user requiring the Communications Adapter and 2790 Adapter Support. This package is available on one separate 2315 Disk Cartridge.

1810 users requiring the entire MPX system, including the Communications Adapter and 2790 Adapter Support, must order both the OPT2 and the OPT3 packages.

Current users will receive a preprinted program order form and a letter announcing the availability of Version 3. The letter instructs them to order the version through the branch office using the preprinted order form. Complete ordering instructions are provided in the letter to users.

Ordering Information [1800OS010]

	Program No. Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	none	MT9/800	28	01
	OPT1	1316 Disk	52	01
	OPT2	2315	58	02
	OPT3	2315	58	01
Optional	none	MT 9/800	28	01
		MT 9/1600	29	01

The basic tape 9/800 may be restored to a 1316 Disk Pack on System/360.

If only the form numbered copies of the publications are required, order them from the IBM Distrubution Center, Mechanicsburg -- not from PID.

IBM CONFIDENTIAL UNTIL 10:30 AM E.D.T. New York, September 23, 1970

IBM World Trade Data Processing

Programming Announcement

PROVEN PROGRAMMING SUPPORT FOR SYSTEM/370 MODEL 145

Still more customers and prospects can now consider easily moving up to the S/370. Proven programming support building on the current S/360 programming base offers compatible growth to the newest member of the System/370.

OS on the Model 145 . . . Significant programming support

- 3330, 2305, and the 2319 Facility
  High performance, high capacity I/O support
- 1401/1440/1460, 1410/7010 Integrated Emulation and the DOS Emulator
  Easy non-disruptive path to utilize the advantages of OS
- Recovery Management Support
  Further availability
- ASP, HASP, and CALL/360
  Available within three months after the availability of the OS support

DOS on the Model 145 . . . Significant programming support

- 2319 Facility
  Proven 2314 programming support
- 1401/1440/1460 Integrated Emulation
  Externally compatible with CS/30 and CS/40
- Integrated Emulation (1401/1440/1460, 1410/7010)
  Easy path to move up to S/370
- Recovery Management Support
  Further availability
- DOS POWER
  Available within three months after the availability of the DOS support

Program Products . . . Highlights

- All Program Products and Type II Programs announced for S/370 Models 155 and 165 will also be supported on the Model 145.
- Program Products and Type I and II Programs which are available both in DOS and OS provide the bridges for DOS customers to move up to OS.

Availability ... DOS and OS support for System/370 Model 145 will be available concurrent with first customer shipment of the system and I/O units.

Additional Information ... See the programming section of the Sales Manual for programming service classification of program products and Type IIs. All other support described in this announcement is programming service classification A.

See Marketing Announcement 70-339 for detailed description of the System/370 Model 145 and the 2319 Disk Storage Facility.

Programming RPQs are not accepted at this time

Primary Control Programming is not extended to support S/370, 3330, 2305, or 3211.

Turn the page for more information.

John Fahey
WTC Director of DP Marketing

Release Date: September 23, 1970

Distribution: Argentina, Australia, Brazil, Canada, Israel, Japan, Mexico, New Zealand, South Africa, Venezuela and Selected European Countries

COMPATIBILITY

All programs written for the System/360 (Model 25 and up) will operate on a System/370 Model 145 with a comparable hardware configuration, with the following exceptions:

- Time dependent programs.
- Programs deliberately written to cause program checks.
- Programs using machine dependent data (e.g., machine logs).
- Programs using the ASCII bit.
- Programs which depend upon the non-usable lower storage area being smaller than 704 bytes.
- Programs which depend upon devices or architecture not available in System/370 (Native File of the M44).
- Operations of the Model 145 are not necessarily compatible with any model of System/360 for those functions specified to be model dependent in the IBM System/360 Principles of Operation.
- Programs that depend upon validity of data after the system power has been turned off and restored.

2319 Disk Storage Facility

DOS and OS programs do not require recompiling to use the 2319 since the programming system support for the 2319 is the same as the current 2314 DASF support. Since the 2316 Disk Pack of the 2319 is interchangeable on any 2314 A-type disk storage drive, no data conversion is required to use the 2319 on the Model 145. The 2319 and the 3330 allow the Model 145 OS customer to emulate his DOS 2314 programs with the OS/DOS Emulator while the OS programs utilize the high performance, high capacity 3330 Disk Storage.

