Product Announcement

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

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

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

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

. Define, delimit, and access both original and intermediate data.

. Enter parameters that control operation of individual programs.

. Select any desired sequence of available programs for execution.

. Make logical decisions on the basis of program generated displays.

. Examine and, if necessary, add, delete, or modify data values.

. Build numerical models of three-dimensional surfaces from irregularly spaced input points.

. Display three-dimensional data in the form of contour maps, perspective diagrams, cross-sections, and "fence" diagrams.

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

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

John Fahey
Director of DP Marketing

NOTE: This Program Product can be ordered only if the criteria specified in DP Letter No. 69-250 are met. Consult the Instruction Manual, Section 2-10 for the Instruction Manual pages that accompanied Instruction Letter No. 69-114 for ordering procedures.

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

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

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

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

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

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

- Two IBM 2311 Disk Storage Drives or equivalent for PLAN, PLAN Graphic Support, and GATD system functions.

- One magnetic tape for each of the following options: save tape, restore tape, plotter interface file, user data interface file. These options may be used in any combination for a given run. A minimum of one magnetic tape is recommended for saving and restoring GATD data.

- One 2250 Display Unit Model 1 or one 2250 Display Unit Model 3 with one 2840 Display Control Model 2 and Absolute Vectors (1002)*, Alphameric Keyboard (1245), 8K Buffer (1499)*, Character Generator (1880)*, Light Pen (4785)*, and Function Keyboard (5855).

* Standard features on 2250 Model 3.

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

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

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

- Define, delimit, and access both original and intermediate data.

- Enter parameters that control operation of individual programs.

- Select any desired sequence of available programs for execution.

- Make logical decisions on the basis of program generated displays.

- Examine and, if necessary, add, delete, or modify data values.

- Build numerical models of three-dimensional surfaces from irregularly-spaced input points.

- Display three-dimensional data in the form of contour maps, perspective diagrams, cross-section, and "fence" diagrams.

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

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

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

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

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

- Two IBM 2311 Disk Storage Drives or equivalent for PLAN, PLAN Graphic Support, and GATD system functions.

- One magnetic tape for each of the following options: save tape, restore tape, plotter interface file, user data interface file. These options may be used in any combination for a given run. A minimum of one magnetic tape is recommended for saving and restoring GATD data.

- One 2250 Display Unit Model 1 or one 2250 Display Unit Model 3 with one 2840 Display Control Model 2 and Absolute Vectors (#1002)*, Alphameric Keyboard (#1245), 8K Buffer (#1499)*, Character Generator (#1880)*, Light Pen (#4785)*, and Function Keyboard (#5855).

    *Standard features on 2250 Model 3

Basic Program Product Offering:

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

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

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

	Specify Number	Track/Density	Description	Quantity
Order from IBM	9128	9/800	2400' MT	1 reel
	9129	9/1600	2400' MT	1 reel

Type	Program No.	DPMO	Programming Service Classification
5734	XX2	XX2	B

Optional Support Package:

Licensed Documentation: One copy of Systems Manual (feature #8101) and one copy of Microfiche listing (feature #8301).

Licensed Machine Readable Material: One copy of Machine Readable Materials containing the GATD Source Program Modules.

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

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

Prices for Additional Copies of Documentation:

Licensed Documentation:

Feature Number	Use Key	Price/Copy
8101 (Y20-0455)*	L	$8.00
8301 (YB0-0465)*	L	2.50

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

Unlicensed Documentation

	Use Key	Price/Copy
Program Description Manual (H20-0678)	S	$3.80
Operations Manual (H20-0679)	S	1.10
Terminal Operations Manual (H20-0680)	S	2.00

Related Documentation (available only from Mechanicsburg; no charge): Application Description Manual (H20-0539) - Use Key G.

For further information contact your Process Industry Marketing Representative.

Publication Support: Initial supplies of the unlicensed Basic Program Product form numbered publications will be distributed through DAPS. Order additional copies as well as copies of licensed publications from the IBM Distribution Center, Mechanicsburg, Pennsylvania when availability is announced in the Weekly Publications Release Letter.

Product Announcement

TEXT PROCESSOR -- EDIT/360 PROGRAM PRODUCT MAY BE ORDERED

System/360 Text Processor -- EDIT/360, program product 5736-K11, may be ordered. It extends the capabilities of the previously announced Type II COMPOSITION/360 program (360A-DP-08X) which includes 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, Text Processor -- EDIT/360 provides:

. 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.

. Modification to stored textual data by --
  - Adding, deleting, and replacing text and commands
  - Scan replacement of text
  - Moving, copying and exchanging portions of text.

Output for Text Processor -- EDIT/360 consists of generalized disk records which user-written routines must direct to a system's output device.

This program product, in conjunction with the user-written input and output programs and the Type II HYPHENATION/360 (360A-DP-07X), forms a comprehensive text-handling system for use by the printing industry.

Newspapers, book publishers, magazine publishers, commercial printers, in-house publishers, and organizations involved in the transcription of textual information are potential users of Text Processor -- EDIT/360. The use of the program reduces tedious, time-consuming manual corrections and eliminates the necessity for re-entering original input text.

On the reverse side is the Program Product Specification sheet which may be reproduced and given to customers. Detailed information (including prices and service classification) is in the write-up on the inside page. Initial supplies of the unlicensed Basic Program Product form numbered publications will be distributed through DAPS. Order additional copies as well as copies of licensed publications from the IBM Distribution Center, Mechanicsburg, Pennsylvania when availability is announced in the Weekly Publications Release Letter.

John Fahey
Director of DP Marketing

NOTE: This Program Product can be ordered only if the criteria specified in DP Letter No. 69-250 are met. Consult the Instruction Manual, Section 2-10 for the Instruction Manual pages that accompanied Instruction Letter No 69-114 for ordering procedures.

Distribution: All Areas

System/360 Text Processor - EDIT/360 is a comprehensive text composition and editing system. It is designed to assist the printer or publisher in the process of transcribing text from the author's original manuscript to the final printed format.

Text Processor - EDIT/360 extends the capabilities of the COMPOSITION/360 (360A-DP-08X) program (Type II) and includes the control and function routines that handle disk-resident text and text format control input ... performs line justification and formatting functions ... produces generalized disk output records ready for input to user-supplied composition device oriented routines.

In addition, it provides justified output for final printing and editing purposes ... input and output text listings and command listings for editing purposes ... on-line storage of text and commands (Text Storage File) ... index listing of stored documents ... dumping of text for back-up and off-line storage ... restoring (to Text Storage File) of text for additional modification ... deletion of stored documents from the Text Storage File ... modification to stored textual data on the Text Storage File by adding, deleting and replacing text and commands; scan replacement of text; moving, copying, and exchanging portions of text and commands.

Output from Text Processor - EDIT/360 consists of generalized disk records which must be tailored for a specific systems output device by user-written routines.

Modular programming techniques, user constructed font and systems constants tables, and user defined formats, together with the input and output device independence of Text Processor - EDIT/360, enable the user to tailor the system to his specific requirements.

Text Processor - EDIT/360, in conjunction with user-written input and output programs and the HYPHENATION/360 (360A-DP-07X) program (Type II), forms a comprehensive text handling system for the printing industry.

Programming Systems: The program is written in System/360 Assembler Language and is designed to operate under control of the Disk Operating System (DOS). It operates in either batch mode or under the multiprogramming option. In the latter environment, EDIT/360 will operate in one program partition while the user's input/output modules will function in the next higher priority partition. The Programming Service Classification is B.

A variety of configurations may be employed by the user in allocating available core storage. Shown here are two of the possible configurations for a minimum 64K Model 30 system:

    Configuration I --   Supervisor 8K --- 10K, Text Processor - EDIT/360 34K - Background, User I/O 20K† - Foreground 2.

    Configuration II --   Supervisor 8K --- 10K, User Prog.† - 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, and Group I Utilities.

The data management facilities of the Disk Operating System required by this program include System Control and Basic IOCS, Direct Access Method Macros, and Consecutive Disk IOCS.

Minimum Machine Configuration: System/360 Model F Processing Unit (64K bytes) with 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 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 sub-system 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.

  * Not required if Text Processor - EDIT/360 is operating in a batch mode without multiprogramming.

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

<u>System/360 Text Processor -- EDIT/360 (5736-K11)</u>: 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.

<u>Description:</u> Text Processor -- EDIT/360 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, 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.

<u>Features:</u>

- Initial Text entry
- Text and command listings for editing purposes
- User-specified edit input language
- Document protection
- 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
- Modification to stored textual data by --
  - Adding, deleting and replacing text and commands
  - Scan replacement of text
  - Moving, copying, and exchanging portions of text

Output for Text Processor -- EDIT/360 consists of generalized disk records which user written routines must direct to a systems output device.

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

<u>Use:</u> The 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.

<u>Customer Responsibilities:</u> Text Processor -- EDIT/360 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.
- Write device dependent records to specific system output devices selected by the user.

<u>Education:</u> When planning the installation of this program, allow sufficient lead time before delivery to permit the writing of input and output modules by the user to tailor the program to his 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 Telecommunications 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.

<u>Programming Systems:</u> 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 two of the possible configurations for a minimum 64K Model 30 system:

Configuration I - Supervisor 8K - 10K
Text Processor - EDIT/360 34K - Background
User I/O 20K† - Foreground 2

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
- Group I Utilities

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

- System Control and Basic IOCS
- Direct Access Method Macros
- Consecutive Disk IOCS

<u>Minimum Machine Configuration:</u> System/360 Model F Processing Unit (64K bytes) with 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 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.

*Not required if Text Processor -- EDIT/360 is operating in a batch mode without multiprogramming.
**See System/360 Disk Operating Guide (C24-5022) for acceptable units and possible substitutions.

<u>Basic Program Package Offering:</u>

<u>Licensed Documentation:</u> One copy of the System Manual (2 Volumes) Features #8019, #8020.

<u>Unlicensed Documentation:</u> One copy Program Description Manual (H20-0712) and one copy Operations Manual (H20-0711).

<u>Licensed Machine Readable Material:</u> One copy machine readable material consisting of Assembly Language Source Library.

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

Type	Program Number	DPMO	Programming Service Classification
5736	K11	K11	B

Prices for Additional Copies of Documentation:

Licensed Documentation:

	Feature Number	Use Key	Price/Copy
System Manual Volume I	8019 (Y20-0489)*	L	$14.50
System Manual Volume II	8020 (Y20-0490)*	L	28.00

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

Unlicensed Documentation:

		Use Key	Price/Copy
Program Description Manual (H20-0712)		S	$10.00
Operations Manual (H20-0711)		S	4.40

<u>Related Documentation:</u> Application Description Manual (E20-0324)†

†Order from Mechanicsburg -- no charge (Use Key G)
For further information contact your regional Media Industry Marketing Representative.

Product Announcement

FIVE NEW FEATURES INCREASE FLEXIBILITY OF 1050, 2702/2703, AND 2741 IN TIME SHARING SYSTEMS

Special features are now available to enhance the capabilities of IBM terminals and multiplexers in the rapidly expanding use of interactive computing and time sharing.

2702 and 2703 Transmission Control Units

Type I Terminal Interrupt -- This feature (8200) gives the 2702/2703 a bi-directional interrupt capability. In addition to having the interrupt recognition capability of the present 2741 Break feature, this new feature will be capable of interrupting a transmission from the terminal. It is compatible with both the 1050 and 2741 interrupt features. This new feature is mutually exclusive with the present 2741 Break feature (8055) on the 2702 and 2703. For the purchase customer who already has the 2741 Break feature, an equivalent function is available through the addition of the Type I Break RPQ (E46765 on the 2702, E53715 on the 2703).

Administrative Provisions --

1. The Type I Terminal Interrupt feature (8200) on the 2702 and 2703 is not intended to be a field replacement for the Type I Break RPQ (E46765 on the 2702, E53715 on the 2703) and should not be ordered for this purpose.

2. Country Special Equipment Engineering must be contacted to verify compatibility when the Type I Terminal Interrupt feature (8200) is to be added to a 2702 or 2703 which has an installed or on-order RPQ.

1050 Communication System

Receive Interrupt --This new feature (6100) provides the ability to interrupt the transmission being received from another location and allow the 1051 to become available as a receiving or sending terminal without the need of re-establishing the connection.

Transmit Interrupt --This feature (7900) allows the 1051, while transmitting, to recognize an interrupt signal on its receive data line. The terminal then reverts to control mode and awaits further signals to transmit or receive.

These features are applicable to point-to-point and multipoint applications. They will require a full duplex communication capability. In a terminal-to-terminal application, each terminal will require the applicable feature. In a terminal-to-multiplexer application, the 2702/2703 must be equipped with Type I Terminal Interrupt feature (or the 2741 Break feature and the Type I Break RPQ).

RPQs E26903 (Transmit Interrupt) and E27428 (Receive Interrupt) provided a function similar to these features. Existing point-to-point systems with these RPQs installed do not require replacement unless a multidrop function is being established. In this case, all machines must be equipped with the announced feature.

2741 Communication Terminal

Transmit Interrupt --This new feature (7900) provides the processor the ability to interrupt a transmission from a 2741. This feature complements the presently available Receive Interrupt (4708) to permit a full bi-directional interrupt capability. The Receive and Transmit Interrupt features may be installed separately or together. The associated 2702/2703 must be equipped with the Type I Terminal Interrupt feature (or the 2741 Break feature and the Type I Break RPQ).

Print Inhibit --This feature (5501) enables the processor to inhibit the 2741 from printing transmitted or received data. When in the print inhibit mode, all printable characters received or keyed from the keyboard will cause the print element to space but not print. The function provided by this feature offers the user an additional measure of data security.

These features are compatible with 2741 RPQs E40681 (Transmit Interrupt Control) and E46151 (Print Inhibit CPU Control) and do not require field replacement of the RPQs.

Publication Support: TNLs to the affected 1050, 2702/2703, and 2741 SRL manuals will be available. Initial copies will be shipped thru DAPS. Additional copies will be available from the IBM Distribution Center, Mechanicsburg, Pa. Consult your weekly Publications Release Letter for actual dates of availability.
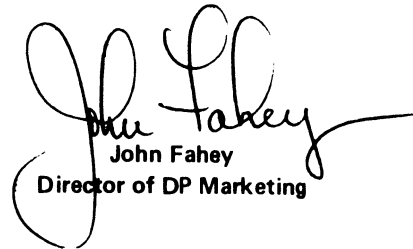
Programming Support: Time Sharing System/360 supports all these features except Print Inhibit (5501) on the 2741.

Delivery: Initial availability of these features will be in November 1970. This includes field installation as well as plant orders.

Distribution: All Areas

Prices:

Description	Type Number	Feature Number	Rental	Purchase	MMMC
Receive Interrupt	1051	6100	$ 10	$ 390	NC
Transmit Interrupt	1051	7900	10	390	NC
Type I Terminal Interrupt	2702	8200	31	1240	NC
Type I Terminal Interrupt	2703	8200	62	2406	NC
Transmit Interrupt	2741	7900	8	280	NC
Print Inhibit	2741	5501	10	350	NC

John Fahey
Director of DP Marketing

Product Announcement

1130 CHARGE MATERIALS ALLOCATION PROCESSOR (CMAP) PROGRAM PRODUCT 5711-P11 MAY BE ORDERED

NOTE: This Program Product can be ordered only if the criteria specified in DP Letter No. 69-250 are met. Consult the Instruction Manual, Section 2-10 for the Instruction Manual pages that accompanied Instruction Letter No. 69-114 for ordering procedures.

The 1130 Charge Materials Allocation Processor (1130 CMAP), program product 5711-P11, may be ordered. It provides a means for foundries and other metal melting facilities to achieve significant savings by calculating a least-cost initial charge of raw materials for the furnace.
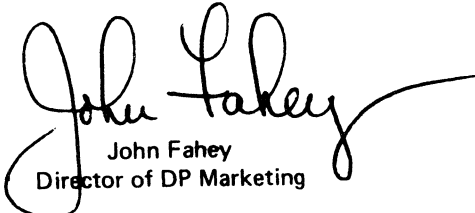
Users ... Potential users include both ferrous and nonferrous foundries which have a wide variety of raw materials (blend to a wide variety of metallurgical specifications) or have rigid metallurgical tolerances.

Here's how it works ... An input translator accepts problem data in formats familiar to melt shop personnel, and then uses the Linear Programming System/1130 (LPS/1130), program product 5711-CO1, for calculation. The output writer prints problem solutions in formats planned for easy use by foundry personnel. An inventory control option permits automatic updating of inventory data on the disk.

Advantages to Users ... This program aids in minimizing the cost of initial charges, evaluating operating practices, purchasing more economically, establishing a materials inventory policy ... and it is easy to use.

On the reverse side is the Program Product Specification sheet which may be reproduced and given to customers. More information is in the write-up on the inside page.

No RPQs will be accepted at this time.

John Fahey
Director of DP Marketing

Distribution: All Areas

Charge Materials Allocation Processor (1130 CMAP) Program Product (5711-P11)

CMAP is composed of procedures which are stored on disk. Use of these procedures is controlled by procedure control cards (prepared by the user) specifying the execution sequence.

CMAP procedures use the subroutines and programs of LPS/1130 (program product 5711-CO1). No modification of LPS/1130 is required and none is made by CMAP. The procedures of LPS/1130 may be called independent of CMAP execution.

CMAP procedures provide for generation of a raw material inventory file and the storing of this file on disk ... data maintenance of the material file stored on disk including modification of stored data, addition of new data and deletion of data no longer needed ... generation of data files representing heat or target specifications and the storing of these files on disk ... modification of disk stored heat specification data ... calculation of a least-cost initial furnace charge using the data of the material file and the data of one heat specification ... automatic adjustment of inventory amounts following a successful charge calculation ... automatic rounding of solution amounts to the nearest multiple of weighing units specified by the user for each raw material ... minor user modification to solution amounts after rounding has been performed ... automatic calculation of successive charges for the same heat specifications, each calculation using an inventory that has been adjusted for previous charges.

CMAP has the logical processing limits of 20 chemical elements in the material file and the heat specification files ... 51 raw material weight constraints, specifying the constraint in pounds ... 20 raw material weight constraints, specifying the constraint in percentage of total charge weight ... 20 percentage constraints on simple linear combinations of elements or materials to be used in the charge.

The other factor limiting problem capacity is the amount of disk storage available for data storage and calculation processing.

Input data may originate on cards or from the console keyboard. A disk may contain *one* material file and one or more heat specification files. Output reports are available on the console printer or line printer. Output options include reports on data included in the material file and in the heat specification files, least-cost charge reports including a report on the chemical analysis of the least-cost charge, rounded solution reports including a report on the chemical analysis of the rounded charge, a charge specification report and a report on material usage.

CMAP *execution* requires at least an 1130 Model 2B (8,192 core storage and one disk storage device) and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

LPS-CMAP system generation and maintenance require at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7, one 2501 Card Reader and 1442 Card Punch Model 5, or one 2501 Card Reader and 1442 Card Read Punch Model 6 or 7.

The 1130 system used to generate LPS-CMAP must have at least as much core storage and at least as many disk storage drives as the 1130 System on which CMAP will be used.

A configuration recommended for flexibility, ease of generation and operation, and improved performance consists of an 1130 Model 2B, a 1442 Card Read Punch Model 6 or 7, and an 1132 Printer.

Compilation of CMAP source decks requires at least an 1130 Model 2B and one 1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

CMAP will run on a system with up to 32,768 words of core storage. Additional disk storage (up to a total of three disk storage drives) and the 1403 Printer may be used. Additional core storage, above the 8,192-word minimum, is used only by LPS/1130 and results in only a slight improvement in the performance of CMAP. Use of an additional disk storage drive will allow more efficient storage of programs and data. Addition of a third disk storage drive may be made, but does not result in significant improvement in CMAP performance. Minor modifications to the CMAP system generation and execution procedures are required when using additional disk storage or the 1403 Printer. A 2315 Disk Cartridge must be dedicated to the CMAP-LPS system.

The source language of CMAP is FORTRAN. CMAP operates under the control of the IBM Disk Monitor System Version 2 and uses the subroutines and programs of LPS/1130 (program product 5711-CO1) which must be ordered separately.

Programming Service Classification is B.

Charge Materials Allocation Processor (5711-P11): The Charge Materials Alloca-
tion Processor (CMAP) provides
a means for ferrous and non-
ferrous foundries and other metal melting and blending facilities to achieve significant
savings by calculating a least-cost initial charge of raw materials for a melting fur-
nace. This program is particularly useful to foundries and other metal melting opera-
tions which have a wide variety of raw materials (blend to a wide variety of
metallurgical specifications) or have rigid metallurgical tolerances.

Description: There may be many possible combinations of raw materials which may
be used to produce metal to given metallurgical specifications. CMAP determines
which combination of raw materials results in the lowest cost initial furnace charge,
consistent with good operating practice and meeting the metallurgical specifications
input by the user.

A linear programming technique is used to solve the problem by calling the routines
of the Linear Programming System/1130 (LPS/1130), program product 5711-C01.
An input translator accepts the problem data in a format familiar to and convenient
for metallurgists and melt shop personnel. An output writer prepares and prints
reports in a format familiar to foundry personnel.

The program may be executed as often as necessary to analyze the effect of changes
in materials, costs, and specifications, providing data not readily available through
manual calculations. An inventory control feature of CMAP will maintain raw material
inventory data, giving a user the first phase of an inventory control system.

Features:

. Minimize the cost of initial charges
. Purchase more economically
. Evaluate operating practices
. Establish a material inventory system
. Use terminology familiar to the user

Customer Responsibility: A basic knowledge of the generation and operation of 1130
Disk Monitor System Version 2 is recommended for ease of CMAP installation. Both
1130 Disk Monitor System Version 2 and Linear Programming System/1130 (pro-
gram product 5711-C01) must be ordered separately.

Use: The user of an installed CMAP system does not need to be well experienced
with computers or linear programming techniques to use the basic features of CMAP.

Input to CMAP consists of a description of the chemical content of each raw material,
the cost of each raw material, the available amount of each raw material, and the
metallurgical specifications and the weight of the heat to be melted.

A solution is calculated and reports may be printed for the user expressing the solu-
tion in shop terminology. The customer may make certain adjustments to fit his
special operation practices, if necessary. The adjustments are analyzed by CMAP
and additional reports prepared showing the effect of the adjustments. Materials used
in the solution may be automatically deducted from the inventory file on disk.

Programming Systems: The source language of CMAP is FORTRAN. CMAP oper-
ates under the control of the IBM Disk Monitor System Version 2 and uses the sub-
routines and programs of LPS/1130 (program product 5711-C01).

Machine Configuration: CMAP execution requires at least an 1130 Model 2B
(8,192 core storage and one disk storage device) and one 1442 Card Read Punch
Model 6 or 7 or one 2501 Card Reader.

LPS/1130-CMAP system generation and maintenance require at least an 1130
Model 2B and one 1442 Card Read Punch Model 6 or 7, one 2501 Card Reader
and 1442 Card Punch Model 5, or one 2501 Card Reader and 1442 Card Read
Punch Model 6 or 7.

The 1130 system used to generate LPS-CMAP must have at least as much core
storage and at least as many disk storage drives as the 1130 system on which
CMAP will be used.

A configuration recommended for flexibility, ease of generation and operation, and
improved performance consists of at least an 1130 Model 2B, a 1442 Card Read
Punch Model 6 or 7, and an 1132 Printer.

Compilation of CMAP source decks requires at least an 1130 Model 2B and one
1442 Card Read Punch Model 6 or 7 or one 2501 Card Reader.

To list or punch the optional machine readable material for CMAP (source code tape),
a System/360 with one 2400 series tape drive is required.

CMAP will run on a system with up to 32,768 words of core storage. Additional
disk storage (up to a total of three disk storage drives) and the 1403 Printer may be
used. Additional core storage, above the 8,192-word minimum, is used only by
LPS/1130 and results in only a slight improvement in the performance of CMAP.
Use of an additional disk storage drive will allow more efficient storage of programs
and data. Addition of a third disk storage drive may be made, but does not result in
significant improvement in CMAP performance. Minor modifications to the CMAP
system generation and execution procedures are required when using additional disk
storage or the 1403 Printer. A 2315 Disk Cartridge must be dedicated to the
CMAP-LPS system.

When installed on a minimum 8K system, several CMAP programs require the use of
the LOCAL and SOCAL facility of the Disk Monitor System due to core requirements.
Increase in the core requirements of either 1130 Disk Monitor or LPS/1130 may
require additional CMAP LOCALS. Instructions regarding these additional LOCALS
will be provided, as required, in the form of a modification change letter for CMAP.

Basic Program Product Offering:

Unlicensed Documentation: One copy Program Description Manual (H20-0687)
... one copy Operations Manual (H20-0688) and TNL (N20-2115).

Licensed Machine Readable Material: One copy each of monitor system control
cards, object program load modules, and sample problem.

	Specify Number	Description
	9015	Cards

Type	Program Number	DPMO	Programming Service Classification
5711	P11	P11	B

Optional Support Package:

Licensed Documentation: One copy System Manual (Feature #8801) and one copy
Compilation Listing Manual (Feature #8802).

Licensed Machine Readable Material: One copy of source decks.

Feature Number	Track/Density	Description
7001	9/800	1 DTR

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

Prices for Additional Copies of Documentation (See DP Letter 69-273):

Licensed Documentation:

Feature Number	Use Key	Price/Copy
8801 (Y20-0468)*	L	$11.50
8802 (Y20-0469)*	L	10.00

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

Unlicensed Documentation (order from Mechanicsburg; bill customer):

	Use Key	Price/Copy
Program Description Manual (H20-0687)	D	$2.40
Operations Manual (H20-0688) TNL (N20-2115)	D	2.10

Related Documentation (available from Mechanicsburg, no charge): Application
Description Manual (H20-0546-1) Use Key G.

Reference Material: Introduction to Linear Programming (E20-8171) ... Aluminum
Alloy Blending (E20-0127) ... Electric Arc Furnace Steelmaking Manual (E20-
0147) ... Linear Programming System/1130 Application Description Manual
(H20-0562) ... Linear Programming System/1130 Program Description Manual
(H20-0633) ... Linear Programming System/1130 Operations Manual (H20-0637).

For further information see Process Industry Marketing representative.

Publication Support: Initial supplies of the unlicensed Basic
Program Product form numbered publications have been
distributed through DAPS. Order additional copies as well
as copies of licensed publications from the IBM Distribution
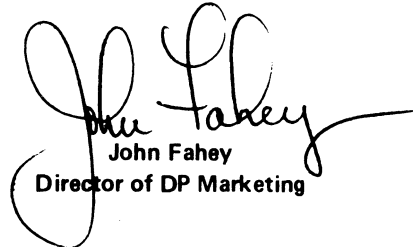Center, Mechanicsburg, Pennsylvania.

Education Announcement

**WITHDRAWAL OF DP LETTERS 69-321,
70-202 AND 70-203**

DP Letter 69-321 which announced Education Courses for American National Standard COBOL was incorrectly worded. These courses are only available in the United States and are not significant to World Trade Countries. Therefore, 69-321 was withdrawn by cable announcement on January 16, 1970.

DP Letters 70-202 and 70-203 which announced Education Curricula revisions for System/360 DOS, TOS and PL/I courses were incorrect in their content. These courses are only available in the United States and are not significant to World Trade Countries. Therefore, 70-202 and 70-203 were withdrawn by cable announcement on January 26, 1970.

John Fahey
Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Cancels: DP Letters 69-321, 70-202 and 70-203
Distribution: All Areas

Marketing Announcement

DP INSTALLATION PROGRAMS

Backlog management has long been a primary concern of the Branch Office. Numerous programs and techniques have been developed and implemented to assist in assessing the soundness of proposals, orders and pre-installation programs. With todays announcement we are combining these programs into one comprehensive program providing a framework for total branch office backlog management and review. The System/360 Proposal Review, Systems Assurance, Risk Assessment and selected pre-installation review programs have been superceded and are incorporated in DP Installation Programs. Several areas not covered in previous programs have been added.
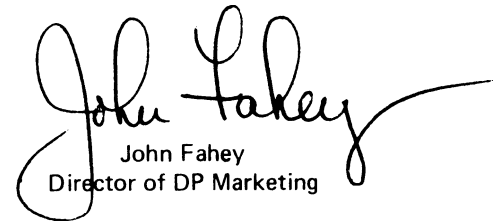
HIGHLIGHTS OF THE NEW PROGRAM

- Provides comprehensive and flexible branch office level procedures and guidance for the total backlog.

- Covers all Systems, major configuration changes to installed or on order Systems and New Accounts.

- Clarifies CE participation.

- Allows for proposal and pre-installation reviews as a regular branch procedure.

- Provides flexible "Designated Lists" for individual Branch Offices, Districts and Countries tailored to meet individual needs and experience.

- Defines review participation by marketing support functions (e.g., Support Center, Field System Center, etc.)

- Established reporting and review responsibilities for Multiple Country Teleprocessing Systems including those involving the DP Division in the United States.

- Provides guidelines for review and assessment of new product areas (System Control Programs, Program Products, Services, etc.)

