P68-150

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

PHASE 3 OF SHARED HOSPITAL ACCOUNTING SYSTEM (TYPE II) MAY BE ORDERED

The Shared Hospital Accounting System (SHAS) Version 1, Modification Level 2 (360A-UH-11X), may now be ordered; shipments will begin the week ending November 15, 1968.

SHAS provides hospital accounting for the multiple hospital environment. The accounting applications are Patient Billing, Accounts Receivable, and General Ledger. Accounting for both inpatients and outpatients is provided. In addition to Medicare cost allocation, SHAS determines Medicare insurance proration facilitating the preparation of the Medicare inpatient and outpatient billing forms. The design of SHAS facilitates the additions of clinical or administrative user written programs. SHAS programs are designed to provide better administrative and operational control and reduce the ever increasing clerical load associated with hospital administration.

The SHAS applications operate in two modes:

On-line entry of data and receipt of reports by means of Teleprocessing terminals.

Off-line data entry and reporting at the central data processing location.

The SHAS programs provide the on-line facility for applications where immediacy of the information is significant (entry of charges, cash payments, request for demand bills, etc.). For other applications, receivable statement writing, etc., the central facility (with its high speed printer) is used directly.

This availability announcement is for the addition of the following to the already available accounts receivable application (Phase 1) and Teleprocessing support (Phase 2):

Phase 3

Patient Billing System
Billing Inquiry
General Ledger System
Cost Allocation Programs
Job Accounting Programs

Current users will receive a memorandum and a prepunched program order card which should be used for ordering Version 1, Modification Level 2. After completion, this card should be forwarded to the local IBM branch office for approval. After approval, the card should be sent to the Program Information Department.

The Systems Manual - Patient Billing and General Ledger will be available from Mechanicsburg on November 29, 1968. Availability and number will be announced in a Publications Release Letter. Preliminary copies may be obtained through your Medical Industry Marketing Representative.

See the reverse side for the new sales manual write-up.

John Fahey
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 y013 through y017, Programming Section, WT DP Sales Manual.
2. Advance copies of the item numbered publications mentioned in the above letter have been shipped with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.
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 preprunched request card in their Area.
4. Programming distribution media may be different in this area based on local conditions although DTRS, tapes, 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 Representatives (or regions) as sources of information or the manuals, etc. should be understood to mean the comparable WT Department (or correspondent, organizational level).
7. Communications facilities or terminals 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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Distribution: All Areas

Shared Hospital Accounting System (SHAS): SHAS provides hospital accounting for the multiple hospital environment. The member hospitals are tied to the central computer facility by Teleprocessing terminals. The accounting applications are Patient Billing, Accounts Receivable, and General Ledger. Accounting for both inpatients and outpatients is provided. In addition to Medicare cost allocation, SHAS determines Medicare insurance proration facilitating the preparation of the Medicare inpatient and outpatient billing forms. The design of SHAS facilitates the addition of clinical or administrative user written programs. SHAS programs are designed to provide better administrative and operational control and reduce the ever increasing clerical load associated with hospital administration. (360A-UH-11X)

Description: The SHAS programs and the System/360 using remote terminals encompass the application areas of Patient Billing, Accounts Receivable, and General Ledger for multiple hospitals.

The SHAS applications operate in two modes: on-line entry of data and receipt of reports by means of Teleprocessing terminals and off-line data entry and reporting at the central data processing location. The SHAS programs provide the on-line facility for applications where immediacy of the information is significant (entry of charges, cash payments, request for demand bills, etc.). For other applications, receivable statement writing, etc., the central facility (with its high speed printer) is used directly.

Features:

General

- Input Edit Tables and Report Format Control provide flexibility at the user's option to tailor the input and output for each application.
- Hospital Profile provides for individual hospital processing decisions and parameters tailoring SHAS program processing to each hospital on the system.
- The SHAS Executive provides the capability for processing foreground and background programs. Several terminals can transmit and receive data concurrently through foreground programs while batch applications are processed by background programs.
- Job Accounting statistics including terminal and CPU utilization are logged internally and are available in report form.
- Security is attained through input and data set identifications to limit access of data. Each hospital is permitted to inquire into or modify its data only.

Executive

Manage communications lines ... handle the timer ... handle interrupts (e.g., demand bill request and inquiries) ... queue messages ... manage input/output.

Patient Billing

Setting up patient's files upon admission to hospital ... central pricing of hospital services ... charge posting ... census ... insurance proration (including Medicare) ... record cash payments ... Daily Balance Forward printed at the hospital ... inquiry on the status of patient accounts (detail and summary patient bills) ... automatic preparation of patient bills ... automatic printing of insurance statements ... automatic transfer to accounts receivable ... accumulation of revenue and usage data for Medicare requirements.

Accounts Receivable

Preparation of statements ... recording cash payments ... receivable accounts stored either off-line or on-line ... inquiry on the status of receivables ... on-line account validity check for off-line receivables ... listing of accounts which require a final diagnosis ... listing of receivables by financial class ... aged trial balance ... listing of accounts which have insurance receivables ... listing of accounts which fail to meet installment payments ... consolidated statement for family billing ... bad debt reports.

General Ledger

Ledger posting ... Trial Balance ... Comparative Income and Expense Report ... Balance Sheet ... Operating Statement ... cost allocation methods suitable for Medicare - stepdown and double apportionment.

Special Sales Information: Designers of specific Teleprocessing line configurations should consider the impact of increasing memory requirements for DOS Supervisor, QTAM, or compiled COBOL modules.

The application programs include the provision to read and write at the central facility all input and output data that is normally transmitted from terminals. This feature is applied to implement systems without Teleprocessing capabilities.

Special Installation Information: SHAS is a powerful, sophisticated, and complex hospital data processing system. Customers involved with SHAS installations must have a thorough working knowledge of DOS and COBOL, and of QTAM if the installation will have Teleprocessing. The flexibility features (e.g., hospital profiles) that let SHAS serve the individual needs of each hospital also increase its complexity of operation and length of required learning time.

In considering the installation and conversion effort and support, a separate system is being installed in each hospital using the system - not just one central computer. Each hospital becomes a computer system user and an IBM customer. Data preparation must be carefully analyzed by the central SHAS site to ensure that proper controls are maintained. Accounts Receivable should be installed first to provide a base of experience with SHAS. These programs use a small number of master files, have a low user urgency if daily running may be delayed, and provide a logical entry into the patient accounting use of SHAS. Special attention should be focused on the preparation of accurate A/R data files for entry into the system. A/R volumes also should be accurately determined in advance to make sure file space is adequate. A non-Teleprocessing system installed first will give the user SHAS experience before installing terminals in the hospitals.

SHAS proposals involving multiple users or Teleprocessing must be reviewed by Systems Assurance.

Use: The SHAS system processes input data against patient and account master files. These files are established through procedures supported by the SHAS programs. Patient admissions and dismissals, charges, payments, and accounting transactions are processed for multiple or single hospitals. Teleprocessing provides an alternate input method and an alternate output for certain operational reports and inquiries. Volume output reports are printed centrally in a Teleprocessing system. File update and report jobs are controlled by the central operator through a higher level function language (series of cataloged job steps).

Balance and edit, maintenance, and error reporting programs process data for all applications. Update programs in each application maintain and back-up tape and Indexed Sequential disk master files. Report programs can select data for individual hospitals from billing and receivables tape and disk files. The Background Monitor supports function initiation and uniform restart capabilities for operator control. The Teleprocessing Foreground Monitor is assembled from user Teleprocessing network specifications.

Customer Responsibilities: A thorough understanding of the system (by personnel in the central facility) before installation ... a thorough understanding of DOS and COBOL, including operating experience with DOS ... a thorough understanding of QTAM for installations with Teleprocessing ... selection of terminal site ... creation of master files ... terminal operation manuals for clerical personnel affected ... preprinted forms for certain reports ... customize formats specified by the user by means of SHAS Input Edit Tables and Report Format Control modules ... create hospital profile parameter records ... make necessary arrangements for communication lines and equipment.

Programming Systems: The Shared Hospital Accounting System (SHAS) operates under the IBM System/360 Disk Operating System (DOS/360). The application programs are written in COBOL and Assembler Language. Also used are Sort/Merge and Utility Programs. Teleprocessing programs utilize Queued Teleprocessing Access Method (QTAM).

Minimum Teleprocessing System Requirements: 2030F Processing Unit (64K), Decimal Arithmetic (#3237), Floating Point Arithmetic (#4427), Interval Timer (#4760), Selector Channel - first (#6960), Selector Channel - second (#6961), Storage Protection (#7520) ... 1052 Printer-Keyboard with appropriate attachments ... 2821 Control Unit Model 1 with 1,100 lines per minute Printer Adapter (#3615) ... 1403 Printer Model N1 ... 1416 Interchangeable Train Cartridge ... 2540 Card Read Punch Model 1 ... 2841 Storage Control Model 1 ... three 2311 Disk Storage Drives Model 1 ... 2415 Magnetic Tape Unit and Control Model 1 ... 2701 Data Adapter Unit Model 1, Terminal Adapter - Type 1 (#4645) or 2702 Transmission Control Model 1, Terminal Control - Type 1 (#4615), Selective Speed (#9684), and IBM Line Adapters as required. System control terminal at the Central computer site includes 1051 Control Unit Model 2, First Printer Attachment (#4408) ... 1052 Printer-Keyboard Model 2.

Terminal configuration at each hospital uses 1050 series equipment. Recommended are 1051 Control Unit Model 2, First Printer Attachment (#4408), First Reader Attachment (#4411), IBM Line Adapter (#469X), Line Correction (#4795), Line Correction Release (#4796) ... 1052 Printer-Keyboard Model 2 ... 1056 Card Reader Model 1 ... 29 Card Punch Model A22* ... 59 Card Verifier Model 2.

* Self-Checking Number Feature (#7062) may be additionally specified for card punch as desired by the user.

Minimum Non-Teleprocessing Machine Configurations (formerly announced as the CARE Accounting System): A 2030 Processing Unit Model E (32K) with Decimal Arithmetic (#3237), Floating Point Arithmetic (#4427), Interval Timer (#4760), Selector Channel - first (#6960), Storage Protection (#7520) ... 1052 Printer-Keyboard with appropriate attachments ... 2821 Control Unit Model 1 ... 1403 Printer Model 2 ... 2540 Card Read Punch Model 1 ... 2841 Storage Control Model 1 ... three 2311 Disk Storage Drives Model 1 ... one 2415 Magnetic Tape Unit and Control Model 1.

A 2025 Processing Unit Model E (32K) with Floating Point Arithmetic (#4427), Interval Timer (#4760), Selector Channel (#6960), Storage Protection (#7520) ... 1052 Printer Keyboard with appropriate attachments ... Integrated 1403 Attachment (#4590) ... 1403 Printer Model 2 ... Integrated 2540 Attachment (#4595) ... 2540 Card Read Punch Model 1 ... Integrated 2311 Attachment (#4598) ... three 2311 Disk Storage Drives Model 1 ... one 2415 Magnetic Tape Unit and Control Model 1.

Basic Program Material:

Publications -- Application Directory ... Program Description Manual (H20-0533-1) ... Operations Manual (H20-0534-1) ... Teleprocessing Operations Manual (H20-0550).

If only the form numbered manuals are required, order them from the IBM Distribution Center, Mechanicsburg -- not PID.

Machine Readable -- One 9-track 2400' reel of magnetic tape (800 or 1600 bpi) or one 7-track 2400' reel of magnetic tape (800 cpi) Data Conversion feature required. The machine readable material contains the source program modules and catalog control cards, model job control statements, and data set file descriptions for compiling and cataloging into the core image and source library for program operation. Also included is a sample problem with control cards for execution.

If the distribution medium required is not indicated on the back of the program order card, 9-track at 800 bpi will be forwarded.

Magnetic tape (2400') may be forwarded or ordered. (The program order card should accompany the tape order form.)

Ordering Procedure: See Branch Office Manual, DP Sales Activity section.

Additional Program Support Material: Teleprocessing Systems Manual (Y20-0251) ... Systems Manual (Y20-0215-1) ... Application Description Manual (H20-0302-2).

For further information contact your Medical Industry Marketing Representative.

SIGNIFICANT CHANGES MADE TO THE SYSTEM/360 MODEL 20 HOSPITAL ACCOUNTS RECEIVABLE AND HOSPITAL PATIENT BILLING PROGRAMS (TYPE IIs)

System/360 Model 20 Hospital Accounts Receivable Program

Major changes have been made to the System/360 Model 20 Hospital Accounts Receivable program. They are:

- The Accounts Receivable program is now available (360V-UH-09X). Formerly, it was scheduled for availability December 15, 1968.
- The minimum configuration has been changed: 1) two 2311 Disk Storage Drives Model 12 are required instead of the one originally specified; 2) the 52 character set is now required on the 2203 Printer instead of the 39 character set originally specified.
- Reports added to the Accounts Receivable system include Insurance Accounts Receivable, Accounts Receivable Status Report, and Deleted Accounts Receivable.
- Entry to Accounts Receivable is now by means of card input only rather than directly from billing via a disk transfer of final billing data.

Description ... Recording Cash (now identified as Cash Receipts and Adjustments), Trial Balance reporting (now identified as Aged Accounts Analysis), Statement Writing continue to be supported. Insurance Accounts Receivable, Accounts Receivable Status, and Deleted Accounts Receivable reports have been added.

Features ... Entry of an account to the Receivable file is effected through cards, either punched automatically in the final billing procedure or manually if Hospital Patient Billing is not implemented. (Previously, transfer to Accounts Receivable was directly from final billing via the then optional second drive.) Statements are written in patient number sequence. They may be written selectively by financial class determined by the user. The Aged Accounts Analysis (previously named Trial Balance) is printed in patient or guarantor sequence.

Two 2311 Disk Storage Drives Model 12 are required to provide disk to disk copy, better backup and audit trail. The programs are designed to utilize the features of the MFCM providing the facility to stacker select error conditions.

Availability of the Accounts Receivable Systems Manual will be announced in a PRL. Preliminary copies can be obtained through your Medical Industry Marketing Representative.

System/360 Model 20 Hospital Patient Billing Program

Major changes have been made to the System/360 Model 20 Hospital Patient Billing program (the availability date remains December 15, 1968). They are:

- Minimum configuration has changed: 1) 16K core is now required instead of 12K core; 2) two 2311 Disk Storage Drives Model 12 are required instead of the one originally specified; 3) the 52 character set is now required on the 2203 Printer instead of the 39 character set originally specified.
- The Diagnosis Delinquency report previously announced will not be provided.
- Patient charges will be batch posted in patient number sequence only, instead of randomly as previously announced.
- Entry to Accounts Receivable is now by means of card input only, rather than directly from billing via a disk transfer of final billing data.
- Revenue Distribution will not be provided. Data for revenue distribution is punched in the charged requisition cards during charge posting allowing the user to summarize revenue data as desired.
- The document control log will not be provided.

Description ... The programs accept patient charges and provide for patient and insurance company billing. The package covers admissions, charge posting, census reporting, insurance proration, preparation of detail bills, and preparation of summary bills. Also included are updating of room transfers, discharges, and Medicare billing for Part A and B.

Features ... Patient charges are batch posted in patient number sequence ... patient data for revenue reporting are punched into the charge cards allowing the hospital to summarize the revenue data as desired ... the document control log will not be provided as document

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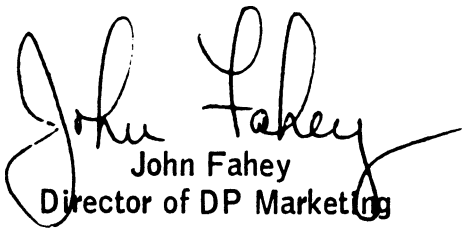
control is defined as a customer responsibility.

Two 2311 Disk Storage Drives Model 12 are required to provide disk to disk copy, better backup and audit trail. The programs are designed to utilize the features of the MFCM providing the facility to read and punch into charge cards and to stacker error conditions.

All customers affected by these changes should be notified immediately.

New sales manual write-ups for both programs are on the next page.



John Fahey
Director of DP Marketing

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Hospital Accounts Receivable: This program provides smaller hospitals having a disk-oriented data processing system the capability to perform the major processing runs in the hospital accounts receivable area including accurate and timely information to management for better accounting control (360V-UH-09X).

Description: Design of the program allows the user to enter accounts receivable data cards directly from billing output (e.g., Patient Billing Program to be available 12/15/68). The programs provide entry to accounts receivable ... Cash Receipts and Adjustments Report ... Aged Accounts Analysis ... statement writing with selective account printout ... Accounts Receivable Status, listing all balances and detail transactions for each account ... Insurance Accounts Receivable by insurance company and plan of coverage ... Delete Accounts Receivable for accounts at zero balance or below a user-determined write-off amount.

Features: Stored Programs - each of the application programs stored on disk is called into core as needed, using System Control and Service Program (Disk) and Job Cards. Entered Accounts - final billing totals including prorated insurance amounts are accepted by the programs to set up an account for the discharged patient. Transaction posting - cash receipts, late charges, and adjustments are posted and control totals are established. Aged Accounts - the accounts receivable file is automatically aged and a report produced showing the age of the account in months. A summary is also produced showing total dollars in age categories. Status Reporting - a full detail listing is provided showing the complete history of the account. Statement writing - statements are prepared either for the entire file or selectively be financial class as determined by the user. Insurance Accounts Receivable - a report of amounts due from each insurance company showing patients covered by each company. Deleted Accounts - as an account is closed the record is automatically deleted and a report is prepared showing which accounts were removed from the file. Card Inquiry - inquiry is available through card input.

Use: When a patient is final billed (after discharge), the final amounts are punched and entered into the Accounts Receivable Master Data Set. As financial transactions occur, they are entered into the system for posting to the account. Daily and periodic reports are printed from the data provided.

Customer Responsibilities: A thorough understanding of the system before installation ... design of statement forms for use by the Statement Writing Program ... creation of table of insurance companies and plans of coverage for use by the Insurance Accounts Receivable program ... establishment of Accounts Receivable Master Data Sets ... installation requires the conversion to card format of data on present accounts receivable.

Programming Systems: This program operates under the IBM Disk Programming System for IBM System/360 Model 20. The application programs are written in Report Program Generator (RPG). Sort/merge and Disk Utility Programs are also utilized.

Minimum System Requirements: 2020 BC2 Central Processing Unit (12K bytes), 2560 Attachment (=8099), 2203 Attachment (=8082), 2311 Attachment (=7495) ... 2560 Multi-function Card Machine Model A1 ... 2203 Printer Model A1, 52 Character-Set (=9088) ... two 2311 Disk Storage Drives Model 12s. Core requirement for largest module of the system is 11,171 bytes including system overhead.

OR

2020 BC4 CPU (12K bytes), 2203 Attachment (=8084), 2560 Attachment (=8100), 2311 Attachment (=7496) ... 2560 MFCM Model A2 ... 2203 Printer Model A2, 52 Character-Set (=9088) ... two 2311 Disk Storage Drives Model 12s.

OR

2020 BC5 CPU (12K bytes), 2203 Attachment (=8082), 2560 Attachment (=8099), 2311 Attachment (=7497) ... 2560 MFCM Model A1 ... 2203 Printer Model A1, 52 Character-Set (=9088) ... two 2311 Disk Storage Drives Model 12s.

Basic Program Material:

Publications -- Application Directory ... Program Description Manual (H20-0567) ... Operation Manual (H20-0568). If only the form numbered publications are required, order from Mechanicsburg -- not PID.

Machine Readable -- RPG source programs and sample problem are available on either one 1316 Disk Pack or one 9-track DTR (800 or 1600 bpi) or one 7-track DTR (800 cpi - Data Conversion feature required). A bootstrap card will be provided with each DTR.

The contents of the disk pack will be required to be punched into cards. Users receiving a DTR will be required to place the contents of the DTR onto a disk pack, using the program supplied on the DTR, along with the single bootstrap card provided. They will then be required to punch the contents of the disk pack into cards in the same manner as those users receiving a disk pack.

DTRs are provided by PID; no tape submittal is required. Disk Packs must be forwarded to PID with the Program Order Card. If the track and density requirements are not specified on the back of the program order card, 9-tract at 800 bpi will be forwarded.

Ordering Procedure: See the DP Sales Activity section of the Branch Office Manual.

Additional Program Support Material: Application Description Manual (H20-0547) System Manual (Y20-0295).