OS/DOS Emulator Program for IBM System/370 Model 145

The DOS Emulator eases the transition for the DOS user migrating to OS MFT and OS MVT on the Model 145. The emulation program integrates the facilities of the DOS into the operating environment of OS. It receives DOS jobs as input and produces output in the same format as found in DOS.

HIGHLIGHTS

- Emulation enables the new OS user to execute his DOS programs without having to rewrite them.
- No re-SYSGEN or link edit is required for DOS.
- The emulator supports the DOS multiprogramming environment.
- The Emulator integrates the DOS into OS operations allowing OS processing to occur concurrently with the emulation of DOS programs.
- DOS unit record I/O may be selected to be staged with OS SYSIN/SYSOUT function to lessen the requirement for additional unit record devices.

USE

The following are user requirements for the operation of the emulator:

- Direct access volumes that are on-line at one time must have unique volume ID's.
- The OS JCL statements must follow the Emulator format as discussed in the Emulator documentation.

PERFORMANCE

Internal speed of executing a selected set of DOS job streams and executing the DOS Emulator under OS control on a S/370 Model 145 is approximately 1.0 to 4.3 times faster than execution of the same job streams with DOS on the IBM System/360 Model 40.

Internal speed of executing a selected set of DOS job streams and executing the DOS Emulator under OS control on a S/370 Model 155 is approximately 0.9 to 3 times faster than execution of the same job streams with DOS on the IBM System/360 Model 50.

Under conditions of the analysis for the System/370 Model 145 internal speed of DOS job streams executing under OS control with the OS/DOS Emulator includes the following three components:

1. Speed of instruction execution for all instructions within both the DOS problem program and the DOS control program.
2. Speed of instruction execution of DOS Emulator routines invoked whenever the DOS program executes any of the following operations:

- Supervisor Call
- Start I/O
- Insert Storage Key
- Set Storage Key
- Set System Mask
- Test Channel
- Load PSW

3. Speed of instruction execution for OSIOS and OS First Level Interrupt Handler both of which are invoked after DOS I/O requests are translated to OS I/O requests by the DOS Emulator.

Internal speed of DOS job streams running on a System/360 Model 40 or 50 includes only component number 1 above.

The job streams used included the compilation of application programs with high level language compilers and the execution of a variety of applications taken directly from industry.

The discussion and timings noted above address internal speeds and not throughput.

RESTRICTIONS

The following IBM units and features supported by DOS are not supported by the emulator:

- 1259, 1412, 1275, 1270 and 1419 Magnetic Character Readers.
- 1287 and 1288 Optical Character Readers in document mode.

  Model-dependent functions such as CS/30, CS/40, and the DIAGNOSE instruction.

The following programming items cannot be handled by the emulator:

- The emulator programs for the 1401/1440/1460 and 1410/7010 under DOS.
- Modification of our use of information in user CCW's between EXCP and WAIT.
- Storage protection under DOS.
- BTAM, QTAM, and Autotest.
- Programs that:
  - Depend upon the HIO, RDD, WDD and DIAGNOSE instructions for their operation.
  - Require more than 2 bytes of sense information.
  - Rely on known timing relationships of DOS.
  - Use PCI bit.
- Staged DOS jobstreams containing embedded statements.

MINIMUM SYSTEM REQUIREMENTS

The minimum main storage required by the emulator program without the staged I/O facility is 22K bytes.

The addition of the staged I/O facility may require up to 4K bytes more.

The OS partition or region must be large enough to contain the emulator plus the Disk Operating System being emulated. The Disk Operating System includes the DOS Control Program and the DOS partitions.

There must be enough devices available to support both the Disk Operating System being emulated and the Operating System. Since devices must be dedicated to the Disk Operating System, device sharing is not provided. The same device types currently being used by DOS programs must be used when these programs are emulated, except for staged unit record I/O devices.