- Provides post-installation measurement tools.

- Strengthens and complements Country Programs already implemented.

- Responsibility for the day to day execution resides with the DP Branch Manager.

The Branch Manager must assure that the necessary reviews are scheduled and performed, attended by appropriate participants. The Branch Manager's decision to submit proposals, enter orders or commit to firm plant delivery schedules will be based in great part upon the findings of these reviews.

The Branch Manager will be assisted by District Country and Area DP Installation Programs Departments. They will provide guidance, education, participate in reviews either at Branch request or for designated list systems, and coordinate reviews involving multi-country TP Systems.

Countries which do not have a DP Installation Programs Department should seek advice from their supporting countries or Area DP Installation Programs.

These new procedures are the key to our future success in installing the backlog in our increasingly complex marketplace. All levels of management should give strong support to this vital new program.

John Fahey
Director of DP Marketing

Attachment [3] : General Information 4.1, 4.3 and 4.5
Distribution: All Areas

Product Announcement

MULTI-POSITION MARK READ FOR IBM 1288 OPTICAL PAGE READER

The Optical Mark Read Feature on the IBM 1288 Optical Page Reader now gives the capability to select by programming, any number of positions from 1-12 in a column or group of columns. This gives the customer greater forms design flexibility for mark reading applications than has heretofore been possible at no increase in cost.

This improvement will be available and included with the initial shipments of the IBM 1288, with the Optical Mark Read Feature. No change in programming support for the 1288 is required.

This new capability will be covered in a planned major revision to the 1288 SRL (A21-9081).

Publication Support: Initial copies of the Announcement Support Literature will be shipped through DAPS. Additional copies of these manuals will be available through the IBM Distribution Center, Mechanicsburg, Pa. Consult your weekly Publications Release Letter for actual dates of availability.

John Fahey
Director of DP Marketing

NOTE: DP Letter No. 70-206 distributed to Latin America only.
DP Letter No. 70-207 distributed to Europe, Canada, Asia-Pacific, Australia, New Zealand and Latin American Headquarters only.
DP Letter No. 70-208 distributed to Latin America only.
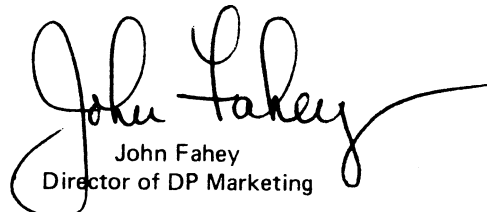
Distribution: All Areas

Product Announcement

● **1800 PRE-INSTALLATION TEST ALLOWANCE**

In response to the needs of your customers who are ordering the new growth features for the IBM 1800 Data Acquisition and Control System, the following changes to the 1800 pre-installation test allowance are in effect:

		Hours
1801/1802	CPU	15
1803	Core Storage Unit	8
1810	Disk Storage	5
2841	Storage Control	5
2311	Disk Storage Drive	
	First Group (1-4 Units)	5
	Second Group (5-8 Units)	5
1826	With Communications Adapter (7550)	20
1826	With 2790 Adapter (7570)	10
1442	Card Read Punch	3
1443	Printer	2
2401	Magnetic Tape Unit (1 or 2 Units)	5

Previous 1800 pre-installation test allowance was 25 hours regardless of system configurations . Existing orders for 1800 systems are eligible for either the previous test allowance or the new one, whichever results in a greater number of hours. All proposals are to be updated to reflect the new test allowance.

The above changes have been incorporated into the General Information section (GI 25.3) of the sales manual. The 1800 Special Allowance as shown in the General Information section (GI 25.2) is not changed.

John Fahey
Director of DP Marketing
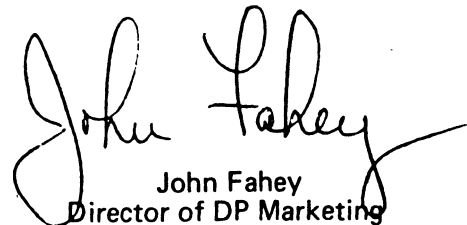
Distribution: All Areas

Product Announcement

IBM 1800 SYSTEM

The provisions of DP Letters No. 66-248, dated
July 1, 1966, and No. 66-296, dated December
30, 1966, stating that proposals for applications
of the 1800 System other than in Process Con-
trol and Data Acquisition must be submitted to
the Industry Marketing Director, WTHQ, for
approval are no longer in effect.

Significant changes in the range of supported
hardware features for this system and the avail-
ability of much larger core size configurations
eliminate the need for this originally stated
review.

This letter does not affect the existing require-
ment for normal Systems Assurance review of
1800 Systems as stated in the General Inform-
ation section of the WT Sales Manual.

John Fahey
Director of DP Marketing

Distribution: All Areas

Product Announcement

WITHDRAWAL FROM THE PRODUCT LINE OF IBM SYSTEMS 1410, 7010, 7070, 7074, 7080 AND ASSOCIATED COMPONENTS NOT USED IN SYSTEM/360

Effective 90 days after February 20, 1970 the following systems, as well as their features, will be withdrawn from the IBM Product Line: 1410, 7010, 7070, 7074 and 7080.
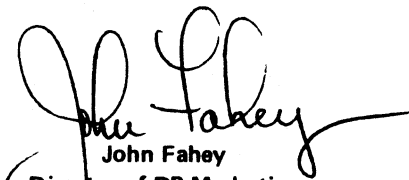
Asterisked units are withdrawn immediately.

	Component	System
	1411 Processing Unit	1410
	1414 I/O Synchronizer	1410,7010
	1415 Console	1410,7010
	7114 Processing Unit	7010
	7104 High-Speed Processor	7074
	7150 Console Control Unit	7070,7074
	7301 Core Storage	7070,7074
*	7400 Printer	7070,7074
	7500 Card Reader	7070,7074
	7501 Console Card Reader	7070,7074
	7550 Card Punch	7070,7074
	7600 I/O Control	7070,7074
*	7601 Arith & Program Control	7070
*	7602 Core Storage Control	7070,7074
*	7603 I/O Synchronizer	7070,7074
*	7604 Tape Control	7070,7074
	7631 File Control	1410,7010,7070,7074
	7802 Power Convertor	7070,7074
*	7900 Inquiry Station	7070,7074
	7907 Data Channel	7070,7074
*	7102 Arith & Logical Unit	7080
*	7153 Console Control Unit	7080
	7302 Core Storage	7080,7090,7094,7094II*
*	7305 Central Storage & I/O Ctl.	7080
	7502 Console Card Reader	7080
	7621 Tape Control	7080
*	7622 Signal Control	7080
*	7804 Power Unit	7080
	7908 Data Channel	7080

Orders scheduled for delivery within 180 days of February 20, 1970 may be deferred by the customer as long as the deferred date remains within this period. Customer-initiated deferment of orders scheduled for delivery after this period may result in cancellation.

RPQ's for special features and repeat orders of previously designed RPQ's will be individually considered and supplied on an "as available" basis until further notice.

The units to be withdrawn are on the restricted machines list for new RPQ's (GI 12.2).

All affected customers must be notified immediately in writing and all outstanding proposals must be updated to reflect this change.

John Fahey
Director of DP Marketing

Distribution: All Areas

Product Announcement

2020 SUBMODELS 3 AND 4 NO LONGER IN NEW PRODUCTION

Effective immediately, the IBM 2020 Processing Unit Submodels 3 and 4* are being withdrawn from new production.

Existing orders for new equipment will be honored. Additional orders will be accepted and will be supplied from:

. Field Transfers

. Plant Reconditioned Units

. Conversions From Submodels 1 and 2

Action Required ... All customers affected by this release must be notified promptly.

* Submodels 3 and 4 include Models B3, C3, BC3, D3, B4, C4, BC4, and D4.

John Fahey
Director of DP Marketing

Distribution: All Areas
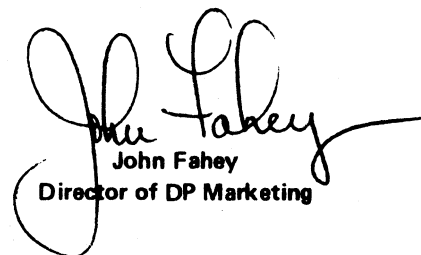
526 AND 557 MODEL 1 IN LIMITED NEW PRODUCTION

Effective immediately, the IBM 526 Printing Summary Punch and 557 Alphabetic Interpreter Model 1 are in limited new production. For this reason, IBM can no longer commit a new machine to any particular order.

Existing orders for new machines scheduled for delivery on or before April 30, 1970 for the 526 and May 31, 1970 for the 557 Model 1 will be honored with new equipment.

A customer-initiated delivery deferment of an existing order for a new machine will result in cancellation of the order or reclassification to a reconditioned machine.

Action Required ... All affected customers must be notified promptly.

John Fahey
Director of DP Marketing

Marketing Announcement

BINARY SYNCHRONOUS COMMUNICATIONS ENHANCES TELEPROCESSING FLEXIBILITY

With the announcement of Binary Synchronous Compatibility for all BSC devices and programs (P69-95), it is now possible to provide greater flexibility in the design of Teleprocessing networks.

With this announcement, it becomes practicable to operate these binary synchronous devices in a system allowing point-to-point communication between any two of the BSC devices in the system; System/360 or not. Provided that the minimum hardware requirements for both links are met, it is possible, for example, to have a 2770 communicate first with a System/360 and then with a 2780.

These added capabilities allow for point-to-point communication over switched or leased networks for the following:

Between an 1130 Computing System equipped with a Synchronous Communication Adapter (7690) - BSC mode only - and:

- a System/360 Model 20 Submodel 2, 4 or 5 equipped with a Binary Synchronous Communications Adapter (2074 or 2720)
- a 2770 Data Communications System (1130 must have at least 8K of core)
- a 2780 Data Transmission Terminal (1130 must have at least 8K of core)

Between an 1800 Data Acquisition and Control System equipped with a Communications Adapter (7550) and a Line Adapter (7551) and:

- a System/360 Model 20 Submodel 2, 4 or 5 equipped with a Binary Synchronous Communications Adapter (2074 or 2720)

(See 69-261 and P70-10 for additional 1800 BSC capabilities)

Between a System/360 Model 20 Submodel 2, 4 or 5 equipped with a Binary Synchronous Communications Adapter (2074 or 2720) and:

- a 2770 Data Communications System
- a 2780 Data Transmission Terminal (No charge feature 9825 must be specified on the S/360 Model 20, Submodels 2, 4 or 5)

Between a 2770 Data Communications System and:

- a 2780 Data Transmission Terminal Models 1, 2 and 4 only.

Operation between this equipment must be in a contention mode, and the following requirements must be met:

1. Both machines must use the same type data set/modem.
2. Both machines must use the same transmission code - EBCDIC or USASCII (EBCDIC must be used when one of the machines is an 1130, or when communication is between a 2770 and 2780).
3. If Transparent mode is to be used, both machines must be equipped with the Transparency feature (when communication is between a 2770 and a 2780, both must be equipped with Transparency and communication must be in Transparent mode).

NOTE: Transparency is standard on the 1800 DACS.

4. Message formatting must comply with buffer requirements of the receiving station.
5. When communication is between a 2770 and 2780, the following features must be installed:

On the 2770

EBCDIC code (9761)
EBCDIC transparency (3650)
Expanded buffer (1490)
Terminal Use (9711)
Limitation: The 2213 printer, 2502 card reader and 545 output punch are the only I/O units to be used.

On the 2780
(Models 1, 2, or 4 only)

EBCDIC code (9762)
EBCDIC transparency (8030)
Terminal Use (9711)
Limitation: Multiple Record Transmission (5010) 120 and 144 Character Print Line (5020 and 5821) cannot be installed.
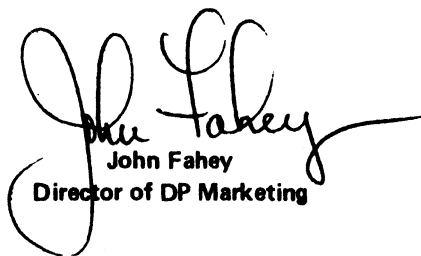
Distribution: All Areas

6. Communication between the 2770 and 2780 is supported only for card-to-card and card-to-printer in either direction, in transparent mode.

7 The Type I programming support for the 1130, 1800 and S/360 Model 20 (Submodels 2, 4 and 5) will not include the Edit Macro for the 2770s Model 50 Magnetic Data Inscriber Therefore, if communication with the 2770s Model 50 MDI is desired, the customer will have to supply his own edit routine.

8. The S/360 Model 20 BSCA must be at EC level 391563 (Submodel 2 or 4) or 13018 (Submodel 5), and the 2780 must be at EC level 308288 (available March 1, 1970). The 1130 System must be at EC level 419695 and the 1130 SCA must be at EC level 571044.

The current version of announced programming on the 1130, 1800 and S/360 Model 20 (the 1130 Communication Subroutine, the 1800 Multiprogramming Executive System Version 2 with BSCIO and the S/360-20 BSCA-IOCS) support these new communication capabilities.

Availability ... 1130 and Model 20 diagnostic support for the 2780 will be available now. 1130 diagnostic support for the 2770 will be available at first customer shipment of the 2770. EC 391598 (Submodel 2 or 4) or 13153 (Submodel 5) (available September 1, 1970) on the S/360, Model 20 will be a prerequisite to its communication with the 2770.

Publications ... The General Information Binary Synchronous Communications manual, A27-3004, has been updated ... availability has been announced in the weekly PRL and the manual is available from the IBM Distribution Center, Mechanicsburg, Pa.

John Fahey
Director of DP Marketing

Product Announcement

1130 COMPUTING SYSTEM COUPLING FEATURE FOR 1442-5 CARD PUNCH 2501-A1 AND A2 CARD READERS — PLANT INSTALLATION ONLY

The 1130 Coupling Feature on the 1442-5 Card Punch (Feature No. 3630) and on the 2501-A1 and A2 (Feature No. 3630) will be available only through plant installation.

The original field installation time was underestimated. Since the present estimate indicates it is unrealistic to field install, and the marketing request for this capability has been minimal, the field installation capability is being withdrawn.

Customers who consider their requirements urgent enough to request a deviation from the *"Plant Installation Only"* designation may submit an RPQ for field installation price.

7772 IN LIMITED NEW PRODUCTION

Effective immediately, the IBM 7772 Audio Response Unit is in limited new production.**

Action Required ... All affected customers must be notified promptly.

John Fahey
Director of DP Marketing

** "Machines and/or components in 'Limited New Production' may or may not be provided from new production depending upon availability of new production at time of order acceptance at plant. Normal delivery schedules apply to such orders, however, where new production is prerequisite to customer order acceptance, ordering locations must negotiate on an individual basis with Manufacturing Plants to provide new production prior to any schedule commitment."

Distribution: All Areas
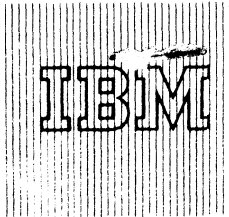
IBM World Trade Data Processing

Product Announcement

MAGNETIC TAPE CAPABILITY ANNOUNCED FOR THE MODEL 20 SUBMODEL 4

IBM 2415 Magnetic Tape Units are now available on System/360 Model 20 Submodel 4. This provides for magnetic tape and tape/disk systems at a lower price than previously available on System/360.

To price out a tape or tape/disk system, use Model 20 Submodel 4 prices for CPU, card I/O, printer, and (where applicable) disk storage control and drives, and simply add the already published prices for the Submodel 2 I/O Channel (4568) and the desired 2415 model.

All TPS and DPS programming support currently available for S/360 Model 20 Submodel 2, with the exception of the DPS tape/disk configuration sort-time estimating option, will also apply to Submodel 4.

Tape speed on Submodel 4 will be the same as on Submodel 2; but throughput will usually be less, because of the slower I/O devices and slower execution of some instructions on Submodel 4. Tape and tape/disk system throughput comparisons between Submodels 2 and 4 will be published in the near future.

(NOTE: 2415 tape units have been available on Submodel 4 via RPQ 550022. This RPQ is now withdrawn.)

REPRESENTATIVE SYSTEM PRICES

Minimum 20-4 Tape System (severely limited program support)

2020B4 (4K) CPU	$ 405
2560A2 MFCM (attached)	539
2203A2 Printer (attached)	458
I/O Channel (4658)	158
2415 Mdl 1 Tape Unit (two drives, NRZI)	790
	$ 2350

Basic 20-4 Tape System

2020C4 (8K) CPU	$ 505
2560A2 MFCM (attached)	539
2203A2 Printer (attached)	458
I/O Channel (4658)	158
2415 Mdl. 2 Tape Unit (four drives, NRZI)	1265
	$ 2925
For 12K CPU (Mdl. BC4) — a typical system — add	+180
	$ 3105

Publications ... The same publications that pertain to Model 20 Submodel 2 tape and tape/disk systems apply to Submodel 4, except for timing information. See IBM System/360 Model 20 Bibliography (A26-3565). Availability of updated TNLs for tape capability on Submodel 4 will be announced via Publications Release Letters for the following Model 20 SRLs:

> System Summary (A26-5889)
> Functional Characteristics (A26-5847)
> Configurator (A26-3572)

As other relevant publications are updated during 1970 to encompass tape capability on Submodel 4, their availability will be announced in PRLs. Since tape system sort/merge times and other performance data will appear in the TPS Performance Estimates SRL (C24-9010), the DPS Performance Estimates SRL (C33-6003) will not be revised to provide Submodel 4 tape performance data.

RPQs ... These will be accepted immediately with response time dependent upon complexity.

Delivery ... First customer shipments of Model 20 Submodel 4 tape and tape/disk systems, and of MESs for field installation of tape on Submodel 4, are scheduled for November, 1970.

Sales Compensation Plan ... Normal provisions apply.

John Fahey
Director of DP Marketing

Distribution: All Areas

Product Announcement

1401, 1440 COMPATIBILITY AVAILABLE ON SYSTEM/360 MODEL 20-5

Now 1401 and 1440 users can move to System/360 at the low entry prices provided by the Model 20--and without re-programming.

With Compatibility Feature 3901 installed and the accompanying card-resident micro-program loaded, programs written for most 1401 and 1440 card, tape and disk systems will run on the Model 20 submodel 5 with equivalent core capacity. Additionally, 1316 disk packs written by 2311 Model 11 Disk Drives can accommodate the data from two 1316 packs written in sector mode by 1311s. This makes it possible for all data available on-line with a 1401 or 1440 to be on-line with the Model 20, and in some cases with a lesser number of drives.

Description of Feature

Feature Components ... The Compatibility Feature consists of hardware changes in the 2020 and a configuration-tailored card-resident micro-program, loaded in place of the standard Model 20 micro-program whenever compatibility-mode operation is desired. It is a free-standing emulator which does not function under an operating system. Either the Compatibility Feature micro-program or the standard Model 20 micro-program can be stored, but not both at the same time.

No new programming support is planned or required.

Storage Requirements ... All 1401 and 1440 core storage capacities are supported, and equivalent Model 20 capacities suffice. For example, a job that required 8,000 positions of 1401 or 1440 core will run within 8K (8,192) bytes of Model 20 core.

Performance ... 2020 CPU performance in compatibility mode averages .95 of 1401 performance; actual throughput depends upon the selection of emulating I/O devices from the large variety available.

Functions and Features Implemented ... Compatibility is provided for all 1401 and 1440 standard operations and instructions, plus the following special features: Bit Test, High-Low-Equal Compare, Multiply-Divide, Sense Switches, Advanced Programming or Indexing and Store Address Register, Expanded Print Edit, Additional Print Control, Print Storage, Space Suppression, Read Column Binary (but not Punch Column Binary), Punch Feed Read; and for 1311 Scan Disk, Direct Seek, Seek Overlap and Track-Record Mode. 1407 and 1447 console functions are emulated by a combination of 2152 Printer-Keyboard and CPU console.

The Processing Overlap special feature is not emulated. Programs utilizing overlap op-codes will run, but not in overlap mode.

Itemized on the reverse side are those 1401/1440 I/O devices that can be emulated by the Compatibility Feature, and the Model 20 units available to emulate them. The Compatibility Feature is not designed to handle emulation for any others. Sterling Feature No. 2771 is not emulated.

For further particulars, see SRL A26-5889 (System Summary) with TNL N33-1534 (available now) and a new SRL on IBM System/360 Model 20, 1401/1440 Compatability Feature, availability to be announced; consult your PRL.
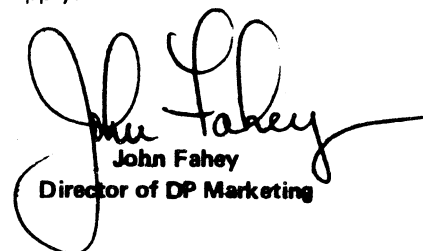
Delivery ... First customer shipments of systems with the Compatibility Feature are scheduled for November 1970. Delivery schedule dates for the remainder of 1970 for systems with this feature will be assigned by allocating locations on a sequential basis. No commitments are to be made until such dates are received in the branch office. Thereafter, the feature will be available with Model 20 submodel 5 on the system's announced delivery schedule, and emulation system configuration changes also become available on standard MES schedule.

RPQs ... RPQs will be accepted for field installation of the compatibility feature for availability after 1970. Any RPQ features utilized by 1401 or 1440 programs that are to be emulated must be submitted for evaluation; and RPQ features or devices on the 2020-5 must be examined for co-residency with the Compatibility Feature.

RPQs will be accepted immediately. Response time depends upon complexity.

Systems Engineering Services ... Systems Engineering Services related to this feature are available at the General Skill Classification rate.

Sales Compensation Plan ... Normal compensation plan provisions apply.

John Fahey
Director of DP Marketing

SELECTION OF EMULATING DEVICES

1401/1440 Devices	Model 20 Devices Available for Emulation
1402	1. 2501A1/A2 with 2520A2/A3 or with 2520A1 (required for Punch Feed Read emulation); or 2. 2501A1/A2 with 1442-5; or 3. 2560A1 (also provides for Punch Feed Read).
1442 Reader-Punch (one only)	1. 2560A1; or 2. 2520A1
1442 Reader & 1444 Punch (one of each only)	1. 2560A1; or 2. 2501A1/A2 with 2520A2/A3; or 3. 2501A1/A2 with 1442-5.
1403 or 1443	1. 1403 Mdl 2, 7, or N1; or 2. 2203A1
1407 or 1447	2152
729 &/or 7330, or 7335	2415 Mdls 1-3; or 2415 Mdls 4-6 with 9-Track or 7- & 9-Track Compatibility [NRZI (5320 or 7135)]
1311 (up to four drives)	2311 Mdl 11 and/or 12. (May be given any four of the five possible 1311 addresses.)

NOTE: The Compatibility Feature micro-program deck supplied is tailored to a single Model 20 configuration selected for use in compatibility mode. Each order for the Compatibility Feature must therefore detail the Model 20 I/O devices, and certain special features, to be employed in emulation mode. (This is of particular importance when the user's system encompasses multiple devices from which a selection must be made. For example, a system that contains a 2560, a 2501, and a 1442: Only the 2560, or the 2501 with 1442, can be specified for emulation.) See "Specify" below.

Specify (one or more of the following):

```
    ┌ 9161 -- for 2501 with 2520 mdl A2/A3 or
    │ 9162 -- for 2501 with 2520 mdl A1 or
  * ┤ 9163 -- for 2501 with 1442, or
    │ 9164 -- for 2520 mdl A1 ... as sole card unit, or
    └ 9165 -- for 2560
  * ┌ 9166 -- for 2203, or
    └ 9167 -- for 1403
      9168 -- for 2152
      9169 -- for 2415
      9170 -- for 2311
      9171 -- for Universal Character Set Feature (8637 on 2020 and
                8640 or 8641 on 1403)
```

*only one of these configurations can be selected.

PRICES

	M/SF	Rental (MAC)	Purchase	MMMC	FIC
1401/1440 Compatibility	3901	$ 285	$ 14,250	$ 29	P.O.
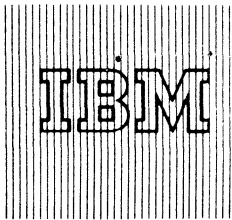
Product Announcement

2401 TAPE DRIVES ENHANCE PERFORMANCE OF MODEL 20 SUBMODEL 5

Model 20 Submodel 5 users can now attach the 2401 tape drive Models 1, 2 and 4. The Native Tape Attachment allows the attachment of up to six 2401s. It combines the function of the I/O channel and most of the functions of the 2803 control unit. The Native Tape Attachment is integrated into the CPU and is available in two versions:

Version 1 allows the attachment of 2401 Models 1 and 2 and has optional features for seven-track compatibility and data conversion.

Version 2 allows the attachment of the 2401 Model 4 (with appropriate features the 2401 Models 1 and 2 can also be attached); optional features for this model include seven-track compatibility, nine-track compatibility, seven and nine-track compatibility and data conversion.

Thus the Model 20 Submodel 5 user now has the following new tape capabilities:

30KB at 800 BPI
60KB at 800 BPI
60KB at 1600 BPI
Single drive increments, i.e., one, three, or five tape drive configurations

These new performance improvements and better configuration flexibility meet your customer's tape requirements more precisely. No new programming support is required. Thus, customers with 2415s installed may change to the faster 2401s without reprogramming. (Reprogramming might be necessary for time dependent programs or non-IBM support programs.)

REPRESENTATIVE SYSTEM PRICES

20-5 Phase Encoded Tape System

2020D5 (16K) CPU	$ 1450
2501A1 Card Reader (attached)	226
1442-5 Card Punch (attached)	286
1403-2 Printer (attached)	1010
Native Tape Attachment (5302)	555
4 2401-4 Tape Drives @ 420	1680
	$ 5207

20-5 Phase Encoded Disk/Tape System

2020E5 (32K) CPU	$ 2170
2501A1 Card Reader (attached)	226
1442-5 Card Punch (attached)	286
1403N1 (1000 LPM) Printer (attached)	1190
2152 Printer Keyboard (attached)	225
4 2311-11 Disk Storage Drives (attached)	2765
Native Tape Attachment (5302)	555
2 2401-4 Tape Drives	840
	$ 8257

Program Testing Allowance ... Standard program testing allowances apply, i.e., the first tape drives on the system are allowed five hours.

Programming Support ... All the Model 20 programming support used to support 2415 tapes is applicable to the 2401 tapes.

Publication Support ... Available from the IBM Distribution Center, Mechanicsburg, Pa., are:

TNL (N33-1536) Systems Summary
TNL (N33-1535) Functional Characteristics
TNL (N33-1537) Configurator

These publications were distributed via DAPS in March. They will be released by the Country Literature Coordinator with this announcement.

Restrictions ... The Native Tape Attachment cannot be installed with the 10C (Feature 4658).

Field Installation ... Field installation of the Native Tape Attachment will begin 90 days after first customer shipment.

An additional seven hours may be required to relocate RPQs installed prior to installing the Native Tape Attachments.

RPQs ... RPQs will be accepted immediately. Response time depends on complexity. An additional RPQ must be submitted for a compatibility check if any RPQ is installed on a system adding the Native Tape Attachment
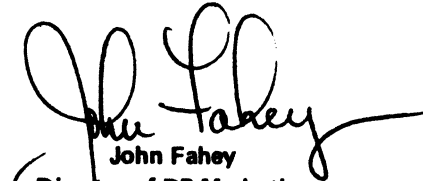
Delivery ... First customer shipments of systems with Native Tape Attachment Features will begin in November, 1970. Field installations will begin in February, 1971.

Sales Compensation Plan ... Normal provisions apply.

Distribution: ANS/SEC

Prices ...

	Rental	Purchase	MMMC	FIC
Native Tape Attachment				
Version 1 (5301)	$ 450	$ 22,750	$170.00	PCR
7 Track Comp. (7125)	52	2,600	22.00	PCR
Data Conv. (3228)	52	2,600	8.50	PCR
Version 2 (5302)	$ 555	$ 27,750	$310.00	PCR
7 Track Comp. (7126)	115	5,750	33.00	PCR
7-9 Track Comp. (7135)	255	12,750	33.00	PCR
Data Conv. (3228)	52	2,600	8.50	PCR
9 Track (5320)	155	7,750	43.00	PCR

John Fahey
Director of DP Marketing
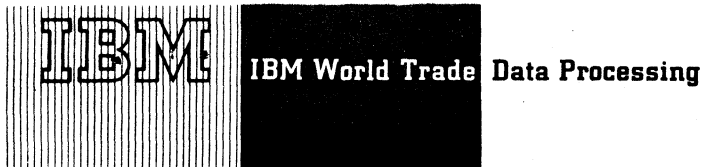
Product Announcement

PRODUCTION STATUS CHANGE FOR IBM 2401 MAGNETIC TAPE DRIVES

Effective immediately, the IBM 2401 Magnetic Tape Drive 60Hz Model 5 is in limited new production and 60Hz Model 6 is out of new production.

Existing orders for new equipment within the published WT delivery schedule will be honored. Orders for 60Hz equipment scheduled or deferred beyond the current WT delivery schedule will be filled as follows:

- Models 1, 2, 3, 5 - may or may not be new production depending on availability at time of order acceptance at plant. Ordering locations must negotiate on an individual basis with plant to provide new production prior to any schedule commitment.