For further information contact your Regional Medical Marketing Representative.

Patient Billing: This program offers the smaller hospitals with a disk-oriented data processing system the capability to perform the major processing runs in the patient billing area including Medicare insurance proration.

Description: The program establishes a patient record ... provides automatic pricing of standard charges and batch posting of charges ... posts part B (professional fee) charge component for Medicare patients ... prorates charges between patient and third party payers including Medicare ... prints patient and insurance bills ... provides for admission, transfer, discharge, and census reporting.

Features: Stored Programs - each of the application programs stored on disk is called into core as needed by the System Control and Service Program (Disk) and Job Control Cards. Insurance Proration - charges are automatically prorated between patient and up to three insurance plans (including Medicare) at the time a bill is printed. Batch Posting of charges - charges are posted in batches by patient. Internal Pricing - standard charges are machine priced. Revenue Distribution - data are punched directly into charge cards which can be utilized to provide income by various patient classifications, e.g., accommodation, service, revenue (including Medicare).

Use: When a patient is admitted, his record is entered into the Billing and Room Master Data Sets. As services are provided, charges are entered into the patient record. When insurance verification is received, the provision of up to three plans is recorded in the Billing Master Data Set.

Interim reports such as census, daily balance forward, and interim bills are printed. Final bills are prepared after discharge. Insurance bills are printed after interim and final bills. When the final bill is printed for a patient, the patient data is punched into cards for direct entry to the Accounts Receivable Data Set. (Refer to System/360 Model 20 Hospital Accounts Receivable Program.)

Customer Responsibilities: A thorough understanding of the system before installation ... collection and preparation of data for master file creation ... preparation of required preprinted input or output forms and control of documents within the hospital.

Programming Systems: The application programs are written in Report Program Generator (RPG) and Assembler Language under Disk Programming System for System/360 Model 20. Also utilized are Disk Utility Programs, Sort/Merge, Input/Output Control System (Disk).

Minimum System Requirements: 2020 D2 CPU (16K bytes), 2203 Attachment (=8082), 2560 Attachment (=8099), 2311 Attachment (=7495), 2560 MFCM Model A1 ... 2203 Printer Model A1, 52-Character Set (=9088) ... two 2311 Disk Storage Drives Model 12s. Core requirement for the largest module of the system is 16,122 bytes including system overhead.

OR

2020 D4 CPU (16K bytes), 2203 Attachment (=8084), 2560 Attachment (=8100), 2311 Attachment (=7496) ... 2560 MFCM Model A2 ... 2203 Printer Model A2, 52-Character Set (=9088) ... two 2311 Disk Storage Drives Model 12s.

OR

2020 D5 CPU (16K bytes), 2203 Attachment (=8082), 2560 Attachment (=8099), 2311 Attachment (=7497) ... 2560 MFCM Model A1 ... 2203 Printer Model A1, 52-Character Set (=9088) ... two 2311 Disk Storage Drives Model 12s.

Program Support Material: Application Description Manual (H20-0548).

For further information contact your Regional Medical Industry Marketing Representative.

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IBM World Trade **Data Processing**

PROGRAM ANNOUNCEMENT

NEW DECISION TABLE PROGRAM AVAILABLE SPEEDS PROBLEM SOLVING (TYPE II)

The System/360 Decision Logic Translator Program, which operates under the Disk Operating System (DOS/360), is now available. It provides customers with a decision table implementation program that converts tabular oriented logic into a FORTRAN source program (360A-CX-32X).

Decision tables provide an easily read and understood tabular approach to solution of complex decision logic. This technique allows a problem to be reduced to its simplest form by arranging and presenting logical alternative courses of action under various combinations of conditions.

The System/360 Decision Logic Translator incorporates many logic capabilities and FORTRAN features into the decision table language to provide the user flexibility, minimum decision table sizes, minimum number of source statements, error checking, sorting, and other capabilities. The use of the program can result in significant savings in implementation time and in cost of installation of complex applications.

The principal applications of this program are for Automatic Design Engineering (ADE) and Automatic Manufacturing Planning (AMP) in the Scientific, Manufacturing, Distribution, Transportation, and Service industries.

The sales manual write-up is on the back of this letter.

John Fahey
Director of DP Marketing

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Decision Logic Translator: This program provides an advanced tool needed to translate decision tables into FORTRAN language. (360A-CX-32X)

Description: Decision tables are a technique for documenting the logic of a problem and its solution. The concise format of decision tables allows them to present information so that it is easily read and understood, and to present logic simply so that its concepts are readily grasped. The tabular approach is used to express complex decision logic in a manner that encourages the analyst to reduce a problem to its simplest form by arranging and presenting logical alternative courses of action under various combinations of conditions.

The Decision Logic Translator incorporates many logical capabilities and FORTRAN features into the decision table language.

Features:

- The number of tables to translate is not limited, the limit is due to the size of the FORTRAN program which is obtained.
- Tables may contain a mixture of limited and extended entry rows.
- The logical connective between conditions in a rule may be either "AND" or "OR". Both connectives may appear in the same table and rule.
- A variable value may be compared with the values of a singly subscripted array in the condition area of a decision table.
- Arrays with up to three subscripts (FORTRAN limit) may be used.
- Blocks of FORTRAN arithmetic statements may be defined in addition to the formula statements.
- FORTRAN Features ... the use of the specification statements -- DIMENSION, COMMON, EQUIVALENCE and FORMAT ... the use of FUNCTION and SUBROUTINE statements ... the use of direct access input/output statements -- DEFINE FILE, FIND, READ, WRITE.
- Tape or disk may be used to store the output FORTRAN source statements which will be acceptable input to the FORTRAN compiler for translation into machine language and execution without further manipulation.
- Table with up to 64 columns and 99 condition and action rows can be translated.
- Each main program or subroutine may have up to 20 closed tables.
- There may be up to 99 references to a single closed table.
- The table columns may be 2, 8, or 16 spaces wide depending on the needs of this table.

Sales Information: All current users of the 1401 Decision Logic Translator program and all analysts and programmers are potential users of the S/360 Decision Logic Translator program.

Areas of application of decision tables and the S/360 Decision Logic Translator apply across industry lines.

Sample Application Areas:

In the Manufacturing and Scientific Industries

The main applications are for Automated Design Engineering (ADE) and Automated Manufacturing Planning (AMP). These applications represent a precise method and set of tools for studying engineering problems and establishing working computer oriented systems. They both accept customer requirements as input and, through the medium of explicit design logic stored in the computer by means of decision table technique, produce the completed design information for manufacturing. Error-checking, bid and order costing can be incorporated into such systems.

In the Distribution Industries

Decision tables are very useful for credit checking, price computation, and inventory control.

In the Transportation Industries

Decision tables are used to establish automated reservation systems and set prices.

In the Service Industries

Decision table techniques are used in insurance areas to establish the policy type and the tariffing from a customer request.

Decision tables can be used effectively for systems analysis, procedure design, program debugging, and many varied applications.

Decision tables may also be employed to describe an entire data processing system as well as a portion of the system.

Use: This program is designed primarily for areas concerned with problems having a complex decision logic.

Decision tables are a means of bringing together and presenting the related information to express complex decision logic in a way that is easy to visualize and follow. They can be used independently of, or to complement, flow charts and block diagrams in recordkeeping, decision-making and problem-solving operations in business, mathematic and the science fields. Decision tables can be used effectively for system analysis, procedure design and documentation. Their use expedites and simplifies the time-consuming functions of problem definition, system analysis and programming. Once the system is established, it is easy to maintain, and the documentation and program are easy to change.

Customer Responsibility: The S/360 Decision Logic Translator provides output in the form of FORTRAN source programs. To augment the many capabilities of the program it is recommended that the customer have an individual who is knowledgeable in FORTRAN and familiar with the applications.

The customer must be prepared to compile test and implement the FORTRAN programs obtained from the Decision Logic Translator processor.

Programming System: The program is written in System/360 Assembler Language and operates under the Disk Operating System (DOS). The Standard Instruction Set and Decimal Arithmetic (#3237) are required to assemble the original programs and the Floating Point (#4427) is required to compile the Basic FORTRAN IV source program produced.

Minimum Machine Configuration: System/360 Model E supported by DOS/360 ... two 2311 Disk Storage Drives ... Printer, Card Reader, and Card Punch (selected from the set supported by DOS/360) ... 1052 Printer-Keyboard.

Basic Program Material:

Publications* -- Application Directory ... Program Description Manual (H20-0572) ... Operations Manual (H20-0573).

Machine Readable** -- The program object decks and sample problem deck are available on one 9-track DTR (800 or 1600 bpi), one 7-track DTR (800 cpi) or one card deck. The Data Conversion feature is required with 7-track tape.

Optional Program Material:

Machine Readable** -- The source decks, assembly listings and flowcharts are available on one 9-track (800 or 1600 bpi) magnetic tape (2400') or one 7-track (800 cpi) magnetic tape (2400'). Data Conversion feature is required with 7-track tape.

Ordering Procedure: See the Branch Office Manual, DP Sales Activity section.

*If only the form numbered manuals are required, order them from the IBM Distribution Center, Mechanicsburg -- not PID.

**If the density requirements are not specified on the back of the program order card, 9-track magnetic tape at 800 bpi will be forwarded.

DTRs are supplied by PID; no tape submittal is required.

Magnetic tape (2400') may be forwarded or ordered. The program order card should accompany the tape order form.

Program Support Material: Application Description Manual (H20-0492-1) ... Systems Manual (Y20-0263).

Reference Material: Automated Design Engineering (E20-8151) ... Automated Manufacturing Planning (E20-0146).

For additional information contact your Regional Manufacturing Industry Representative.

P 68-153

IBM World Trade **Data Processing**

PROGRAM ANNOUNCEMENT

MATLAN (TYPE II) IS A FLEXIBLE TOOL FOR MATRIX PROBLEM-SOLVING

IBM System/360 MATLAN (MATrix LANguage), (360A-CM-05X) is available.

MATLAN is a new application programming language and processing system designed for use with System/360 Model 40, 50, 65, 75, or 85, in the solution of Matrix oriented problems.

The MATLAN language is easy to learn, use, and remember. Problems may be easily stated in MATLAN. MATLAN has the ability to use subroutines written in FORTRAN or assembler language. However, this will not usually be necessary because a comprehensive set of MATLAN statements is available with a wide range of capabilities. The large number and wide range of the statements in the language provide a flexible tool for expressing and solving the many problems in which matrix techniques are used, such as aircraft structures ... network analysis ... bridge design ... marine engineering ... structural frame analysis.

The storage allocation scheme of MATLAN is automatic and dynamic and makes efficient use of core storage. This is a major feature of MATLAN. Sparse matrices are stored in coordinate form. Segmenting algorithms are used if the storage requirements of the matrices exceed available core size. All this is done automatically without requiring programmer intervention.

The availability of the System Manual and the compiler and assembly listings will be announced in a PRL. Preliminary copies of the compiler and assembly listings may be obtained from Industry Development - Scientific Applications, DPD HQ in White Plains.

For detailed information see the reverse side.

John Fahey
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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.
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. 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: November 1, 1968
Distribution: All Areas

MATLAN (MATrix LANguage): MATLAN is a general purpose program for matrix manipulation and computation. It consists of a language processor, which accepts and translates statements written in the problem-oriented MATLAN language; and an execution program, which performs the actual computations as specified by the user's statements. The large number and wide range of the statements in the MATLAN language provide a flexible tool for expressing and solving the many problems in which matrix techniques are used such as aircraft structures ... network analysis ... bridge design ... marine engineering ... structural frame analysis (360A-CM-05X).

Features:

- The language is problem-oriented; therefore, it is easy to learn, use, and remember.
- Matrices are identified and referenced by user-assigned names. These names may be written with scalar subscripts.
- Allocation of storage is performed automatically and dynamically. Segmenting algorithms are used if the storage requirements of the matrices exceed available core size.
- Matrix elements are automatically stored in coordinate form or in array form, according to the degree of sparseness.
- Matrix elements may be real or complex numbers and may be expressed in single or double precision.
- The precision of computation may be selected at execution time. No recompilation is required to run the same problem with higher precision.
- All matrix dimensions are defined at execution time and need not appear in the MATLAN language source program.
- Attributes may be assigned to matrices both for checking purposes and for selecting efficient processing algorithms in special cases.
- An extensive error-checking system provides error messages and simplifies program debugging.
- Subprograms written in either the MATLAN language or in FORTRAN IV may be called by the main program.

Use: MATLAN is easy to use. The use of the MATLAN language is similar to the use of any high-level, problem-oriented languages. The user need only state his problem in the MATLAN language, append his data and submit the program for processing.

Customer Responsibilities: Normally, the customer formulates his problem in the MATLAN language and solves it using the IBM-provided MATLAN object program resident on a direct access device. If, in addition, he wishes to alter MATLAN to increase its scope, he requires a thorough knowledge of the MATLAN master controller, the internal MATLAN utility programs, and the calling conventions of MATLAN subroutines.

Programming Systems: MATLAN operates under the IBM System/360 Operating System. The subroutines are written in FORTRAN IV, H-Level, and Operating System Assembler Language.

Minimum Machine Configuration: MATLAN may be used on any IBM System/360 Model 40, 50, 65, 75, or 85 equipped at least with the following devices: Central Processor with 128K bytes of core storage, the universal instruction set and the interval timer ... two 2311 Disk Storage Drives or other random access storage of same or higher storage capacity (except the 2321 Data Cell Drive) which is supported by Operating System/360 ... one input device (card reader, magnetic tape, DASD) ... one output device (printer, magnetic tape, DASD).

In addition to installation requirements for the options of OS/360 selected, MATLAN requires a minimum of 59K bytes of storage, not including data area. For installation of MATLAN one disk drive not used for OS residence is required.

To use some MATLAN features efficiently (checkpoint/restart procedure, reorganization of direct access device), the use of magnetic tapes is recommended instead of direct access devices. To install the MATLAN system, a magnetic tape unit is required.

Basic Program Material:

Publications -- Application Directory ... Program Description (H20-0564) ... Operations Manual (H20-0559). If only the form numbered manuals are required, order from Mechanicsburg -- not from PID.

Machine Readable* -- Consists of three MATLAN partitioned data sets with the following contents - DFR.LOAD: a library of all separately compiled and link-edited components of MATLAN in non-executable form - DFR.OVLY: contains the linkage editor control for generation of executable modules - DFR.TEST: contains sample problems. The above is distributed on one DTR, either 9-track (800 or 1600 bpi) or 7-track (800 cpi) (Data Conversion feature required).

Optional Program Material:

Machine Readable* -- Consists of three MATLAN partitioned data sets with the following contents - DFR.FLOWCH: contains the input cards for DOS/360 FLOWCHART PROGRAM to generate MATLAN subroutine flowcharts. (These flowcharts are also available in the Systems Manual) -- DFR.MACLIB: contains the macros necessary to generate DFR.LOAD from DFR.SOURCE -- DFR.SOURCE: contains all source modules of the system which are written in FORTRAN IV H level and OS Assembler Language. The above is distributed on one full reel of tape (2400') either 9-track (800 or 1600 bpi) or 7-track (800 cpi) (Data Conversion feature required).

Ordering Procedure: See the Branch Office Manual, DP Sales Activity section.

*If the track and density requirements are not indicated on the back of the program order card, 9-track at 800 bpi will be forwarded.

DTRs are provided by PID; no tape submittal is required. Magnetic tapes (2400') (for the optional material) may be forwarded or ordered (the program order card should accompany the tape order form).

Additional Program Support Material: Application Description Manual (H20-0479) ... System Manual (Y20-0261) ... Assembly Listings (microfiche).

The availability of the System Manual and the compiler and assembly listings will be announced in a PRL. Preliminary copies of the compiler and assembly listings may be obtained from Industry Development-Scientific Application, DPD HQ in White Plains.

Reference Material: IBM System/360 Operating System manuals -- Job Control Language (C28-6539) - Linkage Editor (C28-6538) - Utilities (C28-6586) - Checkpoint/Restart (C28-6656) - Storage Estimates (C28-6551) - System Generation (C28-6554) - FORTRAN IV (H) Programmer's Guide (C28-6602) - Messages and Codes (C28-6631) and IBM System/360 FORTRAN IV Library Subprograms (C28-6596).

For further information contact your Regional Scientific Marketing Manager.

OS/360 CUSTOMIZED DISTRIBUTION PROCESS IS DISCONTINUED

The OS/360 customized distribution service will terminate March 31, 1969.

Announced in January 1967 (P67-1), this customization process produces user-specified subsets of OS/360 for System/360 installations which have only two 2311 Disk Storage Drives available for OS/360 system generation.

The growth of OS/360 now makes the customized distribution process impractical. All current and planned OS/360 users must be advised that the minimum System/360 configuration for performing OS/360 system generation with the package distributed from PID must include at least three 2311 Disk Storage Drives or one 2314 Direct Access Storage Facility. All users with two 2311 Disk Drives should be encouraged to generate systems using other systems with three 2311s or 2314 systems to avoid any complications.

This does not alter the minimum System/360 configuration required to run OS/360. The minimum operational configuration is based on the amount of system residence and work space that is needed for the operations selected.

The discontinuance of this service will require some customers to change their current or planned System/360 configurations. To permit accounts with existing customization commitments to plan and install reconfigured System/360 systems, customized distributions will be provided until the cut-off date of March 31.

If an account to whom customization has been committed is expected to require customized distributions after OS/360 Release 15/16, then the account plans must be reported to DPD Regional Managers of Programming Systems Marketing before November 30, 1968

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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

|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| 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.

OS/360 STORAGE REQUIREMENT CHANGE

The track size requirement for the Sort/Merge program has been changed.

See the revised sales manual page P 360S.12 on the reverse side.

John Fahey
Director of DP Marketing

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: November 7, 1968
Distribution: All Areas

Documentation -- Program Material List . . . OS/360 Prose . . . PTF writeup . . . FORTRAN OPM's . . .

Machine Readable -- The complete OS/360 is distributed:

For the three Drive 2311 User -- On three 2400 foot reels of magnetic tape, either 9-track (800 or 1600 bpi), or 7-track (800 cpi, Data Conversion feature required), or three 1316 Disk Packs.

For the 2314 User -- Two 2400 foot reels of magnetic tape, either 9-track (800 or 1600 bpi), or 7-track (800 cpi, Data Conversion feature required).

For the Two Drive 2311 User -- The customized OS/360 is distributed on two 2400 foot reels of magnetic tape, either 9-track (800 or 1600 bpi), or 7-track (800 cpi, Data Conversion feature required), or two 1316 Disk Packs.

Ordering Procedure

For new users the branch office must have the Program Order Form for System/360 Operating Systems (120-1411). Current users of OS/360 will receive a prepunched Program Order Card and a letter announcing the availability of release 15/16 instructing them to order the new release through the branch office, using this prepunched card. Complete ordering instructions are provided in the letter to users.

In either case, the order form used (120-1411), or the prepunched Program Order Card, must contain the program number for each OS/360 component (if being ordered for the first time) for which program documentation and maintenance material is required.

All orders must indicate the number of 2311 disk storage drives available to perform system generation. Only those orders stating "Two drives to be used for SYSGEN" will be customized, as described in letter P67-1. All other 2311 users will be sent the entire system, for which three disk packs or three reels of tape are required.

Special Note for 2314 Direct Access Storage Facility Users

OS/360 Release 15/16 provides a starter system for 2314 residence. Program distribution medium for 2314-resident systems will be on two reels of either 7- or 9-track magnetic tape. Tapes will be in the dump/restore format. Users who order the 2314 Starter System should indicate 2314 on the back of the program order card.

Since all 2314s provide sufficient capacity for system generation from the full OS/360 libraries, no customization (see P67-1) is planned for 2314-resident systems.

A 2314 user having two or more 2311 Disk Drives but no 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.

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 order form.