PUBLICATIONS

IBM System/360 OS Program Planning Guide for the DOS Emulator on IBM System/370 Model 155 and 145, GC24-5076 ... DOS/OS Management Planning Guide, GC24-5082 ... DOS/OS Implementation Guide (availability will be announced in a PRL).

ADDITIONAL MODEL 145 INFORMATION

OS Recovery Management Support (RMS) on the Model 145 requires 7K bytes of main storage and 22.5K bytes of auxiliary storage. Minimum DOS supervisor size for the Model 145 is 14K, which includes Recovery Management Support (MCAR/CCH), OBR/SDR, and OLTEP support.

On the Model 145, feature code numbers, performance and minimum system requirements for the 1401, 1440, 1460 emulator programs and 1410/7010 emulator programs are as follows.

1400 Series Emulator	OS	DOS
Feature Code	4457	4457
Internal Performance (approx.)	4.9x1401 1.1xCS40	4.9x1401 1.1xCS40
Minimum emulator partition/region main storage requirement	20K	17K

1410 Series Emulator	OS	DOS
Feature Code	4458	4458
Internal Performance (approx.)	2x1410 .67x7010	2x1410 .67x7010
Minimum emulator partition/region main storage requirement	22.5K	28K

Model 145 DOS and OS programming support is announced for the new instructions of the S/370, Extended Precision Feature, ASCII, Integrated 1400 series and 1410 series Emulation, Recovery Management Support (RMS), On-Line Test Executive Program (OLTEP), 3210-1, 3215, and the 3211. Model 145 OS programming support is announced for Extended Precision Simulator, Real Time Monitor (RTM), 3210-2, 3330, and the 2305.

ATTACHED SUPPORT PROCESSOR (ASP) UPDATE PROVIDES NEW FEATURES

A significant update to ASP Version 2, Modification 4 will be automatically shipped to current users on or before the week ending October 2.

• • •

The update will contain:

- **Fail Soft** -- Improves total system reliability and integrity by reducing overall system restart time following system failure ... permits the uninterrupted operation of never-ending jobs over an ASP restart ... and provides a checkpoint of ASP data sets for ASP-initiated jobs.

- **Internal Job Processing (IJP)** -- Provides an interface to the ASP system during program execution. IJP supports: conversational terminal systems, such as CRBE and TSO, desiring to submit job input to ASP for scheduling and processing, jobs desiring to print or punch prior to termination of execution ... jobs that build a JCL input stream and wish to submit it for processing ... and jobs that will schedule another selected job upon termination.

- **Extension of setup facilities** -- Provides the benefits of ASP's exclusive setup facilities to the cataloged data set user. If the user supplies a data set name, the device type and volume serial(s) are retrieved from the OS catalog for use in fetching and mounting desired volumes for use by the job. This feature also permits the user to set up one, all, or any given number of volumes of a cataloged data set.

- **Master Log Console** -- Permits the user to designate a console at initialization time to record all system input and output messages. These messages appear on the master log console as well as on their normal consoles of origin or destination.

As stated in P70-71, ASP will be supported on System/370 within three months after the availability of the corresponding OS support.

Programming service classification is A.

Other information and the sales manual text are on the inside pages.

John Fahey
WTC Director of DP Marketing

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

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FOR IBM INTERNAL USE ONLY

Release Date: September 18, 1970
Distribution: **All Areas**

This update provides existing ASP users with a convenient, incremental method of obtaining new function with a minimum of system disruptions.

It applies to Release 2.4 of ASP and is supported on Release 17 and 18 and with appropriate PTFs, Release 19 of OS/360. ASP Release 2.3 will remain 'current' for programming service purposes as long as Release 17 of OS/360, with which it operates, remains 'current'.

Update Package

The following will be shipped to current ASP users and included as part of the ASP package for new orders.

Documentation ... Memo to users, which includes instructions for using the Distribution Tape Reel. The following updated SRLs: Application Programmer's Manual (H20-0322-6) ... Console Operator's Manual (H20-0321-7) ... System Programmer's Manual (H20-0323-7).

Machine Readable ... Object code and source code updates on a Distribution Tape Reel.