- Model 6 - will be reconditioned equipment.

60Hz Model 4 and all 50Hz models remain in new or modernized current product status.

All affected customers must be notified immediately.

John Fahey
Director of DP Marketing

Attachments [2] :   Machines 526-536 and M 2772.3

Distribution: All Areas

Product Announcement

1270 OPTICAL READER SORTER

IBM World Trade Corporation announces the IBM 1270 Optical Reader Sorter designed especially to satisfy the Document Handling requirements of applications in industries such as Banking, Insurance, Public Utilities and Manufacturing.

Available in four models, the 1270 features:

. An advanced document handling capability.

. A new compact design allowing one operator to handle the machine.

. High Resolution Scanning and recognition of numeric ISO OCR A and B font characters.
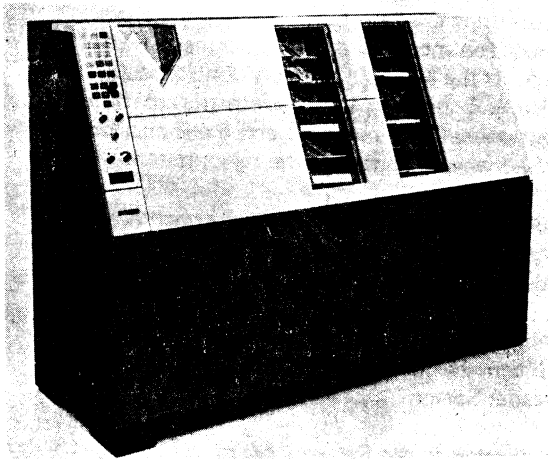
. On line System/360 and off line operations.

. Powerful, flexible IBM multiprogramming support under DOS/360.

. 6-pockets low cost version, on which full digit sorting is possible, using two-phase passes.

. 12-pockets for conventional sorting.

The 1270 offers Banks and Insurance Companies the opportunity to make a major advance in systems efficiency by providing the ability to read and transfer the information printed on checks, transfers, notices of payments and other financial documents into the System/360 as well as sort the documents into any desired sequence according to the information printed in the codeline.

The 1270 reads and sorts numeric data at a maximum speed of 750 six-inch (152 mm) documents per minute. It is equipped with 6 or 12 output pockets. The data can be recorded in the codeline in a variety of ways, including letterpress (bookprinting) offset, IBM 1403 printers (both 600 and 1100 lines per minute models), IBM 1206 inscriber (with RPQ), IBM Model 72 typewriter or other devices such as adding machine inscribers, which produce an equivalent quality of printing.

Depending upon the 1270 model employed, the codeline information to be read and/or sorted can be printed in either the numeric characters and certain special symbols of the International Standards Organization Character Recognition Alphanumeric Font-A (ISOCRAF-A), size 1 or the ISOCRAF-B, size 1. The codeline may contain up to seven fields, each fixed or variable in length.

Model descriptions ... All models are attached to the multiplexor channel of System/360 Models 25, 30, 40 or 50. This enables data from the documents to be read into the System/360 and document sorting to be controlled by the System/360. All models can also be used in off-line mode.

The 1270 Models 1 and 2 read the ten numerical digits (0-9) and three special characters used as field separators: ♩ (hook) Ψ (fork) and ⊓ (chair) of the ISOCRAF-A, size 1. A pre-printed vertical ruling (I) can be also used as a field separator.

. Model 1 has 6 pockets

. Model 2 has 12 pockets.

The 1270 Models 3 and 4 read the ten numerical digits (0-9) and three special characters used as field separators: + (plus) < (less than) and > (greater than) of the ISOCRAF-B, size 1. A pre-printed vertical ruling (I) can also be used as a field separator.

. Model 3 has 6 pockets.

. Model 4 has 12 pockets.

Attachment [1] :   Machine 1270.1

Distribution: ANS, Canada and SEC

Standard Machine features designed for the operator on all models include:

. Continuous document loading without interrupting machine operations.

. Fixed codeline position located within a defined area.

. Easy operator access to hopper and selector areas.

. Movable read head.

Document Dimensions ... All models can process intermixed sizes of paper documents within the following dimensions.

Width:	2.5 to 4.25" (64 to 108 mm)
Length:	5.75 to 8.75" (146 to 222 mm)
Thickness:	.0035 to .007" (0.09 to 0.18 mm)
Basic Weight:	20 to 32 lb. and card stock (75 to 120 grams per square meter and card stock).

Checking ... The readability of each character, including special characters used as a field separator, can be verified each time a document is read and/or sorted. A field length check is made on all fixed length fields being processed to assure that all digits in the field have been read. When a document does not satisfy the checking conditions it is rejected (when the 1270 controls the checking) or the error condition is presented for interrogation by the user program (when System/360 controls the sorting).

Optional Features ...

High Order Zero and Blank Selection ... (2780) This feature allows all documents having zero in the sort position and in all higher-order positions of the field to be selected. The feature cannot operate simultaneously with the Multiple Column Control and is available on Models 2 and 4 only.

Multiple Column Control ... (2779) The feature examines up to six consecutive positions of a selected field and compares the data read there with a control number, set up by thumb - wheel switches on the operator panel. Under operator control, the feature can be used in two ways. Either all documents which do, or all documents which do not, have the same digits as the control number are selected into pocket A. Non-selected documents are sorted normally. Available on models 2 and 4 only.

Self-checking Number ... (7061,7062) This feature ensures greater reliability when reading field, such as account number, with self-checking numbers. A self-checking number consists of two parts, the basic identifying number and its check digit. The feature verifies a self-checking number field any time the field is selected for activity. Two methods are available: Modulus 10 and Modulus 11. Modulus 10 can be used for all basic numbers; with Modulus 11 more transposition errors are detectable, but basic numbers requiring a check "digit" of 10 cannot be used. If the field fails to satisfy the check, the document (on models 2 and 4) is normally routed to pocket A. If the Multiple Column Control feature is also active, self-checking error documents are routed to the reject pocket. On models 1 and 3 self-checking documents are always routed to the reject pocket.

System/360 Attachment ... System/360 attachment (2809) required for attachment of the 1270 to System/360 Models 25, 30, 40 and 50.

Programming Support ... Existing DOS/360 IOCS for the 1419 Magnetic Character Reader supports the 1270 Optical Reader Sorter.

The 1270 attaches to the System/360 multiplexor channel by a Single Address Adapter via the Standard I/O Interface. All 1270 optional features are supported, as are the Selective Tape Listing features on the 1403, which allow individual spacing or skipping of tapes on the printer under program control.

Functions performed by the IOCS are:

— Automatically controlled engaging and disengaging of the 1270's. User control also provided.

— Reading of OCR documents.

— Automatic entry to user stacker select routine at the completion of each document read.

— Stacker selection of documents.

— Maintenance of revolving buffer pool.

— Posting of error conditions to the document buffer for user processing.

— Servicing of I/O and External Interrupts.

— I/O error recovery.

— Appropriate operator messages for I/O error conditions.

— Presenting data and unusual conditions for user processing.

Programming Support (Cont)

- Macro-instructions for efficient operation of multiple Optical Reader Sorter simultaneously within a single program partition.

- Support for all partitions - Foreground/Background.

Customer Program Testing Allowance ...

1270 all models ....5 hours.

Delivery and Source of Supply ... Customer shipments of all models will begin in April 1971. The published delivery scheduled will be announced in 90 days. Schedule dates for orders received during this 90 day period will be assigned by the appropriate allocating locations on sequential basis. No commitments to customers are to be made until such dates are received in the branch office.

Alteration notices and MES's must be submitted at least 120 days prior to the scheduled shipping date.

The Source of Supply for the 1270 is Greenock, Scotland.

RPQ's ... RPQ's will be accepted by Special Engineering Netherlands for consideration immediately with response time and delivery schedules dependent upon RPQ complexity. Shipment of units with RPQ's will not take place before first customer shipment.

Publications Support ... The following publications will be available. Form No. GA-19-0035, IBM System/360 Component Description - 1270 Optical Reader Sorter; TNL to A22-6810 IBM S/360 System Summary; TNL to C19-0001 IBM S/360 Installation Manual - IBM World Trade 50-Cycle Physical Planning Requirements; A planning SRL describing DOS programming considerations. Advance copies will be distributed. Additional copies will be available from the IBM Distribution Center, Mechanicsburg. Actual availability will be announced in a forthcoming Publications Release Letter.

DP Orders and Movements Codes

Type	Models	Product Category On Line	Product Line
1270	001	59,62,92,93	6
1270	002	59,62,92,93	6
1270	003	59,62,92,93	6
1270	004	59,62,92,93	6

Rental and Purchase Prices

Type/Feature	Model/Feature	Rental	Purchase	MMMC
1270	1	$1825	$ 87,600	$550
1270	2	2125	102,000	620
1270	3	2125	102,000	550
1270	4	2425	116,400	620

Type/Feature	Model/Feature	Rental	Purchase	MMMC	FIC
High Order Zero	2780	$ 25	$ 1,200	NC	PCR
Multiple Column Ctrl	2779	50	2,400	$ 7.50	PCR
Self-Checking Number					
Modulus 10	7061	40	1,920	1.75	PCR
Modulus 11	7062	65	3,120	2.75	PCR
System/360 Attach	2809	400	19,200	16.00	PCR

Rental Plan: A
Purchase Option: 40%
Maintenance Group: C
Per Call Category: 2

Sales Compensation Plan ... Normal Sales Compensation Plan provisions apply.
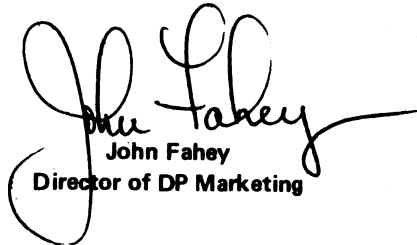
Add to Schedule A, Machine Type 1270, 2000 On Schedule Installation Points.

Add to Schedule B, class B Group 20 Type 1270 Optical Reader Sorter, 1000 Out of Territory Quota Points. Effective date April 24, 1970 - Termination Date December 31, 1970.

The 1270 is not eligible for an educational allowance.

Systems Engineering Services ... Systems Engineering Services related to the IBM 1270 are available at the General Skill Classification rate or at a higher classification as determined by the host system or the System Operating Environment (See Sales Manual SE Section 2 for details).

See the attached Sales Manual Page for additional details.

John Fahey
Director of DP Marketing

Product Announcement

IBM's MOST POWERFUL COMPUTER:
THE SYSTEM/360 MODEL 195

Today, IBM announces the most powerful member of the System/360 family, the Model 195. This higher performance is made possible by a combination of advanced circuit technology, a faster buffer - backing store memory system, and a central processor organization which achieves a considerable degree of overlapped operations within the system.

The Model 195 is supported by OS/360 MVT where multiprogramming permits a high level of utilization of this ultra-high performance system. The Model 195 provides extended precision floating point arithmetic, a CRT operator's console and is available in three processor storage sizes: J(1,048,576 bytes); K(2,097,152 bytes) and L(4,194,304 bytes).

This new model provides growth for your Model 65, 75 and 85 customers. It can provide an outstanding solution to your customer's large scale computing requirements.

Highlights ...

- Extremely high speed instruction execution
- 54 ns cycle central processor with 18 ns floating point multiply/divide sub cycle
- High speed 54 ns buffer - 32K bytes standard
- 16-way interleaving on main storage - K and L
- Up to four million bytes of 756 nanosecond main storage
- 104 microsecond timer - Standard
- Universal Instruction set plus direct control plus extended precision floating point arithmetic - Standard
- Graphic display console

The central processor has five functionally separate units which can operate independently:

- Processor storage
- Buffer storage and storage control unit
- Instruction processor
- Fixed point and VFL - Decimal Execution Element
- Floating Point Execution Element (within this unit, three separate operations can occur concurrently)

Channels and input/output devices share the use of the storage control unit and instruction processor when necessary but operate concurrently with the other elements of the system.

The instruction processor decodes instructions and prefetches data to enable the execution elements to operate at maximum efficiency. The objective of the execution units is to perform as many operations concurrently as possible, using multiple registers, data (operand) buffers and arithmetic units. Each execution unit may be thought of as a small independent CPU, and each performs a portion of the processing of an instruction. With this assembly line approach, "pipelining" becomes possible.

These techniques allow the Model 195 to process complex instructions at an effective rate approaching the basic cycle of the central processor, thereby making the Model 195 truly a powerhouse.

The system can be benchmarked using MVT but without decimal or extended precision arithmetic. Benchmarking of the latter will begin in the fourth quarter of 1970.

Delivery ... Shipments will start the third quarter of 1971. Poughkeepsie is Plant of Control and Manufacturing source.

Orders and Movements Codes ...

Product Category	Product Line	System Type
84	7	3795

Machines will be individually scheduled by the Director of Product Line-Large Systems.

RPQs ... Attachment RPQs only will be accepted. Response time and delivery depends upon the complexity of the request. RPQs will be accepted from the date of this letter.

50/60 HZ Converter ... As the Model 195 is only available from 60 Hertz production, IBM will provide a 50/60 HZ converter to the customer at no charge where necessary. Countries should order a standby 50/60 HZ converter for reliability purposes.

Field Modification Limitations ... Processing unit model changes can be made in the field. The FIT is five days.

Systems Engineering Services ... Systems Engineering Services related to the IBM System 360/195 are available at the complex skill classification rate.

Attachment [3]: Machines 2150-2152, 2195 and 10000.7

Distribution: Australia, New Zealand, South Africa and Selected European Countries

Programming Support ... See P70-40A.

Publications ... Consult previous and forthcoming PRL's for the availability status of the following publications:
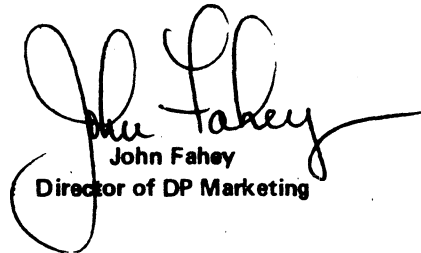
A22-6943 Functional Characteristics
C22-6820 Installation Manual
          (TNL N22-0342)
A22-6810 System Summary
          (TNL N22-0344)
A22-6944 System Configurator
A22-6823 I/O Configurator
221-0528 Proposal Insert
520-2206 Brochure

Educational Allowance ... 10 percent.

Sales Compensation Plan ... Normal provisions apply. In addition, systems sold on an out-of-territory basis will receive quota points.

Program Test Allowance ... Standard provisions apply.

See next page for additional details.

John Fahey
Director of DP Marketing

STORAGE

Up to 4, 194, 304 bytes of 756 ns processor storage are available and provide access to eight bytes of instructions or data in 810 nanoseconds. Eight or sixteen-way interleaving is provided to reduce the effective access time.

A high-speed 54 nanosecond monolithic buffer storage with a capacity of 32, 768 bytes is provided to further reduce the effective access time. As active blocks of instructions or data are addressed in processor storage, they are brought into the high speed buffer, where subsequent fetches may be made in only 162 nanoseconds. Buffer storage and block transfers are controlled by the Storage Control Unit so that use of the buffer storage is not obvious to the programmer.

The storage control unit controls the flow in instructions and data to and from all of the other elements of the systems.

INSTRUCTION PROCESSOR

The Instruction Processor provides 64 bytes of buffering for instructions and also controls the execution of short loops from this buffer when possible. It provides communication with the Storage Control Unit and issues execution instructions to the other execution elements. It also executes branching, I/O and status switching instructions.

ELEMENTS

The fixed Point and VFL - Decimal Execution Element provides for the independent execution of fixed point, variable field length, decimal and logical instructions. It contains the general registers and other buffers and registers of the systems.

The Floating Point Execution Element provides for the execution of floating point operations including the extended precision operations. Several operations can be executed at one time with a maximum of two adds and one multiply or divide concurrently if the operations are logically independent. It contains the necessary buffers, registers, and reservation stations to allow for this concurrent execution.

Product Announcement

SYSTEM/360 MODELS 85, 195 ENHANCED BY NEW STORAGE FACILITY, HIGH-SPEED CHANNEL

The throughput capability of the IBM System/360 Models 85 and 195 is further enhanced through the announcement of the following:

- The 2305 Fixed Head Storage Facility Models 1 and 2 which provide very high performance, direct access storage with capacities from 5.4 to 22.4 million bytes.

- The 2880 Block Multiplexer Channel Models 1 and 2 which permit the attachment of additional channels to the System/360 Models 85 and 195, and data rates at speeds up to 3 million bytes per second with a new capability -- Block Multiplexing.

New Modes of Operation - Block Multiplexing and Rotational Position Sensing ... Block Multiplexing, in conjunction with the new Rotational Position Sensing capability of the 2305, reduces the time the channel is busy searching for a disk record. These features permit the channel to disconnect during latency and then be reinitiated just before the desired record is about to come under the read/write heads -- that is, when the desired rotational position is reached. During this disconnected time, data records for other channel programs may be transmitted on the channel's data path.

2305 FHSF Highlights

- Model 1 — 2.5 millisecond average access time
   - 3 million bytes per second data rate
   - 5.4 or 10.8 million byte capacity

- Model 2 — 5 millisecond average access time
   - 1.5 million bytes per second data rate
   - 11.2 or 22.4 million byte capacity

- Both models offer rotational position sensing in conjunction with the block multiplexing function of the 2880.

- The 2305 FHSF consists of the combination of a 2835 Storage Control and one or two 2305 Fixed Head Storage modules.

The 2305 FHSF attaches to the 2880 Block Multiplexer Channel on the Models 85 and 195 and provides a channel command set compatible with current direct access devices, with additional commands to take advantage of the rotational position sensing function. These direct access storage facilities offer customers high performance, direct access storage for systems residence, work, and data set storage.

2880 Highlights

- Offers data rates up to 1.5 million bytes per second, and with Two Byte Interface Feature, up to 3.0 million bytes per second.

- Permits attachment of up to 12 high speed channels to Model 85, and up to 13 to the Model 195.

- Block Multiplex mode allows concurrent operation -- up to 64 I/O devices on a single channel -- by multiplexing blocks of data on the single data path of the channel.

- New reliability features that provide extensive checking of channel and control unit operations and, on certain failures, provide automatic hardware retry of malfunctioning operations.

- Additional data buffering provides lower system interference.

- Can be connected to a System/360 Selector Channel equipped with the channel-to-channel adapter

Prices ...

	Rental	Purchase	MMMC	FIC
2305 Model 1	$ 5210	$ 244,870	$ 620	—
2305 Model 2	4415	194,815	590	—
2835 Model 1	3190	149,930	555	—
2835 Model 2	2655	124,785	470	—
2835 Feature: Two Channel Switch				
8170 (for Model 1)	215	10,105	10	PCR
8171 (for Model 2)	215	10,105	10	PCR

Attachments: Sample Sales Manual Pages 2305, 2835 and 2880.

Distribution: Australia ... Austria ... Belgium ... Canada ... Denmark ... Finland ... France ... Germany ... Ireland ... Italy ... Netherlands ... New Zealand ... Norway ... Portugal ... South Africa ... Spain ... Sweden ... Switzerland ... United Kingdom

	Rental	Purchase	MMMC	FIC
2880 Model 1	$ 3,200	$ 150,400	$ 472	–
2880 Model 2	4,500	211,500	630	–

Features:

For 2880-2 - Byte Int'face 7850	370	17,390	8	PCR
For 2085 - Ext. Channel 3850	315	14,805	58	PCR
For 2195 - Ext. Channel 3851	315	14,805	2	PCR

Rental plan A (10%), 45% purchase option, maintenance group A, per call class 3, and assignable unit metering.

Orders and Movements Codes (2305,2385,2880)

	Product Category	Product Line	System Type
M85	87	7	NA
M195	84	7	NA

2305 FIXED HEAD STORAGE FACILITY

Fixed Head Concept ... The 2305 Fixed Head Storage modules physically consist of a non-removable rotating media and multiple element recording heads. The recording media consists of six 14-inch oxide coated disks revolving in an environmentally controlled air system.

The 2305 Model 1 has 384 addressable tracks, each with two read/write heads, and a maximum capacity of 14,136 bytes per track.

The 2305 Model 2 has 768 tracks, each with its own read/write head, and a maximum capacity of 14,660 bytes per track.

Standard Features ... Record Overflow, multiple track operation, Multiple Requesting and Rotational Position Sensing are all standard features.

Rotational Position Sensing ... The Rotational Position Sensing function enables the channel to "seek" to an angular track position. It permits channel disconnection during most of the rotational latency period and thus contributes to increased channel availability.

Multiple Requesting Concept ... Multiple requesting provides the hardware capability to allow up to sixteen disconnected command chains (OS/360 provides support for up to 14 disconnect command chains - 7 for each module) to be handled by the control unit simultaneously in a two module facility. This, in conjunction with the rotational position sensing function, will permit better utilization of the control unit, devices, channel, and CPU.

Delivery ... First 60 Hertz customer shipments of the 2305 for the System/360 Model 85 will commence in May, 1971, for the Model 1, and in June, 1971, for the Model 2. First 50 Hertz customer shipments of

the 2305 for System/360 Model 85 will commence in the third quarter of 1971. First customer shipments for Models 1/2 of the System/360 Model 195 will commence in the third quarter of 1971. The published delivery schedule will be available in 120 days. Schedule dates for orders received during this 120 day period will be assigned on a sequential basis. No commitments to customers are to be made until such dates are received in the branch office.

Plant of Control and Manufacturing Source ... is San Jose.

RPQs ... RPQs may be submitted immediately. Processing will begin on June 1, 1970. Response will be within 60 days. No RPQs will be shipped until six months after the first customer shipment of the basic unit.

Programming ... Support will be provided by OS/360 MFT and MVT Systems at first customer shipment and will consist of normal OS/360 DASD Data Management (except ISAM), Systems Residence, Language Processor and Utilities support. In addition, the new Rotational Position Sensing and Multiple Requesting features will be utilized in the access methods PAM, SAM, and DAM, Systems Residence functions (catalog, DADSM, FIND, BLDL, STOW), language processors and utilities. (TCAM, TSO and Sort/Merge support are not provided.)

Modularity ... Up to two Fixed Head Storage modules can be attached to each Control Unit, as follows:

The 2305 FHSF Model 1 consists of the 2835 Model 1 Storage Control and one or two 2305 Model 1 Fixed Head Storage modules.

The 2305 FHSF Model 2 facility consists of a 2835 Model 2 Storage Control and one or two 2305 Model 2 Fixed Head Storage modules.

Field Expansion ... Field expansion from a one to a two module facility is permitted. The second module must be the same model number as the first and must be specified as a second drive expansion.

Limitations ... The 2835 Model 2 attaches only to the 2880 Block Multiplexer Channel.

The 2835 Model 1 attaches only to the 2880 Block Multiplexer Channel with the Two Byte Interface special feature 7850.

Each facility must be composed of the same model storage control and drive modules, i.e., 2305 Model 1 drives on a 2835 Model 1.

No 2835 or 2305 model changes can be made in the field.

These units have been designed for interconnected operation and have not been designed for stand-alone use. Customers wishing to order them separately may do so by submitting RPQs to provide the necessary elements to complete the units for stand-alone operations (covers, cable connectors, etc.). The statements on delivery schedule, RPQs and programming support apply to the individual units as well as to the 2305 FHSF.

Sales Compensation Plan ... Normal provisions apply.

Publication Support ... Available from the IBM Distribution Center, Mechanicsburg, is an SRL (GA26-1589) IBM 2305 Fixed Head Storage Facility, component description manual, 2305 CE Brochure (G229-5060), 85/195 I/O Brochure (G520-2250) and Proposal Insert (G221-2174).

Education Allowance ... A 10% Educational Allowance applies to the 2835 and 2305.

Program Test Allowance ... A program testing allowance of five hours is assigned to the 2835 Storage Control units and three hours to the 2305 Fixed Head Storage modules.

DP Installation Program Review ... the 2305 Facility will be on the Area Installation Programs Designated List.

Systems Engineering Services ... Identified with and related to the installation and use of the IBM 2305 are available for a charge at the applicable Skill Classification rate as determined by the host system or its System Operating Environment (See Sales Manual SE Section 2 for details).

Ordering Instructions ... At the end of this letter, see text to be subsequently inserted in the Sales Manual.

2880 BLOCK MULTIPLEXER CHANNEL

Characteristics ... The 2880 operates in either the selector channel mode or the block multiplexer mode. Selector channel mode is functionally equivalent to the IBM 2860 selector channel operation. Thus, I/O devices which are attachable to the Models 85 and 195 via the 2860 are also attachable via the 2880 Channel. In addition, the 2880 permits the attachment of the new 2305 Fixed Head Storage Facility (Models 1 and 2).

The block multiplexer mode permits the concurrent operation -- up to sixty-four I/O devices on a single channel -- by multiplexing blocks of data on the single data path of the channel. Although only one device may may actually be transmitting data at any given instant, multiple channel programs may be concurrently active for up to sixty-four physical or logical devices at one time. Block multiplexing operates in conjunction with the 2305, which is capable of disconnecting in a sequence of chained channel commands, freeing the channel during non-data transfer activity of the

device, thereby allowing other devices access to the channel during this time.

New reliability features provide extensive checking of channel and control unit operations, and on certain failures, provide automatic hardware retry of malfunctioning operations.

Additional data buffering provides lower system interference.

The 2880 can be connected to a System/360 Selector Channel equipped with the Channel-to-Channel Adapter.

2880 Models

2880 Model 1 provides one Block Multiplexer Channel.

2880 Model 2 provides two Block Multiplexer Channels.

Two Byte Interface Feature (7850) ... The 2880 is capable of data rates up to 1.5 million bytes per second. With the addition of the Two Byte Interface Feature on each channel path, data rates up to 3 million bytes per second can be obtained.

Extended Channel Feature ... When used in conjunction with the Extended Channel Feature of the Model 195, the 2880 provides the capability for attaching more than six high-speed channels to these systems. Combinations of IBM 2860 Selector Channels, IBM 2870 Multiplexer Channels, and IBM 2880 Block Multiplexer Channels may be attached. When intermixing channel types, the following constraints must be observed:

Model 85 (Feature 3850) ...

A maximum of thirteen channels or a total of eight channel frames, whichever occurs first.

2860s — Maximum of 2 (6 channels). 2860s may only be assigned addresses of one through six.

2870s — Maximum of 2 (2 channels). The address of the first 2870 must be zero. The second 2870, if present, may be assigned any address of one through six.

2880s — Maximum of 6 (12 channels). 2880s may be assigned addresses of one through twelve.

Model 195 (Feature 3851) ...

A maximum of fourteen channels or a total of eight channel frames, whichever occurs first.

2860s - Maximum of 2 (6 channels). 2860s may only be assigned addresses of one through six.

2870s - Maximum of 2 (2 channels). The address of the first 2870 must be zero. The second 2870, if present, may be assigned any address of one through six.

2880s - Maximum of 7 (13 channels). 2880s may be assigned addresses one through thirteen.

Devices that may be attached to channels with addresses greater than six are limited to:

IBM 2420 Magnetic Tape Unit Models 5 and 7 ... IBM 2314 Direct Access Storage Facility Models 1 and A ... IBM 2305 Fixed Head Storage Facility, Models 1 and 2.

Delivery ...

Model 85

First customer shipment of 50 or 60 cycle 2880s will be in 1Q71. First customer shipment of the Extended Channel Feature for the Model 85 will be in March 1971.

Model 195

First customer shipment of the 2880 will be in June 1971. First customer shipment of the Extended Channel Feature for the Model 195 will be in July 1971.

RPQs ... Starting on August 1, 1970 RPQs will be accepted on the 2880 channel. Response time will be dependent on the complexity of the RPQ but will normally be within ninety (90) days. No RPQs will be shipped prior to six months after the first customer shipment of the basic unit.

Educational Allowance ... 10 percent.

Program Test Allowance ... None.

Programming Support ... This is provided by Operating System/360 for both the block multiplexer and selector modes of operation. The level of OS/360 support is MFT and MVT for the Model 85 and MVT for the Model 195. OS/360 will include support for the extended Channel Feature of the Models 85 and 195.

Performance Considerations ... The potential for system performance improvements provided by the IBM 2880 Block Multiplexer Channel and the Extended Channel Feature includes:

1. Data Rate Capabilities to 3.0 million bytes per second.

2. More efficient channel utilization resulting from the use of block multiplexing and associated block multiplexing devices.

3. Additional I/O data paths between the CPU and I/O devices.

Exact performance improvement is determined by many installation dependent factors such as system configuration, application mix, CPU and I/O device utilization, and operational considerations.

Limitations ... The 2880 may attach a maximum of four 2835 Storage Control Units Models 1 or 2 per channel. The 2835 is the control unit used to attach the 2305 Fixed Head Storage Facility.