Starter System for 2311 Residence	360S-CI-514**
Starter System for 2314 Residence	360S-CI-534**
Primary Control Program	360S-CI-505**
Primary Data Management	360S-DM-508**
OS/360 Utilities	360S-UT-506**
Independent Utilities	360S-UT-507**
Assembler E	360S-AS-036** †
Assembler F	360S-AS-037**
Linkage Editor E	360S-ED-510**
TESTRAN	360S-PT-516**
Basic Direct Access Method (BDAM)	360S-DM-509**
Basic Telecommunications Access Method (BTAM)	360S-CQ-513**
Queued Telecommunications Access Method (QTAM)	360S-CQ-519**
Graphic Programming Services	360S-IO-523**
Indexed Sequential Access Methods (BISAM, QISAM)	360S-IO-526**
Sort/Merge	360S-SM-023**
FORTRAN E	360S-FO-092 Note 1**
FORTRAN G	360S-FO-520 Note 1**
FORTRAN H	360S-FO-500 Note 1**
FORTRAN Library	360S-LM-501**
COBOL E	360S-CO-503† Note 1**
COBOL E Library	360S-LM-504**
COBOL F	360S-CB-524 Note 1**
COBOL F Library	360S-LM-525**
PL/I F	360S-NL-511 Note 1**
PL/I Subroutine Library	360S-LM-512**
ALGOL F	360S-AL-531**
ALGOL F Library	360S-LM-532 Note 1**
SERO, SER1, and EREP for Model 40	360S-DN-527**
SERO, SER1, and EREP for Model 50	360S-DN-528**
SERO, SER1, and EREP for Model 65	360S-DN-529**
SERO, SER1, and EREP for Model 75	360S-DN-530**
Report Program Generator	360S-RG-038**
MVT	360S-CI-535**
On-Line Test Executive Program	360S-DN-533**
Graphic Subroutine Program	360S-LM-537**
Graphic Job Processor	360S-RC-541***
Linkage Editor F	360S-ED-521***
Recovery Management Mod/65	360S-DN-539***
Remote Job Entry	360S-RC-536***

** Component change with this release. *** Component new with this release.
† Component not supported for operation in an MVT(360S-CI-535) environment.
Note 1: To use language compilers, the corresponding library is required.

If either 9-track (800 bpi or 1600 bpi) or 7-track (800 cpi) magnetic tape is not specified on the IBM Program Order form, 9-track at 800 bpi will be forwarded.

Magnetic tapes may be ordered or disk packs may be forwarded in accordance with current procedures as described in the DP Sales Activity section of the Branch Office Manual.

Orders currently in transit to PID will be filled with the Release 15/16.

Special Notes for Two-Drive Users

1. See Table 1 of this P Letter for sizes of distributed components (reference P67-1 for descriptive information).
2. Branch offices are responsible to assure that valid combinations of components are ordered.
3. Individual components (such as FORTRAN H) require the corresponding level of SYS1.GENLIB, which is distributed as a part of the Primary Control Program (360S-CI-505). PCP should therefore be ordered in all cases.

Table 1

OS/360 Release 15/16 Component Sizes

Component Name	Component Number 360S	Notes	Starter System	Distribution volume space (2311 tracks) DLIB01 PROCLIB	PL1LIB	FORTLIB	COBLIB	SORTLIB	SAMPLIB	MODLIB**	DLIB02* GENLIB	MACLIB
Starter System (for 2311)	CI-514	7	700									
Primary Control Prog.	CI-505	1,8		5					18	185	1331	84
MVT	CI-535	9		2						57		5
Primary Data Mgmt.	DM-508	1								72		105
BDAM	DM-509	5								8		2
ISAM	IO-526	6								50		4
BTAM	CQ-513									18		51
RJE	RC-536	10								30		26
QTAM	CQ-519									33		52
Graphic Job Processor	RC-541									40		
Graphic Subroutine Program	LM-537								6	29		
Graphic Programming Services	IO-523	3							14	19		119
ASSEMBLER E	AS-036	1		3					9	42		
ASSEMBLER F	AS-037	4		3						38		
TESTRAN	PT-516			4						26		51
Sort/Merge	SM-023			2				20	14	77		
Linkage Editor E	ED-510	1		2						29		
Linkage Editor F	ED-521	1,4								20		
OS/360 Utilities	UT-506	1		2					9	97		
Independent Utilities	UT-507	1							32			
COBOL E	CO-503	5		3					28	98		
COBOL E Library	LM-504	3					13					
COBOL F	CB-524	5		3					4	88		
COBOL F Library	LM-525	3								9		
FORTRAN E	FO-092	5		4					9	31		
FORTARN G	FO-520	5		3					10	24		
FORTRAN H	FO-500	5		3					6	158		
FORTRAN Library	LM-501	3				1				40		
PL/I F	NL-511	5,6		4					4	297		
PL/I F Library	LM-512	3			70					43		
RPG	RG-038			3					3	49		
SERO, SER1 & EREP for Model 40	DN-527	2								19		
SERO, SER1 & EREP for Model 50	DN-528	2								19		
SERO, SER1 & EREP for Model 65	DN-529	2								22		
Recovery Management Model 65	DN 539	2,3								16		
SERO, SER1 & EREP for Model 75	DN-530	2								20		
ALGOL	AL-531			3					3	29		
ALGOL Library	LM-532	3								17		
ON-Line Test Exec. Prog.	DN-533	2								7		

*** DLIB01 if space is available and if the Starter System or the Primary Control Program or both are not ordered.**

**** On DLIB03 if the full OS/360 is received.**

Notes:

1. Minimum component for a system able to perform system generation. See also Note 4 where appropriate.
2. Recommended use.
3. Used by and required with the preceding component(s) in the chart.
4. Alternative component to the preceding component in the chart. Either or both may be selected.
5. BDAM is required by the direct access statements of COBOL, FORTRAN and PL/I.
6. ISAM is required by PL/I object programs using the Indexed Organization.
7. Required with initial order; subsequent orders may be processed by the user's own system. The Starter System actually contains several libraries, as described in the System Generation SRL (C28-6554).
8. Required with orders for processors, since the SYS1.GENLIB contains the related system generation macro instructions.
9. MVT users must order both 360S-CI-505 and 360S-CI-535.
10. RJE users must order 360S-CI-535, 360S-DM-509 and 360S-CQ-513.

P68-155

IBM World Trade **Data Processing**

PROGRAM ANNOUNCEMENT

NEW VERSION OF PROJECT CONTROL SYSTEM/360 IS AVAILABLE (TYPE II)

Version 2 of Project Control System/360 is available (360A-CP-06X).

Version 2 has the following significant new features ... ability to store and retrieve up to 52 networks on disk ... a significant throughput improvement in network generation, milestone processing, updating and report printing ... hours per work day specified by the user ... less disk space required for processing ... milestones can be tied to both the start and finish of a work item ... automatic updating of current duration for in-progress work items when no progress is reported in current run ... suppression of printing of zero duration work items on selected reports ... option to remove actual data from files ... addition of Type IV and V Schedule Dates to permit more extensive float analysis.

This program remains input compatible with the Project Control System for the IBM 1130. PCS/360 will process networks with up to 5,000 activities either in the form of precedence lists or in ij/PERT/CPM notations.

The System Manual (Y20-0126) has been withdrawn. A new system manual will be available later this month.

Compilation and assembly listings of the source programs, on microfiche, will be available December 31.

Current users will receive a letter announcing the availability of Version 2. Included with this letter will be a prepunched program order card that the customer should use in ordering the new version through the IBM branch office.

See the reverse side for the new sales manual write-up.

John Fahey
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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

[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] 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: November 7, 1968
Distribution: All Areas

Project Control System: This program provides the advanced tools needed by management to fulfill its responsibilities in the planning, supervising and controlling of project-oriented work by providing extensive capability in the following operations or techniques: (1) Planning ... (2) Scheduling ... (3) Report Preparation. While it provides some capability for resource allocation and cost estimating, PCS/360 does not directly cover these techniques. (360A-CP-06X)

For critical path networks, PCS/360 will process 5,000 activities either in the form of precedence lists or in PERT/CPM notation. Its design permits a very simple approach to networking, but also offers many of the sophisticated features normally found only in programs designed for larger configurations.

Use: The use of PCS/360 is in the areas of government and industry concerned with construction or maintenance. The needs in these areas determine the title and format of the field report and the format of the various input cards. However, intensive investigation has revealed that there are no essential differences among the needs of all critical path users. For this reason, PCS/360 can provide critical path capability for a broad range of DOS/360 users, regardless of industry.

Sample Applications are:

Manufacturing and Distribution Industries -- network techniques have been used to schedule construction operations, aerospace research and development projects, 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 and blast furnace maintenance.

Science Industries -- network techniques have been used to schedule applied research projects and computer program development.

Service Industries -- network techniques have been used to schedule power plant operations, bank clearing-house operations, dividend check distribution and insurance report preparation.

GEM Accounts -- network techniques have been used for internal management control as well as for contractor control, test production of biological products, experimentation with drugs, and university and college curricula and facilities usage.

Transportation Industry -- network techniques have been used to schedule freight forwarding operations, terminal and service facilities, and the repair and maintenance of equipment.

In addition, these project control techniques are extensively used for controlling the design and implementation of data processing systems in virtually all industries.

Features: Ability to store and retrieve up to 52 networks on disk...a significant throughput improvement in network generation, milestone processing, updating and report printing...hours per work day specified by the user...less disk space required for processing...milestones can be tied to both the start and finish of a work item...automatic updating of current duration for in-progress work items when no progress is reported in current run...suppression of printing of zero duration work items on selected reports ...option to remove actual data from files...addition of Type IV and V schedule dates to permit more extensive float analysis...5,000 work items (or PERT/CPM activities) ...12,500 precedence relationships...each precedence relationship can be lagged... the number of days in the work week can be specified for each item...for in-progress work items, progress can be reported as a percent completion, or as a number of work days remaining...scheduled and actual dates can be assigned to both the beginning and end of each work item...arbitrary non-work days can be incorporated into the calendar...basic resource scheduling and cost summarization capability is provided... tabular and graphic reports are available.

Customer Responsibilities: Current users of critical path programs will have to prepare new data cards to use the IBM Project Control System/360. However, data cards for use by PCS/1130 are directly usable. Networks generated under Version I will have to be regenerated under Version II.

All users should learn the particular features of this system before attempting to use it for actual project control. New users will have to learn the fundamentals of the critical path techniques before they can prepare input.

DOS/360 Version 3 must be used to properly implement PCS/360. When running PCS/360 on a 32K machine, a 6K DOS supervisor must be used.

Programming System: The program is written in a combination of FORTRAN and Assembler Language to operate under the Disk Operating System. While the program is designed to meet the needs of most users without modification, it is recognized that special individual requirements do arise. Therefore, the elements of the program written in FORTRAN are those that the user is most likely to modify to suit his application.

Minimum Machine Configuration: A 32K S/360 (E) Processing Unit with Floating Point (#4427), a 1052 Console, a card read/punch, a printer, and two 2311 Disk Storage Drives.

Basic Program Material:

Publications -- Application Directory ... Program Description and Operations Manual (H20-0376-1). If only the form numbered manual is required, order from the IBM Distribution Center, Mechanicsburg -- not PID.

Machine Readable* -- Relocatable object program modules and sample problem including sample job control statements are available on one Distribution Tape Reel (DTR) either 9-track (800 or 1600 bpi) or 7-track (800 cpi, Data Conversion feature required) or on one 1316 Disk Pack.

Optional Program Material:

Machine Readable* -- Source statements are available on one 2400' reel of magnetic tape, either 9-track (800 or 1600 bpi) or 7-track (800 cpi, Data Conversion feature required).

Ordering Procedure: See the DP Sales Activity section of the Branch Office Manual.

*If the distribution medium is not specified on the back of the program order card, 9-track at 800 bpi will be forwarded.

DTRs are provided by PID; no tape submittal is required.

Magnetic Tape (2400') may be forwarded or ordered (the program order card should accompany the tape order form); disk packs must be forwarded to PID with the program order card.

Additional Program Support Material: Application Description (H20-0222) ... System Manual and microfiche program listings (availability and number will be announced in a Publication Release Letter).

For further information contact your Regional Scientific Marketing Manager or your Industry Marketing Representative.

P68.154 A

IBM World Trade Data Processing

Type II
Program Announcement

IBM SYSTEM/360 INFORMATION RETRIEVAL AND MANAGEMENT SYSTEM (IRMS)

System/360 IRMS is a set of seven programs designed for document retrieval. With this program, a user can characterize documents by description, then code and store, and retrieve these documents under program control.

IRMS operates under the control of the System/360 Disk Operating System (DOS). The information files characterizing documents which it processes can be queried to provide Selective Dissemination of Information (SDI) and Retrospective Search Results.

Since IRMS, in line with conventional document retrieval practice, is based on characterization by means of word-type descriptors and a thesaurus file, it will be fully compatible with future developments in this rapidly expanding field. Two such developments are source-automation of documents and remote interrogation. Material prepared for automatic reading by character-recognition devices will be transmitted directly to the documentation center in machine readable form, where it can be made available even before publishing date. Remote interrogation will enable the user to request information by telephone and receive typewritten or visual-display answers. These new developments are feasible with today's hardware, and documentation centers incorporating them are expected to be in operation in the near future.

The advantages derived from the use of IRMS are: (1) it elimates duplication and wasted time; (2) provides up-to-date information; and (3) enables the user to keep up with the enormous growth in specialized literature that is overwhelming library services and creating time-consuming document retrieval bottlenecks.

IRMS provides for growth of the user's collection of documents. It also provides a direct access mode especially programmed to obtain the maximum packing density on the disk pack. This arrangement also provides maximum searching efficiency for all the files.

Application Description Manual H19-0012 will be available. This and other related manuals will be announced in a forthcoming Publications Release Letter.

Refer to the attached sales manual page for further detailed information.

Availability of IRMS will be December 31, 1968.

Contact your Country Scientific Marketing Manager or Systems Center for any other additional information.

John Fahey
Director of DP Marketing

Attached: P 9027
Release Date: November 8, 1968
Distribution: All Areas

P68-154A

P68-156

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

AD-APT/AUTOSPOT FOR OPERATION UNDER OS/360 IS AVAILABLE

The System/360 AD-APT/AUTOSPOT (OS) Numerical Control Processor (360A-CN-12X) is now available.

AD-APT/AUTOSPOT is a bilingual processor which prepares numerical instructions for both point-to-point and contouring machine tools. The AD-APT/AUTOSPOT Processor addresses itself effectively to the requirements of both point-to-point and contouring machine users, yet operates on a medium scale computing system. It is designed to process the AUTOSPOT language and the AD-APT language, or any mixture of the languages in any one part program, without sacrifice in processing speed.

This new Type II program reflects the full capability of Version 2 Modification Level 1 of AD-APT/AUTOSPOT (DOS/360) (360A-CN-09X). In addition, the following new features are implemented:

- Postprocessor input/output modules, completely compatible with those of S/360 APT, are provided for ease in implementation of FORTRAN - coded postprocessors.
- A system library concept permits accessing externally defined part program segments, such as a master TOOL or MACRO library.
- A significant subset of S/360 APT pattern definition and manipulative capability enhances the facility of point-to-point part programming.
- A thickness (THICK) statement may be applied to surfaces used in AD-APT contouring operations.
- The redefinition of variable symbols equivalenced to nonscalar entities is controlled via a modal CANON/ON-CANON/OFF statement.
- The capacity of the RESERV table accommodates 100 unique array names.
- New computational functions are included.
- The XYONLY mode of AUTOSPOT may be suppressed via the modal command XYONLY/OFF.
- AUTOSPOT constants, used in verb interpretation, may be modified via the modal command UNIT/u.

The availability of the System Manual will be announced in a PRL. The sales manual entry is on the back of this letter.

John Fahey
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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

(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) 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: November 8, 1968
Distribution: All Areas

AD-APT/AUTOSPOT (OS/360) (360A-CN-12X)

AD-APT/AUTOSPOT is a bilingual processor which prepares numerical instructions for both point-to-point and contouring machine tools.

Description: The AD-APT/AUTOSPOT Processor addresses itself effectively to the requirements of both point-to-point and contouring machine users, yet operates on a medium scale computing system. It is designed to process the AUTOSPOT language and the AD-APT language, or any mixture of the two languages in any one part program, without sacrifice in processing speed.

The AD-APT/AUTOSPOT Processor provides contouring capabilities involving constant cutter contact with vertical surfaces of many shapes and non-vertical plane part surfaces. In addition, sophisticated macro and loop capabilities are provided for repeating with variation a set of predefined operations. The processor also encompasses an extensive set of geometric and pattern definition and manipulative capabilities, scalar variables, nested definitions, FORTRAN-like computational facilities, and sophisticated editing functions.

Features:

- Both the AUTOSPOT and AD-APT languages may be processed in the same part program.
- Long operand floating point calculations are used throughout the processor to improve reliability and extend the range of usable numbers.
- A processor assigned statement number is referenced in output listings and diagnostic messages.
- The number of MACRO variables allowed is 50. The level of MACRO nesting allowed is five.
- The number of vocabulary synonyms allowed is 50.
- Looping capabilities are implemented using the LOOPST/LOOPND feature of APT.
- The output file (CLFILE) may be edited by using TRACUT and/or COPY instructions.
- Debugging facilities are included to aid part programmers in locating problem areas.
- Extensive FORTRAN-like computational facilities are included.
- An extensive set of geometric and pattern definition and manipulative capability is included. The pattern capability is a significant subset of that contained in S/360 APT.
- A wide range of AUTOSPOT machining verbs may be interpreted by the processor.
- Any number of part programs may be processed in a single job step.
- Postprocessor input/output modules, completely compatible with those of S/360 APT, are provided for ease in implementation of FORTRAN-coded postprocessors.
- A system library concept permits accessing externally defined part program segments, such as a master TOOL or MACRO library.
- A significant subset of S/360 APT pattern definition and manipulative capability enhances the facility of point-to-point part programming.
- A thickness (THICK) statement may be applied to surfaces used in AD-APT contouring operations.
- The redefinition of variable symbols equivalenced to nonscalar entities is controlled via a modal CANON/ON-CANON/OFF statement.
- The capacity of the RESERV table accommodates 100 unique array names.
- New computational functions are included.
- The XYONLY mode of AUTOSPOT may be suppressed via the modal command XYONLY/OFF.
- AUTOSPOT constants, used in verb interpretation, may be modified via the modal command UNIT/u.

Special Sales Information: The majority of N/C devices installed at this time operate in a punched tape input mode. This punched tape information is created by a user-supplied postprocessor, and therefore, there will normally exist requirement for a tape punching device such as an IBM 1012.

Use: The AD-APT/AUTOSPOT Processor accepts an English-like language defining geometric entities, patterns of points, desired motion sequences and machining information. This input, called a part program, is converted into a meta-language containing mathematical representations of the geometric entities and sequential instructions directing a cutting device with respect to specified surfaces and points.

The processor then calculates either analytically or iteratively, points on the cutting device axis, such that the linear motions generated thereby are optimized with respect to the specified tolerance criteria.

Further, a wide range of AUTOSPOT machining verbs may optionally be interpreted by the processor, thus greatly reducing the tasks required of a postprocessor.

These data are then available for subsequent processing by a user-supplied postprocessor program, which must insure that they conform to the characteristics and the dynamics of a particular N/C device.

The user is supplied with a printed listing of the part program, and optionally a printed listing of the cutter center points and machining information. He must also specify which postprocessors are to be executed to process the output of AD-APT/AUTOSPOT.

Customer Responsibilities: A customer using AD-APT/AUTOSPOT must take the following steps to effect usable results and optimum performance.

1. He must supply and merge into the AD-APT/AUTOSPOT Processor any postprocessors required by his N/C Controller/machine tool configurations.
2. He must appropriately train system programmers to enable them to use the Operating System facilities, to operate, and update the AD-APT/AUTOSPOT Processor.
3. He must implement modification and version releases.
4. He must insure that proper training is given to programmers responsible for developing part programs.

Branch Office Responsibilities: The AD-APT/AUTOSPOT Processor is generally considered critical to production schedules of manufacturing operations. To best service the user, the AD-APT/AUTOSPOT Development Group utilizes the SECOM network to distribute all program modifications resulting from APAR resolutions. Use SECOM fixes until program modifications are sent by the Program Information Department to registered users. The responsible account representative should contact the customer to determine how SECOM information could best be used to meet his specific requirements.

Note: The implementation of modifications reflected by SECOM requires updating the source master, which must be ordered separately as optional material.

Programming Systems: The AD-APT/AUTOSPOT Numerical Control Processor is written primarily in Assembler Language. It operates as a task under control of OS/360. It requires the F level assembler and E level linkage editor and uses the SYS1.MACLIB and SYS1.FORTLIB libraries.

The AD-APT/AUTOSPOT Processor may be executed in a normal job step environment. The processor is designed to reside on a direct access device in executable form, and need only be scheduled as a job operating under OS/360.