Program listings on microfiche (GYB0-0508) are the modules changed by this update and are available from the IBM Distribution Center, Mechanicsburg.

No RPQs will be accepted at this time.

Attached Support Processor (360A-CX-15X): The Attached Support Processor (ASP) system provides a multiprocessor operating system as an extension of the Operating System/360. The ASP system enhances the operational environment of the OS computer installation by automating many of the operator functions. ASP executes as a programmed operator of OS, providing an automated interface between the operator and OS. ASP is programmed to optimize the scheduling of the installation workload, including the support of a single centralized job queue. An improved operational environment, which enhances system workload capacity and reduces turnaround time, is achieved through operational control and scheduling of jobs on one, two, three, or four distinct systems. This process results in a significant reduction in necessary operator intervention.

ASP is primarily for the commercial and scientific customer with a large job shop computing system. ASP also includes features to facilitate the use of the 709X Emulator (360C-EU-729) and OS integrated into the same operational environment. The primary programming system used by the application programmer is OS. ASP permits the intermixing of OS and 709X Emulator jobs in the input stream. It also supports remote job submission from synchronous transmit-receive (STR) terminals and binary synchronous communication (BSC) terminals, and permits peripheral support and other background jobs to share Support Processor CPU time with the primary support functions.

Description: The ASP Supervisor operates as a single-step job in the Support Processor under control of OS. The OS Primary Control Program (PCP), the OS Multiprogramming with Fixed Number of Tasks (MFT) Control Program, or the OS Multiprogramming with Variable Number of Tasks (MVT) Control Program* may be used on the Support Processor. The ASP Supervisor schedules and initiates the various support and background functions. It is multiprogrammed within itself to minimize the overhead associated with the sharing of CPU and channel time. Excess CPU capacity may be absorbed by other OS/360 tasks if MFT or MVT is utilized on the Support Processor.

The Main Processor operates under either the OS PCP, MFT, or MVT Control Program.* The system input and output devices for the Main Processor are replaced by the channel-to-channel connection with the Support Processor. Direct access storage devices for systems residence and program library are attached to the Main Processor, as are any input/output devices accessed during execution by the problem programs. The operating system in the Main Processor provides an environment for the problem program identical to a standalone system. The performance of the system is directly related to the throughput capability of OS on the Main Processor.

The ASP system accepts job streams from remote terminals over STR or BSC transmission lines. The STR package supports three input/output data formats for Remote Job Processing. One is compatible with the IBM 1974 or the IBM 1978 terminals (RPQ devices). The second is oriented toward System/360 Model 20s; and the third is designed for other System/360 processors equipped with proper STR features on a 2701 Data Adapter Unit, and for the 1130 system. The data format is suitable for any computer which has an eight-bit byte data format and which can accept STR transmission. The BSC package supports three data formats for Remote Job Processing. One is compatible with the 2780 Data Transmission Terminal, and the other two are full and partial pressed formats that are designed for the System/360 and 1130 computer terminals. Note that the ASP system does not include the computer programming that is necessary in the remote terminals.

If the workload at an installation exceeds the capacity of one Main Processor, the ASP Support Processor can be expanded to support additional Main Processors, balancing the total installation workload between them. In this configuration, termed a Multiple Main Processor system, the Main Processors need not be symmetric but, rather, may be any combination of permissible Main Processors. Jobs will be distributed to the available system based upon job priority, device requirements, and processor dependency (including the requirement for 709X Emulation). The application programmer will be responsible for specifying processor dependency (for example, data set dependency), via an ASP control card, if such a dependency exists. The system provides the programmer with adequate information concerning job execution to enable him to direct subsequent job submissions to the correct processor if required.

The ASP system supports the use of OS PCP, MFT, or MVT Control Program configurations on the Main Processor. With MFT or MVT, the ASP system provides for the execution of several jobs concurrently under control of the ASP supervisor. With MVT, the ASP system maintains control of Main Processor execution, varying the depth of multiprogramming based upon the current job mix. An attempt is made to optimize the scheduling of jobs to balance the computer workload and to take maximum advantage of the available core storage. The ASP system is also capable of supporting the execution of application programs on the Support Processor, provided that the OS/360 MFT or MVT control program is used. This mode of execution permits the Support Processor to assume part of the application workload of the installation as if the Support Processor were another Main Processor, and may be used in a single processor environment. With this feature, it is possible to have a Dual Main Processor with only two CPUs.