A Model 85 can accommodate two 2880 channels attaching either the 2835 Storage Control Unit (Models 1 or 2) or the 2820 Storage Control Unit. The priority of channels attaching either control unit must be designated as the two highest priority channels in the system. Due to cable limitations, when attaching two 2880 channels with either 2835 or 2820 Storage Control Units, they must be attached via a 2880 Model 2.

A Model 195 can accommodate three 2880 channels attaching either the 2835 Models 1 or 2 - or the 2820. The channels attaching 2835s or 2820s must be assigned the highest priorities in the system.

Installation Programs ... Area Installation Program Review is required on the 2880 due to the variety of channel configurations possible in combination of 2860s, 2870s, and 2880s, and the wide variety of Model 85 and 195 configurations needed to satisfy specific customer shipments.

Publications ... The following publications will be revised to include the 2880 Block Multiplexer Channel:
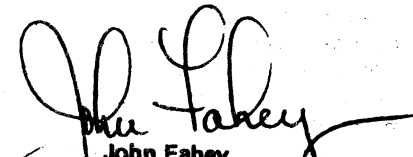
System/360 Principles of Operation (GA22-6821)... System/360 System's Summary (GA22-6810)... Model 85 Functional Characteristics (GA22-6916)... Model 195 Functional Characteristics (GA22-6943)... System/360 Installation Manual - Physical Planning (GC22-6820) 50 cycle C19-0001...System/360 I/O Configurator (GA22-6823)...IBM System/360 I/O Interface Channel to Control Unit Original Equipment Manufacturer's Information (GA22-6843) available with FCS...Model 85 System Configurator (GA22-6920)...Model 195 System Configurator (GA22-6944)...2880/2305 promotional brochure (G520-2250)...2880 Proposal Insert (G221-2173).

Consult previous and forthcoming PRL's for the availability status of the above publications.

Sales Compensation Plan ... Normal provisions apply.

Plant of Control and Manufacture Source ... Kingston, New York.

See sample Sales Manual pages attached for additional details.

John Fahey
Director of DP Marketing

Product Announcement

NEW FEATURE PROVIDES INCREASED FLEX-IBILITY AND MULTIPLE EMULATION WITH CS/40

Now System/360 Model 40 users can emulate 1400 in all three partitions under DOS, resulting in increased throughput and full multiprogramming capability.

The 1401/1440/1460 Relocatable DOS Compatibility Feature (4462) allows emulated 1400 storage to begin at 16,384 bytes (16K) or any multiple of 16K up to and including 114,688. When used in conjunction with the improved Compatibility Support/40 (CS/40) (See P70-30) the advantages are:

. Compatibility Support/40 (CS/40) emulator programs may be executed in foreground partitions of DOS/360.

. CS/40 emulator programs can be executed concurrently in up to and including three partitions of DOS/360.

. DOS/360 supervisors larger than 16K are now possible with CS/40 emulation because emulation can begin at memory locations higher than 16K.

Prerequisites ... 1401/1440/1460 DOS Compatibility (4460); 1401/1460 Compatibility (4457); with 1131 Disk Compatibility (9710); if a 2540 Card Read Punch is to be used to emulate a 1402, a 2540 Compatability Attachment (8065) is required on the 2821 Control Unit.

Prices ...

Feature Code	MAC	Purchase	MMMC	FIC
4462	$150	$5100	NC	PCR

Restrictions ... Feature 4462 may be installed on 2040 Models F, G, GF and H, Serial Numbers 20001 and above. Both this feature (with its prerequisites) and 1410/7010 Compatibility (4478) can be installed.
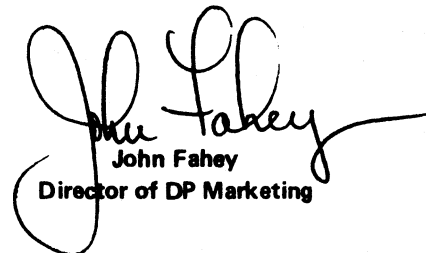
Delivery ... First customer shipment from Montpellier will occur 16 weeks after Montpellier Plant is in receipt of first customer order. For those shipments from Poughkeepsie, first customer shipment will occur in June, 1970. This feature supplants RPQ E60924. See Administrative Instructions for action required.

Administrative Instructions ... RPQ E60924 is presently installed and on order for both rental and purchased 2040 CPUs. These will be upgraded to the feature (4462) at no additional charge.

1. Installed Rental -- Upgrades will be sent out automatically by the Poughkeepsie Plant after June 1970. After installation, the DP Machine Order-Miscellaneous Transaction Form No. 112-5987 must be submitted to delete E60924 and substitute 4462 at the same price.

2. Installed Purchase -- Submit MES to Poughkeepsie.

3. On-order Rental and Purchase Machines -- If machine is scheduled for shipment in June 1970 or later, submit Alteration IAC to delete E60924 and substitute 4462 at the same price.

4. On-order MESs -- If shipped as E60924 prior to June 1970, follow procedure in 1 or 2 above.

5. Outstanding Quotations for E60924 -- If MES is shipped prior to June 1970, the RPQ will be supplied. These must then be handled as in 1 or 2 above for upgrading.

Programming ... Feature Code 4462 will be supported under DOS/360. (See P70-30).

Publications ... A technical newsletter for the IBM System/360 Model 40 Functional Characteristics (GA22-6881) and a revision of the IBM System/360 Model 40 Configurator (GA22-6813) will be issued. Availability will be announced in a Publications Release Letter.

John Fahey
Director of DP Marketing

Product Announcement

● 2770 ADDS 1053 PRINTER MODEL 1 AS I/O DEVICE OPTION AND TWO SECURITY FEATURES

1053 Printer Model I

IBM's 2770 Data Communication System now allows the user the ability to attach the 1053 Printer Model 1 to the 2772 Multi-Purpose Control Unit in lieu of a 2213 Matrix Printer.

The 1053 may be used in data entry and inquiry applications, or other requirements where print volumes are low. It provides a more economical 2770 configuration and an added element of flexibility to the system.

In conjunction with the attachment of the 1053 Model 1, features for vertical forms control and ribbon shift are announced for the 2772.

The new features on the 2772 and the 1053 for use in the 2770 Data Communication System are:

	Rental(MAC)	Purchase	MMMC	FIC
On the 2772:				
1053 Model 1 Attachment (7920) Req.	$26	$1,144	$1.50	PCR
1053 Vertical Forms Control (7930) Optnl.	16	704	1.00	PCR
1053 Ribbon Shift (7925) Optional	5	220	NC	PCR
On the 1053:				
Forms Stand/ Stacker (4462)	–	50	NC	NC
2772 Attachment (7850)	16	640	–	PO

Security Features

The Security Identification Special Feature - provides an expanded identification function relative to the currently announced Identification feature on dial communication facilities.

A five-character unique code is automatically entered at the beginning of each transmission. The code consists of one character repeated once followed by three distinct characters. This greatly expands the number of unique codes available to the user, and substantially increases the security of his system. The feature may be used in lieu of the current Identification feature, which is not a prerequisite to it.

The Keylock Special Feature - eliminates unauthorized use of the 2770 through use of a key operated Power On switch. The System can be operated only when the key is inserted in the lock and turned on. By issuing keys only to authorized personnel, the user can add a new dimension of security to his system.

	Rental(MAC)	Purchase	MMMC	FIC
Security Identification (6310)	$16	$704	$1.00	PCR
Keylock (4695)	5	150	NC	PCR

Delivery/Support Elements

Delivery ... The Security Identification and Keylock features will be available for first customer shipment in August 1970. The 1053 and its associated features (on 2772 and 1053) will be available for first customer shipment in September 1970.
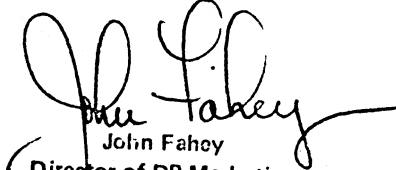
RPQ Support ... RPQs will be accepted immediately. Response to these RPQs may require 120 days. Delivery will be a minimum of 120 days after first customer shipment of the features, with actual date dependent upon the complexity of the RPQ.

An RPQ is required for field installation of the 2772 Attachment special feature on the 1053 Printer Model 1.

Programming ... These features will be supported under presently announced 2770 Data Communication System Programming Support which is:

> DOS/BTAM available from WT Program Library June 30, 1970 - (P69-89)
> OS/BTAM available from WT Program Library September 30, 1970 - (P69-89)
> OS/TCAM available from WT Program Library 1Q71 - (P69-89 and 91)

Publications ... Publications support will be via TNLs to the 2770 Data Communication System SRLs. Initial copies will be shipped thru DAPS. Additional copies will be available from the IBM Distribution Center, Mechanicsburg, Pa. Consult the Weekly Publications Release Letter for actual dates of availability.

John Fahey
Director of DP Marketing

Distribution: Australia, Canada, New Zealand, South Africa and Selected European Countries.

Product Announcement

LIMITED NEW PRODUCTION - 2044 PROCESSING UNIT

Effective immediately, the 2044 Processing Unit is in limited new production.* IBM can no longer commit a new machine to any particular order.

Existing orders for new machines scheduled for delivery on or before January 1, 1971, will be honored with new equipment.

Existing orders for new machines scheduled for delivery after January 1, 1971 will be honored with new equipment if the original delivery date was within the published delivery schedule in effect at the time of order entry, and such date has not been deferred beyond that schedule.
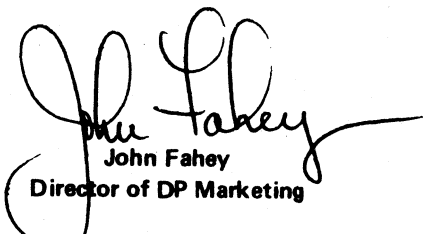
A customer-initiated delivery deferment of an existing order for a new machine may result in reclassification of the order to a normal mix.

All customers affected by this announcement must be promptly notified.

Machines and/or Components in limited new production may or may not be provided from new production depending upon availability of new production at the time of order acceptance at the plant. Delivery schedules as listed in the WT DP Shipping Schedule Guidance Card apply; however, where new production is prerequisite to customer order acceptance, ordering locations must negotiate on an individual basis with manufacturing plants to provide new production prior to any schedule commitment.

2780 DATA TRANSMISSION TERMINAL FEATURE LIMITATION REMOVED

Multiple Record Transmission, Feature No. 5010 is now functional with 4800 bps Operation, Feature No. 9208 on all models of the 2780 Data Transmission Terminal at Engineering Change level 308281. Feature No. 5010 could not previously be installed on 2780s operating at 4800 bps.

John Fahey
Director of DP Marketing

Distribution: All Areas

Product Announcement

**RPQ ANNOUNCEMENT:
IBM 1133 MULTIPLE TERMINAL COMMUNICATIONS
ADAPTER (MTCA) RPQ's**

IBM World Trade announces the 1133 Multiple Terminal
Communications Adapter (MTCA) RPQ's for use with the
1130 Computing System.

With the availability of these RPQ's, users of the 1130
Computing System will have the capability of attaching
up to 16 local or remote IBM 2741 or Teletype Model
33/35 Terminals (ASR, KSR, or RO Models).

PROGRAMMING SUPPORT ... Programming Support
for these RPQ's consists of IOCS subroutines callable
by 1130 Assembler and 1130 FORTRAN user programs.
This 10CS is an extension of the 1130 Disk Monitor
System, Version 2 (1130-OS-005, 1130-OS-006).

DELIVERY ... World Trade customer shipments of the
MTCA RPQ's will be scheduled individually in accord-
ance with manufacturing capability. IOCS subroutines
will be available concurrently with First Customer
Shipment.

DATA SETS (Modems) permitted are:

For 2741 (Domestic)
Switched Telephone Network	WE-103A2
CE-TWX Network	WE-103A1
Type 3002 (leased)	WE-103F2

For Teletype (Domestic)
CPT-TWX Network	WE-811B 3/4

For 2741 (World Trade)
PTT Leased Voice Grade Channel	IBM3976-1
PTT Switched Network	IBM3976-2
PTT Leased or Switched Network	GPO Datel-2B With 5970 LO1 Modem

Other existing World Trade modems should be RPQ'd
separately. Such RPQ's will be accepted immediately
for processing.

ADDITIONAL RPQ's ... Additional RPQ's for attach-
ment of other I/O devices to the MTCA may be sub-
mitted immediately.

APPLICATIONS ... Applications for this new hard-
ware and programming support include:

Message Switching
Scientific Computing
Student Instruction
Data Collection
Engineering Spec writing and retrieval
Management Games
Real Estate Multiple Listing Services
Order Entry
Production and/or inventory control inquiry
Information retrieval
Hotel Reservation System

HIGHLIGHTS ...

— IBM's lowest cost teleprocessing System

— Up to 16 local (100 feet), limited distance
 (4.75 miles), or remote terminals

— PTTC/EBCD to EBCDIC code conversion
 (and vice-versa)

— IOCS program support (2741 and/or Teletype)
 Write/read characters to/from a line
 Error reporting

— IOCS program support (2741 only)
 Message assembly/disassembly
 Line control procedures
 Line statistics
 On line diagnostics

— IOCS Performance
 Approximately 3000 words of storage
 Simultaneous I/O at the terminals handles
  an input character within 1.0 milliseconds,
  handles an output character within 0.5
  milliseconds

— Auto Answer capability
 A terminal may dial up the 1130 computing
  system and become connected via the
  MTCA without manual intervention in the
  computer room.

— Interrupt capability
 A 2741 terminal equipped with the interrupt
  feature (FC4708) may interrupt the system
  at any time (e.g. in the middle of a long
  stream of output data).

ORDERING ... These RPQ's may be ordered as described in the RPQ pages of the Sales Manual.

LIMITATIONS ... The following RPQ's may not be ordered on an 1133 if any MTCA RPQ's are ordered:

> Y76147 Com. Adapter High Speed BSC
> (WTC)
> F21059 Com. Adapter High Speed BSC
> (Domestic)
> 831554 7272 Reader Attachment

PREREQUISITES ... RPQ 831551 (Expansion Gate) and FC1865 (Channel Multiplexer) are prerequisites to the MTCA RPQ's.

The 1130 system must be Model 2B or higher.
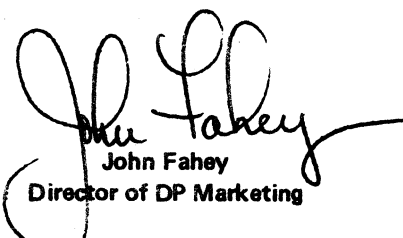
PUBLICATIONS ... An 1130 SRL Manual, The IBM 1133 Multiple Terminal Communications Adapter (MTCA) RPQ will be available from Mechanicsburg on June 1, 1970.

A second 1130 SRL Manual, The IBM 1133 Multiple Terminal Communications Adapter (MTCA) Input/Output Control System (1OCS) Subroutines, will be available from Mechanicsburg June 30, 1970.

PRICES ...

	RPQ Ref.No.	MAC	Purchase	MMMC	FIC
Expansion Gate	831551	60	2280	3.75	PCR
MTCA-Common Base	Y94121	278	11690	29.00	PCR
MTCA-8 Line Base Extension	Y94122	93	3900	2.00	PCR
MTCA-Term. Select 2741	Y94123	26	1080	.50	PCR
MTCA-Term. Select TTY	Y94124	26	1080	.50	PCR
MTCA-Direct Comm Adapt	Y94125	46	1950	.50	PCR
MTCA-Line Adapter Interface 1B	Y94126	41	1730	.50	PCR
MTCA-Limited Dist. Line Adapter	Y94127	62	2600	1.00	PCR
MTCA-Data Set Adapter	Y94128	57	2380	.50	PCR

Revised Sales Manual pages will be issued in the near future.