Minimum System Requirements: In addition to OS/360 requirements, this program requires the Floating Point Arithmetic feature and 100K of core. Distribution of the program will be by magnetic tape only. Systems without tape drives may be used to execute the program if other provisions are made to load the program to a disk storage device.

The program requires the equivalent of 15 cylinders of 2311 storage on a disk storage device. In addition, space must be available on a second disk storage device for intermediate storage. The amount of intermediate storage required is dependent on the input data.

An example of a configuration which could be used for this program is a 2040G ... 2540 Card Read Punch ... 1403 Printer ... two 2311 Disk Storage Drives ... one 2400 Magnetic Tape Drive.

Basic Program Material:

Publications -- Application Directory ... Part Programming Manual (H20-0549) ... Operations Manual (H20-0557). If only the form numbered manuals are required, order from Mechanicsburg -- not from PID.

Machine Readable* -- Executable load modules, postprocessor overlay structure and sample part programs are contained on one DTR 9-track (800 or 1600 bpi) or one 7-track (800 cpi, Data Conversion feature required). The contents of the tape are written in the IEHMOVE unload format.

Optional Program Material:

Machine Readable* -- Flowcharts and source program modules contained on one 2400' reel of magnetic tape for 9-track (800 or 1600 bpi) users.

For 7-track (800 cpi, Data Conversion feature required) users, flowcharts and listings will be available, each on an individual 2400' reel of magnetic tape. If only one of these 7-track tapes is desired, specify whether the flowcharts or the listings are required.

Ordering Procedures: See DP Sales Activity section of the Branch Office Manual.

*If the track and density requirements are not specified on the back of the program order card, 9-track at 800 bpi will be forwarded.

DTRs are furnished by PID; no tape submittal is required.

Magnetic tapes (2400') may be forwarded or ordered (the program order card should accompany the tape order form).

Additional Program Support Material: Application Description Manual (H20-0523) .. System Manual (availability and form number will be announced in a PRL).

For further information contact your Manufacturing Industry Marketing Representative.

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IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

1130 TYPE II PROGRAMS FOR OPERATION UNDER 1130 DISK MONITOR SYSTEM VERSION 2

Program Announcement P68-121 extended the availability of the 1130 Disk Monitor System Version 1 (1130-OS-001) to June 30, 1969, to provide continuing support to our 1130 customers during their conversion to 1130 Disk Monitor System Version 2 (1130-OS-005).

Schedules for conversion of the Type II programs now dependent on Version 1 are shown below. These programs remain functionally equivalent to the earlier versions which they replace. However, the programs indicated with an asterisk (*) operate under the 1130 Problem Language ANalyzer (PLAN) submonitor, which in turn operates under the 1130 Disk Monitor System Version 2.

Version 2 of the following programs will be available on June 30, 1969:

1130 Mechanism Design System Gears and Springs (MDS)*	1130-EM-01X
1130 Work Measurement Aids (WMA)* (See special information below)	1130-MF-03X
1130 Data Presentation System (DPS)*	1130-CX-14X
1130 Automated Chemistry (ACP)*	1130-UH-13X
1130 Project Control System (PCS)	1130-CP-05X
1800/1130 Control Optimization(COP)	1800-CC-01X

Version 2 of the following programs will be available on April 30, 1969:

1130 Numerical Surface Techniques and Contour Map Plotting	1130-CX-11X
1130 Economic Evaluation of Petroleum Projects	1130-MP-01X
1130 Casing Design	1130-MP-02X
1130 Decline Curve Analysis	1130-MP-03X
1130 Tarner Material Balance	1130-MP-04X
1130 Schilthuis Material Balance	1130-MP-05X
1130 Two-Dimensional Water-flooding	1130-MP-06X
1130 Gas Deliverability	1130-MP-07X
1130 Flash Calculation	1130-MP-08X
1130 Velocity Functions from Time-Depth Data	1130-MP-09X
1130 Wave-Front Ray-Path Determination	1130-MP-10X
1130 Synthetic Seismogram	1130-MP-11X
1130 Gravity and Magnetics Continuations Derivatives and Residuals	1130-MP-12X
1130 Theoretical Gravity of a 3-D Mass	1130-MP-13X
1130 Quantitative Log Analysis	1130-MP-14X
1130 Dipmeter	1130-MP-15X

The 1130 Civil Engineering Coordinate Geometry (COGO), Version 1, Modification Level 3 (1130-EC-02X), released September 24, 1968, operates under Disk Monitor System, Version 2 (1130-OS-005).

The following program modifications, which will operate under Disk Monitor System, Version 2 (1130-OS-005) are now available and will be automatically distributed to current users.

1130 Scientific Subroutine Package (SSP) Version 1, Modification Level 2	1130-CM-02X
1130 STRESS Version 2, Modification Level 1	1130-EC-03X
1130 Statistical Package Version 1, Modification Level 2	1130-CA-06X
1130 Continuous System Modeling Version 1, Modification Level 3	1130-CX-13X

Expanded Features Support ... These programs run on 8K or larger core systems. Where the programs make use of LOCAL cards, performance may be improved on 16 or 32K systems through customer removal of LOCAL cards.

The programs which support the IBM 1442 Model 6 or 7, also support the IBM 2501 Card Reader and the IBM 1442 Model 5 Card Punch. Programs which specified an IBM 1132 Printer will support an IBM 1403 Model 6 or 7 as optional.

Special Information ... Program load time in Work Measurement Aids will be approximately twice that of the currently available version resulting in some deterioration in performance when the minimum configuration (1130 Model 2B) is being used.

Action Required ... Notify customers affected by this change immediately.

For more information on these programs, see the Version 1 write-ups in the programming section of the sales manual. The sales manual pages will be updated as the new versions become available.

John Fahey
Director of DP Marketing

Published by DP Sales Publishing Services, WTHQ

SEE REVERSE SIDE FOR "NOTE TO WORLD TRADE READERS".

FOR IBM INTERNAL USE ONLY

Release Date: November 15, 1968
Distribution: All Areas

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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

[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] 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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IBM World Trade **Data Processing** **PROGRAM ANNOUNCEMENT**

ADMINISTRATIVE TERMINAL SYSTEM (ATS/360) OS VERSION UPGRADED TO INCLUDE OS/360 MVT AND 2703 SUPPORT (TYPE II)

The OS/360 Version of ATS/360 was announced in P67-26. That announcement supported operation under OS/360 MFT Version 2 with the 2702 Transmission Control.

The OS/360 MVT and 2703 Transmission Control capabilities will also be included in the OS Version of ATS/360 when it is available December 31, 1968. The OS Version of ATS/360 enables a customer to use ATS with either his MFT Version 2 or MVT System. Support of the 2703 enables a customer to increase the number of terminals that can be attached to an ATS/360 system.

Use the new sales manual text on the reverse side and the currently available Application Description Manual (H20-0297) until the revised edition is announced in a Publication Release Letter.

John Fahey
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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.
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. 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: November 18, 1968
Distribution: All Areas

IBM Administrative Terminal System/360 Under OS/360: ATS/360 is a new dimension in data entry and text processing. ATS/360 is a user-oriented remote typewriter terminal system which operates in the multiprogrammed environment of either OS/360 MFT (Version 2) or MVT, typically in the high priority partition/region. Multiprogramming means the customer does not need to dedicate an entire system to ATS/360 operations. Other programs may run concurrently with and independently of normal ATS/360 terminal operation, thereby extending the productivity of System/360 for users of ATS/360.

The three major applications of ATS/360 are:

1. Data Entry — typically by placing typewriter terminals in the source department.
2. Text Processing — including on-line input, on-line editing, and on- or off-line formatted output.
3. Foundation — for specialized typewriter terminal applications by the modification of ATS programs or the addition of new programs to ATS.

Features: The features of ATS/360 are used in three basic areas: those which have general applications for all the uses of the system, those which are oriented to text and documentation processing, and those which are oriented to data entry:

General --

- Low entry and start up costs.
- In some applications the capture of text or data can take place as it is originated.
- Is multiprogrammed, which allows for efficient use of the computer.
- Rapid direct access to stored documents.
- Input and corrections are easy and fast.
- Terminal Language Compatibility with CALL/360 DATATEXT.
- Productive without customer program change or modification.
- Commands are short mnemonics, easy to learn and quick to use.

Text --

- Upper and lower case printing.
- Corrections do not require extensive retyping.
- Hyphenless justification of right margin.
- Free form input for "formatted" (narrative) text, fixed form for tabular material.
- Computer printing (1403 N1 with TN train) of upper and lower case, about 5,000 words per minute.
- Correction facilities include change/addition/deletion of a phrase or word; addition or deletion of paragraphs; rearrangement of sentences or paragraphs.
- Flexible headings, footings, and page numbering.
- Line width and page depth controlled by terminal operator.
- Vertical spacing commands for the later insertion of art work.
- Tabs used like regular typewriter.

Data Entry --

- Quickly changing data can be easily maintained.
- Automatic sequence numbering, including resetting the number at any point. Field duplication.
- Variable length record sizes up to 132 characters.
- Output as OS data set to disk or tape; OS writers used to write to punch or printer.
- Easy to use the terminal typewriter in the source department.
- Upper only or upper and lower case.

Special Sales Information: Types of customers and prospects interested in ATS/360 are aerospace, manufacturing, financial, publishing operations, engineering groups, large computer programming groups (particularly those remote from the computers), transportation, insurance, legislative bodies, legal firms, process, public utilities, distribution, state & local governments, education, medical, scientific, etc.

Customer Responsibilities: The system is designed to run primarily unattended. However, when console operator intervention is required, a knowledgeable individual thoroughly trained in the equipment and programs, including OS/360, must be available to make quick accurate decisions. Education of the terminal and console operators is the prime installation requirement for this system. It is the customer's responsibility to order and install the communications facilities required.

Programming System: The ATS/360 program is written in OS/360 Assembler Language and operates under control of OS/360, either with MFT (Version 2) or MVT. ATS/360 writes its peripheral (card, printer) output on disk or tape as an OS data set. Input to ATS/360 can be an OS data set. A writer in another partition/region is required to perform the actual output to the peripheral device.

Minimum System Requirements: The basic machine components used for ATS/360 consist of a System/360 Processing Unit with at least 22,528 bytes of dynamic main storage (see note below), Multiplexer Channel, Selector Channel ... 1052 Printer-Keyboard (or other system console device) ... 2841 Storage Control Unit ... 2311 Disk Storage Drives (2 minimum) or, 2314 Direct Access Storage Facility ... 2702 or 2703 Transmission Control ... 2741 Communication Terminal, with only Feature #9812, Courier 72 standard IBM SELECTRIC® printing element (part 1167043), and an appropriate line adapter.

Note: In addition to the 22,528 bytes of dynamic main storage specified above, provision must be made for the OS/360 Queued Sequential Access Method (QSAM) routines. Additional dynamic main storage will be required to support additional terminals and devices and optional ATS functions. See the Application Description Manual for further information.

The above configuration is in addition to OS/360 requirements. This configuration will preclude some ATS/360 document transmission capabilities depending on the selection of I/O devices and the availability of additional dynamic main storage. A typical ATS system supporting ten terminals and a peripheral printing capability will require 45,056 bytes of dynamic main storage in addition to that required by the QSAM routines. It will also require a program in a separate partition or region to write the print/punch data set on the printer and punch.

One 2400 Magnetic Tape Unit must be available for system generation and maintenance of ATS/360. One 2400 Magnetic Tape Unit is desirable for ATS/360 peripheral operations. It is also desirable that at least one 2741 Communications Terminal be located near the system console.

Optional Machine Units: Additional Processor Storage (see the Application Description Manual) ... Additional Selector Channel(s) ... Additional 2741 Communications Terminals (see the Application Description Manual) ... 2311 Disk Storage Drives ... 2314 Direct Access Storage Facility (one or more) ... 2400 Magnetic Tape Units with Control Unit (one or more) ... Card Read Punch Unit ... Printer (producing at least 132 character print line).

If upper and lower case high-speed printing is desired, a 1403 Printer Model 2, 3, or N1 equipped with the universal character set feature and the TN printing arrangement may be used. It should be noted that the TN characters are appreciably thinner than the Courier characters used at the terminal. The print quality of the 1403 can be improved and made to approximate that of the 2741 by the use of the special "Courier" characters. The quality may be further improved by special "wide hammers" on the printer. Both the special slugs and the wide hammers are RPQ items. See the Application Description Manual for further information.

Reference Material: Application Description (H20-0297-1).

For further information and educational material, see your Regional Scientific Marketing Manager.

P68.159

Data Processing

PROGRAM ANNOUNCEMENT

NEW EXTENSIONS TO DOS/360 INCREASE ITS RELIABILITY, AVAILABILITY, PERFORMANCE AND FLEXIBILITY

As part of our continuing objective to strengthen and enhance the operating system's capabilities for the small and intermediate System/360 configurations, the following improvements are now provided:

Greater system reliability and availability

Outboard Recording, Statistical Data Recording, and Machine Check Recording and Recovery (OBR-SDR/MCRR) -- Information about the reliability of the hardware is collected in a recorder file and may be displayed. The number of conditions which cause the system to enter an uninterruptible wait state is reduced.

Improved system performance

Double Buffer for Indexed Sequential (DTFIS) is provided with two I/O areas for loading and sequential retrieving.

More user flexibility

Data Transfer I/O Errors -- Extended error option capabilities are available for several logical DTFs and modules within data management.

Schedule ... Availability will be April 30, 1969.

The extensions highlighted above are described on the inside pages.

John Fahey
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.

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E. ISMOD increases when IOAREA2=YES

SEQUENTIAL RETRIEVE	400 ± 60
ADD - RETRIEVE RANDOM	400 ± 60
SEQUENTIAL	
LOAD	225 ± 34
SEQUENTIAL ADD RETRIEVE	400 ± 60

F. DTFIS increases by 8 ± 4 bytes for IOAREA2 = NAME

G. DTFMT increases by 4 ± 4 bytes for ERROPT

Minimum System Requirements -- Same as for previous releases of DOS with the exception that the OBR-SDR/ MCRR functions require a minimum storage size of 24K bytes and MCRR is restricted to the Models 30, 40 and 50.

NOTE: LIOCS Error Extensions and ISAM Double Buffering are supported by Assembler only.

Publications Reference -- TNL N24-5372 to IBM System/360, Disk Operating System, Supervisor and Input/Output Macros, C24-5037-4 ... TNL N24-5369 to IBM System/360, Disk Operating System, System Control and System Service Programs, C24-5036-3.

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IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

CONTENTS

DOS/360 BTAM Extension ... available with BSC
2420 Model 7 Support ... available
CNDP (Type II) for 7000 Series ... withdrawn

DOS/360 RELEASE 18 (BTAM EXTENSION) NOW AVAILABLE WITH BSC

DOS/360 BTAM has been extended to include Binary Synchronous Communications Support for System/360* to communicate with System/360 Model 20 under these configurations:

- Point-to-point over non-switched lines
- Point-to-point over switched (dial) lines
- Multipoint over non-switched lines

* Models 30, 40, 50, 65, 67 (65 mode) and 75.

This additional BTAM support is available as *DOS/360 Release 18 BTAM Extension.*

Only current users of BTAM, 360N-CQ-469, will receive the memo to users ... TNL N30-5520 to SRL C30-5001-5 ... and the prepunched program order card.

The prepunched order card should be used to order the BTAM Extension. For 2311 residence it is available on one 2,400 foot reel of magnetic tape or one 2316 Disk Pack. This tape or disk pack is the Second Volume of the Basic 2311 package as no changes have been made to the First Volume.

For 2314 residence a complete replacement of the Basic system is needed. Two 2,400 foot reels of magnetic tape are required. It is not available on disk.

BTAM users who do not order this extension will still receive BTAM maintenance.

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THE 2420 MODEL 7 SUPPORT IS AVAILABLE IN CURRENT RELEASES

OS/360 Release 15/16, DOS/360 Release 18, and TOS/360 Release 12 include support of the 2420 Magnetic Tape Unit Model 7s now being shipped. Those users who already have these releases do not have to reorder to obtain this device support.

The 2420 Model 7 is supported on OS/DOS/TOS/360 by specifying, through the I/O device macro, a 2401 or 2402 tape unit at 1600 bpi attached via a 2803 Tape Control Unit. This effectively designates the channel and device address for any 1600 bpi tape unit including the 2420 Model 7.

The 2420 Model 7s may be supported, without a SYSGEN and without change to the user's jobs (JCL and programs), as a replacement for 2401 or 2402 tape units under the following conditions:

- The 2401 or 2402 tape units at 1600 bpi

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are attached via a 2803 Tape Control Unit Model 2 to a selector channel.

- The 2420 Model 7 is installed, via a 2803 Tape Control Unit Model 2, at the same addresses as the 2400 Series.

Because of the high data rate (320,000 bytes per second), the 2420 Model 7 can be attached only to a selector channel via 2803 Model 2 equipped with a 2420 Attachment (7900).

Users who have not installed OS Release 15/16, DOS Release 18 or TOS Release 12 must upgrade to these levels if 2420 Model 7 support is required.

Details for OS/360 are in the SRL S/360 Operating System 2420 Magnetic Tape Unit Model 7, C28-6700. For DOS/TOS see DOS Supervisor and I/O Macros, C24-5037 ... DOS Systems Control and Service, C24-5036 ... TOS Supervisor and I/O Macros, C24-5035 ... TOS Systems Control and Service, C24-5034 ... DOS/TOS Assembler, C24-3414 ... DOS/TOS Utility Macro Specifications, C24-5042 ... all are available from the IBM Distribution Center, Mechanicsburg.

COMMUNICATIONS NETWORK DESIGN (TYPE II), 7000 SERIES PROGRAM, WITHDRAWN

Communications Network Design Program (CNDP) for the 7040/44 (7040-SE-04R) and 7090/94 (7090-SE-03R) is no longer available from PID. Formal maintenance support for copies of this program previously ordered has been discontinued. The Application Description (Z20-0310-1) and CNDP Reference Manual (Z20-1790) are now obsolete.

This program has been superseded by Communications Network Design Program/360 (360A-SE-28R) a significantly improved version. For further information on CNDP/360, refer to sales manual page P 360A.42.

John Fahey
Director of DP Marketing

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IBM Data Processing

STATEMENT OF INTENT

STATEMENT OF INTENT

IBM INTENDS TO PROVIDE SYSTEM MANAGEMENT FACILITIES WITHIN OS/360 MVT AND MFT-II

It is the intent of the IBM Company to provide System Management Facilities (SMF) within the OS/360 MVT and MFT-II Control Programs.

SMF will provide "automatic data collection" by gathering and recording information associated with the use of the computing system by each job and optionally, by each step. Included are:

- CPU time for processing programs.
- Start and stop times for jobs and steps.
- Start and stop times for readers and writers on behalf of each job.
- SYSIN and SYSOUT record counts.
- 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 core required by each step.

SMF will provide "user exits" in the Reader/Interpreter to edit the Job Control statement card images for jobs entering the system and/or to augment the SMF-collected data. SMF will also provide "user exits" in the Initiator/Terminator to validate and/or to augment the SMF-collected data. There will also be "user exits" when CPU time or WAIT time limits are exceeded.

SMF-collected or user-supplied (via a macro instruction) system management information will be recorded on a "System Management Data Set" using a standard record format on tape or on a direct access storage device (of the same device type as used for Systems Residence).

The options can be specified from a system data set at IPL-Time, and can be overridden by the operator. The WAIT-Time Limit can be specified for steps as an option.

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Additional information about the System Management Facilities support within the OS/360 MVT and MFT-II Control Programs is planned to be available by April 30, 1969.

This statement does not declare an intent to provide System Management Facilities in the following OS/360's areas of support: PCP, MVT Model 65 Multiprocessor, Remote Job Entry, or Graphic Job Processor.

This information represents the technical intent of IBM with respect to this program. It is possible that the objectives of this intent will not be met. The program is subject to revision or withdrawl, and no commitment or warranty is expressed or implied.

Guidelines for using the Statement of Intent appear on the reverse side.

John Fahey

John Fahey
Director of DP Marketing

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Statement of Intent Guidelines

You must insure that:

1. In any discussions with customers or prospects on intent information, the IBM representative makes clear to the customer that intent information represents only technical objectives and does not constitute any announcement of a programming system.