Highlights: The special features of the ASP system are increased system workload capacity; reduction of turnaround time; improved operating efficiency; and workload balancing between multiple System/360 processors.

These features are made possible by:

1. Computer-controled execution of support functions in multiprogrammed mode on a lower cost Support Processor or in a partition/region of OS/360 which permits:
   a. Priority job scheduling
   b. Automatic processing of system input and output data sets
   c. Concurrent processing of peripheral and other user programs, such as:
      Card-to-Tape
      Tape-to-Tape
      Tape-to-Printer
      Tape-to-Card
      Card-to-Printer
      Card-to-Card
      User-written background programs
      Tape labeling
      Tape dumping
2. Reduction of resource interference on Main Processor in terms of:
   a. Core storage. Core buffering of Main Processor input and output data sets in the Support Processor.
   b. CPU time. Multiplexer channel interference and interrupt service for peripheral input/output devices eliminated in Main Processor.
   c. Data channels. Selector channel data flow time for system input and output on Main Processor reduced.
   d. Input/output devices. Algorithm provided for efficient management of direct access storage devices for system input and output data sets.
3. Pre-execution setup of removable input/output devices on Main Processor.
4. Support of multiple operator consoles for diversification of system operation.
5. Concurrent input/output background processing on Support Processor during emulation on Main Processor.
6. Selective job scheduling for Main Processors and Support Processor devices.
7. Remote job processing from STR and BSC terminals.
8. Internal job processing, which provides a generalized interface to the ASP system during program execution.
9. Automatic FAIL SOFT options, which enhance total system availability.

Use: Operational control of the ASP system is exercised by the operator from the console typewriter or an alternate operator console on the Support Processor. A command language is provided to start ASP, to delete and restart jobs, to initiate background processing, to change priority of jobs, and to determine the backlog of jobs in the queue.

ASP provides a standard sequence of functions for each job in the Support Processor: Input Service, Main Processor Service, Print Service, Punch Service, and job purge. Special control cards are not required for jobs using the standard sequence. The ASP control cards provide a simple means of altering this sequence for a particular job.

Special Sales Information: ASP supports the single centralized job queue concept in a wide variety of large installations. The degree to which an installation will realize the advantages of ASP is dependent upon the job mix and the extent to which the centralized job queue concept applies.

Customer Responsibility: A customer using ASP must take the following steps prior to installation to ensure that the use of the system will be satisfactory:

1. He must order and install satisfactorily all required communications equipment.
2. Appropriate training must be given the application programmers and system operators in OS/360 and the 709X Emulator, in addition to training in the use and/or operation of ASP.
3. It is highly recommended that his system programmer become familiar with the internal operation of the system. This knowledge will enable him to customize the ASP system to the unique operational environment of his installation.
4. He must complete any programming of remote terminals that is necessary for their operation.
5. If he chooses to use the IJPWTR module, he must incorporate this generalized interface routine into any program or user task desiring to communicate with the ASP DSPs.
6. He should generate and maintain an assembly listing, which should be available to all personnel servicing the program.

Branch Office Responsibility: Because ASP is a complex system, it is recommended that System Engineering Services be utilized whenever possible, particularly during initial installation and for performance tuning.

Maintenance questions regarding ASP should be directed to your local IBM Customer Engineer, who will provide the programming service.

Programming Systems: The ASP system programs are written in OS/360 Macro Assembler Language. Programs to provide additional functions, known as Dynamic Support Programs (DSPs), can be incorporated into the Support Processor by the customer at his installation. These programs also must be written in OS/360 Macro Assembler Language. The minimum OS/360 control program that will execute ASP includes the Primary Control Program (MFT and MVT may also be used), a linkage editor, and the OS/360 utility programs. Distribution and maintenance assume the use of IEBUPDAT. Installations wishing to use IEBUPDTE are responsible for any control card conversions. The OS/360 Macro Assembler program (F-level) must be available if program modifications are anticipated.