John Fahey
John Fahey
Director of DP Marketing

CONFIGURATOR AID – 1133 MTCA RPQ's

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┌─────────────────┐
│      1130       │
│  2B OR HIGHER   ├──┐
└─────────────────┘  │
         ┌───────────┴──────┐
         │       1133       │
         │    MULTIPLEX     │   ┌─────────────────┐
         │     CONTROL      ├───┤   MULTIPLEXER   │
         │    ENCLOSURE     │   │    FC 1865      │
         └────────┬─────────┘   └─────────────────┘
                  │
                  ▼
         ┌─────────────────┐
         │     GATE        │
         │    831551       │
         ├─────────────────┤
         │    COMMON       │
         │     BASE        │
         │    Y94121       │
         └────────┬────────┘
                  │
                  ▼
            ╱───────────╲
           ╱  More than   ╲         ( Y )───────────────────────┐
           ╲  8 Terminals ╱                                     │
            ╲     ?      ╱                                       │
              ( N )                                             │
                  │                                             │
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            ╱───────────╲                          ┌─────────────────┐
           ╱   2741 &    ╲      ( Y )──────────────│   8 LINE BASE   │
           ╲  TTY MIXED  ╱                         │   EXTENSION     │
            ╲     ?      ╱                         │    Y94122       │
              ( N )                                └────────┬────────┘
                  │                                         │
                  ◄─────────────────────────────────────────┘
                  ▼
┌──────────────────────┐   ╱───────────╲   ┌──────────────────────┐
│  TERMINAL SELECT     │◄(2741)  2741    (TTY)─►│ TERMINAL SELECT   │
│  2741    Y94123      │   ╲    or    ╱   │ TTY    Y94124         │
└──────────┬───────────┘    ╲   TTY  ╱   └──────────────────────┘
           │                 ╲   ?  ╱     Configurate as for 2741
           │                                   Local or Remote Only
           ▼
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( L )╱   Local     ╲( R )──────────────────────────────────┐
     ╲ and/or Limited╱                                      │
      ╲ Distance and/╱                                      │
       ╲ or Remote  ╱                                       │
         ( LD )──────────►┌──────────────────────┐         │
          │               │ Line Adapter Interface│         │
          │               │   1B  Y94126         │         │
          │               └──────────┬───────────┘         │
          ▼                          ▼                      ▼
┌─────────────────┐      ┌─────────────────┐    ┌─────────────────┐
│  DIRECT CONN    │      │  LIMITED DIST.  │    │   DATA SET      │
│    ADAPTER      │      │    ADAPTER      │    │    ADAPTER      │
│    Y94125       │      │    Y94127       │    │    Y94128       │
└────────┬────────┘      └────────┬────────┘    └────────┬────────┘
   ┌─────┴─────┐            ┌─────┴─────┐         ┌───────┴───────┐
   ▼           ▼            ▼           ▼         ▼               ▼
┌──────┐  ┌──────┐      ┌──────┐  ┌──────┐   ┌──────┐       ┌──────┐
│Ter-  │  │Ter-  │      │ 2741 │  │ 2741 │   │Modem │       │Modem │
│minal │  │minal │      │ only │  │ only │   └──┬───┘       └──┬───┘
└──────┘  └──────┘      └──────┘  └──────┘      ▼              ▼
                                            ┌──────┐       ┌──────┐
                                            │Ter-  │       │Ter-  │
                                            │minal │       │minal │
                                            └──────┘       └──────┘
```

CONFIGURATIONS

The 1133 MTCA consists of eight separate RPQ features, as follows:

1. **RPQ Y94121 Common Base and The Basic IOCS**

   This provides the coupling of the MTCA to the 1133 Multiplex Channel. The capacity of this RPQ is sufficient to handle the first 8 lines, but only in conjunction with other RPQs to be described below. Terminals may not be intermixed on this base.

2. **RPQ Y94122, Eight Line Base**

   This interfaces to Y94121 and is required only for 9 to 16 line capability or if both TTY and 2741's will be used. Terminals may not be intermixed on this base.

3. **RPQ Y94123 Terminal Select 2741**

   This provides a customizing feature to permit the use of IBM 2741 terminals. A customizing module of the IOCS System Control Program is also provided. IOCS will provide full message assembly and line control facilities. Regardless of the number of 2741's to be attached, this RPQ need only be ordered once.

4. **RPQ Y94124 Terminal Select TTY**

   This provides a customizing feature when the terminals to be used are Teletype Model 33 or 35. A customizing module of the IOCS System Control Program is also provided. This IOCS only provides character handling and line error indications. Only one Terminal Select TTY is required regardless of the number of Teletype terminals. Teletype is limited to versions conforming to one start bit, eight data bits and two stop bits, operating at 110 baud.

   If both 2741 terminals and TTY terminals exist on the same system, both Y94123 and Y94124 must be ordered. In this case, also, Y94122 must be ordered since terminals may not be intermixed within the common base or the eight line base.

5. **RPQ Y94125 Direct Connection Adapter**

   This provides a direct multiwire connection between either the common base or the eight line base and locally sited terminals. It serves two lines and may be ordered up to eight times. The maximum separation allowed between the 1133 and the terminal is 100 cable feet, although this RPQ only supplies up to 50 feet of cable. Cables must be purchased from IBM. The terminals to be connected may have up to 50 feet of cable which must be terminated in a 25 pin connector, suitable for insertion into a data set conforming to either the EIA RS 232C or CCITT V 24 interfaces. It is recommended that, request to send (Circuit CA Pin 4) be provided in the TTY interface, to insure that the MTCA can monitor terminal power on.

6. **RPQ Y94126 Line Adapter 1B Interface**

   This is a base which provides for use of RPQ Y94127. It supports any number between one and eight of these RPQs which give facilities for two to sixteen lines where the system uses terminals within 4.75 route miles of the processor.

7. **RPQ Y94127 IBM Limited Distance Line Adapter 1B**

   This supplies a coupling between the common base or the eight line base and a line where the line length does not exceed 4.75 route miles. It provides facilities for two terminals and may be ordered up to eight times. It uses RPQ Y94126 as a prerequisite. For details of Communication Facilities, see SRL A24-3435. Supports 2741 terminals only; not Teletype.

8. **RPQ Y94128 Data Set Adapter**

   This provides a link between the common base or the eight line base and common carrier data sets. It provides for two lines which may be leased or switched facilities. It may be ordered up to eight times.
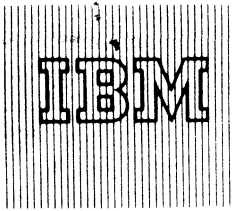
Marketing Announcement

CABLES AND SHIPPING GROUPS

The attached World Trade Sales Manual General Information pages explain in detail ordering procedures and ownership policy related to cables and shipping group items accompanying the initial shipment of IBM equipment. A clear understanding of the basis by which IBM provides cables and other items with initial equipment shipments as well as ownership of these items is particularly important prior to the movement of equipment in mixed system configurations consisting of IBM rental and IBM purchased units.

Cables ...

. One cable or cable group within standard specifications required to install rental or purchased machines delivered by IBM is provided at no additional charge.

. Orders for cables not within standard specifications must be accompanied by approved RPQ.

. Changes in cable order specification within three months of installation may be subject to charge.

. Cables required for rearrangement of previously installed IBM equipment necessary to accommodate the installation of additional machines delivered by IBM will be supplied at no additional charge on an exchange basis.

. IBM furnished cables have labels affixed identifying the "from" and "to" machine type designations. Generally, the "from" unit is farthest from the CPU by cable path.

. A cable furnished by IBM is considered to be part of the product and therefore belongs to the owner of the "from" machine.

Shipping Groups ...

. The complement of items accompanying the shipment and required for installation, operation and maintenance of each IBM machine is provided at no additional charge.

. The specific Shipping Group for a machine is considered part of the machine and therefore belongs to the owner of the machine.

John Fahey
WTC Director of DP Marketing

Attachments [3] :   General Information Table of Contents, Alphabetical Index and 12.7

Distribution: Selected European Countries

Product Announcement

PRICE CHANGES -- PRINT ELEMENTS AND PIN FEED AND SPLIT PLATENS

Purchase prices of additional print elements listed in the DP Sales Manual (TC3) are changed from $15 to $18 effective September 1, 1970.

Purchase prices of pin feed or split platens (to be plant installed in lieu of standard friction feed platens) are changed as follows effective Sept. 1, 1970.

Sales Manual Page	Machine Type	Feat.No.	Purchase Price From	To
M 614.3	614 mdls 1 and 7	9506	$49.50	$57.25
M 614.3 &M 633.2	614 mdls 1, 7 and E3	9507	52.00	59.50
		9508	55.25	62.50
M 10000.3	824,826,866 867,1717,7900	9506	49.50	57.25
	826,866,7900	9507	52.00	59.50
		9508	55.25	62.50
M 10000.4	1033,1052 (except mdl 7 or 8), 1053, 1447,1816,2213, 2740, 2741	9509	59.25	61.75
	1052 (except mdl 7 or 8), 1053	9510	84.25	89.75
M 10000.6	2740 mdl 2	9600	60.00	76.00

Action Required ... Outstanding customer proposals should be updated to reflect these price changes immediately. Open orders will be honored at the former prices. Customer orders received and time-stamped at the branch office prior to September 1, 1970 will be honored at the former prices as follows:

Platens - If DPMO/AN is received at the Country prior to September 10.
Print Elements - If DP Supply Order is received at the appropriate plant prior to September 10.

IBM 1288 OPTICAL PAGE READER – ATTACHMENT TO SYSTEM/360 MODELS 65 65MP, 67 IN 65 MODE, AND 75

IBM World Trade Corporation announces an improvement in the availability date for the attachment of the IBM 1288 Optical Page Reader, via the IBM 2870 Multiplexor Channel, to System/360 Models 65, 65MP, 75 and 67 when in 65 mode.
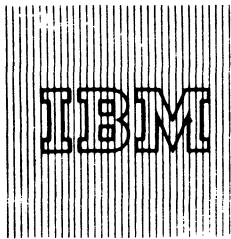
First Customer Shipments for attachment to the subject System/360 Models will be July 1970, rather than January 1971, as announced in DP Letter 69-316.

DOS will support July 1970 shipments of the 1288.

OS/360 support remains September 30, 1970, as announced in DP Letter P69-101.

Support publications will be announced in a future Publications Release Letter.

John Fahey
WTC Director of DP Marketing

Product Announcement

WITHDRAWAL FROM NEW PRODUCTION —
1442 MODEL N1 CARD READ PUNCH
2501 MODELS A1 AND A2 CARD READERS
2520 MODELS B1 AND B2 CARD READ PUNCHES
2520 MODEL B3 CARD PUNCH

Effective immediately, the U.S.A. production status of
the 1442 Model N1, the 2501 Models A1 and A2, and
the 2520 Models B1, B2, and B3 is being changed from
"limited new" to *"not in new production"*. Additional
orders will be filled with reconditioned machines. The
currently published delivery schedule remains in effect.

Any remaining orders for new machines in existence at
the time that limited new production was announced,
which are not deferred, will be honored with new equip-
ment.

Action Required ... All customers affected by this
announcement must be promptly notified.

1442 MODEL N2 CARD PUNCH
LIMITED NEW PRODUCTION

Effective immediately, the 1442 Model N2 Card Punch
is in limited new production in the U.S.A. The Roches-
ter plant can no longer commit a new machine to any
particular order.

Existing orders for new machines scheduled for delivery
on or before September 30, 1970, will be honored with
new equipment.

Existing orders for new machines scheduled for delivery
after September 30, 1970, will be honored with new
equipment if the original delivery date was within the
published delivery schedule in effect at the time of
order entry, and such date has not been deferred beyond
that schedule.

A customer-initiated delivery deferment of an
existing order for a new machine may result in
reclassification of the order to a normal mix.

If any orders for new machines exist which are
scheduled for delivery after the above date (i.e.
the original delivery date was not within the
published delivery schedule at time of order entry),
they must be reclassified to normal mix.

Action Required ... All customers affected by this
announcement must be promptly notified.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas

IBM World Trade Data Processing
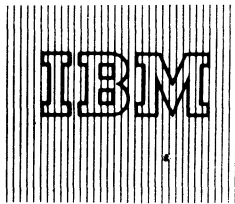
Product Announcement

1275 OPTICAL READER SORTER - DUAL MULTIPLE COLUMN CONTROL FEATURE

IBM World Trade Corporation announces the availability of the Dual Multiple Column Control Feature for the 1275 Optical Reader Sorter.

The Dual Multiple-Column-Control Feature is an extension of the Multiple-Column-Control Feature. It permits the 1275 to select or edit documents based on two control numbers instead of one. Both control numbers can be up to six digits in length.

When Dual MCC is active in the Select-Mode, documents are distributed as follows:

Documents matching the A-number	Pocket A
Documents matching the B-number	Pocket B
Remaining documents	Normally Sorted

When the feature is used in the Edit-Mode, document distribution is as follows:

Documents matching the A-number	Normally Sorted
Documents matching the B-number	Pocket B
Remaining documents	Pocket A

The Dual MCC Feature can only be active in Off-Line or 1275-Sort Mode. The High-Order Zero Feature cannot be used when control number B is active. To de-activate control number B all positions of this set of control number switches must be set to N (neutral) or Off.

This feature eliminates further sorting passes for some classes of documents, thus reducing total sorting time.

Dual MCC is field installable. Multiple Column Control is prerequisite.

The Dual MCC Feature provides an additional set of control number switches (B) which allow for setting up control number B.

Delivery ... First Customer Shipment will be September 1970.

MES ... Shipments for field installation on an MES basis will begin September 1970.

RPQ's ... RPQ's may be submitted immediately after announcement with response time dependent upon complexity.

Distribution: All Areas

Publication Support ... Initial copies of TNL GN19-0063 updating GA 19-0034 have been shipped through DAPS. Additional copies are available from the IBM Distribution Center, Mechanicsburg, Pa.

Price ...

	M/SF	Rental (MAC)	Purchase	MMMC
Dual Multiple Column Control	2937	$95	$4,560	$10.50

Sales Compensation Plan ... Normal compensation plan provisions apply.

083 SORTER AND 1132 PRINTER IN LIMITED NEW PRODUCTION

Effective immediately, the IBM 083 Sorter and 1132 Printer are in limited new production.*

084 SORTER PRODUCTION CHANGE

Effective immediately, the production status of the IBM 084 Sorter is changed from *"limited new"* to *"not in new production."***

Action Required ... All affected customers must be notified promptly.

*Machines and/or Components in limited new production may or may not be provided from new production depending upon availability of new production at the time of order acceptance at the plant. Delivery schedules as listed in the WT DP Shipping Schedule Guidance Card apply to such orders; however, where new production is prerequisite to customer order acceptance, ordering locations must negotiate on an individual basis with manufacturing plants to provide new production prior to any schedule commitment.

** Orders will be filled with reconditioned machines.

John Fahey
WTC Director of DP Marketing

Product Announcement

MAINTENANCE CHARGES REVISED FOR 2260 EXTENDED CURSOR CONTROL FEATURES

DP Letter 69-307 announced three keyboard-related extended cursor control features for the 2260 Display Station. The features had previously been available as RPQs.

The MMMCs as announced varied from the RPQ MMMCs. The purpose of this announcement is to reduce the announced MMMCs to conform with the RPQ prices:

Feature	Announced MMMC	Revised MMMC
Keyboard (3605)	$6.00	$5.00
Keyboard (3606)	2.50	1.50
Keyboard (3607)	2.00	1.00

The MACs and purchase prices remain the same as announced.

Action Required ... Process Amendments to Maintenance Agreements effective with the initial MMMC billing on the announced features and make any appropriate billing adjustments.

IBM 7741 TO BE WITHDRAWN

Effective immediately, the 7741 Processing Unit and its features will be withdrawn from the product line.
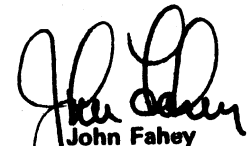
Orders for this machine which have been time-stamped in the branch office before the date of this announcement will continue to be accepted on an "as available" basis.

Customer-initiated deferment of orders for which a shipping date has been established may result in cancellation by IBM.

RPQs ... RPQs for special features and repeat orders of previously designed RPQs will be considered individually and supplied on an "as available" basis until further notice.

Action Required ... Affected customers must be notified immediately in writing, and outstanding proposals must be updated to reflect this withdrawal.

Customers should be advised that there is a limited ability to satisfy requests for this machine, and the grace period implies no added ability to supply the unit.

John Fahey
WTC Director of DP Marketing
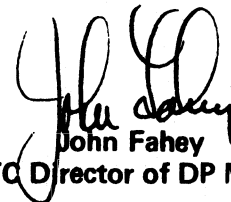
Distribution: All Areas

Product Announcement

**1130 COUPLING FEATURE
IS NO LONGER FIELD INSTALLABLE**

The 1130 Coupling feature (3630) is no longer available for field installation on the 1442 Model 5 Card Punch and on the 2501 Model A1 and A2 Card Reader.

If a customer has an urgent requirement for field installation of this feature, an RPQ may be submitted. Orders accepted prior to withdrawal of this feature will be filled.

A pending revision to the sales manual will include this change.
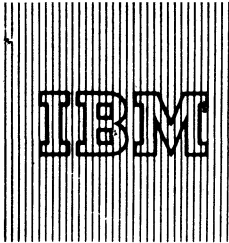
John Fahey
WTC Director of DP Marketing

Distribution: All Areas
Note: DP Letter 70-300 distributed to Australia, Canada, New Zealand,
                South Africa and Selected European Countries only.
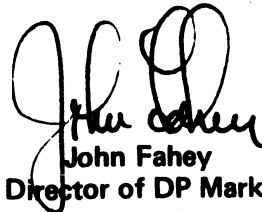
Marketing Announcement

LOGIC PAGE AND WIRING DIAGRAM PRICING

The attached General Information page (13.3) is being updated to reflect a new basis of pricing logic pages and wiring diagrams. Now there is a price for the first page plus an incremental price for each additional page.

John Fahey
WTC Director of DP Marketing

Attachment: General Information 13.3

Distribution: All Areas

Product Announcement

WITHDRAWAL OF SYSTEM/360 PROCESSING UNIT MODELS 2030C, 2040D AND 2050F

Effective immediately the following Models of System/360 are withdrawn: Processing Unit Models 2030C, 2040D and 2050F.

Outstanding proposals for these models must be changed to reflect this announcement and new orders for the 2030 Model C, 2040 Model D and 2050 Model F will not be accepted. All other models of the 2030, 2040 and 2050 continue to be available.

Orders now in the backlog will retain their scheduled delivery date. Orders received but not yet scheduled will be assigned a delivery date. Customers should be informed that failure to accept the scheduled delivery or any postponement of an order in the backlog may result in cancellation of that order.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas

Marketing Announcement

THREE WARRANTY CATEGORIES ESTABLISHED

Effective immediately, all IBM machines, plus their features and model conversions are assigned to a specific warranty category of A, B, or C.

The categories, and the coverage they provide, are:

Warranty Category A

Machines assigned to Warranty Category A will have a one year Service and Parts Warranty commencing on the Date of Installation.

Features and model conversions for machines in Warranty Category A will also have a one year Service and Parts Warranty commencing on the Date of Installation of the feature or model conversion.

Warranty Category B

Machines assigned to Warranty Category B will have a three month Service and Parts Warranty commencing on the Date of Installation. These machines have an additional Parts Warranty (excluding tubes, solid state and other electronic devices) for the remainder of one year commencing on the Date of Installation of the machines.

Features and model conversions for machines in Warranty Category B will also have a three month Service and Parts Warranty commencing on the Date of Installation of the feature or model conversion. In addition, if the feature or model conversion is installed within one year of the Date of Installation of the machine, the unexpired Parts Warranty (excluding tubes, solid state and other electronic devices) of the base machine will apply to the feature or model conversion.

Warranty Category C

All previously announced machines are assigned to Warranty Category C and will have a three month Service and Parts Warranty commencing on the Date of Installation. These machines have additional Parts Warranty (excluding tubes, solid state and other electronic devices) for the remainder of one year commencing on the Date of Installation of the machines.

Features and model conversion for machines in Warranty Category C will have a Parts Warranty only for three months commencing on Date of Installation of the feature or model conversion. In addition, if the feature or model conversion is installed within one year of the Date of Installation of the machine, the unexpired Parts Warranty (excluding tubes, solid state and other electronic devices) of the base machine will apply to the feature or model conversion.

As new products are announced, the appropriate warranty category will be stated in the corresponding machine pages of the sales manual. In the absence of a warranty statement for any particular machine the machine is in Warranty Category C. As existing pages of the machine section of the sales manual are updated, the applicable Warranty Category statement will also be added. In addition, the applicable warranty category will be specified on the Purchase Contract.
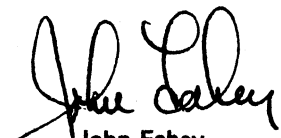
Questions and answers are shown on the reverse side.

ADDITIONAL MACHINE GROUP ESTABLISHED FOR MAINTENANCE SERVICE AVAILABILITY

Effective immediately, an additional Machine Maintenance Group is established to reflect the appropriate charges for optional additional periods of Maintenance Agreement service availability. Machines that qualify for these new percentage charges applicable to optional additional periods of Maintenance Agreement service availability will be designated Machine Group D.

Optional periods of maintenance service availability will be charged based on a percentage of the minimum monthly maintenance charge. The percentage is dependent upon the optional period selected and the machine group in which the machine is included. The Machine Group Identification (A, B, C or D) for each machine type is listed in the "Machines" section of the sales manual under the heading "Maintenance."

A chart of optional maintenance service availability periods and group percentage appears on the reverse side.

John Fahey
WTC Director of DP Marketing

Questions and Answers

1. Why does IBM now have a one year warranty for certain machines?

Our studies have indicated that on certain complex machines a longer period of time is required to ensure that all of the circuitry in the machine has been thoroughly checked out. The experience revealed by these studies indicates that there is a build up of usage and a gradual cutover of applications by the· customer that requires a period of one year for complete check out. Therefore, for these machines the Service and Parts Warranty will be one year.

2. What does this new one year warranty provide?

For machines covered by the new one-year warranty (Warranty Category A), IBM will maintain the machine, for one year from date of installation, in good working order at no additional charge to the customer.

During this period, at the Purchaser's request, IBM will make all necessary adjustments, repair and parts replacement at no additional charge. All replaced parts will become the property of IBM on an exchange basis.

3. Will parts purchased from IBM, either over the counter or during an IBM service call, receive an increased warranty also?

No. The present parts warranty remains. These parts are warranted by IBM to be free from defects in workmanship and material. IBM's obligation in this respect continues to be limited to furnishing, on an exchange basis, replacements for parts which have been promptly reported by the purchaser as having been, in his opinion, defective and are so found by IBM upon inspection. IBM's obligation shall terminate three months after the date of delivery of each part.

4. When a part that is still under warranty is replaced will it have a three-month part replacement warranty?

A part replaced under a warranty continues the warranty period of the part being replaced. A new warranty period is not initiated. For example, a part replacement for an over-the-counter part will assume only the remainder of the three-month part warranty.

MACHINE GROUP	MONDAY - FRIDAY HOURS				
	9*	12	16	20	24
A	10%	15%	20%	25%	30%
B	10%	18%	30%	38%	45%
C	10%	20%	37%	50%	60%
D	10%	12%	15%	18%	20%

MACHINE GROUP	SATURDAY HOURS				
	9	12	16	20	24
A	4%	5%	7%	8%	9%
B	5%	6%	8%	10%	11%
C	8%	9%	11%	13%	15%
D	4%	5%	7%	8%	9%

MACHINE GROUP	SUNDAY HOURS				
	9	12	16	20	24
A	5%	7%	9%	11%	12%
B	6%	8%	10%	12%	14%
C	9%	11%	14%	16%	18%
D	5%	7%	9%	11%	12%

*9 consecutive hours any part of which is outside the hours of 7:00 a.m. to 6:00 p.m.
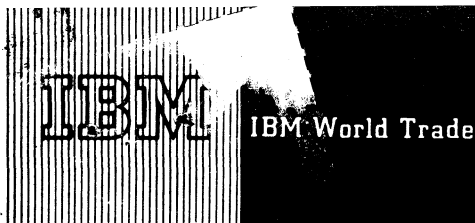
Product Announcement

SYSTEM/360 MODEL 195 ENHANCEMENTS

The System/360 Model 195, the first of IBM's new price/performance systems for the 1970s, is being enhanced today in many ways. These enhancements make IBM's top performance system even more attractive as the system of the future for your largest commercial, scientific, and interactive customers.

Highlights ...

. New intermediate storage Model KJ
. New high performance disk storage and printer
. New programming function and performance
. New one-year warranty
. New maintenance category
. Redesignation of CPU components to 3000 series.

KJ Model ... The addition of the 3,145,728 byte KJ model now provides Model 195 Processing Unit availability in memory sizes of approximately one, two, three and four million bytes.

The interleaving in the KJ storage will be a combination of 16-way and 8-way interleaving. The first two million bytes of storage will be 16-way interleaved; the third million bytes of storage will be 8-way interleaved. Code which goes beyond the first two million bytes of storage into the third million may experience a slight degradation in performance.

Delivery ... The first customer shipment of KJ storage on the Model 195 will begin in September 1971, and field conversion will begin in January 1972.

Prices ...

Model	MAC	Purchase	MMMC
J	$ 96,800	$ 4,266,000	$ 12,735
K	127,800	5,766,000	13,485
(NEW) KJ	148,800	6,800,000	14,300
L	167,800	7,766,000	14,985

Model Changes are field installable
Rental Plan: "A" (10%)   Purchase Option: 50%
Warranty: Category A (one year)   Maintenance: D
Metering: Base Unit (meter on 3060)   Per Call: 3

DP Sales Compensation Plan ... Out-of-territory quota point credit is increased to 75,000 points for all 195 processing unit models, effective June 30, 1970.

I/O ... Faster data rates and I/O capacities coupled with the Model 195's I/O bandwidth, the broadest of any IBM system, provide high levels of I/O concurrency and data rate to balance the internal power of the processing unit. (See DP Letter 70-312.)

. The 3330 Disk Storage subsystem provides 30 ms average access time, up to 800 million bytes per facility, 806,000 bytes per second data rate, and Rotational Position Sensing.

. The 3211 Printer has a speed of 2000 lines per minute using a standard 48 character set and up to 2500 lines per minute with reduced or customized character sets.

Programming ... Programming performance and functional improvements include:

. Extended precision divide (See P70-69).
. FORTRAN H and PL/I compiler and library support of extended precision (See P70-69A).
. MVT support of the 2305 now includes TSO, ISAM, and RPS support of JOBQUE (P70-69).
. OS MVT support of the 3330 and 3211 (P70-69).

3000 Series ... The System/360 Model 195 CPU components have been redesignated as follows:

New		Previous
3195	Processing Unit	2195
3060	System Console	2160
3080	Power Unit	2180
3085	Power Distribution Unit	2185
3086	Coolant Distribution Unit	2186

The Model 195 retains its S/360 designation to describe its instruction set. It is unique from the rest of S/360 primarily in price/performance, a factor that places the 195 at the top of all IBM systems. To achieve the design goals of performance and reliability, the 195 and newly announced S/370 utilize the same circuit technology and general system organization. The CPU components of these systems are numbered in the 3000 series to identify the new price/performance, technology, and maintenance programs.

See reverse side for more information.

John Fahey
WTC Director of DP Marketing

Attachments [8] :   Machines 2150-2152, 2305, 2835, 2860, 2880, 3060-3085, 3195 and 10000.62

Distribution: Australia, Canada, New Zealand, South Africa and Selected European Countries

Maintenance Group ... The new Maintenance Group D provides reduced charges for additional or off-hour maintenance agreement coverage of the 3195. The 3060, 3080, 3085, and 3086 remain in Maintenance Group A.

Warranty ... The 3195 and 3060 are now covered under the new one year service and parts warranty category A. The 3080, 3085, and 3086 are now covered under a new three month warranty category B. (See DP Letter 70-308 for further details.)

Action Required ... No branch office action is required. New DPMOs will be handled by the Country Sales Order Control departments.

NOTE: There are no changes in the System Type, Product Line and Product Category Codes.

DRAFT.

IBM SYSTEM/370 -- POWERFUL NEW COMPUTING SYSTEM

The IBM System/370 -- extends System/360 architecture and adds the benefits of newer technology to provide improved processing and price/performance while recognizing the continuing need for compatibility.

The System/370 Models 155 and 165 are two new extremely attractive systems for medium and large scale users of data processing equipment. The highlights are:

. Large processor storage at low cost increments
. Faster internal performance
. Greater channel capabilities
. Integrated emulation
. Reliability, availability, serviceability features

. OS (MFT/MVT for the 155 and 165) and DOS (for the 155) extended for systems support
. New devices with faster data rates, larger capacities and greater print speed
. One Year Warranty

Transition to System/370 can be accomplished with a minimum of effort because most I/O equipment, user programs and programming systems can be used on the Models 155 and 165 without reprogramming. The Systems Section of the Sales Manual covers exceptions.

The System/370 155 and 165 have other new features. These include:

. "Time of Day" Clock
. Extended Precision Floating Point
. New Instructions

. Byte Boundary Alignment
. More Precise Interval Timer

New business practices apply to this announcement.

Sales Manual pages are being released with this announcement.

Model 155 ... A powerful new System/370 Model 155 is being added to IBM's product line. It offers ... internal speed of about 3½ to 4 times the System/360 Model 50 ... large storage sizes of up to 2 million bytes ... more, faster, new channel capabilities ... 1401, 1440, 1460, 1410, 7010 integrated emulation ... execution of DOS programs under OS control ... attachment of new high-speed I/O devices.

Model 165 ... Large scale scientific and commercial users can achieve substantial throughput gains using IBM's new System/370 Model 165. With an internal power 2 to 5 times that of the System/360 Model 65, it provides fast access through buffered storage using highly efficient algorithms, and concurrent operation. The 165 provides integrated emulation of the 7070, 7080 and 7090.

Director of DP Marketing

Distribution: Selected European Countries, South Africa, Australia, New Zealand and Canada.

System/370 Model 155 provides a new dimension in throughput. It offers:

Large Storage

The System/370 Model 155 offers a wide range of storage sizes. They are available in the following increments:

Processor Model	Attachable Storage
H	256K
HG	384K
I	512K
IH	768K
J	1,024K
JI	1,536K
K	2,048K

Internal Performance

The instruction/execution rate for most instruction streams is in a range of approximately 3½ to 4 times that of the System/360 Model 50. There are several reasons for this:

1. The processor storage of the Model 155 is one part of a two level memory system. The other part is a very high-speed monolithic buffer storage that has an access time of 230 nanoseconds for four bytes. Since data being accessed by the CPU is found in high-speed buffer storage most of the time, the effective time to process data is dramatically reduced.
2. Instruction processing performance has been improved because instruction fetching has been overlapped with instruction execution.
3. The cycle time of the system is 115 nanoseconds due to the use of high-speed monolithic circuits.