2. All proposals or installation planning discussions with customers or prospects on intent information must be documented to the customer. The following disclaimer must appear in this or any other documentation on intent information:

   "This information represents the technical intent of IBM with respect to this program. It is possible that the objectives will not be met. The program is subject to revision or withdrawal, and no commitment or warranty is expressed or implied."

   The proposal section containing the Statement of Intent must be entitled "Statement of Intent".

   The description of the Statement of Intent which precedes the disclaimer must contain no omissions or rephrasing of the information contained in the DPD HQ Statement of Intent release that could result in misrepresentation to the customer.

   The following sentence should be included after the disclaimer: "It should be clear that this Statement of Intent is not a Program Announcement and that a Program Announcement may or may not be forthcoming."

3. Orders secured from proposals in which intent information appears must contain installation plans not dependent upon the technical objectives or target schedules embodied in a Statement of Intent.

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IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

NEW VERSION OF RAX SUPPORTS 2741 AND TELETYPEWRITER TERMINALS (TYPE II)

Version 4 of System/360 Remote Access Computing System (RAX), a time-sharing, remote-computing system for the System/360 Models 30, 40, and 50 will be available February 14, 1969.

Version 4 incorporates all features of RAX Version 3 (see programming section of the sales manual) and, in addition, allows the use of the 2741 and the No. 33 and 35 Teletypewriters (TTY).

The installation specifies, by means of system generation parameters, the terminal types it will use. These parameters are used to delete unnecessary system modules and thus provide for the maximum number of devices on a specific machine size.

The "enter data" message has been replaced by an underscore, backspace (2741, 1050) or period, backspace (TTY).

Terminal configurations supported by RAX Version 4 are varied and depend on system memory size:

- 256K byte machine - up to 63 terminals in any combination (maximum of eight 2260s may be used on a system)
- 128K byte machine -
  - up to 36 1050s or 2741s or Teletypewriters
  - up to 32 of a combination of any two of the above terminals
  - up to 28 of a combination of all three of the above terminals
  - a maximum of eight 2260s may be used on a system. Use of the first 2260 reduces the maximum number of typewriter-keyboard terminals by nine; each additional 2260 reduces the maximum by three.
- 64K byte machine - up to ten 1050s or 2741s or Teletypewriters. (2260s are not supported for this machine size.)

A Technical Newsletter (N20-1918) to the Application Description Manual (H20-0545) describing the details of this announcement is available from Mechanicsburg.

More information is on the reverse side.

Note: Version 3 of RAX will become obsolete when Version 4 is available.

John Fahey
Director of DP Marketing

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Remote Access Computing System (RAX) - Version 4: RAX Version 4 provides for access to the system from the 2741 Communications Terminal and No. 33 and 35 teletypewriter terminals, as well as the 1050 and 2260 currently available. Maximum terminal support for the three memory sizes is:

- 256K - up to 63 terminals in any combination (maximum of eight 2260s)
- 128K - 1050 or 2741 or Teletypewriter up to 36 terminals
  - up to 32 of any two of the above
  - up to 28 if all three are included
  - if 2260s are to be included in the system, the number of terminals supported in addition to the 2260s may be calculated by using the following formula: T=M-3 (n+2) where:

    T = number of keyboard-typewriter terminals RAX will support
    M = maximum number of terminals supported due to installation configuration (i.e., 36, 32, 28 as explained above)
    n = number of 2260s required (maximum of 8)

- 64K - 1050 or 2741 or Teletypewriter up to 10 terminals

2741 Terminal Configuration: The RAX system requires the 2741 to have the Interrupt feature on the terminal device and the 2741 Break feature on the 2702 Transmission Control Unit. The RAX system does not support the 2741 on the 2701 Data Adapter Unit. Complete specifications are:

2702 Transmission Control

1. Terminal Control Type I (#4615)
2. 2741 Break feature (#8055)
3. Selective Speed feature (#9684)
4. Data Set Line Adapter (#3233)

2741 Data Communications Terminal

1. Standard Correspondence IBM SELECTRIC® Keyboard
2. Interrupt feature (#4708)
3. Manifold 72 type elements (#9806 or 9810)
4. 10 characters/inch character spacing (#9104)
5. Data set attachment:
   #9114 for use with Western Electric 103A2 dial-up data set
   #9115 for use with Western Electric 103F2 direct data set
6. If data set attachments #9114 is specified dial-up feature (#3255) is required.

No. 33 and 35 Teletypewriter - Terminal Configuration: Teletypewriter terminals may be ordered through local telephone company representatives. RAX will support both ASR and KSR Teletypewriter terminals. The Teletypewriter keyboard should have a left arrow as upper case letter 'O'. At installation time, the answer-back drum of the Teletypewriter may be encoded with any sequence the user desires.

2701 Specifications:

1. Telegraph Adapter Type II (#7885)

2702 Specifications:

1. Telegraph Terminal Control Type II (#7912)
2. Data Set Line Adapter (#3233) one per line.

Additional Program Support Material: Application Description Manual (H20-0545) with Technical Newsletter (N20-1918).

For further information contact your Regional Scientific Marketing Manager.

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IBM Data Processing

STATEMENT OF INTENT

STATEMENT OF INTENT

IBM INTENDS TO PROVIDE 2495 TAPE CARTRIDGE READER SUPPORT UNDER OS/360

It is the intent of the IBM Company to provide a Data Set Utility Program which will:

Execute as a job in a configuration that includes an IBM 2495 Tape Cartridge Reader under OS/360 control.

Accept input data from tape cartridges read sequentially on an IBM 2495.

Edit the data in each record.

Prepare a sequential data set as output on an I/O device by QSAM; or as an option, permit the user to create his own data set.

The data on the tape cartridges read on the IBM 2495 can be created on the IBM 50 Magnetic Data Inscriber or the IBM Magnetic Tape "Selectric" Typewriter.

Additional information will be available by April 30, 1969.

This information represents the technical intent of IBM with respect to this programming support. It is possible that the objectives of this intent will not be met. The program is subject to revision or withdrawal, and no commitment or warranty is expressed or implied.

Salesmen with accounts planning early installation of the IBM 2495 under OS should contact their Regional Programming Systems Manager for additional information and guidance.

Guidelines for using the Statement of Intent appear on the reverse side.

John Fahey
Director of DP Marketing

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P68-165

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

SYSTEM/360 MODEL 20 HOSPITAL PATIENT BILLING PROGRAM

System/360 Model 20 Hospital Patient Billing Program (360V-UH-16X) may now be ordered. Shipments will begin the end of this week.

The program accepts patient charges and provides for patient insurance company billing. The package covers admissions, charge posting, census reporting, insurance proration, preparation of detailed bills, and preparation of summary bills. Also included are updating of room transfers and discharges. The program provides Medicare billing for Part A (SSA-1453C) and Part B (SSA-1554).

Patient charges are batch posted in patient number sequence, and data for revenue reporting are punched into the charge cards allowing the hospital to summarize revenue data as desired. The program provides a daily balance forward report to assist in responding to patient inquiries.

Availability of the Patient Billing System Manual will be announced in a PRL. Preliminary copies can be obtained through your Medical Industry Marketing Representative.

For detailed information see the reverse side.

John Fahey
Director of DP Marketing

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IBM

Hospital Patient Billing: This program provides smaller hospitals with the capability of installing a patient billing system with a minimum of programming effort. (360V-UH-16X)

Description: The programs accept patient charges, provide for insurance company billing, Medicare Part A (SSA-1453C) and Part B (SSA-1554), and detailed billing of patients. The package covers admissions ... charge posting ... census reporting ... insurance proration ... preparation of detailed bills ... preparation of summary bills ... daily balance forward ... updating room transfers and discharges.

Features:

- Stored Programs - each of the application programs, stored on disk, is called into core as needed, using System Control and Service Program (Disk) and Job Control cards.
- Insurance Proration - charges are automatically prorated among the patient and insurance companies at the time a bill is printed. Provision is made to handle up to three insurance plans (including Medicare).
- Internal Pricing - standard charges are priced automatically.
- Preparation of data for entry to Accounts Receivable - patient data are punched at the time a final bill is prepared. The data are punched in the format required for direct entry to System/360 Model 20 Hospital Accounts Receivable program (360V-UH-09X).
- Revenue Distribution Data - punched into charge requisition cards as charges are posted. The user may then distribute revenue according to his particular needs.
- Controls - system control totals, in conjunction with manually posting to the Patient Billing Audit form, provide for an effective audit trail. The Patient Billing Audit form is used to record the dollar value of patient transactions in the billing system.

Use: When a patient is admitted, his record is entered into the Patient Master Data Set and the Census Master Data Set. As services are provided, all charges, credits, and payments are entered into the patient record. When insurance verification is received, the provisions of up to three plans are recorded in the patient insurance master data set.

Interim reports such as Census, Daily Balance Forward, Interim bills are printed. Final patient bills are prepared after discharge. Insurance bills are printed after interim and final bills. When final bills are printed the patient data are punched for entry to Accounts Receivable (refer to System/360 Model 20 Hospital Accounts Receivable, 360V-UH-09X).

The largest module of the patient billing system (DEWBBF) requires 16,339 bytes of core storage including input/output areas and system overhead.

Customer Responsibilities: A thorough understanding of the system before installation ... conversion to card format of data on present patients ... establishment of master data sets for charge description, department description, physician description ... a census master data set must also be established in card format ... design and printing of forms for bills and control of documents within the hospital.

Programming Systems: Programs are written using Report Program Generator (RPG) and Assembler Language. Hospital Patient Billing operates under Model 20 Disk Programming system (DPS). Also used are Sort/Merge, Disk Utility Programs, and Input/Output Control System (Disk).

Minimum Machine Configuration: A 2020 Model D2 (16, 384 bytes) with 2203 Attachment (#8082), 2560 Attachment (#8099), 2311 Attachment (#7495) ... one 2560 Multi-Function Card Machine Model A1 ... one 2203 Printer Model A1 with 52-Character Set (#9088) ... two 2311 Disk Drives Model 12 ... OR a 2020 Model D4 (16,384 bytes) with 2203 Attachment (#8084), 2560 Attachment (#8100), 2311 Attachment (#7496) ... one 2560 Multi-Function Card Machine Model A2 ... one 2203 Printer Model A2 with 52-Character Set (#9088) ... two 2311 Disk Drives Model 12 ... OR a 2020 Model D5 (16,384 bytes) with 2203 Attachment (#8082), 2560 Attachment (#8099), 2311 Attachment (#7497) ... one 2560 Multi-Function Card Machine Model A1 ... one 2203 Printer Model A1 with 52-Character Set (#9088) ... two 2311 Disk Drives Model 12.

Basic Program Material:

Publications -- Application Directory ... Program Description Manual (H20-0570-0) ... Operations Manual (H20-0571-0). If only the form numbered manuals are required order them from the IBM Distribution Center, Mechanicsburg -- not PID.

Machine Readable -- One 9-track Distribution Tape Reel (DTR) (800 or 1600 bpi) or one 7-track DTR (800 cpi) Data Conversion feature required. One bootstrap card is sent with each DTR order. Machine readable may also be ordered on one 1316 Disk Pack supplied by the user. The Machine Readable material contains the source modules and job control statements for compiling. Also included is a sample problem with control cards for execution.

If the distribution medium required is not indicated on the program order card, 9-track DTR at 800 bpi will be forwarded.

Ordering Procedure: See the DP Sales Activity Section of the Branch Office Manual. DTRs are provided by PID; no tape submittal is required. Disk packs must be forwarded to PID with the program order card.

Additional Program Support Material: Application Description Manual (H20-0548) ... System Manual (availability and form number will be announced in a PRL).

For further information contact your Regional Medical Industry Marketing Representative.

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IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

EXPANDED SYSTEM/360 MODEL 20 DPS NOW AVAILABLE

System/360 Model 20 DPS is now available with:

A new program ... The S/360 Model 20 Input/Output Macro Definitions for Binary Synchronous Communications Adapter. It consists of a set of pretested macro routines which relieve the user of much of the programming required to control the exchange of messages.

An expanded CMAINT program ... Version 3 of the S/360 Model 20 DPS Core Image Maintenance. It now consists of five phases and every generated monitor can be replaced by any other generated Monitor.

Maintenance Modifications to various current DPS Programs.

Details of these added dimensions to Model 20 DPS are on the inside pages.

John Fahey
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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

[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] 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: December 18, 1968
Distribution: All Areas

Synchronous Communications Adapter IOCS Macro Definitions

The BSCA IOCS (360W-CQ-201) provides programming support for the customer using the Model 20 Disk System equipped with the Binary Synchronous Communications Adapter feature. The BSCA IOCS consists of a set of pretested macro routines which relieve the user of much of the programming necessary to properly control the exchange of messages on a transmission line.

BSCA IOCS is integrated into, and can be used in conjunction with a Model 20 DPS Assembler and DPS IOCS programming support. The communications program may use all features of this IOCS package, plus 1259 or 1419 IOCS.

Extensive diagnostic messages and error recovery procedures are provided in the BSCA IOCS. The error statistics are available as a user option.

In the DPS System the BSCA IOCS file definition statements and macro instructions are expanded into an appropriate set of symbolic machine instructions and are assembled together with the user program by the DPS Assembler.

In the DPS System the telecommunications program can be one of a series of batch jobs and will be loaded by the loader which is part of the monitor. The program will then operate under supervision of the DPS monitor.

Features ...

Headers
EBCDIC or USASCII Transmission Codes
Overlapping of processing and I/O activity with non-burst line operation
Intermediate Block Checking
Transmission and reception of message blocks in LIMITED CONVERSATIONAL MODE ("TETE-A-TETE")
Automatic Calling and answering functions for Switched Network
Full transparent text mode for both EBCDIC and USASCII transmission codes
Support of High Speed Feature
Optional identification - verification for greater circuit assurance and security protection (on switched lines only).
BSCA IOCS DTFBT which is used to select the optimum set of BSCA IOCS routines.

Operative macros consisting of Control Macros, Transmission Initialization Macros, Transmission Macros and Transmission Ending Macros. These are used in the problem program for control and execution of the actual data transmission.

Performance Data ... For performance data refer to the SRL publication IBM System/360 Model 20 Disk Programming Systems, Performance Estimates, C33-6003-1, with TNL N33-9048.

Minimum Systems Requirements ... *For Systems with 2020 Processing Unit Model BC2 - D2* the minimum requirement for assembly of programs containing macro instructions for the DPS BSCA is the configuration required by the DPS Assembler program.

The minimum configuration for execution of such programs depends on processing requirements. Especially required are: a 2020 Central Processing Unit, Model BC2 with Binary Sybchronous Communications Adapter (2074) ... one remotely connected Model 20 with Binary Synchronous Communications Adapter (2074) or one System/360 Model 25 or above with 2701 or 2703 with BSC ... input/output units as required by the DPS System and the problem program.

Features supported for object program execution: Card reading devices (2501, 2520, 2560 Model A1) ... Card punching devices (1442, 2520, 2560 Model A1) ... Printer (1403 or 2203, Model A1) ... 2415 Magnetic Tape Unit (Models 1 - 6) ... 1419 Magnetic Character Reader ... 1259 Magnetic Character Reader ... 2152 Printer Keyboard ... 16, 384 bytes of core storage (CPU Model D2) ... Two 2311 Disk Storage Drives (Model 11 or 12).

For Systems with 2020 Processing Unit Model BC4 - D4: for program assembly ... 2020 Processing Unit Model BC4 - D4 ... Input/Output units as required by the DPS Assembler.

For program execution ... 2020 Processing Unit Model BC4 with Binary Synchronous Communications Adapter (2074) ... One remotely connected Model 20 with Binary Synchronous Communications Adapter (2074) ... or one System/360 Model 25 or above with 2701 or 2703 with BSC ... Input/Output units as required by DPS and the problem program.

Features supported for object program execution: 16, 384 bytes of core (CPU Model D4) ... 2560 Model A2 MFCM ... 2203 Model A2 Printer ... 2152 Printer Keyboard ... Two 2311 Disk Storage Drives, Model 12.

Supported Data Link Configurations -- Leased (unswitched) Line - Communication with another Model 20 whose program also uses BSCA IOCS or with a System/360 Model 25, 30, 40, 50, 65, 67 (in 65 mode) 75, 85, equipped with a 2701 or 2703 (with BSCA) and program supported with DOS BTAM or OS BTAM (Model 25, DOS BTAM only; Model 85 OS BTAM only).

Switched Network - same configuration as for leased (unswitched) line.

Centralized Multipoint Line - The Model 20 using BSCA IOCS operates as a slave station only. The master station is a System/360 Model 25/30/40/50/65/67 (operating

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in a 65 mode)/75/85 with a 2701 or 2703 (with BSCA) and program supported with DOS or OS BTAM (Model 25, DOS BTAM only; Model 85/OS BTAM only).

Program Reference Material – IBM System/360 Model 20, Input/Output Control System for the Binary Synchronous Communications Adapter, C33-4001-02.

IBM System/360 Disk Operating System Basic Telecommunication Access Method, C30-5001-05 and TNLs N30-5509 and N30-5515.

IBM System/360 Operating System Basic Telecommunication Access Method, C30-2004-01 with TNLs N30-2501; N30-2504; N30-2508; N30-2512 and N30-5027.

Additional Program Support Material – Program Logic Manual, IBM System/360 Model 20 IOCS for the Binary Synchronous Communications Adapter, Y33-8004.

Program listings of the BSCA Macro Definitions are available on microfiche.

Core Image Maintenance

The Core Image Maintenance Program (360W-SL-175) allows to add, delete or replace IBM and/or user-written program phases to or from the program (core-image) library of the system disk pack. The CMAINT program consists now of 5 phases and every generated monitor can be replaced by any other generated monitor.

Performance Data: For performance data refer to the SRL publication IBM System/360 Model 20 Disk Programming Systems, Performance Estimates, C33-6003-1, and TNL N33-9048.

Additional Program Support Material ... TNL Y33-9036 to IBM System/360 Model 20 DPS, Control and Service, Y33-9008-1.

Modifications to DPS Programs

The programs that have been modified and their current status are listed below:

Program Number	Version	Mod. Level
360W-SL-173	2	1
360W-SL-175	3	0
360W-RG-180	2	1
360W-UT-188	2	1
360W-IO-192	2	1
360W-IO-200	1	1
360W-CQ-201	1	0 (New)

Basic Program Material

Publications:

Disk Programming System, Operating Procedures, C33-6004-2 ... plus TNL N33-9046
Disk Programming System, Control and Service Programs, C24-9006-3 ... plus TNLs N33-9045 and N33-9049
Disk Programming System, Disk Utility Programs, C26-3810-2 ...
Disk Programming System, System Generation and Maintenance, C33-6006-1.

Documentation:

Basic Program Material List.

Machine Readable:

Users ordering at least one of the DPS programs will receive the complete set of Model 20 DPS programs with exception of the Distribution Package Retrieval Program 360W-SL-178, which is contained only in distributions on magnetic tapes. The DPS programs are available on one 1316 Disk Pack, one 2,400 foot reel 9-track tape (800 or 1600 bpi), or one 2,400 foot reel 7-track tape (800 cpi) Data Conversion feature required.

The 1316 Disk Pack returned from the program library will contain a running system as well as the card-resident control programs and sample decks in card-image format to be punched. It will be accompanied by five Disk IPL cards to be used for initializing the loading of the running system, which is referred to as the DPS Disk Pack.

Users with 2415 Magnetic Tape Units attached to their Model 20 Systems should request the programs on tape. The tape will contain the Distribution Package Retrieval Program to be activated by one Bootstrap Card distributed with the tape. The retrieval program will:

- Initialize the first one hundred cylinders of a 1316 Disk Pack.
- Copy a running system as well as the card-resident programs and sample programs in card-image format onto a 1316 Disk Pack.
- Punch the cards for initializing the loading of the DPS Disk Pack.

Ordering Procedure

See DP Sales Activity Section of the Branch Office Manual.

If only the publications or additional copies are required, order them from the IBM Distribution Center, Mechanicsburg – not from PID.

If the track and density requirements are not indicated on the back of the program order card, 9-track (800 bpi) will be forwarded.

Magnetic tapes (2400 foot) may be forwarded to PID or ordered. The order card should accompany the tape or tape order form; disk packs must be forwarded to PID with the order form.