ASP users must order these programming systems separately: OS/360, the 709X Emulator program (360C-EU-729), if used, and the Synchronous Transmit-Receive Access Method for OS/360 (360A-SE-33X), if STR terminals are to be used.

Minimum System Requirements: The configuration requirements for the Main Processor are identical with those of a standalone processor operating under OS/360, except

* ASP does not support the Model 65 MP Option of OS/360 MVT.

that the channel-to-channel adapter replaces the normal system input and output devices. If the 709X Emulator is to be used, the Main Processor must have at least one 2311 Disk Storage Drive for OS/360 and 709X Emulator checkpoints. The modifications to the OS/360 Control Program nucleus that are required for operation as an ASP Main Processor increase the nucleus by approximately 3000 bytes. If the 709X Emulator is used, approximately 2000 more bytes must also be added to the nucleus.

Support Processor with OS/360 Primary Control Program: The minimum Support Processor for executing under the Primary Control Program is a Model 40G with two selector channels (one dedicated to the channel-to-channel adapter), one 1052 Printer-Keyboard, Model 7 (Console Typewriter), one 2540 Card Read Punch, one 1403 Printer, Model 2 or N1, and three 2311 Disk Storage Drives: This configuration permits queuing of up to 30 jobs. (A job is considered equal to a combined input and output stream of 5000 100-byte records.) System capability can be expanded by attaching additional units of the following:

1403 Printers, Model 2 or N1

2540 Card Read Punches

2311 Disk Storage Drives or 2314 Direct Access Storage Facilities

2401 Magnetic Tape Units (at least one 9-track or 7-track tape unit with Data Conversion feature is recommended for system maintenance). The ASP system supports 2401 Magnetic Tape Units for use by background programs.

In addition, a 2701 Data Adapter Unit with the Synchronous Data Adapter Type I feature and the 2701 Data Adapter Unit with the Synchronous Data Adapter Type II feature may be attached for Remote Job Processing. When Remote Job Processing is used, at least a Model 40H is required. When the number of functions required or the workload capacity needed exceeds the capabilities of this configuration, larger core storage or a faster processor should be considered. A 2314 Direct Access Storage Facility may be substituted for 2311 Disk Storage Drives as the ASP work queue device. The number and type of direct access storage devices, the type of processor, and the size of core depends upon the individual installation's workload. The user should refer to the ASP System Programmer's Manual (GH20-0323), which contains an algorithm for estimating core storage needs.

The following devices are supported as auxiliary operator consoles in the ASP system:

2740 Communication Terminal attached on a dedicated line through a 2701 Data Adapter Unit

2260 Model 1 Display Station attached through a directly attached 2848 Display Control Model 3 (with the Line Addressing feature)

1443 Model N1 Printer (output only)

1053 Model 4 Printer attached through a 2848 Display Control (output only)

1403 Model 2 or N1 Printer (output only)

Support Processor with OS/360 MFT or MVT Control Program: The minimum Support Processor for use of OS/360 Multiprogramming in the Support Processor is the same as for the Primary Control Program except that the minimum processor is a Model 40H. The minimum partition size for ASP is 150,000 bytes. Consideration should be given to larger region sizes, commensurate with planned system facilities, such as an additional Main Processor or Remote Job Processing.

At least one IBM 2401 Magnetic Tape Unit (9-track or 7-track with Data Conversion feature) should be available for system maintenance.

Support Processor -- Multiple Main Processors: The minimum Support Processor in a Multiple Main Processor configuration is the same as the system that supports the Primary Control Program with the following exceptions:

The minimum Support Processor is a Model 50H. For reasons of system performance, the Model 40 is not recommended except under controlled conditions. For Dual Main Processor support, the minimum partition size is 200,000 bytes.

A minimum of four operator terminals, at least one of which must be an input terminal, must be available to ASP (for example, a 1052 and three 2740s attached through a 2701).