The actual rate measured in a particular case will vary depending on the operating system, the language being used, and the nature of the problem program. Due to the buffer feature, any task switching will cause a small degradation in the instruction execution rate. The table below shows the instruction execution rates for a selection of job step types. These rates include the effects of task switching and are based on a combination of measured runs and simulation.

Instruction/Execution Rate X
The System/360 Model 50 (with Task Switching)

System Jobsteps

FORTRAN Compile	3.8
COBOL F Compile	3.7
Linkage Editor	3.6
PL/1 Compile	3.7
Assembler F	3.6
Sort (Tape Support)	3.9
Sort (Disk Support)	3.7

Jobstreams

Scientific Production 1	4.0
Scientific Production 2	3.7
Scientific Production 3	3.8
Commercial Production 1	3.7
Commercial Production 2	3.6
Scientific/Commercial Production 1	3.5

The measurements were made under the following run conditions:

1. Operating Systems were OS MFT Release 17 and OS MVT Release 18.

2. The scientific production jobstreams utilized FORTRAN G.

3. The commercial production jobstreams consisted of COBOL F, Assembler F, OS Sort, file maintenance, input editing, mathematical calculations, and report generation.

Channels

The channels of the Model 155 offer many advantages over those of other systems in this price class. There are faster channels, more channels, and a new channel concept called block multiplexing. A maximum of six channels is available.

Block Multiplexer Channels

Data is transferred between main storage and the channels at the rate of 16 bytes in a 2.1-microsecond cycle. The aggregate data rate is about 4 times that of the Model 50. An individual channel can sustain a data rate in excess of 1.5 million bytes/second. This is one of the reasons higher speed I/O devices can be used with the Model 155. Two block multiplexer channels are standard and are included in the price of the main system. Three more may be added.

These channels can also operate in selector channel mode. In this mode their operation is functionally the same as System/360 selector channels.

The advantages of block multiplexing are that it reduces the number of channel programs that have to be initiated, frees channels, and permits disk channel programs to be initiated on block multiplexer channels sooner than is possible with selector channels. To the user this means more efficient use of channel time and increased systems throughput.

Byte-Multiplexer Channels

One Byte-Multiplexer Channel is standard and is included in the price of the system. A second channel may be added in place of the fourth block multiplexer channel. This channel is functionally

compatible with System/360 byte-multiplexer channels.

Integrated Emulation

On the Model 155 you may emulate 1401, 1440, 1460, 1410 and 7010 under OS (MFT and MVT) or DOS, and only one compatibility feature is necessary to emulate all of these 1400-7010 programs.

DOS to OS Transition

On the Model 155, there is a special feature that allows DOS programs to run under OS (MFT and MVT) control. This is a significant aid to an installation converting from DOS to OS.

System Consoles

Two new Console Printer-Keyboards are available for the Model 155. The 3215 is a new high-speed matrix printer-keyboard operating at 85 characters per second and the 3210, a newly designed unit which operates at 15 characters per second. In addition to the main console, the Model 155 can have a remote 3210 Console.

Reliability, Availability, Serviceability

OS (MFT and MVT) and DOS will be extended to enhance reliability, availability and serviceability. This support described in P70XX requires additional Processor and Direct Access Storage.

The Model 155 offers:

CPU Retry
Error Checking and Correction Code
Channel Retry
Expanded Machine Check

I/O Devices

Faster data rates and larger capacities for I/O devices are required to balance the internal power of the Model 155.

- The 3330 Disk Storage (with 3830 Storage Control) with faster access time, higher data rate and larger capacity.
- The 2305 Fixed Head Storage Facility - Model 2 with a data rate of 1.5 million bytes per second and a capacity of 11.2 million bytes.
- The 3211 Printer with a speed of 2000 lines per minute using a standard 48-character set.

All three units will be supported by OS (MFT and MVT), and the 3211 will also be supported by DOS.

Most current I/O devices on the S/360 Models 40, 50, and 65 are supported on the Model 155.

Program Test Allowance ... Program Test Allowances are covered in the Sales Manual GI Section 25.

Installation Programs ... All proposals for the IBM System/370 Model 155 must be reviewed prior to submission. The Model 155 will be on the Country Installation Programs Designated List. See Sales Manual GI Section 4.

Programming Support ... The Model 155 is supported with OS/360 (MFT and MVT) and DOS. See P70XX for details.

Delivery ... System/370 Model 155 shipments will start in Poughkeepsie in February 1971, in Montpellier in April 1971 and Fujisawa in July 1971. See P70-XX for programming support delivery and 270-XX for I/O deliveries for tie-in.

Demonstration Capability ... Available now in Poughkeepsie, and La Gaude. Additional facilities will be announced in the third and fourth quarter of 1970.

RPQs ... Attachment RPQs will be accepted immediately. Other RPQs will be accepted beginning September 30, 1970. Response time and delivery will depend upon the complexity of the request.

SE Skill Classifications .. Systems Engineering Services related to the IBM System/370 Model 155 are available at the General Skill Classification Rate or at a higher rate as determined by the Systems Operating Environment. See Sales Manual SE Section 2.

Orders and Movements Codes ... Product Category 78
DPL Code 2
Systems Type 3855

Sales Compensation Plan ... The standard provisions of the DP Sales Plan apply. The point values assigned for On Schedule Installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

Schedule A - On Schedule Installation

Machine Type	Points
3155	15,000
3360-1 (256K)	2,000
3360-2 (384K)	2,500
3360-3 (512K)	4,500

Schedule B - Out-of-Territory

Machine Type	Points
3155	20,000

Educational Allowance ... The Educational Allowance stated below applies to the MAC and Purchase Price only and does not apply to the MMMC.

Prices ...

Model	MAC	Purchase	MMMC
3155 Processing Unit H	$19,425	$932,400	$2,160
HG	19,450	933,600	2,160
I	19,475	934,800	2,160
IH	19,950	957,600	2,170
J	20,000	960,000	2,170
JI	21,675	1,040,400	2,240
K	22,200	1,065,600	2,250

Rental Plan:	A (10%)	Purchase Option:	55%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Rate:	3	Warranty Plan:	A

Model Changes are Field Installable.

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Channel-to-Channel Adapter	1850	$370	$12,950	$12	PCR
Direct Control	3274	105	3,150	2	PCR
Emergency Power-Off Control · For 2 switches	3621	NC	NC	NC	PCR
· For up to 12 switches	3622	NC	NC	NC	PCR
1401/40/60, 1410/7010 Compatibility	3950	420	16,800	19	PCR
Second Byte Multiplexer Channel	4990	395	13,825	14	PCR
Block Multiplexer Channel Third	1433	395	13,825	14	PCR
Fourth	1434	370	12,950	12	PCR
Fifth	1435	185	6,475	6	PCR
Extended Precision Flt. Pt.	3700	185	8,880	19	PCR
3210-1 Adapter	7844	160	7,680	10	PCR
3210-2 Adapter	7845	180	8,640	10	PCR
3215 Adapter	7855	210	10,080	10	PCR
OS/DOS Compatibility	5450	265	10,600	20	PCR

	Mdl.	Capacity	MAC	Purchase	MMMC
3360 Processor Storage	1	256K	$3,150	$138,600	$290
	2	384K	4,725	207,900	435
	3	512K	6,300	277,200	580

Rental Plan:	A (10%)	Purchase Option:	65%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Rate:	3	Warranty Plan:	A

Model Changes are not recommended for Field Installation.

Processor Storage Combinations ...

Processing Units require the following specific processor storage models to configure the system. Models cannot be used other than stated on the following chart:

CPU Model	Capacity	Quantity Model 1	Quantity Model 2	Quantity Model 3
H	256K	1		
HG	384K		1	
I	512K			1
IH	768K	1		1
J	1024K			2
JI	1536K			3
K	2048K			4

Systems Consoles ...

	Model	MAC	Purchase	MMMC
3210 Console Printer/Keyboard	1	$185	$5,920	$85
	2	190	6,080	90

Rental Plan:	B (none)	Purchase Option:	35%
Educational Allowance:	10%	Maintenance Category:	C
Per Call Rate:	3	Warranty Plan:	B

Model Changes are not recommended for Field Installation.

	Model	MAC	Purchase	MMMC
3215 Console Printer/Keyboard	1	$ 210	$ 8,400	$ 55

Rental Plan:	B (none)	Purchase Option:	40%
Education Allowance:	10%	Maintenance Category:	A
Per Call Rate:	3	Warranty Plan:	B

Minimum System Requirements ... Described in Sales Manual Pages.

SYSTEM/370 MODEL 165

The System/370 Model 165 is significantly more powerful than its System/360 Model 65 predecessor, and provides a throughput and internal performance improvement over the Model 75, due to ultra-high-speed buffer storage and a high degree of concurrency in operation.

Highlights of System/370 Model 165 include:

FAST INTERNAL PERFORMANCE

Two to five times the System/360 Model 65 provided by:

. New high-speed monolithic circuits operating at 80 nanoseconds for handling processor functions and controlling channel operations.
. A high-speed buffer storage between the CPU and main memory which also operates at 80 nanoseconds.
. More overlapping of operations in the instruction and execution units than on the System/360 Models 65 or 75.

THE MEMORY SYSTEM

The System/370 Model 165 has a two-level memory system. It consists of a 4-way double-word interleaved processor storage with a 2-microsecond cycle time and a very high speed buffer storage with an 80-nanosecond cycle time. The use of interleaving and the two-level storage system greatly reduces the effective cycle of the Model 165, and further accounts for the high internal performance.

STORAGE

Processor storage is available in the following increments:

Processor Model	Attachable Storage
I	512K
J	1,024K
JI	1,536K
K	2,048K
KJ	3,072K

Processor Storage Interleaving

Processor storage is divided into four logical memories to achieve four-way interleaving. A logical memory is that portion of processor storage which can operate independently from all other processor storage.

Four consecutively addressed double-words are spread across logical memories so that 32 consecutive bytes can be accessed almost simultaneously.

Processor Storage Reconfiguration

The user has the ability through the storage reconfiguration plugboard to remove one or more processor storage boxes from the system and reconfigure the remaining boxes to achieve consecutive storage addressing. Four-way interleaving will be maintained if the remaining storage consists of an even number of boxes, but this is reduced to 2-way if an odd number of boxes remains.

Error Checking and Correction (ECC)

The ECC facility automatically detects and corrects all single-bit processor storage errors and detects but does not correct, all double-bit and most multiple-bit errors.

HIGH-SPEED BUFFER

The second element of the Model 165's two-level memory system is the high-speed buffer storage unit. Depending on the buffer option selected (8K is standard, with 16K as an optional feature), this unit automatically retains instructions, and data previously transferred from processor storage.

The CPU can obtain eight bytes from the buffer in two cycles or 160 nanoseconds, and a request can be initiated every cycle. This compares with 1.44 microseconds (or 18 cycles) required to obtain eight bytes directly from main storage. Buffer operation is handled entirely by hardware and is transparent to the programmer who need not adhere to any particular program structure in order to achieve close to optimum use of the buffer.

HIGH-SPEED MULTIPLY OPTION

The High-Speed Multiply feature substantially enhances internal performance on both the fixed and floating-point multiply operations. With this feature multiplication execution increases in speed by a factor of two to three times.

7074/7080/7094 COMPATIBILITY OPTIONS

The Model 165 has, as optional features, 7070, 7080, or 7090 series compatibility. These features work in conjunction with OS (MFT and MVT) integrated emulators, and operate at the following approximate internal speeds (the speed of performing the emulated instructions weighted by frequency of use):

709/7090/7094/7094 II at 1.5 times 7094 II
7070/7074 at 3 times 7074
7080 at 2 times 7080

CHANNELS

The Model 165 can achieve an aggregate channel data rate in excess of 8 million bytes per second, approximately twice the rate possible on a System/360 Model 65, using combinations of the 2860 Selector Channel, 2870 Multiplexer Channel, and the 2880 Block Multiplexer Channel. Up to seven addressable channels are permitted on the standard Model 165, and up to twelve channels are permitted with the Additional Channels Special Feature. The maximum number of each type of channel that can be included is:

2860 Selector Channels - 6
2870 Multiplexer Channels - 2
2880 Block Multiplexer Channels - 11

The 2880 can operate either as a selector or a block multiplexer channel.

I/O DEVICES

Faster data rates and larger capacities for I/O devices which are required to balance the internal power of the Model 165.

. The 3330 Disk Storage (with 3820 Storage Control) with faster access time, higher data rate and larger capacity.
. The 2305 Fixed Head Storage Facility - Model 1 with a data rate of 3 million bytes per second and a capacity of 5.4 million bytes.
. The 2305 Fixed Head Storage Facility - Model 2 with a data rate of 1½ million bytes per second and a capacity of 11.2 million bytes.
. The 3211 Printer with a speed of 2000 lines per minute using a 48-character set in nine equal arrays.

All four units will be supported by OS (MFT and MVT).

THE SYSTEM CONSOLE

Basic to the System/370 Model 165 is a stand-alone system console which incorporates several advanced features, including a cathode ray tube with a 4K buffer and keyboard, a microfiche projection display, a microfiche document viewer, a main storage reconfiguration plugboard, a system activity monitor, and a read-only direct access device called the console file.

OPERATIONAL FLEXIBILITY

Rapid installation of new applications is allowed by eliminating the need for major conversion efforts to use the Model 165.

. Upward compatibility with S/360 models and programs
. Integrated emulators providing concurrent operation of native-mode and 7000 series jobs
. Reliability, availability, and serviceability features implemented in hardware and programming systems. OS (MVT and MFT) will be extended to provide this support. This support is described in P70-XX and requires additional Processor and Direct Access Storage.

Program Test Allowance ... Program Test Allowances are covered in the Sales Manual General Information Section 25.

Installation Programs ... All proposals for the IBM System/370 Model 165 must be reviewed prior to submission. The Model 165 will be on the Country Installation Programs Designated List. See Sales Manual General Information Section 4.

Programming Support ... Programming support will be OS/360 (MFT and MVT). See P70-XX for details.

Delivery ... Customer shipment will start in July 1971 for 50 and 60 cycle systems from Kingston, New York and October 1971 from Havant, England.

Demonstration/Benchmark Facilities ... will be available beginning in December 1970 at the WT Systems Center in Poughkeepsie.

RPQs ... Attachment RPQs will be accepted immediately. Other RPQs will be accepted beginning September 30, 1970. Response time and delivery will depend upon the complexity of the request.

SE Skill Classification ... Systems Engineering Services related to the IBM System/370 Model 165 are available at the Complex Skill Classification Rate. See Sales Manual SE Section 2.

Orders and Movements Codes ... Product Category 83
DPL Code 3
System Type 3865

Sales Compensation Plan ... The standard provisions of the DP Sales Plan apply. The point values assigned for On Schedule Installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

Schedule A - On Schedule Installation

Machine Type	Points
3165	30,000
3360-4	2,000
3360-5	4,500
2880	2,000

Schedule B - Out-of-Territory

Machine Type	Points
3165	35,000

In addition, Out-of-Territory Points for the following systems have been revised as follows:

Machine Type	Points
2067	35,000
2085	45,000
3195	75,000

Educational Allowance ... The Educational Allowance stated below applies to the MAC and Purchase Price only and does not apply to the MMMC.

Prices ...

	Model	MAC	Purchase	MMMC
3165 Processing Unit	I	$34,000	$1,632,000	$3,960
	J	34,100	1,636,800	3,970
	JI	34,500	1,656,000	4,000
	K	34,800	1,670,400	4,050
	KJ	35,800	1,718,400	4,150

Rental Plan:	A (10%)	Purchase Option:		55%
Education Allowance:	10%	Maintenance Category:		D
Per Call Class:	3	Warranty Plan:		A

Model changes are Field Installable.

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Buffer Expansion	1432	$1,550	$74,400	$ 75	PCR
High Speed Multiply	4520	2,675	128,400	150	PO
Extended Channels	3850	465	22,320	90	PCR
7070/7074 Compatibility	7117	3,000	144,000	250	PO
7080 Compatibility	7118	3,000	144,000	250	PO
709/7090/ 7094/7094 II Compatibility	7119	3,000	144,000	250	PO

	Model	MAC	Purchase	MMMC
3066 System Console	1	$3,200	$153,600	$460

Rental Plan:	A (10%)	Purchase Option:		55%
Educational Allowance:	10%	Maintenance Category:		D
Per Call Class:	3	Warranty Plan:		A

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Emergency Power-Off Control					
· For 2 switches	3621	NC	NC	NC	PCR
· For up to 12 switches	3622	NC	NC	NC	PCR

	Model	MAC	Purchase	MMMC
3067 Power and Coolant Distribution Unit	1	$2,375	$114,000	$ 110

Rental Plan:	A (10%)	Purchase Option:		55%
Educational Allowance:	10%	Maintenance Category:		A
Per Call Class:	3	Warranty Plan:		B

	Mdl.	Capacity	MAC	Purchase	MMMC
3360 Processor Storage	4	256K	$3,150	$138,600	$ 290
	5	512K	6,300	277,200	580

Rental Plan:	A (10%)	Purchase Option:		65%
Educational Allowance:	10%	Maintenance Category:		D
Per Call Class:	3	Warranty Plan:		A

Model changes not recommended for field installation.

Processor Storage Combinations ... Processing units require the following specific Processor Storage models to configure the system. Models cannot be used other than stated on the following chart:

CPU Model	Capacity	Quantity Model 4	Quantity Model 5
I	512K	2	
J	1024K		2
JI	1536K	2	2
K	2043K		4
KJ	3072K		6

Minimum System Requirements ... Described in Sales Manual Pages.

Motor Generator Set ... One is required for each system. These units are not manufactured by IBM and are available on a purchase basis only. Manufacturers warranty will be extended to the purchaser. Installation check-out and maintenance will not be provided by IBM and any expenses involved must be borne by the customer. Contact your installation planning representative and see System/370 Installation Planning Manual, GA22-6971 for installation requirements.

	Feature	Purchase	
· 200/208/230V, AC 60 cycle	9447	$ 15,750	Purchase Only
· 460V, AC 60 cycle	9449	15,750	Purchase Only
· 200/220/235V, AC 50 cycle	2933	15,750	Purchase Only
· 380/408V, AC 50 cycle	2934	15,750	Purchase Only

Publications Support ... Various publications have been made available to support System/370 announcement activities. These provide information for product familiarization and educational purposes, and marketing and technical data pertinent to the System. In addition, there are several planning and installing aids. These publications and their supply sources are categorized by use key indicating availability status outside IBM. For detailed use key information, refer to Sales Manual, General Information Section 13. Other System/370 publications in process of development will be distributed when released. Initial quantities will be distributed through DP Automatic Publications Service (DAPS) and announced in the weekly Publications Release Letter.

SYSTEM/370 ANNOUNCEMENT PUBLICATIONS

SRL MACHINES MANUAL

GA19-0038	Physical Planning for Mdl 155 (50Hz)
GA19-0039	Physical Planning for Mdl 165 (50Hz)
GA22-6935	/370 Mdl 165 Functional Characteristics
GA22-6942	/370 Mdl 155 Functional Characteristics
GA22-6962	/370 Mdl 155 Channel Characteristics
GA22-6970	/370 Mdl 155 Physical Planning Installation Information
GA22-6971	/370 Mdl 165 Physical Planning Installation Information
GA22-7000	/370 Principles of Operation
GA24-3543	3211 Printer Keyboard Component Descrip.
GA24-3550	3215 Printer Keyboard Component Descrip.
GA24-3552	3210 Printer Keyboard Component Descrip.
GA26-1592	3330 Disk Storage
GA26-1589	2305/2385 Component Summary

SRL PROGRAM MANUALS

GC20-1729	/370 Mdl 155 Planning Guide
GC20-1730	/370 Mdl 165 Planning Guide
GC21-5008	2311 OS Reference Manual
GC24-5076	DOS Emulator
GC24-5084	DOS MCAR/CCH Function Mdl 155
GC24-5085	DOS 3211 Planning Guide
GC27-6945	OS/370 Emulator Mdl 155, 1401/40/60
GC27-6946	OS/370 Emulator Mdl 155, 1410/7010
GC27-6948	DOS Emulator 7070 Mdl 165
GC27-6951	DOS Emulator 7090 Mdl 165
GC27-6952	DOS Emulator 7080 Mdl 165
GC33-2004	DOS/370 Emulator Mdl 155, 1401/40/60
GC33-2005	DOS/370 Emulator Mdl 155, 1410
GC33-4015	/370 Mdl 155 Sort/Merge Planning

PROMOTIONAL MATERIAL

G520-2258	/370 Mdl 155 Brochures
G520-2274	/370 Mdl 165 Brochures
G520-2311	3211 Brochure Printer
G520-2312	2305/3330 Brochure
GV20-0248	/370 Mdl 155 Slides & Script
GV20-0249	/370 Mdl 165 Slides & Script
GV20-0250	/370 Announcement Slides & Script
GV20-4650	/370 Announcement Movie

PROPOSAL INSERTS

G221-0544	/370 Mdl 165 Prop. Insert
G221-0545	/370 Mdl 155 Prop. Insert
G221-0547	3330 Prop. Insert
G221-0558	3211 Printer Prop. Insert
G221-0559	3336 Prop. Insert
G221-2174	2305 Prop. Insert

FACT FOLDERS

G520-2358-00	/370 Mdl 155 Fact Folder
G520-2359-00	/370 Mdl 165 Fact Folder

GENERAL PROMOTIONAL BROCHURES ORIGINATED BY WTC

—	German - dist. to Austria, Switz., Netherlands
—	UK - Ireland, South Africa
—	France - Belgium, Switzerland, Spain, Italy
—	Sweden - Norway, Denmark, Finland

PUBLICATIONS AVAILABLE AFTER ANNOUNCEMENT

SRL MACHINES MANUAL

GA22-6955	S/370 Mdl 165 709/7090/7094/7095-II Compatibility Feature
GA22-6956	S/370 Mdl 165 System Configurator
GA22-6957	S/370 System Configurator
GA22-6958	S/370 Mdl 165 7070/7094 Compatibility Feature
GA22-6963	S/370 Mdl 165 7080 Compatibility Feature
GA22-6964	S/370 Mdl 155 1401/1440/1460/1410/7010 Compatibility Feature
GA22-6965	S/370 Mdl 155 OS/DOS Compatibility Feature
GA22-6966	S/370 Mdl 155 Operating Procedures
GA22-6967	S/370 Mdl 155 Component Description Remote Console-Printer Keyboard
GA22-6969	S/370 Mdl 165 Operating Procedures
GA22-6972	S/370 I/O Configurator
GA24-3488	3211 Forms Design

SRL PROGRAM MANUALS

GC24-3414	Assembler Specifications Mdl 155
GC24-5082	DOS-OS Implementation Guide
GC24-6820	3211 Installation Manual - Physical Planning
GA26-5756	2316, 1316, 2315, 3336 Operating Procedure
GY26-3642	Assembler Mdl 155

Letter No. 70-2XX
June 30, 1970

INTRODUCING NEW AND POWERFUL I/O

THE 3330: FOR MASSIVE DATA BASES UP TO 800 MILLION BYTES

IBM's 3330 is a modular, large capacity, high-performance subsystem for use with System/370 and System/360 - Models 85 and 195.

3330 Disk Storage ...

* 200 million, 400 million, 600 million or 800 million bytes in a single facility

* 806,000 bytes per second data rate (2½ times the 2314)

* 30 millisecond average access time (half the 2314 access time)

* Two disk drives in each 3330 module

* Each module designed for convenience and ease of pack exchange

* Each module individually metered.

3336 Disk Pack ...

* Pack interchangeable on any 3330 drive

* Up to 100 million bytes of storage per pack (over three times that of the 2316 pack).

3830 Storage Control ...

* Can attach and control up to four 3330 modules (eight drives)

* Rotational position sensing increases channel availability

* Multiple requesting enhances device overlap

* Extensive error detection and correction capabilities for improved reliability and data integrity.

Prices ...

A maximum-sized 3330 facility(Control without Switch, 8 drives, exclusive of Disk Packs), rents for $7,880, sells for $370,360 and has an MMMC of $970.

THE 3211 PRINTER: IBM's FASTEST EVER –

The IBM 3211 is a new train printer in the 2,000 lines a minute range, maintaining high print quality.

Highlights ...

* Speed ... 2,000 lpm using a standard 48-character set in nine equal arrays ... 2,500 lpm can be attained with reduced or customized type arrays.

* Standard universal character set feature ... permits maximum flexibility in train arrangement.

* Three new features to assist the operator: a tapeless carriage to eliminate carriage control tape changes, a powered stacker, and a platen which automatically positions itself according to the thickness of the forms being used.

* Compatibility ... attaches to System/370 and most models of System/360.

* Wider print line ... 150 print position available as an option.

* More and better retry and recovery procedures.

3811 Control Unit ... One for each printer.

3216 Train Cartridge ... Used in the 3211.

2821 Control Unit Model 6 ... A new unit to control 2540 Card Read Punch when used in Systems with the 3211.

Prices ... The 3211 rents for $1750, sells for $84,000 and has a MMMC of $380. The 3811 rents for S790, sells for $37,920 and has a MMMC charge of S120. The 3216 rents for $360, sells for $11,880 and has a MMMC of $170.

Director of DP Marketing

New business practices apply to this announcement.

For more details on these new products, refer to succeeding pages.

FOR IBM INTERNAL USE ONLY

Distribution: Selected European Countries, South Africa, Australia, New Zealand and Canada

New 3330 Facility Provides Large Capacity, High Performance

Highlights ...

. **3330 Disk Storage** ... a single module containing two independent disk storage drives, each mounted in a powered drawer for operator convenience and ease of pack exchange ... each drive has a high-speed electromagnetic actuator to move and control the head assembly ... average access time is 30 ms. Each 3330 provides up to 200 million bytes of on-line storage on its two drives, using 3336 packs.

. **3336 Disk Pack** ... a new pack for use on the 3330 ... is interchangeable on any 3330 drive ... provides up to 100 million bytes of data storage per pack.

. **3830 Storage Control** ... will attach and control up to four 3330 Disk Storage units (eight drives) ... New functions include rotational position sensing, which increases channel availability by releasing the channel during most of the record search time ... Multiple requesting permits up to eight (one per disk drive) channel command sequences to be active in the facility, which provides overlapped latency on multiple devices within the subsystem ... Data integrity is improved by extensive error detection and correction capabilities ... Command retry enhances error recovery by permitting the channel and control unit to retry operations without CPU program intervention ... The 3830 contains a device which loads storage control programs and non-resident diagnostic programs ... Modifications to the control program or diagnostics will be distributed on prerecorded magnetic disk cartridges ... Two channel switch is an optional special feature and field installable.

Specifications ...

. On-line capacity-(eight drive
   facility; to nearest thousand bytes)146,000
Track Capacity (max bytes) 13,030
Cylinder capacity (max bytes; 247,570
   19 tracks)
Pack capacity (max bytes to 100,018,000
   nearest thousand; 404 cylinders)

. Access time (ms)
   average random 30
   maximum 55
   cylinder to cylinder (avg.) 10

. Rotational speed (rpm) 3,600

. Rotational period (ms) 16.67

. Data rate (bytes/sec) 806,000

Prices ...

	Rental (MAC)	Purchase	MMMC	FIC
3330 Disk Storage (2 drives)	$ 1,340	$62,980	$ 200	–
3830 Storage Control	2,520	118,440	170	–
2-channel switch feature 8170	210	9,870	10	PCR

3330/3830

Rental Plan: A (10%)	Purchase Option: 60%
Education Allowance: 10%	Maintenance Category: A
Per Call Class: 3	Warranty Plan: B

	Rental (MAC)	Purchase	MMMC
3336 Disk Pack	(Purchase Only)	$ 1,050	Time and Materials

Education Allowance: 10%
Per Call Class: 3   Warranty Plan: B

NOTE: *Information and prices on a 3336 Disk Pack Repair Service will be available prior to first customer shipment.*

3330 Facility Prices ...

(Storage Control and Disk Storage; exclusive of Disk Packers; no two channel switch)

	Rental (MAC)	Purchase	MMMC
2 Drives (200 MB)	$ 3,860	$ 181,420	$ 370
4 Drives (400 MB)	5,200	244,400	570
6 Drives (600 MB)	6,540	307,380	770
8 Drives (800 MB)	7,880	370,360	970

System/Product Category Codes ...

System	System Type Code	Product Category	DPL Code
S/360 Model 85	3685	87	3
S/360 Model 195	3695	84	3
S/370 Model 155	3855	78	2
S/370 Model 165	3865	83	3

Limitations ... The 3830 requires a control unit position on a 2880 Block Multiplexer Channel (System/360-85, 195, System/370-165), or an integrated block multiplexer channel (System/370-155). Up to four 3330s may be attached to the 3830.

Delivery ... First customer shipment of 60 Hertz 3330 facilities will begin in August 1971. First customer shipments of 50 Hertz 3330 facilities will begin in November 1971. First customer shipments of the 3336 Disk Pack will begin in August 1971. The published delivery schedule will be available in 120 days. No delivery commitments are to be made to customers until schedules are received in the branch office.

Manufacturing Source ...

50 Hertz 3330/3830: Mainz, Germany
60 Hertz 3330/3830: San Jose, California, U.S.A.
3336: Sindelfingen, Germany

NOTE: *In July 1972, Fujisawa, Japan, will become an additional manufacturing source for both 50 and 60 Hertz 3330s and 3830s.*

Plant of Control ...

3330/3830: Plant of control for the attaching system
3336: Sindelfingen

RPQs ... May be submitted immediately. Processing will begin 120 days after this announcement. Response will be within 65 days. Earliest RPQ shipment will be six months after the first 3330/3830 customer shipment.

Programming ... Support for the 3330 will be provided at first customer shipment by OS MFT and MVT. Support will consist of OS DASD data management access methods, systems residence and utilities. Language processor support is obtained from access method usage. Rotational Position Sensing (RPS) and multiple requesting functions will be included in the basic support. TCAM and TSO Swap support will be provided without RPS. See Programming Announcement Letter P70-XXX for additional details. Sort/Merge will be provided at first customer shipment as an IBM Program Product and includes RPS support. See Program Product Announcement Letter P70-XX for additional details.

Publications ... Available from the IBM Distribution Center, Mechanicsburg: 3330/3830 Component Summary SRL, GA26-1592; 3330/2305 Brochure, G520-2312-0; 3330/3830 Proposal Insert, G221-0547-0; and, 3336 Proposal Insert, G221-0559-0. SRL GA26-5756 will be updated to include component distribution information for the 3336 Disk Pack.

DP Sales Compensation Plan ... The standard provisions apply to the 3330, 3336 and 3830. (The 3336 is purchase only and the plan provides a 1% commission on such items.) The point values assigned for both On Schedule Installation (OSI, Schedule A) and Out-of-Territory (Schedule B) are as follows:

Unit	OSI Points	Out-of-Territory Points
3330	1300	300
3830	2500	3500

Program Test Allowance ... Pre-installation program test allowances will be as follows:

3330 Disk Storage	
First group (1-2 modules)	5 hours
Second group (3-4 modules)	5 hours
3830 Storage Control	5 hours

DP Installation Program Review ... The 3330/3830 will be on the Country Installation Programs Designated List. See Sales Manual General Information Section 4.

Systems Engineering Services ... Identified with and related to the installation and use of the IBM 3330 and 3380 are available for a charge at the applicable Skill Classification rate as determined by the host system or its System Operating Environment (See Sales Manual SE Section 2 for details).

Ordering Instructions ... See Sales Manual pages attached.

3211 Printer, Associated Products, Powerful Additions to System/370

The 3211 Printer is capable of speeds at 2000 lpm using nine arrays of the standard 48 characters. The printer and control units can be installed on System/360 Models 30, 40, 50, 65, 67 Model 1 (in Model 65 mode), 75, 85, 91, 195, and System/370 Models 155 and 165. The universal character set is standard; therefore, the speed obtained on a particular job will depend upon the train used, the frequency of the array and the frequency of the characters within the array. This presents an extension in obtaining the maximum printer throughput. Speeds of 2,500 lpm can be attained with reduced or customized type arrays.

The 3211 has (as standard) 132 print positions, however, 18 additional print positions are available as an optional feature. The 3216 interchangeable Train Cartridge has 432 characters. It is removable by the operator. With the universal character set as standard, this allows the customer a selection in print train configurations to maximize throughput and application versatility.

3811 Control Unit ... The logic, buffers and control of the 3211 and its associated 3216 are contained in the 3811 Control Unit. Each 3211 requires one 3811. The forms control buffer is standard, thus eliminating the need for a carriage control tape.

2821 Control Unit Model 6 ... The 3211 Printer and its 3811 control unit make it desirable to supply the customer with a control unit associated with a single 2540 Card Reader Punch. The 2821 Model 6 will control one 2540 and furnish all the features currently available on this type control unit. Presently installed 2821 Model 1s may be field converted to Model 6s.

RPQs ... These will be accepted immediately. Response time may require 120 days. Delivery will be a minimum of 120 days after first customer shipment of the 3211 with actual date dependent on the complexity of RPQ.

RPQs also will be accepted for the System/360 Model 44 for attachment to the 3811 and 3211.