Current users will receive a prepunched Program Order Card and a letter announcing the availability of a Maintenance Package and a Replacement DPS/360 System. Also provided will be Ordering Instructions for either the Maintenance Package or the Replacement System. All orders are to be processed through the Branch Office using the prepunched card.

DTRs (for Maintenance) are supplied, no tape submittal is required.

Optional Program Material

The entire source statements of all DPS programs will be made available in card-image format, upon special request, on one or two 2400-foot reels of magnetic tape, 9-track at 800 bpi or 1600 bpi.

"A" reel of magnetic tape contains the programs 360W-CL-171 through 360W-SM-182. "B" reel of magnetic tape contains the programs 360W-UT-183 through 360W-IO-202.

360W-CL-171
360W-SL-172
360W-SL-173
360W-SL-174
360W-SL-175
360W-SL-176
360W-SL-177
360W-SL-178
360W-SL-179
360W-RG-180
360W-AS-181
360W-SM-182

360W-UT-183
360W-UT-184
360W-UT-185
360W-UT-186
360W-UT-187
360W-UT-188
360W-UT-189
360W-UT-190
360W-UT-191
360W-IO-192
360W-IO-193
360W-SM-194
360W-UT-195
360W-UT-196
360W-UT-197
360W-UT-198
360W-UT-199
360W-IO-200
360W-CQ-201
360W-IO-202

By using the DPS program numbers, the requester may forward or order one or two reels of magnetic tape, following the current ordering procedures in the Branch Office Manual, DP Sales Activity.

If the density is not indicated on the program order card, 800 bpi will be forwarded.

Program Logic Manual:

An additional PLM and a TNL are available. They are:

IBM System/360 Model 20 IOCS for The Binary Synchronous Communications Adapter, Y33-8004 ... TNL Y33-9036 to IBM System/360 Model 20 DPS, Control and Service, Y33-9008-1.

See GI page 14.2 and P 360T.10 for complete information before ordering additional program support material.

IBM World Trade Data Processing P68-167 PROGRAM ANNOUNCEMENT

MANUFACTURING INDUSTRY ANNOUNCES THAT THE REQUIREMENTS PLANNING PROGRAM (TYPE II) IS AVAILABLE

The System/360 Requirements Planning Program (360A-MF-05X), scheduled for release March 20, 1969, is available now. It offers a mechanized approach to detailed requirements planning for a large segment of manufacturing industries.

This application program uses the Item Master and Product Structure files created by the IBM System/360 Bill of Material Processor Program (360A-ME-06X). It performs time series planning to determine planned orders for finished products, assemblies, sub-assemblies, parts, and raw materials based upon the input of forecasts and orders. In addition to supporting 2311, System/360 Requirements Planning also supports the 2314 Direct Access Storage Facility.

System/360 Requirements Planning determines the net requirements for finished products and component parts, establishes planned orders based on the predetermined order policy, and offsets the planned orders with respect to lead times. Additional capabilities include:

- projecting demand
- consideration of safety stock, allocated quantity, and shrinkage factors
- Plan order policies which include discrete, fixed quantity, least unit cost, and part period balancing
- modifying plan order policies by considering number-days-supply, minimum-maximum-multiple quantities, and cutoff dates
- offsetting by a fixed or a calculated lead time.

Processing variations include: complete generation of requirements, Requirements Alteration (revisions to gross requirements), and Conversational Planning (revisions to planned orders). A customizing procedure permits a user to tailor the system to meet his specific requirements. System/360 Requirements Planning utilizes many of the concepts of the requirements planning subsystem as discussed in the IBM Production Information and Control System (E20-0280).

Availability of the System Manual will be announced in a PRL.

For the new sales manual write-up, see the back of this letter.

John Fahey
Director of DP Marketing

Note to World Trade Readers

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(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) 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: December 20, 1968
Distribution: All Areas

Requirements Planning: **Offers a mechanized approach to detailed requirements planning for a large segment of manufacturing industries.** This system uses the Item Master and Product Structure files created by the System/360 Bill of Material Processor Program (360A-ME-06X). It performs time series planning to determine planned orders for finished products, assemblies, sub-assemblies, parts, and raw material based upon the input of forecasts and orders. (360A-MF-05X)

This system determines the net requirements for finished products and component parts, establishes planned orders based on the predetermined order policy, and offsets the planned orders with respect to lead times. Additional capabilities include projecting demand ... consideration of safety stock, allocated quantity, shrinkage factors ... plan order policies include discrete, fixed quantity, least unit cost, and part period balancing ... modifying plan order policies by considering number-days-supply, minimum-maximum-multiple quantities, and cutoff dates ... offsetting by a fixed or a calculated lead time. Processing variations include: complete generation of requirements, Requirements Alteration (revisions to gross requirements), and Conversational Planning (revisions to planned orders). A customizing procedure permits a user to tailor the system to meet his specific requirements. System/360 Requirements Planning utilizes many of the concepts of the requirements planning subsystem discussed in the IBM Production Information and Control System (E20-0280).

Description: System/360 Requirements Planning consists of two programs: The Requirements Generation Program and the Print Exception Program. The inputs to the system are from card, magnetic tape, or disk and contain the gross requirements by shop day, calendar date or time period. Card input is by date and quantity only. These requirements can be generated manually from a forecast, from customer orders, or from System/360 Inventory Control (Application Description Manual H20-0471). This input spans a user specified number of planning time periods into the future. The output of the Requirements Generation Program is in the form of planned orders for purchased and manufactured items. Orders for items manufactured are available for input to a capacity planning function, and orders to be purchased are available to a purchasing function. A considerable amount of flexibility is provided by System/360 Requirements Planning relative to the printing of pertinent information. This flexibility is provided to enable the extraction of as much or as little information as desired. Three types of reports are provided: detailed requirements, planned orders that have been adjusted through Conversational Planning, and an exception report. The Print Exception Program is used to print the exceptions generated from the Requirements Generation Program.

Features:

- Two programs are provided to assist the user in performing requirements planning: The Requirements Generation Program performs the actual time series requirements generation, and the Print Exception Program prints notices for the exceptions that were discovered during requirements generation.
- Functions performed include gross requirements determination, net requirements determination, plan orders, and offset requirements. Net requirements determination, plan orders, and offset requirements are optional functions.
- Many options are provided within the functions. These include: projection of demand ... safety stock quantity ... allocated quantity ... shrinkage factor ... discrete, fixed quantity, least unit cost, part period balancing, and user order policies ... minimum-maximum-multiple, number-days-of-supply, maximum quantity, and cutoff date modifiers to order policies ... fixed and calculated lead time ... product structure offset adjustment ... product structure scrap factor ... user's exits for engineering change effectivity of product structure.
- Three types of processing variations are provided. These include: complete generation of requirements, Requirements Alteration (revisions to gross requirements), and Conversational Planning (revisions to planned orders).
- Three types of reports are provided. These include: detail report of requirements, planned orders that have been adjusted through Conversational Planning, and an exception report.
- Two optional methods are provided for printing of detail requirements. These include printing of item indicative information, gross requirements, open orders, net requirements, planned orders, and offset requirements in random sequence, as requirements are generated, or at the completion of generating requirements in the sequence that the Item Master file is organized.
- Provision is made to store gross requirements, open orders, and planned orders in either an Item Master file or a Subordinate Item Master file, both of which are created and maintained by the System/360 Bill of Material Processor. When the Subordinate Item Master file is used, any combination of the gross requirements, open orders, and planned orders will be stored as one separate record for each item. The linkage between the two files will be created by System/360 Requirements Planning.
- Input to the system is from card, magnetic tape, or disk and contain gross requirements by shop day, calendar date, or time period. Card input is by date and quantity only.
- A customizing procedure permitting the user to select the functions and options necessary to tailor the system to meet his specific requirements.

Special Sales Information: The philosophies and concepts incorporated in System/360 Requirements Planning are applicable to a large segment of the manufacturing industry. Modular design and programming techniques facilitate the user's selective expansion and modification of input-output formats, processing routines and the contents of the data base. Many of the aspects of this system are discussed in the Production Information and Control System (E20-0280).

Use: System/360 Requirements Planning is direct access file oriented utilizing data contained in the Item Master, Product Structure, and Subordinate Item Master (optional) files. The records within these files are created and maintained by the System/360 Bill of Material Processor Program (360A-ME-06X).

Frequency of use of System/360 Requirements Planning will depend on the user needs of his production planning function. Typically, each scheduled program run would be a complete generation of requirements with the input of gross requirements spanning from the current time period to the last time period in the planning horizon. The Conversational Planning (optional) method of processing enables the system to stop processing after each level of planned orders have been developed. This allows the planned orders to be reviewed and, if necessary, readjusted before the next level of requirements is determined. Thus, either complete requirements generation or Conversational Planning would normally be performed on a scheduled basis. Requirements Alteration processing (optional) provides for regeneration of requirements due to changes to the original gross requirements input. In this instance, only the altered gross requirements are input to the system. Requirements Alteration processing would normally be performed between scheduled complete requirements generation or Conversational Planning program runs.

Customer Responsibilities: A thorough knowledge and understanding of this program before installation ... customize System/360 Requirements Planning to meet user requirements ... a thorough knowledge and understanding of the IBM System/360 Bill of Material Processor ... provide and maintain a shop calendar that resides on a direct access device ... define contents and format of the Item Master, Product Structure and Subordinate Item Master files ... maintain accurate up-to-date data ... provide open orders to the system ... provide file organization and maintenance of the Item Master, Subordinate Item Master, and Product Structure files through the use of the IBM System/360 Bill of Material Processor Program (360A-ME-06X).

Programming Systems: System/360 Requirements Planning programs are written in Assembler Language utilizing the macro language facility and will operate under the IBM System/360 Disk Operating System. The DOS/360 Disk Sort/Merge (360N-SM-450) is required if the exception notice file is to be sorted. In addition, the System/360 Bill of Material Processor (360A-ME-06X) is also required.

Minimum System Requirements: Device or Feature	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 Printer-Keyboard	---	1051 N1
System/360 Card Reader (see Note 1)	2540	Any
Printer-Keyboard	1052 Model 7	1052 Model 8
System/360 printer	1403 Model 2	Any (with at least 132 print positions)
Storage Control	---	2841 Model 1
Disk Storage Drives (as required to contain DOS/360 and the user's data files (minimum of 2)	2311 Model 1	2311 Model 1
or		
Direct Access Storage Facility (see Note 2)	---	2314 Model 1

NOTES:

1. A System/360 card punch, while not used by the System/360 Requirements Planning programs, is required for system preparation.
2. In addition, a 2314-only system configuration also requires a 2400 series tape drive for system preparation.

Refer to the machines section of the sales manual for appropriate attachments required for connection of input/output units.

Basic Program Material:

Publications -- Application Directory ... Program Description Manual (H20-0584) ... Operations Manual (H20-0583). If only the form numbered manuals are required, order from Mechanicsburg -- not from PID.

Machine Readable -- The source programs and sample problem may be obtained on one 9-track 2400' reel of magnetic tape (800 or 1600 bpi), or one 7-track 2400' reel of magnetic tape (800 cpi - Data Conversion feature required), or one 1316 Disk Pack.

If track and density requirements for magnetic tape are not indicated on the back of the program order card, 9-track at 800 bpi will be sent.

Magnetic tape (2400') may be forwarded to or ordered from PID. The program order card should accompany the tape order form.

Disk packs must be forwarded to PID with the program order Card.

Ordering Procedure: See Branch Office Manual, DP Sales Activity section.

Additional Program Support Material: Application Description Manual (H20-0487-2) ... Systems Manual (availability and form number will be announced in a PRL).

Reference Material: Production Information and Control System (E20-0280) ... System/360 Bill of Material Processor - Application Description Manual (H20-0197) ... System/360 Bill of Material Processor - Programmer's Manual (H20-0246) ... System/360 Inventory Control - Application Description (H20-0471).

For further information contact your Regional Manufacturing Industry Marketing Representative.

IBM World Trade Data Processing P68-168

PROGRAM ANNOUNCEMENT

COMPOSITION/360 IS AVAILABLE (TYPE II)

The COMPOSITION/360 (360A-DP-08X) component program of the System/360 Text Processor system is available. This program, in combination with a user-supplied input/output generation program, forms the basis of a comprehensive text composition system which utilizes the multiprogramming facilities of DOS/360.

Potential users of COMPOSITION/360 are organizations that transcribe textual information into the form required for final printing on composition devices which can be attached directly to a System/360 or controlled indirectly by the System/360 via magnetic or paper tape. Also, newspapers, book publishers, technical manual publishers, and in-house publishers can significantly reduce the time and programming effort required to implement computerized text composition.

This component program of System/360 Text Processor consists of control and functional routines that accept input text from a user-prepared disk file, process the text into justified lines according to graphic and stylistic requirements described by the user, and produce generalized output records on disk. The user must write the routines to place input on the file and relieve the generalized output records from the file. This enables the user to tailor the system to his own requirements and provides the necessary flexibility for change and growth.

See the reverse side for detailed information.

John Fahey
Director of DP Marketing

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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. 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.

Published by DP Sales Publishing Services, WTHQ

FOR IBM INTERNAL USE ONLY

Release Date: December 30, 1968
Distribution: All Areas

Text Processor - COMPOSITION: This program, in conjunction with a user-supplied program, forms the basis of a comprehensive text-composition system that operates under DOS/360.

(360A-DP-08X)

Description: The program consists of control and functional routines that accept input from a user-prepared disk-resident file. The disk-resident file must contain the copy to appear in print and instructions describing the desired printing format. The program produces generalized output records and stores them in a specified disk area. These output records contain (1) the original copy in the form of justified lines arranged according to the graphic and stylistic requirements described by the user with the input format instructions and (2) the functional format control information necessary to completely define the printed appearance of the lines. The user must retrieve this generalized information from the disk area, convert it into coding acceptable to the specific composition device on which final printing will occur, and write it to the appropriate systems output device. The input/output processing described must be provided by the user in the form of an input/output generation program. If word division capabilities are required, COMPOSITION/360 is designed to use the HYPHENATION/360 (360A-DP-07X) component program of System/360 Text Processor.

Although COMPOSITION/360 is programmed to run in one-partition under DOS/360, it is designed with the intent that the user-supplied input/output generation program occupies the Foreground I partition with COMPOSITION/360 occupying either the Foreground II (if independent user background programs are desired) or Background partition (if in a dedicated text-processing environment). Implementation of an operational System/360 Text Processor, which consists of COMPOSITION/360, HYPHENATION/360 (if required), and a user-supplied input/output generation program, requires two partitions of DOS/360, with the user-supplied program occupying Foreground I. The two partition operational concept for System/360 Text Processor is designed to gain maximum utilization of the multiprogramming features of DOS/360 in effecting maximum program overlap and thruput, while allowing non-related programs in the Background partition to run concurrently with and independently of normal text processing operation.

Features: Two format control languages are supported to allow user flexibility in utilizing maximum capabilities of different composition output devices and to permit the transition of existing 1130 or 1620 Type Composition installations to System/360 with minimum operator training ... COMPOSITION/360 is intended to provide functional capabilities which are common to most text composition applications, thus forming the base from which the user can integrate the facilities of System/360 and System/360 Disk Operating System with his specific installation requirements ... the composition device-independent output records produced by the program are designed to permit user utilization of the capabilities of a broad range of composition output devices without requiring a separate COMPOSITION/360 program run for each device. This could be advantageous, for example, with a system in which proofing operations are desired on an output device different from the final composition device ... COMPOSITION/360 can be used to process text input originating from different system input devices since it is designed to operate independently of I/O facilities; this input media transparency is effected by user code conversion of the input data stream prior to writing it onto the disk file for input to COMPOSITION/360.

Special Sales Information: Any organization which transcribes textual information into the form required for final printing on composition devices that can be attached directly to System/360, or controlled indirectly (e.g., via magnetic tape or paper tape) from System/360 is a potential user. Other users are newspapers, book publishers, technical manual publishers, and in-house publishers which can significantly reduce the time and programming effort required to implement computerized text composition.

Use: This component program of System/360 Text Processor consists of control and functional routines that accept input text from a user-prepared disk file, process the text into justified lines according to graphic and stylistic requirements described by the user, and produce generalized output records on disk. The user must write the routines to place input on the file and retrieve the generalized output records from the file. This enables the user to tailor the system to his own requirements and provides the necessary flexibility for change and growth.

Customer Responsibilities: For a minimum operational system, user responsibility encompasses the following two areas:

1. Write an input/output generation program which tailors COMPOSITION/360 to the user's own input/output requirements. This program includes:
   - Routines (1) which select, initiate, and handle reading of textual and format control information from the specific systems input device(s) selected by the user for that function and (2) which place the textual and format control information in the designated disk file area in the proper format where it then becomes input to COMPOSITION/360.
   - Routines (1) which retrieve the generalized output record from the designated file output area after COMPOSITION/360 processing, (2) tailor the output records to the specific composition device on which the copy is to be printed or displayed, and (3) which select, initiate, and handle the output of tailored device-dependent records to the specific systems output device(s) selected by the user for that purpose.
2. Gather data which controls the graphic and stylistic appearance of the text and which defines the fonts used to justify the text. This data must then be loaded on a disk in a format acceptable to COMPOSITION/360 via utility programs supplied with this package.

Programming Systems: COMPOSITION/360 is written in Assembler Language and operates under control of DOS/360 in a multiprogramming environment. In addition to a Supervisor and System Control and Basic IOCS, the following components are required:

Direct Access Method	360N-IO-454
Disk Sort/Merge	360N-SM-450
Assembler	360N-AS-465

Minimum Machine Configuration: System/360 Model F Processing Unit (64K bytes) with Decimal Arithmetic, Interval Timer, Storage Protection, and one Selector Channel, 1052 Printer-Keyboard with CPU attachments, 2841 Control Unit, and one 2311 Disk Storage Drive. These components are in addition to DOS/360 requirements of one 2311 Disk Storage Drive, one card reader*, one card punch*, and one printer*. Note that this minimum machine configuration does not include the text input/output system devices necessary to implement an operational text processing system (e.g., magnetic tape, paper tape, data entry terminals, display components etc.). It is the responsibility of the user to select these components and provide the necessary support programming based on his composition system requirements.

The core residence requirement for COMPOSITION/360 is 30K bytes. The inclusion of HYPHENATION/360 with COMPOSITION/360 does not increase this requirement since HYPHENATION/360 functions as an overlay phase in COMPOSITION/360. The remaining 34K in a minimum system can be used for the DOS Supervisor, the user's input/output generation program, and a user background program. Implementation of a three partition system (user's input/output generation program in Foreground I, COMPOSITION/360 in Foreground II, and user program in Backgrounc) in a minimum system is dependent upon the size of user's input/output generation program and the DOS Supervisor needed.

*See System/360 Disk Operating Guide (C24-5022) for acceptable units and possible substitutions.

Basic Program Material:

Publications: Application Directory ... Program Description Manual (H20-0585) ... Operations Manual (H20-0579). If only the form numbered manuals are required, order from Mechanicsburg -- not from PID.

Machine Readable: Machine readable material may be obtained on one 9-track 2400' magnetic tape (either 800 or 1600 bpi) or one 7-track 2400' magnetic tape (either 800 cpi, Data Conversion feature required) or on one 1316 Disk Pack.

Magnetic tapes (2400') may be forwarded or ordered (the program order card should accompany the tape order form); disk packs must be forwarded to PID with the program order card.

If track and density requirements are not indicated on back of the program order card, 9-track at 800 bpi will be forwarded.

Ordering Procedure: See Branch Office Manual, DP Sales Activity section.

Additional Program Support Material: Application Description (E20-0256) ... Systems Manual Flowchart narratives Vol. 1 (Y20-0318) ... Systems Manual Flowcharts Vol. 2 (Y20-0319).

The Subscription Service (SRL/SS) should be used to ensure that revisions to the Systems Manuals are received.

For further information contact your Regional Printing and Publishing Industry Marketing Representative.

IBM World Trade Data Processing

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PROGRAM ANNOUNCEMENT

SYSTEM/360 ATTACHED SUPPORT PROCESSOR (ASP) SYSTEM VERSION 2, MODIFICATION 2 IS NOW AVAILABLE (TYPE II)

Today we are announcing the availability of three significant extensions to Version 2 of the ASP system:

- Support for the use of the OS/360 Multiprogramming with a Variable Number of Tasks (MVT) option.
- Support for the control of application job execution under MVT on the Support Processor.
- Support of Binary Synchronous Communication adapters as an interface for remote job processing.