A 2314 Direct Access Storage Facility for Support Processor work queue or the equivalent 2311 Disk Storage Drive capacity.

At least one IBM 2401 Magnetic Tape Unit (9-track or 7-track with Data Conversion feature) should be available for system maintenance.

Note: These are complex configurations and must be system assured.

Engineering Change Levels: In addition to the required engineering changes to run the supported levels of OS/360 and the 709X Emulator, the EC levels required for proper functioning of the ASP system are EC 705835 and EC 254902 on the Channel-to-Channel Adapter (special feature #1850).

Basic Program Package:

Documentation: Application Directory ... Application Programmer's Manual (GH20-0322-6) ... Console Operator's Manual (GH20-0321-7) ... System Programmer's Manual (GH20-0323-7).

Machine Readable -- Object code, source code, OS/360 modifications, 709X Emulator modifications and macro definitions.

Optional Program Package:

Documentation -- None

Machine Readable -- Assembly listings.

Ordering Information: Program number 360ACX15X.

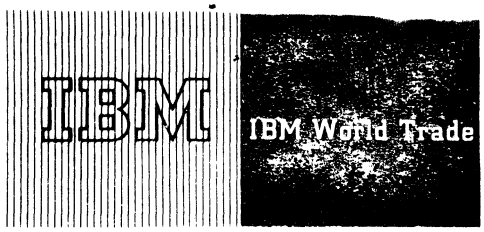
	Program Number Extension	Distribution Medium Type	Code	User Volume Requirement
Basic	none	MT 7 DC/800	26	01
		MT 9/800	28	01
		MT 9/1600	29	01
Optional	none	MT 9/800	28	02
		MT 9/1600	29	02

For additional ordering information, see Branch Office Manual, DP Sales Activity Section.

Additional Support Material: System Description Manual (GH20-0466-4) and microfiche listings (GYB0-0508) are available from IBM Distribution Center, Mechanicsburg.

For further information, contact the ASP Regional Marketing Representative.

ASP is a Type II program with programming service classification A.



Data Processing

PROGRAM ANNOUNCEMENT

OS SHIPMENTS NOW INCLUDE CRJE AND PCP

Starting today, all shipments of OS/360 Release 19 will include support for Conversational Remote Job Entry and the PCP option.

• • •

Customers who have Release 19 and do not require either of these functions, need not reorder OS/360.

CRJE is an option of MFT and MVT. To the on-line user, it provides the capability for remote conversational preparation of programs, remote file management, and remote job entry while normal background processing continues. The power and flexibility of OS/360 MFT and MVT are conveniently extended to users at remote locations via the IBM 1050, 2740 and 2741 printer keyboard terminals. Both PL/I and FORTRAN Syntax checking facilities are included (see P69-31).

An updated Release 19 will be available in two to four months. It will contain PTFs which have been generated in the interim.

The information on the reverse side updates P70-91 - Release 19.

John Fahey
WTC Director of DP Marketing

Note to World Trade Readers

This letter is a reprint of an IBM Programming Announcement and was mailed concurrently to USA and WT offices. The following changes, when appropriate, should be applied to the text for WT use.

[1] All programs announced as available have been shipped to the appropriate WT Program Libraries. Programs and associated material may be ordered as indicated on pages 9013 through 9017, Programming Section, WT DP Sales Manual.

[2] Advance copies of the form numbered publications mentioned in this letter either have been distributed through the DP Automatic Publications Service (DAPS) to country headquarter, branch office and support center locations, or will be distributed when available. Requisition additional copies from the Supply source indicated when availability is announced in the weekly DP Marketing Publications Release letter distributed weekly to local DP Literature Coordinators. Customers enrolled in the Systems Libraries Subscription Service (SL/SS) for the system configuration involved will receive their copies by direct mail.

[3] When a new version of a program is announced, current users must order it; they will not receive it automatically nor will they necessarily receive a prepunched request card in their Area.

[4] Programming distribution media may be different in this area based on local conditions although DTR, disk packs, etc., may be indicated.

[5] All references made to the Program Information Department (PID) should be understood to mean the appropriate WT Program Library.