Publications Support ... The following may be ordered from the IBM Distribution Center, Mechanicsburg: 3211/3811 Component Description Manual (GH24-3543); 3211 Forms Design (GA24-3488); Installation Manual - Physical Planning (GC24-6820); OS: Planning for the 3211 (GC21-5008; DOS: 3211 Planning Guide (GC24-5085).

Also, the following promotional material is available: 3211 General Brochure (G520-2311-0) and Proposal Insert (G221-0558-0).

Delivery ... First customer shipments of 3211 and related products will be December 1971 for 60 Hertz units from Endicott, N.Y. and February 1972 for 50 Hertz units from Vallingby, Sweden. The plant of control will be the plant of control of the attaching system.

The published delivery schedule will be available in 90 days. No delivery commitments are to be made to customers until schedules are received in the branch office.

Sales Compensation Plan ... Normal provisions apply. The point value for On Schedule Installation (OSI), Schedule A is as follows:

Unit	Points
3211	2,000

Systems Engineering Services ... The Services identified with and related to the installation and use of the 3211 and 2821 are available for a charge at the applicable skill classification rate as determined by the host system or its System Operating Environment (See Sales Manual SE Section 2 for details).

Program Test Allowance ... 2 hours.

Programming Support ... See P70-XX for 3211 Programming Systems Support.

Prices ...

	MAC	Purchase	MMMC
3211-1 Printer	$ 1750	$ 84,000	$ 380
3811-1 Control Unit	790	37,920	120
3216-1 Inter. Train Cart.	360	11,880	170
2821-6 Control Unit	465	15,810	90

Features ...

	Number	MAC	Purchase	MMMC	FIC
For 3211 18 Additional Print Positions	5554	$57	$2,736	$8	PCR
For 3811 18 Additional Print Positions	5553	20	960	5	PCR

	Number	MAC	Purchase
Type Catalog Substitute Character			
Artwork per Char.	9950	–	$139
Matrix per element	9951	–	165
Set up per element	9952	–	41
Field Installation			
First Assembly	8481	109SUC	109
Each Additional (at same time)	8482	105SUC	105

Rental Plan: A (10%) for 3211, 3811, 2821
Rental Plan: B (none) for 3216
Purchase Option:　3211 - 40%　3811 - 45%
　　　　　　　　　3216 - 30%　2821 - 55%
Educational Allowance: 10%
Maintenance Category:　A - 3811
　　　　　　　　　　　B - 3211, 3216, 2821
Per Call Class: 3　　Warranty Plan B

PROGRAM PRODUCT ANNOUNCEMENT

A BROAD RANGE OF NEW PROGRAM PRODUCTS AND EXTENSION FOR S/360 AND S/370 ARE BEING ANNOUNCED. THESE INCLUDE IMPORTANT FUNCTIONAL AND/OR PERFORMANCE IMPROVEMENTS OVER CURRENT PROGRAMS OR METHODS.

The new program products are highlighted below. Each S/360 and S/370 customer should be interested in several. Make sure that every S/370 sales effort includes a proposal for program products.

• • •

PL/I

The new PL/I Optimizing Compiler offers major execution speed improvements for OS and DOS customer. It supports the full OS F-level language plus new features. Debugging aids and compilation speed are improved and communications with FORTRAN and COBOL are provided. The S/370 and S/360 Models 85 and 195 Extended Precision feature is supported by the OS version.

COBOL

Version 3 ANS Full COBOL for OS and DOS retains all features of previous versions and includes such new functions as ASCII support, a sorted cross-reference listing and flow trace facilities. Version 3 should be proposed to all users of Version 1, 2 or COBOL F.

FORTRAN

OS FORTRAN IV (H Extended) supports the S/370 and S/360 Models 85 and 195 Extended Precision Floating Point feature. It furnishes FORTRAN users with ... increased floating point precision ... expanded control and performance improvements in input/output operations ... and an automatic precision increase feature which aids in FORTRAN conversion and simplifies the coding task.

Sort

The new OS Sort/Merge "OS-SM1" runs faster and provides more functions and is compatible with 360S-SM-023. OS-SM1 supports the new 3330 DASD and ASCII. All customers who require these features or who sort more than 10 hours a month on disk are prime prospects.

ASCII

Extensive program product support of the American Standard Code for Information Interchange provides data interchange capability between systems. ASCII has been adopted as an American National standard.

Data Base/Data Communications

Information Management System/360 Version 2 is a major new program to build, maintain and access medium to large data bases under OS. IMS/360 allows both on-line message and conventional batch processing separately or concurrently. Version 2 will support the new 3330 DASD. This program product provides the means for gathering and exchanging information throughout your customer's environment.

Data Entry

DATA/360-OS is IBM's latest on-line data entry program product. it supports one to forty-eight 2260 display stations which makes possible reduced data entry costs, improved management control of data entry activities and increased operator productivity.

Simulation

GPSS V - OS and DOS are easy to use and easy to understand tools for modeling and examining the behavior of systems in the areas of engineering and management planning. GPSS V offers important new features such as the expanded use of auxiliary storage which removes restrictions on model size and an automatic cross-referencing dictionary for all symbolic entities. Compatibility with earlier GPSS/360 programs is maintained.

Compatibility

In addition to the program products announced today, all of those previously announced for OS and DOS will be supported on S/370 with the exception noted below. They will run on S/370 without user modification. (This support will enable current S/360 program product users to migrate to S/370 with a minimum of effort.)

The S/370 configuration must be compatible to that of the S/360 for which the programs were announced. Specifically, the S/370 will require the same I/O devices required to run these programs on S/360

or comparable S/370 devices used in accordance with the compatibility considerations specified for those devices (for example, operating procedures are different than for the 1403 since the 3211 has a tapeless carriage; the users randomizing routines for the 2314 will not automatically take full advantage of the track capacity of the 3330 disk storage facility.) Total core requirements on S/370 could vary from those required on S/360 according to the operating system used.

(Note: The OS Array Processing Subroutines, 5736-P72 are not supported. The 2938 Array Processor requires an RPQ for attachment to S/360. See the S/370 announcement (270-XX) for information on the submission of RPQs.)

Assembler

Assembler H will include support for the new machine instructions of System/370 Models 155 and 165 with the first maintenance release in February 1971.

In addition to the new machine instructions, Assembler H will also support both the 2305 and the 3330 and allows their use as its single intermediate workfile. Assembler H operates on any System/370 model supported by OS/360 MFT or MVT providing that it meets the minimum machine configuration required for Assembler H as described in the sales manual. This program product provides significant enhanced performance as compared to IBM's other Assemblers. Availability is planned for February 1971.

Other Information

Monthly charges for previously announced program products remain unchanged.

Additional information is contained in the sales manual and letter, P70-XX.

Program Product Design Objectives for each program product are available from Mechanicsburg; each branch office has been sent a limited supply.

SE Skill Classifications ... SE Services, identified with and related to the installation and use of these Program Products follow new business practices.

Program Product Use During Customer Pre-Installation Testing ... Refer to individual letters for availability.

John Fahey
WTC Director of Marketing

IBM SYSTEM/370 – POWERFUL NEW COMPUTING SYSTEM

The IBM System/370 – extends System/360 architecture and adds the benefits of newer technology to provide improved processing and price/performance while recognizing the continuing need for compatibility.

The System/370 Models 155 and 165 are two new, extremely attractive systems for medium and large scale users of data processing equipment. The highlights are:

- Large processor storage at low cost increments
- Faster internal performance
- Greater channel capabilities
- Integrated emulation
- Reliability, availability, serviceability features

- OS (MFT/MVT for the 155 and 165) and DOS (for the 155) extended for systems support
- New devices with faster data rates, larger capacities and greater print speed
- One Year Warranty

Transition to System/370 can be accomplished with a minimum of effort because most I/O equipment, user programs and programming systems can be used on the Models 155 and 165 without reprogramming. The Systems Section of the Sales Manual covers exceptions.

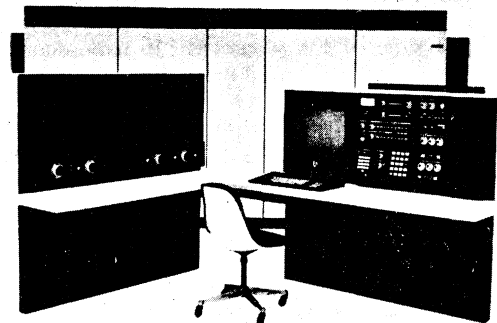**The System/370 Models 155 and 165 have other new features. These include:**

- **"Time of Day" Clock**
- **Extended Precision Floating Point**
- **New Instructions**

- **Byte Boundary Alignment**
- **More Precise Interval Timer**

New business practices apply to this announcement.

Sales Manual pages are being released with this announcement.

Model 155 ... A powerful new System/370 Model 155 is being added to IBM's product line. It offers ... internal speed of about 3½ to 4 times the System/360 Model 50 ... large storage sizes of up to 2 million bytes ... more, faster, new channel capabilities ... 1401, 1440, 1460, 1410, 7010 integrated emulation ... execution of most DOS programs under OS control ... attachment of new high-speed I/O devices.

Model 165 ... Large scale scientific and commercial users can achieve substantial throughput gains using IBM's new System/370 Model 165. With an internal power 2 to 5 times that of the System/360 Model 65, it provides fast access through buffered storage using highly efficient algorithms, and concurrent operation. The 165 provides integrated emulation of the 7070, 7080 and 7090.

John Fahey
WTC Director of DP Marketing

FOR IBM INTERNAL USE ONLY

Attachments [7] :   [1 thru 3] Machines 3155.1, 3165.1, 3360 ...[4 thru 7] Systems 370.1, 370.3, 370.5, 370.7

Distribution: Australia, Canada, New Zealand, South Africa and Selected European Countries

SYSTEM/370 MODEL 155

System/370 Model 155 provides a new dimension in throughput. It offers:

Large Storage

The System/370 Model 155 offers a wide range of storage sizes. They are available in the following increments:

Processor Model	Attachable Storage
H	256K
HG	384K
I	512K
IH	768K
J	1,024K
JI	1,536K
K	2,048K

Internal Performance

The instruction/execution rate for most instruction streams is in a range of approximately 3½ to 4 times that of the System/360 Model 50. There are several reasons for this:

1. The processor storage of the Model 155 is one part of a two level memory system. The other part is a very high-speed monolithic buffer storage that has an access time of 230 nanoseconds for four bytes. Since data being accessed by the CPU is found in high-speed buffer storage most of the time, the effective time to process data is dramatically reduced.
2. Instruction processing performance has been improved because instruction fetching has been overlapped with instruction execution.
3. The cycle time of the system is 115 nanoseconds due to the use of high-speed monolithic circuits.

The actual rate measured in a particular case will vary depending on the operating system, the language being used, and the nature of the problem program. Due to the buffer feature, any task switching will cause a small degradation in the instruction execution rate. The table below shows the instruction execution rates for a selection of job step types. These rates include the effects of task switching and are based on a combination of measured runs and simulation.

Instruction/Execution Rate X
The System/360 Model 50 (with Task Switching)

System Jobsteps

FORTRAN Compile	3.8
COBOL F Compile	3.7
Linkage Editor	3.6
PL/1 Compile	3.7
Assembler F	3.6
Sort (Tape Support)	3.9
Sort (Disk Support)	3.7

Jobstreams

Scientific Production 1	4.0
Scientific Production 2	3.7
Scientific Production 3	3.8
Commercial Production 1	3.7
Commercial Production 2	3.6
Scientific/Commerical Production 1	3.5

The measurements were made under the following run conditions:

1. Operating Systems were OS MFT Release 17 and OS MVT Release 18.

2. The scientific production jobstreams utilized FORTRAN G.

3. The commercial production jobstreams consisted of COBOL F, Assembler F, OS Sort, file maintenance, input editing, mathematical calculations, and report generation.

Channels

The channels of the Model 155 offer many advantages over those of other systems in this price class. There are faster channels, more channels, and a new channel concept called block multiplexing. A maximum of six channels is available.

Block Multiplexer Channels

Data is transferred between main storage and the channels at the rate of 16 bytes in a 2.1-microsecond cycle. The aggregate data rate is about 4 times that of the Model 50. An individual channel can sustain a data rate in excess of 1.5 million bytes/second. This is one of the reasons higher speed I/O devices can be used with the Model 155. Two block multiplexer channels are standard and are included in the price of the main system. Three more may be added.

These channels can also operate in selector channel mode. In this mode their operation is functionally the same as System/360 selector channels.

The advantages of block multiplexing are that it reduces the number of channel programs that have to be initiated, frees channels, and permits disk channel programs to be initiated on block multiplexer channels sooner than is possible with selector channels. To the user this means more efficient use of channel time and increased systems throughput.

Byte-Multiplexer Channels

One Byte-Multiplexer Channel is standard and is included in the price of the system. A second channel may be added in place of the fourth block multiplexer channel. This channel is functionally

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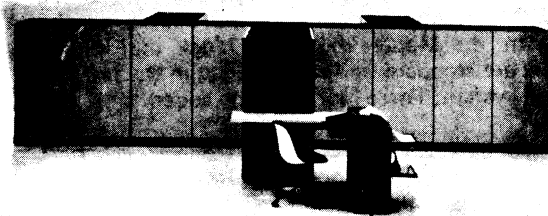. One Year Warranty

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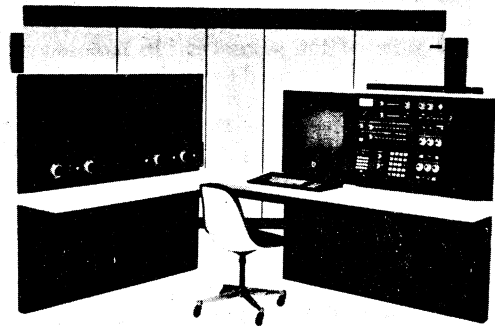**The System/370 Models 155 and 165 have other new features. These include:**

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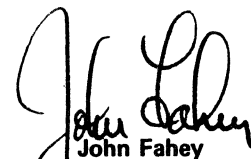New business practices apply to this announcement.

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The advantages of block multiplexing are that it reduces the number of channel programs that have to be initiated, frees channels, and permits disk channel programs to be initiated on block multiplexer channels sooner than is possible with selector channels. To the user this means more efficient use of channel time and increased systems throughput.

Byte-Multiplexer Channels

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compatible with System/360 byte-multiplexer channels.

Integrated Emulation

On the Model 155 you may emulate 1401, 1440, 1460, 1410 and 7010 under OS (MFT and MVT) or DOS, and only one compatibility feature is necessary to emulate all of these 1400-7010 programs.

DOS to OS Transition

On the Model 155, there is a special feature that allows DOS programs to run under OS (MFT and MVT) control. This is a significant aid to an installation converting from DOS to OS.

System Consoles

Two new Console Printer-Keyboards are available for the Model 155. The 3215 is a new high-speed matrix printer-keyboard operating at 85 characters per second and the 3210, a newly designed unit which operates at 15 characters per second. In addition to the main console, the Model 155 can have a remote 3210 Console.

Reliability, Availability, Serviceability

OS (MFT and MVT) and DOS will be extended to enhance reliability, availability and serviceability. This support described in P70-69 requires additional Processor and Direct Access Storage.

The Model 155 offers:

CPU Retry
Error Checking and Correction Code
Channel Retry
Expanded Machine Check

I/O Devices

Faster data rates and larger capacities for I/O devices are required to balance the internal power of the Model 155.

. The 3330 Disk Storage (with 3830 Storage Control) with faster access time, higher data rate and larger capacity.
. The 2305 Fixed Head Storage Facility - Model 2 with a data rate of 1.5 million bytes per second and a capacity of 11.2 million bytes.
. The 3211 Printer with a speed of 2000 lines per minute using a standard 48-character set.

All three units will be supported by OS (MFT and MVT), and the 3211 will also be supported by DOS.

Most current I/O devices on the S/360 Models 40, 50, and 65 are supported on the Model 155.

Program Test Allowance ... Program Test Allowances are covered in the Sales Manual GI Section 25.

Installation Programs ... All proposals for the IBM System/370 Model 155 must be reviewed prior to submission. The Model 155 will be on the Country Installation Programs Designated List. See Sales Manual GI Section 4.

Programming Support ... The Model 155 is supported with OS/360 (MFT and MVT) and DOS. See P70-69 for details.

Delivery ... System/370 Model 155 shipments will start in Poughkeepsie in February 1971, in Montpellier in April 1971 and Fujisawa in July 1971. See P70-69 for programming support delivery and 70-312 for I/O deliveries for tie-in.

Orders involving multiple units of one type are subject to an extension of schedules. Prior to delivery commitment to customer, confirmation of shipping schedule must be received by Branch Office.

Demonstration Capability ... Available now in Poughkeepsie, and La Gaude. Additional facilities will be announced in the third and fourth quarter of 1970.

RPQs ... Attachment RPQs will be accepted immediately. Other RPQs will be accepted beginning September 30, 1970. Response time and delivery will depend upon the complexity of the request.

SE Skill Classifications .. Systems Engineering Services related to the IBM System/370 Model 155 are available at the General Skill Classification Rate or at a higher rate as determined by the Systems Operating Environment. See Sales Manual SE Section 2.

Orders and Movements Codes ... Product Category 78
DPL Code 2
Systems Type 3855

Sales Compensation Plan ... The standard provisions of the DP Sales Plan apply. The point values assigned for On Schedule Installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

Schedule A - On Schedule Installation

Machine Type	Points
3155	15,000
3360-1 (256K)	2,000
3360-2 (384K)	2,500
3360-3 (512K)	4,500

Schedule B - Out-of-Territory

Machine Type	Points
3155	20,000

Educational Allowance ... The Educational Allowance stated below applies to the MAC and Purchase Price only and does not apply to the MMMC.

Prices ...

Model	MAC	Purchase	MMMC
3155 Processing Unit			
H	$19,425	$932,400	$2,160
HG	19,450	933,600	2,160
I	19,475	934,800	2,160
IH	19,950	957,600	2,170
J	20,000	960,000	2,170
JI	21,675	1,040,400	2,240
K	22,200	1,065,600	2,250

Rental Plan:	A (10%)	Purchase Option:	55%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Rate:	3	Warranty Plan:	A

Model Changes are Field Installable.

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Channel-to-Channel Adapter	1850	$370	$12,950	$12	PCR
Direct Control	3274	105	3,150	2	PCR
Emergency Power-Off Control					
· For 2 switches	3621	NC	NC	NC	PCR
· For up to 12 switches	3622	NC	NC	NC	PCR
1401/40/60, 1410/7010 Compatibility	3950	420	16,800	19	PCR
Second Byte Multiplexer Channel	4990	395	13,825	14	PCR
Block Multiplexer Channel					
Third	1433	395	13,825	14	PCR
Fourth	1434	370	12,950	12	PCR
Fifth	1435	185	6,475	6	PCR
Extended Precision Flt. Pt.	3700	185	8,880	19	PCR
3210-1 Adapter	7844	160	7,680	10	PCR
3210-2 Adapter	7845	180	8,640	10	PCR
3215 Adapter	7855	210	10,680	10	PCR
OS/DOS Compatibility	5450	265	10,600	20	PCR

	Mdl.	Capacity	MAC	Purchase	MMMC
3360 Processor Storage	1	256K	$3,150	$138,600	$290
	2	384K	4,725	207,900	435
	3	512K	6,300	277,200	580

Rental Plan:	A (10%)	Purchase Option:	65%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Rate:	3	Warranty Plan:	A

Model Changes are not recommended for Field Installation.

Processor Storage Combinations ...

Processing Units require the following specific processor storage models to configure the system. Models cannot be used other than stated on the following chart:

CPU Model	Capacity	Quantity Model 1	Quantity Model 2	Quantity Model 3
H	256K	1		
HG	384K		1	
I	512K			1
IH	768K	1		1
J	1024K			2
JI	1536K			3
K	2048K			4

System Consoles ...

	Model	MAC	Purchase	MMMC
3210 Console Printer/Keyboard	1	$185	$5,920	$85
	2	190	6,080	90

Rental Plan:	B (none)	Purchase Option:	35%
Educational Allowance:	10%	Maintenance Category:	C
Per Call Rate:	3	Warranty Plan:	B

Model Changes are not recommended for Field Installation.

	Model	MAC	Purchase	MMMC
3215 Console Printer/Keyboard	1	$ 210	$ 8,400	$ 55

Rental Plan:	B (none)	Purchase Option:	40%
Education Allowance:	10%	Maintenance Category:	A
Per Call Rate:	3	Warranty Plan:	B

Minimum System Requirements ... Described in Sales Manual Pages.

SYSTEM/370 MODEL 165

The System/370 Model 165 is significantly more powerful than its System/360 Model 65 predecessor, and provides a throughput and internal performance improvement over the Model 75, due to ultra-high-speed buffer storage and a high degree of concurrency in operation.

Highlights of System/370 Model 165 include:

FAST INTERNAL PERFORMANCE

Two to five times the System/360 Model 65 provided by:

. New high-speed monolithic circuits operating at 80 nanoseconds for handling processor functions and controlling channel operations.
. A high-speed buffer storage between the CPU and main memory which also operates at 80 nanoseconds.
. More overlapping of operations in the instruction and execution units than on the System/360 Models 65 or 75.

THE MEMORY SYSTEM

The System/370 Model 165 has a two-level memory system. It consists of a 4-way double-word interleaved processor storage with a 2-microsecond cycle time and a very high speed buffer storage with an 80-nanosecond cycle time. The use of interleaving and the two-level storage system greatly reduces the effective cycle of the Model 165, and further accounts for the high internal performance.

STORAGE

Processor storage is available in the following increments:

Processor Model	Attachable Storage
I	512K
J	1,024K
JI	1,536K
K	2,048K
KJ	3,072K

Processor Storage Interleaving

Processor storage is divided into four logical memories to achieve four-way interleaving. A logical memory is that portion of processor storage which can operate independently from all other processor storage.

Four consecutively addressed double-words are spread across logical memories so that 32 consecutive bytes can be accessed almost simultaneously.

Processor Storage Reconfiguration

The user has the ability through the storage reconfiguration plugboard to remove one or more processor storage boxes from the system and reconfigure the remaining boxes to achieve consecutive storage addressing. Four-way interleaving will be maintained if the remaining storage consists of an even number of boxes, but this is reduced to 2-way if an odd number of boxes remains.

Error Checking and Correction (ECC)

The ECC facility automatically detects and corrects all single-bit processor storage errors and detects but does not correct, all double-bit and most multiple-bit errors.

HIGH-SPEED BUFFER

The second element of the Model 165's two-level memory system is the high-speed buffer storage unit. Depending on the buffer option selected (8K is standard, with 16K as an optional feature), this unit automatically retains instructions, and data previously transferred from processor storage.

The CPU can obtain eight bytes from the buffer in two cycles or 160 nanoseconds, and a request can be initiated every cycle. This compares with 1.44 microseconds (or 18 cycles) required to obtain eight bytes directly from main storage. Buffer operation is handled entirely by hardware and is transparent to the programmer who need not adhere to any particular program structure in order to achieve close to optimum use of the buffer.

HIGH-SPEED MULTIPLY OPTION

The High-Speed Multiply feature substantially enhances internal performance on both the fixed and floating-point multiply operations. With this feature multiplication execution increases in speed by a factor of two to three times.

7074/7080/7094 COMPATIBILITY OPTIONS

The Model 165 has, as optional features, 7070, 7080, or 7090 series compatibility. These features work in conjunction with OS (MFT and MVT) integrated emulators, and operate at the following approximate internal speeds (the speed of performing the emulated instructions weighted by frequency of use):

709/7090/7094/7094 II at 1.5 times 7094 II
7070/7074 at 3 times 7074
7080 at 2 times 7080

CHANNELS

The Model 165 can achieve an aggregate channel data rate in excess of 8 million bytes per second, approximately twice the rate possible on a System/360 Model 65, using combinations of the 2860 Selector Channel, 2870 Multiplexer Channel, and the 2880 Block Multiplexer Channel. Up to seven addressable channels are permitted on the standard Model 165, and up to twelve channels are permitted with the Additional Channels Special Feature. The maximum number of each type of channel that can be included is:

2860 Selector Channels - 6
2870 Multiplexer Channels - 2
2880 Block Multiplexer Channels - 11

The 2880 can operate either as a selector or a block multiplexer channel.

I/O DEVICES

Faster data rates and larger capacities for I/O devices which are required to balance the internal power of the Model 165.

. The 3330 Disk Storage (with 3830 Storage Control) with faster access time, higher data rate and larger capacity.
. The 2305 Fixed Head Storage Facility - Model 1 with a data rate of 3 million bytes per second and a capacity of 5.4 million bytes.
. The 2305 Fixed Head Storage Facility - Model 2 with a data rate of 1½ million bytes per second and a capacity of 11.2 million bytes.
. The 3211 Printer with a speed of 2000 lines per minute using a 48-character set in nine equal arrays.

All four units will be supported by OS (MFT and MVT).

THE SYSTEM CONSOLE

Basic to the System/370 Model 165 is a stand-alone system console which incorporates several advanced features, including a cathode ray tube with a 4K buffer and keyboard, a microfiche projection display, a microfiche document viewer, a main storage reconfiguration plugboard, a system activity monitor, and a read-only direct access device called the console file.

OPERATIONAL FLEXIBILITY

Rapid installation of new applications is allowed by eliminating the need for major conversion efforts to use the Model 165.

. Upward compatibility with S/360 models and programs
. Integrated emulators providing concurrent operation of native-mode and 7000 series jobs
. Reliability, availability, and serviceability features implemented in hardware and programming systems. OS (MVT and MFT) will be extended to provide this support. This support is described in P70-69 and requires additional Processor and Direct Access Storage.

Program Test Allowance ... Program Test Allowances are covered in the Sales Manual General Information Section 25.

Installation Programs ... All proposals for the IBM System/370 Model 165 must be reviewed prior to submission. The Model 165 will be on the Country Installation Programs Designated List. See Sales Manual General Information Section 4.

Programming Support ... Programming support will be OS/360 (MFT and MVT). See P70-69 for details.

Delivery ... Customer shipments will start in July 1971 for 50 and 60 cycle systems from Kingston, New York and October 1971 from Havant, England.

Orders involving multiple units of one type are subject to an extension of schedules. Prior to delivery commitment to customer, confirmation of shipping schedule must be received by Branch Office.

Demonstration/Benchmark Facilities ... will be available beginning in December 1970 at the WT Systems Center in Poughkeepsie.

RPQs ... Attachment RPQs will be accepted immediately. Other RPQs will be accepted beginning September 30, 1970. Response time and delivery will depend upon the complexity of the request.

SE Skill Classification ... Systems Engineering Services related to the IBM System/370 Model 165 are available at the Complex Skill Classification Rate. See Sales Manual SE Section 2.

Orders and Movements Codes ... Product Category 83
DPL Code 3
System Type 3865

Sales Compensation Plan ... The standard provisions of the DP Sales Plan apply. The point values assigned for On Schedule Installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

Schedule A - On Schedule Installation

Machine Type	Points
3165	30,000
3360-4	2,000
3360-5	4,500
2880	2,000

Schedule B - Out-of-Territory

Machine Type	Points
3165	35,000

In addition, Out-of-Territory Points for the following systems have been revised as follows:

Machine Type	Points
2067	35,000
2085	45,000
3195	75,000

Educational Allowance ... The Educational Allowance stated below applies to the MAC and Purchase Price only and does not apply to the MMMC.

Prices ...

	Model	MAC	Purchase	MMMC
3165 Pro- cessing Unit	I	$34,000	$1,632,000	$3,960
	J	34,100	1,636,800	3,970
	JI	34,500	1,656,000	4,000
	K	34,800	1,670,400	4,050
	KJ	35,800	1,718,400	4,150

Rental Plan:	A (10%)	Purchase Option:	55%
Education Allowance:	10%	Maintenance Category:	D
Per Call Class:	3	Warranty Plan:	A

Model changes are Field Installable.

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Buffer Expansion	1432	$1,550	$74,400	$ 75	PCR
High Speed Multiply	4520	2,675	128,400	150	PO
Extended Channels	3850	465	22,320	90	PCR
7070/7074 Compatibility	7117	3,000	144,000	250	PO
7080 Com- patibility	7118	3,000	144,000	250	PO
709/7090/ 7094/7094 II Compatibility	7119	3,000	144,000	250	PO

	Model	MAC	Purchase	MMMC
3066 System Console	1	$3,200	$153,600	$460

Rental Plan:	A (10%)	Purchase Option:	55%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Class:	3	Warranty Plan:	A

Features ...

	Feature	MAC	Purchase	MMMC	FIC
Emergency Power-Off Control					
· For 2 switches	3621	NC	NC	NC	PCR
· For up to 12 switches	3622	NC	NC	NC	PCR

	Model	MAC	Purchase	MMMC
3067 Power and Coolant Distribution Unit	1	$2,375	$114,000	$ 110

Rental Plan:	A (10%)	Purchase Option:	55%
Educational Allowance:	10%	Maintenance Category:	A
Per Call Class:	3	Warranty Plan:	B

	Mdl.	Capacity	MAC	Purchase	MMMC
3360 Pro- cessor Storage	4	256K	$3,150	$138,600	$ 290
	5	512K	6,300	277,200	580

Rental Plan:	A (10%)	Purchase Option:	65%
Educational Allowance:	10%	Maintenance Category:	D
Per Call Class:	3	Warranty Plan:	A

Model changes not recommended for field installation.

Processor Storage Combinations ... Processing units require the following specific Processor Storage models to configure the system. Models cannot be used other than stated on the following chart:

CPU Model	Capacity	Quantity Model 4	Quantity Model 5
I	512K	2	
J	1024K		2
JI	1536K	2	2
K	2048K		4
KJ	3072K		6

Minimum System Requirements ... Described in Sales Manual Pages.

Motor Generator Set ... One is required for each system. These units are not manufactured by IBM and are available on a purchase basis only. Manufacturers warranty will be extended to the purchaser. Installation check-out and maintenance will not be provided by IBM and any expenses involved must be borne by the customer. Contact your installation planning representative and see System/370 Installation Planning Manual, GA22-6971 for installation requirements.

	Feature	Purchase	
· 200/208/230V, AC 60 cycle	9447	$ 15,750	Purchase Only
· 460V, AC 60 cycle	9449	15,750	Purchase Only
· 200/220/235V, AC 50 cycle	2933	15,750	Purchase Only
· 380/408V, AC 50 cycle	2934	15,750	Purchase Only

Publications Support ... Various publications have been made available to support System/370 announcement activities. These provide information for product familiarization and educational purposes, and marketing and technical data pertinent to the System. In addition, there are several planning and installing aids. These publications and their supply sources are categorized by use key indicating availability status outside IBM. For detailed use key information, refer to Sales Manual, General Information Section 13. Other System/370 publications in process of development will be distributed when released. Initial quantities will be distributed through DP Automatic Publications Service (DAPS) and announced in the weekly Publications Release Letter.

SYSTEM/370 ANNOUNCEMENT PUBLICATIONS

SRL MACHINES MANUAL

GA19-0038	Physical Planning for Mdl 155 (50Hz)
GA19-0039	Physical Planning for Mdl 165 (50Hz)
GA22-6935	S/370 Mdl 165 Functional Characteristics
GA22-6942	S/370 Mdl 155 Functional Characteristics
GA22-6962	S/370 Mdl 155 Channel Characteristics
GA22-6970	S/370 Mdl 155 Physical Planning Installation Information
GA22-6971	S/370 Mdl 165 Physical Planning Installation Information
GA22-7000	S/370 Principles of Operation
GA24-3543	3211 Printer Keyboard Component Descrip.
GA24-3550	3215 Printer Keyboard Component Descrip.
GA24-3552	3210 Printer Keyboard Component Descrip.
GA26-1592	3330 Disk Storage
GA26-1589	2305/2385 Component Summary

SRL PROGRAM MANUALS

GC20-1729	S/370 Mdl 155 Planning Guide
GC20-1730	S/370 Mdl 165 Planning Guide
GC21-5008	2311 OS Reference Manual
GC24-5076	DOS Emulator Mdl 155
GC24-5084	DOS MCAR/CCH Function Mdl 155
GC24-5085	DOS 3211 Planning Guide
GC27-6945	OS/370 Emulator Mdl 155, 1401/40/60
GC27-6946	OS/370 Emulator Mdl 155, 1410/7010
GC27-6948	OS Emulator 7070 Mdl 165
GC27-6951	OS Emulator 7090 Mdl 165
GC27-6952	OS Emulator 7080 Mdl 165
GC33-2004	DOS/370 Emulator Mdl 155, 1401/40/60
GC33-2005	DOS/370 Emulator Mdl 155, 1410
GC33-4015	S/370 Mdl 155 Sort/Merge Planning

PROMOTIONAL MATERIAL

G520-2258	S/370 Mdl 155 Brochures
G520-2274	S/370 Mdl 165 Brochures
G520-2311	3211 Brochure Printer
G520-2312	2305/3330 Brochure
GV20-0248	S/370 Mdl 155 Slides & Script
GV20-0249	S/370 Mdl 165 Slides & Script
GV20-0250	S/370 Announcement Slides & Script
GV20-4650	S/370 Announcement Movie

PROPOSAL INSERTS