The combination of ASP's functional capabilities with MVT provides a powerful tool for both commercial data processing and scientific/engineering computing users. In addition to its existing functional capabilities, the ASP support of MVT provides a flexible means of scheduling work for execution under MVT.

The scheduling algorithm selects jobs for execution based on the job's priority and core storage requirement, while attempting to maintain a balance of high and intermediate input/output and high compute jobs to optimize CPU utilization.

The support for the control of job execution under MVT on the Support Processor extends to the single system user the operational advantages of ASP (except for 709X emulation). This is accomplished by using ASP as a high-priority task to control job execution. In addition, it allows the multiple system user to integrate up to three asymmetric System/360 Processors into a single ASP system.

This asymmetric multiprocessing capability provides load balancing and device pooling among CPUs, as well as a means of continuing system execution from an existing job queue as long as at least one of the processors is available (provided the system is suitably configured to support this mode of operation).

The support of Binary Synchronous Communications adapters as an interface for remote job processing gives ASP users Binary Synchronous Communications capability similar to the currently existing ASP STR remote job entry capability.

Current users will receive a prepunched program order card and a letter announcing the availability of Modification 2. This program order card should be used to order Version 2, Modification Level 2.

Details are on the reverse side.

John Fahey
Director of DP Marketing

P68-169

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 the above either have been shipped (with additional copies available from the IBM Distribution Center, Mechanicsburg, Pennsylvania) or will be shipped when available. In the case of the latter, availability will be announced in the Weekly DP Marketing Publications Release Letter.

(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) 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.

Published by DP Sales Publishing Services, WTHQ

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Release Date: December 20, 1968
Distribution: All Areas

Attached Support Processor (ASP): ASP provides a multiprocessor operating system as an extension of System/360 Operating System (OS/360) (360A-CX-15X).

Version 2 extends ASP Version 1 to support Dual Main Processors and local mode execution on one processor. Improvements have also been added to enhance system operation and to facilitate implementation of local modifications and extensions. Through a reduction in required operator intervention, ASP provides an improved operational environment, enhancing system workload capacity and reducing turnaround time. The Version 2 configuration consists of one, two, or three IBM System/360 computers connected via the channel-to-channel adapter. The Support Processor (Model 40 or larger) provides the support functions (including card reading, punching, and printing) under computer control, while one or two high-speed Main Processors (usually Models 50, 65, or 75) perform the application workload. ASP also permits intermixing of OS/360 and 709X Emulator (360C-EU-729) jobs in the input stream, supports Remote Job Processing from Synchronous Transmit Receive (STR) terminals or Binary Synchronous Communications (BSC) terminals, and permits other background functions 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/360. The Primary Control Program (PCP), the Multiprogramming with Fixed Number of Tasks (MFT), or Multiprogramming with Variable Number of Tasks (MVT) control program options 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/360 PCP or MVT options. The system input and output devices for 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/360 on the Main Processor.

Modifications incorporated into OS/360 permit 709X Emulator and OS/360 jobs to be intermixed in the input stream if the 709X Emulator feature is installed on a Model 65 Main Processor. Operating System/360 used in the Main Processor is modified to overlay itself with the Emulator program upon a signal from the Support Processor. The 709X Emulator program is similarly modified to overlay itself with OS/360 at the end of an emulation job or a group of consecutive emulation jobs. The Emulator program is also modified to recognize the channel-to-channel adapter as its system input and output devices. Thus, the system input and output streams for Emulator jobs are handled by the Support Processor in the same manner as are those for OS 360 jobs.

The ASP system will accept 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 1974 or the 1978 terminals (RPQ devices). The second is oriented toward System/360 Model 20s. 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. This 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 four data formats for Remote Job Processing. One is compatible with the 2780 Data Transmission Terminal; a second is compatible with the 2780 with the Multiple Record Transmission feature; the other two are full and partial pressed formats designed for System/360 and 1130 computer terminals.

Note: The ASP system does not include the computer programming that is necessary in the remote terminals.

If the workload capacity at an installation exceeds one Main Processor, the ASP Support Processor can be expanded to support an additional Main Processor, balancing the total installation workload between the two. In this configuration, termed a Dual Main Processor system, the Main Processors need not be symmetric, but may be any combination of permissible Main Processors. Jobs will be distributed to the available system based upon job priority, device requirements, and processor dependence (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 will provide 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 the OS/360 PCP or MVT control program configurations on the Main Processor. With MVT, the ASP system provides for the execution of several jobs concurrently under control of the ASP Supervisor. 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 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.

Features: Increased system workload capacity ... reduction of turnaround time ... improved operating efficiency ... intermixed OS/360 and 709X Emulator jobs in the input stream (for a Model 65 Main Processor with the 709X Emulator feature) ... and workload balancing between multiple System/360 processors.

These features are made possible by:

1. Computer-controlled execution of support functions in a multiprogrammed mode on a lower cost Support Processor or in a region of an OS/360 MVT system. This feature permits:
   a. Priority job scheduling.
   b. Automatic processing of system input and output data sets.
   c. Automatic switching between OS/360 and 709X Emulator jobs.
   d. Concurrent processing of peripheral and other user programs, such as:
      (1) Card-to-Tape
      (2) Tape-to-Tape
      (3) Tape-to-Printer
      (4) Tape-to-Card
      (5) Card-to-Printer
      (6) Card-to-Card
      (7) 7090/94 Direct Couple Operating System (DCS) Tape Format Deblocking
      (8) Remote Terminal Transmission
      (9) Remote Terminal Reception
      (10) User-written background programs
      (11) Tape labeling
      (12) 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.

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.

For jobs to be executed under the control of the 709X Emulator, the programmer must use an OS/360 JOB card and 709X Emulator control cards in addition to the control cards required by the 7090/94 programming system being used. The ASP system separates the ASP control cards and the 709X Emulator control cards from the job stream, presenting the 7090/94 programming system with its system input job stream only. The Support Processor may assume the functions of the on-line unit record devices for the 709X Emulator. However, output data for the on-line printer will not be displayed during problem program execution. This data will be added to the output of the job and printed.

Sales Information: ASP is designed for the user whose computer installation is operated on a job shop basis. The degree to which an installation will realize the functional and performance advantages of the ASP system is determined by the nature of the job mix.

Customer Responsibilities: A customer using ASP must take the following steps prior to installation to ensure that the use of the system will be satisfactory:

1. The customer must be responsible for ordering and installing 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 a customer 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. The customer is responsible for any programming of remote terminals that is necessary for their operation.

Programming Systems: The ASP system's 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, a linkage editor, and the OS/360 utility programs. 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.

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Minimum System Requirements: The configuration requirements for the Main Processor are identical with those of a standalone processor operating under OS/360, except 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 Primary Control Program nucleus required for operation as an ASP Main Processor increase the nucleus by approximately 2,500 bytes.

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 5,000 100-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 ... 2401 Magnetic Tape Units (at least one nine-track or seven-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 - EBCDIC and Transparency, the 2701 Data Adapter Unit with the Synchronous Data Adapter Type II features or a 2703 Transmission Control with the Synchronous Data Adapter Type II - EBCDIC 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 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 (H20-0323-4), 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, a 2702 Transmission Control or a 2703 Transmission Control.
- 2260 Display Station Model 1 attached through a directly attached 2848 Display Control Model 3 (with the Line Addressing feature).
- 1443 Printer Model N1 (output only).
- 1053 Printer Model 4 attached through a 2848 Display Control (output only).
- 1403 Printer Model 2 or N1 (output only)

Support Processor with OS/360 MFT or MVT: The minimum Support Processor for use of OS/360 Multiprogramming with Fixed Number of Tasks (MFT) option in the Support Processor is the same as for the Primary Control Program except for:

- The minimum processor for MFT is a Model 40H. For MFT operation, the minimum partition size for ASP is 150,000 bytes. This system permits independent scheduling of other partitions by OS/360.
- If MVT is to be used in local mode, the minimum processor is a Model 50I. In this mode of operation, the region size for ASP should be approximately 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 2401 Magnetic Tape Unit (nine-track or seven-track with Data Conversion feature) should be available for system maintenance.

Support Processor-Dual Main Processors: The minimum Support Processor in a Dual 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. 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 2401 Magnetic Tape Unit (nine-track or seven-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 705754 and EC 254902 on the Channel-to-Channel Adapter (#1850).

Basic Program Material:

Publications -- Application Directory ... Application Programmer's Manual (H20-0322-3) ... Console Operator's Manual (H20-0321-4) ... System Programmer's Manual (H20-0323-4). If only the form numbered manuals are required, order from the IBM Distribution Center, Mechanicsburg -- not from PID.

Machine Readable* -- Object programs, source programs, OS/360 modifications, 709X Emulator modifications, and macro definitions may be obtained on one full reel of magnetic tape in either nine-track (800 or 1600 bpi) or seven-track (800 cpi, Data Conversion feature required) mode.

Optional Program Material:

Machine Readable* -- An assembly listing tape may be obtained on two full reels of magnetic tape in either nine-track (800 or 1600 bpi) or seven-track (800 cpi, Data Conversion feature required) mode.

Ordering Procedures: See DP Sales Activity Section of the Branch Office Manual.

*If track and density requirements are not indicated on the back of the program order card, a nine-track tape (800 bpi) will be forwarded.

Magnetic tapes (2400') may be forwarded or ordered (the order card should accompany the tape order form).

Additional Program Support Material: System Description Manual (H20-0466-2) ... System Manual (Y20-0305).

For further information, see the ASP Regional Marketing Representative.

IBM World Trade Data Processing

Type II
Program Announcement

IBM SYSTEM/360 MODEL 20 CRITICAL PATH METHOD PROGRAM: CPM/360-20 NOW AVAILABLE (360V - CP - 07X)

The IBM System/360 Model 20 Critical Path Method Program CPM/360-20 (360V-CP-07X) may now be ordered from your WT library. First shipments will begin the week ending December 27, 1968.

The program extends the use of network-based project scheduling techniques to any configuration of the IBM System/360 Model 20. It produces, in short running time, basic scheduling results for I/J-oriented networks of considerable size, with two passes of the activity cards. It incorporates many features which make the network easy to design and the program easy to use. The program is written in IBM System/360 Model 20 Basic Assembler Language.

The CPM/360-20 produces the customary basic scheduling results; facilitates the simulation of several alternatives; makes updating easy; permits total freedom in the design of a network; and processes a network only when it has passed all controls. It is user-oriented.

Because it permits multi-network processing, it offers the following advantages:

Full capacity of core storage can always be put to use;

Two or more versions of the same network can be processed together, thus obtaining output reports where the consequences of the variations can be clearly and immediately seen;

Savings in operational and processing times and lower probability of operator errors when more networks are processed together instead of separately.

Its output features are flexible and varied. Any number of activity cards, in any desired order (not necessarily equal to that during the first pass), intermixed with eventual group heading cards can be fed during the second pass. This feature allows the user to obtain an output report as desired. After completion of the second pass, the program is again ready for the second pass. This makes it possible to have any desired number of output reports through suitable rearrangement of the activity cards and group heading cards.

The program is designed to become a vital tool in the planning, scheduling, simulating, and up-dating of project activities in the Manufacturing, Construction, and Service Industries.

Refer to the attached sales manual page for additional information on publication support, etc.

John Fahey
Director of DP Marketing

Attachment: P 9031
Release Date: December 30, 1968
Distribution: All Areas

P68-169A

IBM World Trade Data Processing

Type II
Programming Announcement

IBM SYSTEM/360 RESOURCE ALLOCATION (REAL/360) FOR PROJECT CONTROL SYSTEM/360

Description: The REsource ALlocation program (REAL/360), available September 15, 1969, provides Model 30 (and larger) customers with a powerful addition to the widely used Project Control System/360 (PCS). Taking the output from PCS (critical path analysis) as input, together with the resource availability data, REAL reschedules either one single project (network) or several by taking care of the resource limitations and time constraints. It also allocates the resources accordingly by using a serial method of resource allocation. Schedule evaluation messages can then be provided to assist the manager in making decisions. Graphic and tabular reports give detailed information to the responsible personnel. REAL is a dependent module of PCS.

Features: PERT/CPM or PRECEDENCE network ... Up to 52 networks simultaneously ... Up to 5,000 activities can be scheduled ... Several independent calendars can be used ... Fixed-time or fixed-resource scheduling ... Up to 20 resources can be allocated ... Variable normal and maximum availability levels ... Up to 4 resources per activity ... Alternative resources ... All Project Control System/360 reports can be printed ... Evaluation messages.

Sales Information: All resource levelling program users, and all Project Control System/360 users, are potential users of the REAL package.

Any customer or prospect in the construction, repair, or maintenance areas of government branches and industrial corporations should be interested in this new product.

Machine Configuration: A 64K-2030 Processing Unit and 3 - 2311 DASD's are required.

Programming System: REAL is a modular program coded partly in basic FORTRAN IV language, and partly in Assembler. It operates under DOS.

Publication Support: An Application Description Manual, Form No. H19-0014, will be available. Advance copies will be shipped. Additional copies will be available from the IBM Distribution Center, Mechanicsburg, Pa. Consult your weekly Publications Release letter for actual availability.

For further information, contact your Country Scientific Marketing Manager or your Systems Center.

John Fahey
Director of DP Marketing

Attachment: P 9029
Release Date: December 30, 1968
Distribution: All Areas

P68-169B

IBM World Trade Data Processing

Type II
Program Announcement

SYSTEM/360 INFORMATION RETRIEVAL AND MANAGEMENT SYSTEM (IRMS) IS NOW AVAILABLE

IRMS, 360A–CR–03X, was announced and described in P 9027 on November 8, 1968. It is now available and can be ordered from your WT library.

The basic material is distributed on a 9-track or 7-track DTR only. The attached Sales Manual pages provide detailed information.

Contact your Country Scientific Marketing Manager or Systems Center for additional information.

John Fahey
Director of DP Marketing

Attachment: P 9027
Release Date: December 30, 1968
Distribution: All Areas

P68-169C

IBM World Trade **Data Processing**

Type II
Programming Announcement

IBM SYSTEM/360 CIVIL ENGINEERING PACKAGE

This package will be available August 30, 1969.

The System/360 Civil Engineering Package (CEP) consists of 45 programs designed to solve most of the numerical problems that occur in the routine work of the civil engineer. The three application areas of civil engineering are covered by the following independent CEP subsets:

Structural Analysis Program Package - (STRAPP)
Geodesy Program System - (GEOPS)
Highway Design System - (HIDES)

The CEP programs will be used mainly by consulting engineers, building contractors, surveying offices, and government agencies. They will also be used by other industrial organizations such as shipyards and aerospace companies.

The CEP programs are written in basic FORTRAN IV and compiled and executed under the IBM System/360 Disk Operating System.

For detailed information, refer to the attached Sales Manual page.

Three Application Description Manuals will be available.

Structural Analysis Program Package	**Form H19-0009**
Geodesy Program System	**Form H19-0011**
Highway Design System	**Form H19-0010**

Advance copies will be shipped. Additional copies will be available from the IBM Distribution Center, Mechanicsburg, Pa.

Consult the weekly Publications Release Letter for actual availability date.

John Fahey
Director of DP Marketing

Attachment: P 9033
Release Date: December 31, 1968
Distribution: All Areas

P68-169D

IBM World Trade **Data Processing**

Type II
Programming Announcement

IBM 1130 CIVIL ENGINEERING PACKAGE

This package will be available October 31, 1969.

The 1130 Civil Engineering Package (CEP) consists of 44 programs designed to solve most of the numerical problems that occur in the routine work of the civil engineer. The three application areas of civil engineering are covered by the following CEP subsets:

Structural Analysis Program Package - (STRAPP)
Geodesy Program System - (GEOPS)
Highway Design System - (HIDES)

The CEP programs will be used mainly by consulting engineers, building contractors, surveying offices, and government agencies. They will also be used by other industrial organizations such as shipyards and aerospace companies.

The CEP programs are written in Basic FORTRAN IV and compiled and executed under the IBM 1130 Disk Monitor System.

For detailed information, refer to the attached Sales Manual page.

Three Application Description Manuals will be available.

Structural Analysis Program Package	**Form H19-0009**
Geodesy Program System	**Form H19-0011**
Highway Design System	**Form H19-0010**

Advance copies will be shipped. Additional copies will be available from the IBM Distribution Center, Mechanicsburg, Pa.

Consult the weekly Publications Release Letter for actual availability date.

John Fahey
Director of DP Marketing

Attachment: P 9031
Release Date: December 31, 1968
Distribution: All Areas

P68-169E

IBM World Trade **Data Processing**

PROGRAM ANNOUNCEMENT

OS/360 EXTENDED SUPPORT AND RELEASE IMPROVEMENTS

IBM announces a new support plan for OS/360 in response to customer requirements to install one OS/360 release per year. The new support plan provides improved reliability through the availability of maintenance between releases and extended PTF support.

In 1968, there were two releases of OS/360. It is anticipated that a similar number of releases per year will be provided in the future, thus providing a more stable environment for the OS user than in the past. It is expected that an account will select at least one of these releases for installation as his production system.

The OS/360 release procedures are being changed to provide for improved reliability between OS releases. It is our intent that between releases, PTFs that become available on a current release of OS/360 will be centrally applied to the distribution libraries by IBM. When this is done PID will fill new orders with the updated system. All PTFs for a given release will still be available through the normal Field Engineering channels for individual application as required.

Independent Components ... IBM intends to extend and expand component releases with OS/360 by making system independent components available between system releases of OS/360. They will be usable with the current release of OS/360 and, where applicable, the prior release. In addition, IBM intends to incorporate these components into the current distribution libraries between releases so that PID can fill new orders with an updated system.

PTF Support ... PTF support for a given release of OS/360 will be extended to nine months beyond the availability of the next release. This extended support starts with Release 15/16, which will be supported with PTFs until nine months after the availability of Release 17. Field Engineering will continue to diagnose problems and submit APARs on problems not previously defined regardless of the customer's system level.

Extended PTF support, central application of PTFs, component releases and a low number of releases a year should significantly improve the OS/360 environment. Once these procedures are implemented, it will be to the advantage of those users not immediately requiring the maintenance or function in the new release to defer ordering from PID until an updated system is available. Additional details will be made available during 1969 pertaining to schedules for updating specific releases to enable proper planning for installing OS/360

John Fahey
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.

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IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

1400, 1620, AND 7000 SERIES COMPUTER APPLICATION PROGRAMS TO BE WITHDRAWN FROM TYPE II PROGRAM LIBRARY

A number of application programs in the program library have satisfied customers' needs and are no longer in demand. To keep only active programs in the library, the 1400, 1620 and 7000 series computer programs listed on the reverse side will be withdrawn 90 days from the date of this announcement letter. The program documentation will also be withdrawn from the IBM Distribution Center, Mechanicsburg.

The program update service and APAR processing will be discontinued in 30 days.

Customers who may be affected should be notified immediately.