[6] Any references made to DPD Departments (or regions) as sources of information or for manuals, etc., should be understood to mean the comparable WT Department (or corresponding organizational level).

[7] Communications facilities or services may be required which are not offered in all WT countries. In case of any doubt as to the availability of suitable communications facilities, the country Teleprocessing Coordinator should be consulted.

[8] References made to Engineering Change requirements should be verified with the local CE office. Although E/C requirements are identical for WT and IBM, availability and shipping dates will differ. NO PRODUCTION COMMITMENTS FOR PROGRAMS WITH E/C LEVEL REQUIREMENTS SHOULD BE MADE TO CUSTOMERS PRIOR TO VERIFICATION WITH LOCAL CE MANAGER OF EC AVAILABILITY.

[9] World Trade now identifies certain current programs with a Programming Service Classification of A, B, or C Programming services to WT customers remain unchanged for programs classified A or B and for programs available only in World Trade. After January 1, 1970, Programming services for programs classified C will not include centralized Authorized Program Analysis Report (APAR) programming service or automatic distribution of corrections.

[10] Availability of machines or features not described in the World Trade Sales Manual should be verified with local Special Equipment Engineering.

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FOR IBM INTERNAL USE ONLY

P70-112 NOT USED

Release Date: September 22, 1970
Distribution: **All Areas**

This release has been designated as 19.3 in the RELNO field of system printouts. The planning and maintenance support information remains the same as stated in P70-91. Release 19.3 contains two fixes essential to the proper functioning of the PCP option. The Field Engineering Division should be contacted for additional PTFs which may be appropriate for your customer's PCP operations.

The following information updates Release 19:

New Components

FORTRAN Syntax Checker, 360S-FO-550
PL/I Syntax Checker, 360S-PL-552
CRJE, 360S-RC-551

New SRLs

OS/360 CRJE Concepts and Facilities, GC30-2012-0
OS/360 CRJE Terminal User's Guide, GC30-2014-0
OS/360 CRJE System Programmer's Guide, GC30-2016-0
OS/360 Storage Estimates, GC28-6551-9. Note: This obsoletes GC28-6551-10. TNL GN28-2438 is available to update GC28-6551-9 to GC28-6551-11
OS/360 System Generation, GC28-6554-7. Note: This obsoletes GC28-6554-8. TNL GN28-2439 is available to update GC28-6554-7 to GC28-6554-9

New PLMs

OS/360 Input/Output Supervisor Program Logic Manual, GY28-6616-7
OS/360 CRJE, GY30-2011

New TNLs

TNLS GN28-2432 and GN28-2434 to the OS/360 Release 19 Guide GC28-6733-1
TNL GN28-2436 to OS/360 Concepts and Facilities GC28-6535-7
TNL GN28-2437 to OS/360 System Programmer's Guide GC28-6550-8
TNL GN28-2438 to OS/360 Storage Estimates GC28-6551-9
TNL GY30-2552 to OS/360 BTAM Program Logic Manual GY30-2001-4
TNL GY30-2542 to OS/360 CRJE Program Logic Manual GY30-2005-4
TNLs GN28-2429 and GN28-2440 to OS/360 Messages and Codes GC28-6631-9
TNL GN28-2433 to OS/360 Operator's Reference GC28-6691-1
TNL GN30-2543 to OS/360 Remote Job Entry GC30-2006-4
TNL GN28-2439 to OS/360 System Generation GC28-6554-7

Optional Program Material

Distribution Volume Number	Prog. Component Name	Program Number
3	PL/I F Syntax Checker	360S-PL-552*
4	FORTRAN Syntax Checker	360S-FO-550*
14	CRJE	360S-RC-551*

In addition, volume 8B contains OS/360 utilities.

Program Listings

Use the following group codes to order microfiche from Mechanicsburg on order form Z120-1399-2.

	Order Number
S/360 OS PL/I Syntax Checker	GJDI - 1065
S/360 OS CRJE	1019
S/360 OS FORTRAN Syntax Checker	1054

Ordering Instructions

See P70-91.

* These components are in addition to those announced for the indicated volumes as stated in P70-91.