John Fahey
Director of DP Marketing

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FOR IBM INTERNAL USE ONLY

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Program	Number
1401 Autoplotter	1401-CX-03X
1401 IMPACT	1401-DW-02X
1401 Demand Deposit	1401-FB-01X
1401 Bank Sort Program	1401-FB-06X
1401 Allocation of Resources	1401-FB-14X
1410 Linear Programming System	1410-CO-01X
1410 Linear Programming System	1410-CO-06X
1410 Linear Programming System	1410-CO-07X
1410 Linear Programming System	1410-CO-09X
1410/7010 Linear Programming System	1410-CO-10X
1410 Engineering Block Diagram	1410-EE-01X
1410 62 CFO Consolidated Functions Ordinary	1410-IL-06X
1440 Allocation of Resources	1440-FB-13X
1440 Fire and Casualty Program - Autorating	1440-IF-07X
1440 Homeowners Rating	1440-IF-08X
1440 General Dist. Program	1440-IF-09X
1440 Debit Insurance	1440-IL-05X
1620 AUTOMAP	1620-CN-01X
1620 Interpretive Programming System	1620-CS-07X
1620 Interpretive Programming System	1620-CS-08X
1620 Interpretive Programming System	1620-CS-09X
1620 Interpretive Programming System	1620-CS-10X
1620 Interpretive Programming System	1620-CS-11X
1620 Interpretive Programming System	1620-CS-12X
1620 Autoplotter for 1620	1620-CX-01X
1620 Autoplotter for 1620	1620-CX-02X
1620 Numeric Surface Tech & Contour Map Plot	1620-CX-05X
1620 Type Composition Program System 1	1620-DP-01X
1620 Type Composition Program System 3	1620-DP-03X
1620 General Raytrace & 3rd Order Aberrations	1620-EO-02X
1620 Vignetted Aperture & Spot Diagram Comp	1620-EO-04X
1620 Radial Energy & Focus Shift Prog	1620-EO-06X
1620 Automatic 3rd Order Corrections	1620-EO-07X
1620 Automatic 3rd Order Corrections	1620-EO-08X
1620 Least Sq Curve Fit for Time-Depth Chart	1620-MP-03X
1620 Wave-Front Ray-Path Chart	1620-MP-04X
1620 Migration Template Plotting	1620-MP-05X
1620 Normal Move-Out Chart	1620-MP-06X
1620 Synthetic Seismogram	1620-MP-07X
1620 Grid Value Determination	1620-MP-08X
1620 Automatic Grid Contouring	1620-MP-09X
1620 Anal. of Magnetic or Gravity Anomalies	1620-MP-10X
1620 Data Point Plotting Program	1620-MP-11X
1620 Calculation of Intercepts & Velocities	1620-MP-12X
1620 Refrac Interp & Velocity Determination	1620-MP-13X
1620 FORTRAN Plot Subroutine	1620-MP-14X
1620/1710 SPS Plot Subroutine	1620-MP-15X
1620 Multi-Stage Flash Calculation	1620-MP-16X
1620 Optimizing Flash Calculation	1620-MP-17X
1620 Decline Curve Anal of Oil Well Prod	1620-MP-18X
1620 Format Conv Prog NGAA K-Value COEFF	1620-MP-19X
1620 Dipmeter Calculation	1620-MP-20X
1620 Contouring by Triangulation	1620-MP-21X
1620 Quantative Log Analysis	1620-MP-22X
1620 Theoretical Gravity of a 3/D Mass	1620-MP-23X
1620 Velocity Determination Delta T Analysis	1620-MP-24X
1620 Gas Deliverability	1620-MP-25X
1620 Least Squares Curve Fit for Mat. Bal	1620-MP-26X
1620 Tarner Material Balance	1620-MP-27X
1620 Prediction of Water Cut vs Recovery	1620-MP-28X
1620 Casing Design	1620-MP-29X
1620 Sand Volume Determination	1620-MP-30X
1620 Filter Analysis Routine	1620-MP-31X
1620 CVL or Sonic Log Adj to Check-Shot Data	1620-MP-32X
1620 Two Dimensional Waterflooding	1620-MP-33X
1620 Economic Evaluation of Petroleum Proj.	1620-MP-34X
1620 One Dimensional Trim Program	1620-MT-01X
1620 Electric Load Flow	1620-SU-04X
1620 Electric Load Flow	1620-SU-05X
1620 Electric Load Flow	1620-SU-06X
1620 Electric Load Flow	1620-SU-07X
7040/7044 Linear Prog Sys III	7040-CO-12X
7040 QUIKTRAN/COGO	7040-EC-05X
7040 Control System Analysis	7040-MA-01X
7090 Pert Cost Program	7090-CP-01X
7090 General Purpose Systems Simulator II	7090-CS-13X
7090 Assembly Line Balancing	7090-MF-02X
7740 Scientific Terminal System, STS	7740-CX-09X
7740 Scientific Terminal System, STS	7740-CX-10X

AVAILABILITY DATE FOR RIGID FRAME SELECTION PROGRAMS (RFSP) HAS CHANGED (TYPE II)

Availability of RFSP, for aid in designing prefabricated as well as conventional buildings, was announced for January 31, 1969. (See P68-49.)

To insure that this program provides maximum customer utility, it was necessary to include both the general loading case for non-symmetric structures and multiple loading cases for symmetric gable frames. However, implementing these capabilities in an effective manner took significantly longer than expected.

Since a large majority of early RFSP users are 1130 customers, all of the RFSP resources have been assigned to support the 1130 program. As a result, this program will still be available for those customers who require it on January 31, 1969. However, initial delivery will be on a controlled release plan with general availability to follow by April 30, 1969.

Availability of DOS/360 and OS/360 versions is deferred to November 30, 1969.

The minimum storage requirement of OS/360 specified originally as a 60K partition applies to PCP and MFT options. MVT operation will require a larger region due to its different main storage allocation.

Before making any customer commitments for controlled release of the 1130 version, branch offices must have their installation and training plan approved by Manufacturing Industry Marketing.

The procedure for the controlled release will be announced by January 15, 1969.

Action Required ... Notify customers affected by this change immediately.

Inform Manufacturing Industry Marketing of any customers who will require controlled release of the 1130 version.

Additional information can be obtained through your regional Manufacturing Industry Representative.

John Fahey
Director of DP Marketing

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Published by DP Sales Publishing Services, WTHQ

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Distribution: All Areas

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

PRINTING AND PUBLISHING INDUSTRY ANNOUNCES NEW TYPE II PROGRAM THAT PROVIDES TEXT PROCESSING AND EDITING

The System/360 Text Processor--EDIT/360 is a text processing and editing program. It will be available October 31, 1969.

This program will provide all of the capabilities of the previously announced COMPOSITION/360 program which include control and functional routines that:

- *Handle disk-resident text and text format control input.*
- *Perform line justification and formatting functions.*
- *Produce generalized disk output records ready for input to user-supplied composition-device-oriented routines.*

In addition, the following editing functions will be available:

- *Justified output for final printing and editing purposes.*
- *Text and command listings for editing purposes.*
- *On-Line storage of text and commands.*
- *Index listing of stored textual data.*
- *Dumping of text for back-up and off-line storage.*
- *Restoring of text for additional modifications.*
- *Deletion of stored documents.*
- *Document protection.*
- *Modification to stored textual data by:*
  - *Adding, deleting and replacing text and commands*
  - *Scan replacement of text*
  - *Moving, copying, and exchanging portions of text*

This program, in conjunction with the required user written input and output programs and the optional HYPHENATION/360 (360A-DP-07X), will form a comprehensive text handling system for use by the printing community.

Newspapers, book publishers, magazine publishers, commercial printers, in-house publishers, and organizations involved in the transcription of textual information are potential users of this program. The use of the program will reduce tedious, time-consuming manual corrections and will eliminate the necessity for re-entering original input text.

The application description is not available (availability will be announced in a Publication Release Letter). However, preliminary copies may be ordered from Printing and Publishing, Department 850, DPD HQ.

Details are on the reverse side.

John Fahey
Director of DP Marketing

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Text Processor -- EDIT: This program provides a comprehensive text processing and editing system. It contains all of the features of COMPOSITION/360 plus significant text editing functions. Through the use of Text Processor -- EDIT/360, both the justification of textual data and its subsequent modification can be performed. To meet the needs of a broad range of potential users, several different forms of justified output and techniques for modifying text are available.

This program is designed to operate in either a multiprogramming or dedicated System/360 environment under control of the Disk Operating System (DOS/360). The use of the DOS Multiprogramming option allows for the simultaneous operation of the program and user programs thus providing maximum response to text-processing requests while taking advantage of low system activity for I/O modules and other data processing. If simultaneous operation is not desired, the program is capable of running in a batch job processing environment.

Features:

- Initial Text entry
- Text and command listings for editing purposes
- User-specified edit input language
- Modification to stored textual data
- Justified output for final printing and editing purposes
- Input/Output device independence
- On-line storage of text
- Index listing of stored textual data
- Dumping of text for back-up and off-line storage
- Restoring of text for additional modifications
- Deletion of stored documents
- Document protection
  - Adding, deleting and replacing text and commands
  - Scan replacement of text
  - Moving, copying, and exchanging portions of text

The text justification capabilities of the program will be the same as those supported under the COMPOSITION/360 program (360A-DP-08X).

Use: This program consists of control and functional routines that accept input from a user-prepared disk-resident file. Input consists of textual material, text-formatting commands, and output requests. After the output text has been proofread, alterations can be made to stored textual data through the use of text modification commands without re-entering the original text input. Completely justified and corrected text is written as generalized disk records which the user must retrieve and write on an appropriate system's device. Potential users of the program are newspapers, book publishers magazine publishers, commercial printers, in-house publishers, and organizations involved in the transcription of textual information. The program, in addition to providing for the storage, justification and retrieval of textual data, permits the user to correct errors before the textual material is processed in a final justified format.

Customer Responsibilities: This program is a generalized text storage, editing, and justification system which the user must tailor to his specific configuration. For a minimum operational system, user programming responsibility encompasses:

Input Module

- Select, initiate, and handle reading in of text, formatting and modification commands, and output requests from a specific system input device selected by the user.
- Build disk file in proper format for input to the program.

Output Module

- Retrieve generalized disk output records generated by the program.
- Tailor generalized output to specific output devices.
- Outputting of device dependent records to specific system output devices selected by the user.

Special Programming Considerations: When planning the installation of this program, sufficient lead time should be allowed before program delivery to permit the writing of input and output modules tailoring the program to the user's requirements. The amount of time required will be determined by the level of programming expertise available to the user and by the complexity of the input and output modules required to accommodate the user's I/O devices. The use of Teleprocessing support features of DOS, such as Basic Telecommunication Access Method (BTAM), or Queued Telecommunications Access Method (QTAM), will require detailed knowledge of these facilities. The decision as to whether this program will be operating in a multiprogramming or batch job environment will determine the complexity of the installation and the input and output modules.

Programming Systems: The program is written in System/360 Assembler Language and is designed to operate under control of the Disk Operating System (DOS) utilizing the multiprogramming option. In a multiprogramming environment, the program will operate in one program partition while the user's input/output modules will function in the next higher priority partition.

Under the multiprogramming option, a variety of configurations may be employed by the user in allocating available core storage. Shown here are a few of the possible configurations for the minimum system which is a 64K System/360 Model 30.

Configuration I - Supervisor 8K - 10K
Text Processor-EDIT/360 34K - Background
User I/O 20K* - Foreground 2
User Prog. 0 - 2K* - Foreground 1

Configuration II - Supervisor 8K - 10K
User Prog. 10K* - Background
Text Processor - EDIT/360 34K - Foreground 2
User I/O 10K - 12K* - Foreground 1

*As the core requirements of the user's input and output modules decrease, more core storage becomes available for a third program partition which can be used for other data processing functions.

The minimum DOS system required for creating an operational system and executing the program must include:

- Supervisor (8K or 10K),
- Disk Sort Merge,
- Assembler.

The data management facilities of the Disk Operating System required by this program include:

- System Control and Basic IOCS
- Direct Access Method Macros

Minimum Machine Configuration: System/360 Model F Processing Unit (64K bytes) with Decimal Arithmetic, Interval Timer, and one Selector Channel, 1052 Printer-Keyboard with CPU attachments, 2841 Control Unit, and one 2311 Disk Storage Drive. These components are in addition to the DOS/360 requirements of one 2311 Disk Storage Drive, one card reader**, one card punch**, and one printer**. Note that this minimum machine configuration does not include the text input/output subsystem devices necessary to implement an operational text processing system (e.g., magnetic tape, paper tape, data entry terminals, alphameric display terminals, etc.). It is the responsibility of the user to select these sub-system components and provide the necessary support programming based on his text processing system requirements.

The core residence requirement for the program is 34K bytes of storage. The remaining 30K bytes of storage are allocated, by the user, to the DOS Control Program and his own input and output modules. Any remaining space may be utilized as desired within normal DOS restrictions (e.g., a background partition program under DOS requires a minimum of 10K bytes). If the user of the minimum system configuration uses Teleprocessing support (such as BTAM, QTAM) in his input and/or output modules, there may not be sufficient storage space for a third program partition. may not be sufficient storage space for a third program partition.

Program Support Material: Application Description Manual (availability and form number will be announced in a PRL).

**See System/360 Disk Operating Guide (C24-5022) for acceptable units and possible substitutions.

For further information contact your Regional Printing and Publishing Industry Marketing Representative.

IBM World Trade Data Processing

PROGRAM ANNOUNCEMENT

ADMINISTRATIVE TERMINAL SYSTEM/360 UNDER OS/360 AVAILABLE (TYPE II)

Version 1 Modification Level 0 (360A-CX-19X) may now be ordered. First shipments will begin the week ending January 3, 1969. ATS/360 is a new dimension in data entry and text processing. It is intended for Models 40, 50, 65, 75, and 85. ATS/360 is a user-oriented remote typewriter terminal system which operates in the multiprogrammed environment of either OS/360 MFT (Version 2) or MVT, typically in the high priority partition/region.

Multiprogramming means the customer does not need to dedicate an entire system to ATS/360 operations. Other programs may run concurrently with, and independently of, normal ATS/360 terminal operations, thereby extending the productivity of System/360 for users of ATS/360. The three major applications of ATS/360 are:

Data Entry -- typically by placing typewriter terminals in the source department.

Text Processing -- including terminal input, terminal editing, and terminal or 1403 N1 printer formatted output.

Foundation -- for specialized typewriter terminal applications by the modification of ATS programs or the addition of new programs to ATS.

Special Sales Information ... Types of customers and prospects interested in ATS/360 include: aerospace, manufacturing, financial, publishing operations, engineering groups, large computer programming groups (particularly those remote from the computers), transportation, insurance, legislative bodies, legal firms, process, public utilities, distribution, state and local governments, education, medical, scientific, etc..

For the new sales manual write up, see the reverse side. For further information and educational material contact your Regional Scientific Marketing Manager.

John Fahey
Director of DP Marketing

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P68-174

Administrative Terminal System Under OS/360: 360A-CX-19X

ATS/360 is a new dimension in data entry and text processing. ATS/360 is a user-oriented remote typewriter terminal system which operates in the multiprogrammed environment of either OS/360 MFT (Version 2) or MVT, typically in the high priority partition/region. Multiprogramming means the customer does not need to dedicate an entire system to ATS/360 operations. Other programs may run concurrently with and independently of normal ATS/360 terminal operation, thereby extending the productivity of System/360 for users of ATS/360.

The three major applications of ATS/360 are:

1. Data Entry — typically by placing typewriter terminals in the source department.
2. Text Processing — including Terminal input, Terminal editing, and Terminal or 1403 N1 Printer formatted output.
3. Foundation — for specialized typewriter terminal applications by the modification of ATS programs or the addition of new programs to ATS.

Features: The features of ATS/360 are used in three basic areas: those which have general applications for all the uses of the system, those which are oriented to text and documentation processing, and those which are oriented to data entry:

General --

- Low entry and start up costs.
- In some applications the capture of text or data can take place as it is originated.
- Is multiprogrammed, which allows for efficient use of the computer.
- Rapid direct access to stored documents.
- Input and corrections are easy and fast.
- Productive without customer program change or modification.
- Commands are short mnemonics, easy to learn and quick to use.

Text --

- Upper and lower case printing.
- Corrections do not require extensive retyping.
- Hyphenless justification of right margin.
- Free form input for "formatted" (narrative) text, fixed form for tabular material.
- Computer printing (1403 N1 with TN train) of upper and lower case, about 5,000 words per minute.
- Correction facilities include change/addition/deletion of a phrase or word; addition or deletion of paragraphs; rearrangement of sentences or paragraphs.
- Flexible headings, footings, and page numbering.
- Line width and page depth controlled by terminal operator.
- Vertical spacing commands for the later insertion of art work.
- Tabs used like regular typewriter.

Data Entry --

- Quickly changing data can be easily maintained.
- Automatic sequence numbering, including resetting the number at any point.
- Field duplication.
- Variable length record sizes up to 132 characters.
- Output as OS data set to disk or tape; OS writers used to write to punch or printer.
- Easy to use the terminal typewriter in the source department.
- Upper only or upper and lower case.

Special Sales Information: Types of customers and prospects interested in ATS/360 are aerospace, manufacturing, financial, publishing operations, engineering groups, large computer programming groups (particularly those remote from the computers), transportation, insurance, legislative bodies, legal firms, process, public utilities, distribution, state & local governments, education, medical, scientific, etc.

Customer Responsibilities: The system is designed to run primarily unattended. However, when console operator intervention is required, a knowledgeable individual thoroughly trained in the equipment and programs, including OS/360, must be available to make quick accurate decisions. Education of the terminal and console operators is the prime installation requirement for this system. It is the customer's responsibility to order and install the communications facilities required. Terminal texts, which are provided, should be included in the disk system at generation time.

Programming System: The ATS/360 program is written in OS/360 Assembler Language and operates under control of OS/360, either with MFT (Version 2) or MVT. ATS/360 writes its peripheral (card, printer) output on disk or tape as an OS data set. Input to ATS/360 can be an OS data set. A writer in another partition/region is required to perform the actual output to the peripheral device.

Minimum System Requirements: The basic machine components used for ATS/360 consist of a System/360 Processing Unit with at least 22,528 bytes of dynamic main storage (see note below), Multiplexer Channel, Selector Channel ... 1052 Printer-Keyboard (or other system console device) ... 2841 Storage Control Unit ... 2311 Disk Storage Drives (2 minimum) or, 2314 Direct Access Storage Facility ... 2702 or 2703 Transmission Control ... 2741 Communication Terminal, with only Feature #9812, Courier 72 standard IBM SELECTRIC® printing element (part 1167043), and an appropriate line adapter.

Note: In addition to the 22,528 bytes of dynamic main storage specified above, provision must be made for the OS/360 Queued Sequential Access Method (QSAM) routines. Additional dynamic main storage will be required to support additional terminals and devices and optional ATS functions. See the Application Description Manual for further information.

The above configuration is in addition to OS/360 requirements. This configuration will preclude some ATS/360 document transmission capabilities depending on the selection of I/O devices and the availability of additional dynamic main storage. A typical ATS system supporting ten terminals and a peripheral printing capability will require 45,056 bytes of dynamic main storage in addition to that required by the QSAM routines. A typical 100 terminal system would require 115 - 140K bytes of dynamic main storage in addition to that required by the QSAM routines. In any case, a separate partition region is also required to write the print/punch data set on the printer and punch.

One 2400 Magnetic Tape Unit must be available for system generation and maintenance of ATS/360. One 2400 Magnetic Tape Unit is desirable for ATS/360 peripheral operations. It is also desirable that at least one 2741 Communications Terminal be located near the system console.

Optional Machine Units: Additional Processor Storage (see the Application Description Manual) ... Additional Selector Channel(s) ... Additional 2741 Communications Terminals (see the Application Description Manual) ... 2311 Disk Storage Drives ... 2314 Direct Access Storage Facility (one or more) ... 2400 Magnetic Tape Units with Control Unit (one or more) ... Card Read Punch Unit ... Printer (producing at least 132 character print line).

If upper and lower case high-speed printing is desired, a 1403 Printer Model 2, 3, or N1 equipped with the universal character set feature and the TN printing arrangement may be used. It should be noted that the TN characters are appreciably thinner than the Courier characters used at the terminal. The print quality of the 1403 can be improved and made to approximate that of the 2741 by the use of the special "Courier" characters. The quality may be further improved by special "wide hammers" on the printer. Both the special slugs and the wide hammers are RPQ items. See the Application Description Manual for further information.

Basic Program Material: 360A-CX-19X

Publications* -- Application Directory - Terminal Operations Manual (H20-0589) Operations Manual (H20-0590), Program Description Manual (H20-0582).

Machine Readable** -- The basic machine readable material is contained on one magnetic tape (2400 foot) 9-track 800 or 1600 bpi on one magnetic tape (2400 foot) 7-track 800 cpi (Data Conversion feature required). This reel contains the material required to install ATS/360 plus two archive documents (terminal texts) which are necessary for terminal maintenance.

Optional Program Material:

Machine Readable** -- The optional machine readable material is contained on one magnetic tape (2400 foot) 9-track 800 or 1600 bpi or on one magnetic tape (2400 foot) 7-track 800 cpi (Data Conversion feature required). This tape contains the print images of the ATS/360 flowcharts.

Ordering Procedure: See Branch Office Manual, DP Sales Activity section.

*If only the form numbered manuals are required, order them from the IBM Distribution Center, Mechanicsburg -- not from PID.

**Magnetic tapes may be forwarded or ordered (the program order card should accompany the tape order form). If the track and density requirements are not specified, 9-track 800 bpi will be forwarded.

Additional Program Support Material: Application Description Manual (H20-0297-02) ... Systems Manual (Y20-0320).

For further information and educational material see your Regional Scientific Marketing Manager.