G221-0544	S/370 Mdl 165 Prop. Insert
G221-0545	S/370 Mdl 155 Prop. Insert
G221-0547	3330 Prop. Insert
G221-0558	3211 Printer Prop. Insert
G221-0559	3336 Prop. Insert
G221-2174	2305 Prop. Insert

FACTS FOLDERS

G520-2358	S/370 Mdl 155 Facts Folder
G520-2359	S/370 Mdl 165 Facts Folder

GENERAL PROMOTIONAL BROCHURES ORIGINATED BY WTC

—	German - dist. to Austria, Switz., Netherlands
—	UK - Ireland, South Africa
—	France - Belgium, Switzerland, Spain, Italy
—	Sweden - Norway, Denmark, Finland

PUBLICATIONS AVAILABLE AFTER ANNOUNCEMENT

SRL MACHINES MANUAL

GA22-6955	S/370 Mdl 165 709/7090/7094/7095-II Compatibility Feature
GA22-6956	S/370 Mdl 165 System Configurator
GA22-6957	S/370 System Configurator
GA22-6958	S/370 Mdl 165 7070/7094 Compatibility Feature
GA22-6963	S/370 Mdl 165 7080 Compatibility Feature
GA22-6964	S/370 Mdl 155 1401/1440/1460/1410/7010 Compatibility Feature
GA22-6965	S/370 Mdl 155 OS/DOS Compatibility Feature
GA22-6966	S/370 Mdl 155 Operating Procedures
GA22-6967	S/370 Mdl 155 Component Description Remote Console-Printer Keyboard
GA22-6969	S/370 Mdl 165 Operating Procedures
GA22-6972	S/370 I/O Configurator
GA24-3488	3211 Forms Design

SRL PROGRAM MANUALS

GC24-3414	Assembler Specifications Mdl 155
GC24-5082	DOS-OS Implementation Guide
GC24-6820	3211 Installation Manual - Physical Planning
GA26-5756	2316, 1316, 2315, 3336 Operating Procedure
GY26-3642	Assembler Mdl 155

INTRODUCING NEW AND POWERFUL I/O

THE 3330: FOR MASSIVE DATA BASES UP TO 800 MILLION BYTES

IBM's 3330 is a modular, large capacity, high-performance subsystem for use with System/370 and System/360 - Models 85 and 195.

3330 Disk Storage ...

* 200 million, 400 million, 600 million or 800 million bytes in a single facility

* 806,000 bytes per second data rate (2½ times the 2314)

* 30 millisecond average access time (half the 2314 access time)

* Two disk drives in each 3330 module

* Each module designed for convenience and ease of pack exchange

* Each module individually metered.

3336 Disk Pack ...

* Pack interchangeable on any 3330 drive

* Up to 100 million bytes of storage per pack (over three times that of the 2316 pack).

3830 Storage Control ...

* Can attach and control up to four 3330 modules (eight drives)

* Rotational Position Sensing increases channel availability

* Multiple Requesting enhances device overlap

* Extensive error detection and correction capabilities for improved reliability and data integrity.

Prices ...

A full 3330 facility (including a 3830 and four 3330s) rents for $7,880, sells for $370,360 and has an MMMC of $970.

THE 3211 PRINTER: IBM's FASTEST EVER –

The IBM 3211 is a new train printer in the 2,000 lines a minute range, maintaining high print quality.

Highlights ...

* Speed ... 2,000 lpm using a standard 48-character set in nine equal arrays ... 2,500 lpm can be attained with reduced or customized type arrays.

* Standard universal character set feature ... permits maximum flexibility in train arrangement.

* Three new features to assist the operator: a tapeless carriage to eliminate carriage control tape changes, a powered stacker, and a platen which automatically positions itself according to the thickness of the forms being used.

* Compatibility ... attaches to System/370 and most models of System/360.

* Wider print line ... 150 print position available as an option.

* More and better retry and recovery procedures.

3811 Control Unit ... One for each printer.

3216 Train Cartridge ... Used in the 3211.

2821 Control Unit Model 6 ... A new unit to control 2540 Card Read Punch when used in Systems with the 3211.

Prices ... The 3211 rents for $1750, sells for $84,000 and has a MMMC of $380. The 3811 rents for $790, sells for $37,920 and has a MMMC charge of $120. The 3216 rents for $360, sells for $11,880 and has a MMMC of $170.

John Fahey
WTC Director of DP Marketing

New business practices apply to this announcement.

For more details on these new products, refer to succeeding pages.

FOR IBM INTERNAL USE ONLY

Attachments [3] :   Machines 3210-3211, 3330-3336, and 3811-3830

Distribution: Australia, Canada, New Zealand, South Africa and Selected European Countries

New 3330 Facility Provides Large Capacity, High Performance

Highlights ...

. **3330 Disk Storage** ... a single module containing two independent disk storage drives, each mounted in a powered drawer for operator convenience and ease of pack exchange ... each drive has a high-speed electromagnetic actuator to move and control the head assembly ... average access time is 30 ms. Each 3330 provides up to 200 million bytes of on-line storage on its two drives, using 3336 packs.

. **3336 Disk Pack** ... a new pack for use on the 3330 ... is interchangeable on any 3330 drive ... provides up to 100 million bytes of data storage per pack.

. **3830 Storage Control** ... will attach and control up to four 3330 Disk Storage units (eight drives) ... New functions include Rotational Position Sensing, which increases channel availability by releasing the channel during most of the record search time ... Multiple Requesting permits up to eight (one per disk drive) channel command sequences to be active in the facility, which provides overlapped latency on multiple devices within the subsystem ... Data integrity is improved by extensive error detection and correction capabilities ... Command retry enhances error recovery by permitting the channel and control unit to retry operations without CPU program intervention ... The 3830 contains a device which loads storage control programs and non-resident diagnostic programs ... Modifications to these control programs or diagnostics will be distributed on prerecorded magnetic disk cartridges which will reside on this device ... Two channel switch is an optional special feature and is field installable.

Specifications ...

. On-line capacity-(eight drive facility; to nearest thousand bytes)	800,146,000
Track Capcity (max bytes)	13,030
Cylinder capacity (max bytes; 19 tracks)	247,570
Pack capacity (max bytes to nearest thousand; 404 cylinders)	100,018,000
. Access time (ms)	
average random	30
maximum	55
cylinder to cylinder (avg.)	10
. Rotational speed (rpm)	3,600
. Rotational period (ms)	16.67
. Data rate (bytes/sec)	806,000

Prices ...	Rental (MAC)	Purchase	MMMC	FIC
3330 Disk Storage (2 drives)	$ 1,340	$62,980	$ 200	—
3830 Storage Control	2,520	118,440	170	—
2-channel switch feature 8170	210	9,870	10	PCR

3330/3830

Rental Plan: A (10%)	Purchase Option: 60%
Education Allowance: 10%	Maintenance Category: A
Per Call Class: 3	Warranty Plan: B

	Rental (MAC)	Purchase	MMMC
3336 Disk Pack	(Purchase Only) $ 1,050	Time and Materials	

Education Allowance: 10%
Per Call Class: 3   Warranty Plan: B

NOTE: *Information and prices on a 3336 Disk Pack Repair Service will be available prior to first customer shipment.*

3330 Facility Prices ... (3330s and one 3830)

3330s	Drives	On Line Bytes	Rental (MAC)	Purchase	MMMC
1	2	200MB	$3,860	$ 181,420	$ 370
2	4	400MB	5,200	244,400	570
3	6	600MB	6,540	307,380	770
4	8	800MB	7,880	370,360	970

System/Product Category Codes ...

System	System Type Code	Product Category	DPL Code
S/360 Model 85	3685	87	3
S/360 Model 195	3695	84	3
S/370 Model 155	3855	78	2
S/370 Model 165	3865	83	3

Limitations ... The 3830 requires a control unit position on a 2880 Block Multiplexer Channel (System/360-85, 195, System/370-165), or an integrated block multiplexer channel (System/370-155). Up to four 3330s may be attached to the 3830.

Delivery ... First customer shipments of 60 Hertz 3330 facilities will begin in August, 1971. First customer shipments of 50 Hertz 3330 facilities will begin in November, 1971. First customer shipments of the 3336 Disk Pack will begin in August, 1971. The published delivery schedule will be available in 120 days. No delivery commitments are to be made to customers until schedules are received in the branch office.

Manufacturing Sources ...

    50 Hertz 3330/3830: Mainz, Germany
    60 Hertz 3330/3830: San Jose, California, U.S.A.
    3336: Sindelfingen, Germany

    NOTE: *In July 1972, Fujisawa, Japan, will become an additional manufacturing source for both 50 and 60 Hertz 3330s and 3830s.*

Plants of Control ...

    3330/3830: Plant of control for the attaching system
    3336: Sindelfingen

RPQs ... May be submitted immediately. Processing will begin 120 days after this announcement. Response will be within 65 days. Earliest RPQ shipment will be six months after the first 3330/3830 customer shipment.

Programming ... Support for the 3330 will be provided at first customer shipment by OS MFT and MVT. Support will consist of OS DASD data management access methods, systems residence and utilities. Language processor support is obtained from access method usage. Rotational Position Sensing (RPS) and Multiple Requesting functions will be included in the basic support. TCAM and TSO Swap support will be provided without RPS. See Programming Announcement Letter P70-69 for additional details. Sort/Merge will be provided at first customer shipment as an IBM Program Product and includes RPS support. See Program Product Announcement Letter P70-69A for additional details.

Publications ... Available from the IBM Distribution Center, Mechanicsburg: 3330/3830 Component Summary SRL, GA26-1592; 3330/2305 Brochure, G520-2312-0; 3330/3830 Proposal Insert, G221-0547-0; and, 3336 Proposal Insert, G221-0559-0. SRL GA26-5756 will be updated to include component distribution information for the 3336 Disk Pack.

DP Sales Compensation Plan ... The standard provisions apply to the 3330, 3336 and 3830. (The 3336 is purchase only and the plan provides a 1% commission on such items.) The point values assigned for both On Schedule Installation (OSI, Schedule A) and Out-of-Territory (Schedule B) are as follows:

Unit	OSI Points	Out-of-Territory Points
3330	1300	300
3830	2500	3500

Program Test Allowance ... Pre-installation program test allowances will be as follows:

3330 Disk Storage	
First group (1-2 modules)	5 hours
Second group (3-4 modules)	5 hours
3830 Storage Control	5 hours

DP Installation Program Review ... The 3330/3830 will be on the Country Installation Programs Designated List. See Sales Manual General Information Section 4.

Systems Engineering Services ... Identified with and related to the installation and use of the IBM 3330 and 3380 are available for a charge at the applicable Skill Classification rate as determined by the host system or its System Operating Environment (See Sales Manual SE Section 2 for details).

Ordering Instructions ... See Sales Manual pages attached.

3211 Printer, Associated Products, Powerful Additions to System/370

The 3211 Printer is capable of speeds at 2000 lpm using nine arrays of the standard 48 characters. The printer and control units can be installed on System/360 Models 30, 40, 50, 65, 67 Model 1 (in Model 65 mode), 75, 85, 91, 195, and System/370 Models 155 and 165. The universal character set is standard; therefore, the speed obtained on a particular job will depend upon the train used, the frequency of the array and the frequency of the characters within the array. This presents an extension in obtaining the maximum printer throughput. Speeds of 2,500 lpm can be attained with reduced or customized type arrays.

The 3211 has (as standard) 132 print positions, however, 18 additional print positions are available as an optional feature. The 3216 interchangeable Train Cartridge has 432 characters. It is removable by the operator. With the universal character set as standard, this allows the customer a selection in print train configurations to maximize throughput and application versatility.

3811 Control Unit ... The logic, buffers and control of the 3211 and its associated 3216 are contained in the 3811 Control Unit. Each 3211 requires one 3811. The forms control buffer is standard, thus eliminating the need for a carriage control tape.

2821 Control Unit Model 6 ... The 3211 Printer and its 3811 control unit make it desirable to supply the customer with a control unit associated with a single 2540 Card Reader Punch. The 2821 Model 6 will control one 2540 and furnish all the features currently available on this type control unit. Presently installed 2821 Model 1s may be field converted to Model 6s.

RPQs ... These will be accepted immediately. Response time may require 120 days. Delivery will be a minimum of 120 days after first customer shipment of the 3211 with actual date dependent on the complexity of RPQ.

RPQs also will be accepted for the System/360 Model 44 for attachment to the 3811 and 3211.

Publications Support ... The following may be ordered from the IBM Distribution Center, Mechanicsburg: 3211/3811 Component Description Manual (GH24-3543); 3211 Forms Design (GA24-3488); Installation Manual - Physical Planning (GC24-6820); OS: Planning for the 3211 (GC21-5008; DOS: 3211 Planning Guide (GC24-5085).

Also, the following promotional material is available: 3211 General Brochure (G520-2311-0) and Proposal Insert (G221-0558-0).

Delivery ... First customer shipments of 3211 and related products will be December 1971 for 60 Hertz units from Endicott, N.Y. and February 1972 for 50 Hertz units from Vallingby, Sweden. The plant of control will be the plant of control of the attaching system.

The published delivery schedule will be available in 90 days. No delivery commitments are to be made to customers until schedules are received in the branch office.

Sales Compensation Plan ... Normal provisions apply. The point value for On Schedule Installation (OSI), Schedule A is as follows:

Unit	Points
3211	2,000

Systems Engineering Services ... The Services identified with and related to the installation and use of the 3211 and 2821 are available for a charge at the applicable skill classification rate as determined by the host system or its System Operating Environment (See Sales Manual SE Section 2 for details).

Program Test Allowance ... 2 hours.

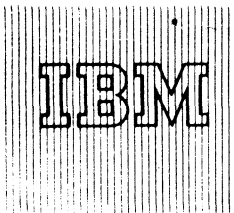**Programming Support** ... See P70-69 for 3211 Programming Systems Support.

Prices ...

	MAC	Purchase	MMMC
3211-1 Printer	$ 1750	$ 84,000	$ 380
3811-1 Control Unit	790	37,920	120
3216-1 Inter. Train Cart.	360	11,880	170
2821-6 Control Unit	465	15,810	90

Features ...

		Number	MAC	Purchase	MMMC	FIC
For	3211 18 Additional Print Positions	5554	$57	$2,736	$8	PCR
For	3811 18 Additional Print Positions	5553	20	960	5	PCR

		Number	MAC	Purchase
Type Catalog Substitute Character				
	Artwork per Char.	9950	–	$139
	Matrix per element	9951	–	165
	Set up per element	9952	–	41
Field Installation				
	First Assembly	8481	109SUC	109
	Each Additional (at same time)	8482	105SUC	105

Rental Plan: A (10%) for 3211, 3811, 2821
Rental Plan: B (none) for 3216
Purchase Option: 3211 - 40%   3811 - 45%
3216 - 30%   2821 - 55%
Educational Allowance: 10%
Maintenance Category: A - 3811
B - 3211, 3216, 2821
Per Call Class: 3   Warranty Plan B

Product Announcement

EIGHT 1800 SYSTEM MACHINES IN LIMITED NEW PRODUCTION

Effective immediately, all models of the following machines are changed from "new" to "limited new" production:

1801 Processor-Controller
1802 Processor-Controller
1816 Printer-Keyboard
1826 Data Adapter Unit
1827 Data Control Unit
1828 Enclosure
1851 Multiplexer Terminal
1856 Analog Output Terminal

IBM can no longer commit a new machine to a specific order. Existing orders for new machines scheduled for delivery on or before May 31, 1971 will be honored with new equipment.
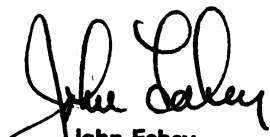
A customer-initiated delivery deferment of an existing order for a new machine may result in reclassification of the order to normal mix.

Action Required ... All affected customers must be notified promptly in writing.

1403 PRINTER ON THE 1130 SYSTEM

When a 1403 is tied to a 1130 system, the 1403 Auxiliary Ribbon Feed Feature (FC 1376) is not available on the 1403.

Action Required ... All affected customers must be notified.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas
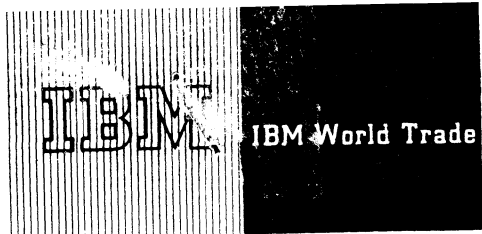
Marketing Announcement

IBM SYSTEMS ENGINEERING SERVICES

This letter supersedes information contained in DP Letter No. 70-218. Highlights of the changes are included below. All changes are effective immediately.

Highlights ...

. Clarification of Marketing Support role for Systems Engineers in installation planning and review activities.

. Individual Service offering to System/3 customers by System/3 Support Centers either at the Center or the customers' location.

. System/Machine Type Skill Classification Table for determining the appropriate skill rate for Systems Engineering Services related to newly announced systems and products (including Program Products). See the Systems Engineering Section for the new table.

. Discontinuance of the minimum requirements of 18 hours of Systems Engineering Services within a three month period and four Group Service Sessions within a six week period.

. In conjunction with a Test Session, Group Services Session, or Hourly Machine Services, unscheduled individual service is now available at an IBM facility for a minimum of one hour.

The marketing representative will be responsible for the marketing of Systems Engineering Services. In selling newly announced IBM DP systems and products (including System/3) to which Systems Engineering Services relate, the marketing representative will review the customer's requirements and submit a proposal for the necessary equipment, Program Products, Education, and SE Services. The marketing representative and the systems engineer may provide the customer with installation orientation and review the progress of installation activities. Since these are marketing support activities, they are not chargeable. The marketing representative is not to provide Systems Engineering Services toward the installation or use of a system or product.

Systems Engineering Services will be offered on the basis of a defined scope of effort directed toward specific customer tasks. These tasks include, but are not limited to the following:

> Systems Analysis and Design
> Application Design and Development
> Program Design and Development
> Conversion and Implementation
> Installation Evaluation and Improvement

For example, a scope of effort may be broad enough to include assistance in all phases of the installation of a data processing system or product, or as specific as assistance in the design of a procedure for processing inventory records. Systems Engineering Services are provided to assist the customer in accomplishing his tasks.

The specific skills required to provide Systems Engineering Services for these tasks will vary relative to the complexity of the system or product and the system operating environment. IBM Systems Engineering Services will be offered for a charge in three skill classifications: Basic, General, and Complex, each with its applicable rate. For additional information on the new skill classifications and applicable rates, see the Systems Engineering Services section of the sales manual.

Systems and products not covered in the Systems Engineering Services section of the sales manual, or under a separate announcement letter, must be referred to the Director of Systems Engineering, WTHQ, for proper skill classification. Products directly associated with Systems or Products in the Systems Engineering Section of the sales manual will take the skill classification of that system or product.

DP Sales Compensation Plan ... for details see the DP Sales Compensation Plan.

Agreement For Systems Engineering Services ... Systems Engineering Services, including participation in Group Service sessions, will be provided under the Agreement for Systems Engineering Services. The Agreement should be signed prior to or at the time the first Systems Engineering Services assistance is requested; thereafter, additional Systems Engineering Services may be requested under that Agreement.

The service offerings will be scheduled in minimums of half days (three hours) or full days (six hours). Additional time requested for work beyond the minimum, if available, will be charged for in half-hour increments and the charges will be based on the applicable Skill Classification. These services normally will be rendered during IBM scheduled working hours. Requests for Systems Engineering Services outside IBM scheduled working hours must be approved by either the Branch or SE Manager.

Attachments [6] :   [1-4] General Information 20.1, 20.3, 20.5, 20.7 ... [5 - 6] Systems Engineering 2.1, 2.3

Cancels: DP Letter No. 70-218

Distribution: Selected European Countries

For each request for assistance requiring at least three
full days (18 hours) of individual customer assistance
or two full days of Group Services effort, IBM will prepare
a Service Estimate defining the appropriate Skill Classi-
fication (s) with a statement of the scope of effort, an
estimate of the amount of assistance required, the estimated
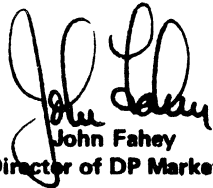charge, and a schedule of work.

For each request for assistance requiring less than
three full days of individual customer assistance or
less than two full days of Group Services effort,
IBM will prepare an Authorization for Service con-
firming our verbal understanding of the scope of
effort and the appropriate Skill Classification (s).
This assistance will be provided subject to availa-
bility of resources.

Description of Services ... Systems Engineering
Services will be offered for a charge to assist the
customer in tasks related to the installation and use
of newly announced data processing systems and
products including Program Products. Accom-
plishment of the tasks is a customer responsibility.
The type of customer tasks for which IBM will
offer assistance will cover the wide range of pro-
fessional services necessary to assist in the installa-
tion of data processing systems and products
including Program Products, as well as the enhance-
ment of installed systems. Assistance may include
specialized instruction not available as a DP
Education offering. Performance work and in-
formal instruction which is incidental to the
assistance provided, and is generally done while
working with customer personnel, may also be
included. IBM does not assume responsibility
for the end result of incidental performance work.

A Service Estimate must be prepared for a user
of a system announced prior to today who requests
Systems Engineering Services exclusively related to
the installation and use of a Program Product.

Actual charges to the customer will be based on the
number of hours worked at the applicable rates and
minimums in effect at the time the services are
rendered, not on the basis of the estimated charges.

For further information see the Systems Engineering
Services and the General Information section of the
Sales Manual.

John Fahey
WTC Director of DP Marketing
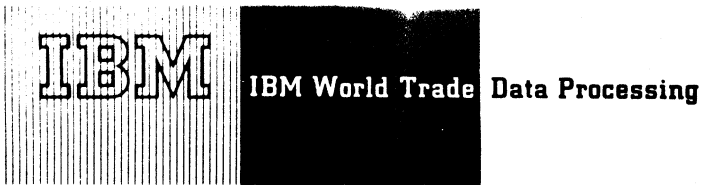
Product Announcement

2770 WITH 4800 BPS CAPABILITY

With a new, no-charge feature on the 2770 Data Communication System, customers can double the transmission speed of the system. Transmission at 4800 bps can be over leased or privately owned telephone lines in either EBCDIC or ASCII code.

To order this new capability, specify no-charge feature 9124 on the 2772 Multi-purpose Control Unit. The feature permits leased line attachment of the 2770 at 4800 bps.

The configurations possible with the new feature are:

. 2770 to 2770, 2780, 1130, 1800, or S/360 Model 20... point to point only.

. 2770 with a S/360 Model 25 ... via Integrated Communications Attachment (4580) and appropriate binary synchronous features on the 2025 ... either point-to-point or multi-point.

. 2770 with all S/360 Models 25 and above.... via a 2701 Data Adapter Unit or a 2703 Transmission Control equipped with appropriate binary synchronous features ... either point-to-point or multi-point.

Programming Support ... DOS/BTAM available from WT Program Library July 31, 1970 ... OS/BTAM available from WT Program Library October 31, 1970 ... OS/TCAM available from WT Program Library 1Q71 ... OS/RJE available from WT Program Library October 31, 1970.

Delivery ... First customer shipment of this capability will start October 30, 1970 for machines on-order and scheduled for delivery. Alteration notices must be submitted with 90 days lead time for installation of this new specify feature (9124) to update machines on-order. MESs to add this feature to installed machines must be submitted 90 days before expected delivery.

Publications ... Availability of a 2770 TNL will be announced in a Publications Release Letter.

RPQs ... RPQs will be accepted for consideration starting August 28, 1970.

World Trade Modems and PTT Approval ... As with any World Trade Communications Product announcement, the individual country PTT must approve of attachment to their facilities. Before proposal you must assure that 4800 bps operation is available in your country. This assurance should be accomplished through your Teleprocessing (TP) Coordinator. A Country and/or Area DP Installation Pre-Proposal Review must be made to assure the PTT approval position. Your TP coordinator should be contacted for 4800 bps modem information.

FEATURE CODE CHANGES

Multiple use of certain feature code numbers has necessitated reassigning another number to them. The old and the new numbers along with a description of the feature and machine type involved are as follows:

Machine Type	Feature No. Old	New	Description
50	2732	2848	Latin American Keyboard Arrangement
50	2733	2849	Brazilian Keyboard Arrangement
421	2733	2824	Multiply/Divide Feature
1071	2807	2825	50 Hertz Analog To Digital Converter
S/360 Model 85	2807	2868	380/408 3-phase 50Hz Motor Generator Set

Revisions to the Sales Manual will be forthcoming.

John Fahey
WTC Director of DP Marketing

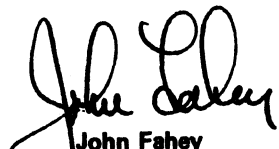**Distribution: All Areas**

Product Announcement

**PRODUCTION STATUS CHANGES
AFFECT EIGHT MACHINE TYPES**

Effective immediately the production status of the following machines is changed to "not in new" production:

    24 Card Punch Models 5, 6
    26 Printing Card Punch Models 5, 6
    26 Printing Card Punch Models 7, 8
       sourced from U.S. plant
  534 Control Unit Model 3
  834 Control Unit Models 1, 2, 3
  836 Control Unit (Printing Models 1, 2, 3)
 1012 Tape Punch
 1061 Control Unit
 1062 Teller Terminal

Orders for new 534 model 3s scheduled for delivery on or before November 30, 1970 will be honored with new equipment. However, a customer-initiated deferment may result in reclassification to normal mix. 026 model 7, 8 will still be sourced from Greenock.

Action Required ... All affected customers must be notified promptly in writing.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas

Product Announcement

FEATURE NUMBER CHANGES -- 1073 MODEL 3, 1074 MODEL 1 and 1075 MODEL 1

AC Power Supply is a chargeable feature on the IBM 1073 Model 3, 1074 Model 1 and 1075 Model 1. The feature numbers associated with the AC voltages have been changed for compatibility with automated order entry procedures.

AC, 1 phase, 60 cycle	Former Feature No.	New Feature No.
115 volts	9880	8680
208 volts	9884	8684
230 volts	9886	8686

Alteration Notices must be submitted immediately to reflect the above changes to on-order machines. When ordering one of these feature changes for installed machines, DPMO Miscellaneous Transaction Form No. 112-5987 accompanied with Miscellaneous Equipment Specification Form No. Z112-8629 is required. Both of these forms are available from Mechanicsburg.

John Fahey
WTC Director of DP Marketing

Note: DP Letter 70-317 was distributed only to the Asia/Pacific Area and Japan.

Distribution: All Areas
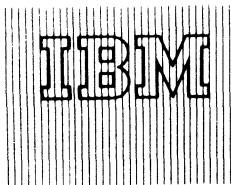
Product Announcement

NEW FEATURES FOR THE 2790 DATA COMMUNICATION SYSTEM

With the announcement of Pulse Counters and External Alarm features, new production monitoring capabilities and alarm control are now available for the 2790 Data Communication System.

The Pulse Count feature is designed to permit a customer to tailor the 2790 system to monitor his production machines.

The External Alarm feature provides for alerting a foreman or supervisor that a customer-designated alarm condition exists.

Additional Macros in S/360 DOS and OS BTAM and OS TCAM and the necessary control functions in the Expanded Capability feature on the 2715 TCU will be available for the S/360—oriented 2790 system. An extension to the previously announced 1800/2790 MPX Communication System will be provided for the 1800-oriented 2790 system.

Pulse Counters for the 2790 Data Communication System

A powerful new capability for Production Monitoring applications is now available for the 2790. It is embodied in pulse counters that can be installed in the 2793 Area Station(s) and control functions provided by the 2715 Terminal Control Unit (equipped with Expanded Capability feature No. 3801 as a prerequisite) or the 1800 Data Acquisition and Control System.

This new capability permits a customer to dynamically monitor his production machines according to pre-defined parameters stored in either his 2715 user tables or in his 1800 system.

Highlights:

- Up to 63 counters per 2793 Area Station.

- One counter used for diagnostics (1 per 2793).

- Up to 1008 counters per 2715 or 1800/2790 Loop Adapter.

- Decimal count with 0-29, 900 range.

- Counters operate at 30 counts/second (maximum.)

- READ/WRITE capability for all counters.

- Overflow interrupt capability for all counters when count reaches 30,000.

- COUNT and NO-COUNT test capability.

- Count value transmitted as EBCDIC numerics.

Feature Descriptions

Pulse Counter - Basic (No. 5550)

This feature provides for the first 7 Pulse Counters attached to the 2793 Area Station, as well as the diagnostics counter (not usable by customer) for servicing all counters on that Area Station.

Pulse Counters - Additional (No. 5551)

This feature provides for additional groups of 8 Pulse Counters. A maximum of 6 of these features may be installed on the 2793, thereby permitting up to 63 customer-usable counters. The Expansion Feature provides counters 32 - 39, and is prerequisite for attaching counters 40 through 63.

Pulse Counter Expansion Feature (No. 5552)

This feature allows attachment of more than 31 customer counters. It provides counters 32 - 39 and also allows for attaching Pulse Counters - Additional groups 4 through 6.

Visual Readout Feature (No. 8710)

This feature allows readout of the counters' contents by the area supervisor in the event of system failure, or in the event the Area Station had been bypassed. Each counter is addressable by switches and the contents are presented to the supervisor on a binary coded numeric light display.

Configuration Prerequisites: The 2715 TCU requires Expanded Capability (No. 3810) for control of Area Stations with the Pulse Count features. The Pulse Count features and its prerequisites are all plant or field installable.

No additional 1800 features are necessary to support these 2790 enhancements.

External Alarm Contact

The 2790 Data Communication System can now be equipped to provide control for actuating customer-provided alarm devices such as bells, whistles, lights, etc. at 2791-1 and 2793-1 Area Station locations. Thus, a foreman or supervisor in the vicinity can be alerted to customer-designated alarm conditions. Such an alarm status may be initiated from any input terminal attached to 2715 or 1800 and/or the host S/360.

The External Alarm Contact feature is available for plant or field installation on each 2791-1 or 2793-1 Area Station.

Feature Description

External Alarm Contact (No. 3690)

The feature provides a set of dry contacts in conjunction with the 1053 Attachment (No. 8050), a prerequisite on the AS for the alarm feature. The momentary closure of the contacts, actuated by receipt of the EBCDIC "Bell" character, allows attachment of a customer's alarm device to make use of this momentary contact. The "Bell" character, as the first character in a message, can be received even though the printer is for some reason (eg., out of paper) not operational. The alarm signal may be routed to an AS by itself, or in conjunction with related data to be printed on the 1053. Alarm test provides (1) "WHO" sent...address of initiating location; (2) "WHEN" ...time in hours and minutes it was initiated; (3) "WHAT"... definition of the alarm condition.

Configuration Prerequisites: The 2715 TCU requires Expanded Capability (No. 3801) for control of Area Stations with the feature. Each 2791-1 or 2793-1 to be equipped with the new feature requires a 1053 Attachment (No. 8050). The new feature and its prerequisites are all plant or field installable.

No additional 1800 feature is necessary to support the External Alarm feature.

Configuration/Price Example (2793 AS with 63 Counters)

Type/Feature	Type Feature No.	MAC
Area Station	2793/1	$137
Counters 01-07	5550	90
" 08-15	5551	16
" 16-23	5551	16
" 24-31	5551	16
" 32-39	5552	38
" 40-47	5551	16
" 48-55	5551	16
" 56-63	5551	16
Visual Readout	8710	30
External Alarm Contacts	3690	10
		$401

See prices for 1053 Printer and 1053 Attachment in Sales Manual pages.

Above new features may be combined with other available 2793 features.

Delivery and Source of Supply

First customer shipment will commence in February, 1972. Normal lead time will be required for DPMO and MES orders for the new features. Required EC's for installed 2715's which are equipped with Expanded Capability (No. 3801) prior to that time, will be shipped in time for FCS of pulse counters to be installed in the system.

Plant of Control and Plant of Manufacturing will be the same as for 2791 and 2793:

For WT Countries (excluding Canada) ... Havant (U.K.)

For Canada ...Raleigh (U. S. A.)

Programming Support

2715: The table-generating macro support for the 2715 Transmission Control Unit under DOS/360 BTAM, OS/360 BTAM and OS/360 TCAM is being expanded to accommodate the macro requirements for the Pulse Count Feature. This support will be available to DP PID December 30, 1971. The OS/360 BTAM to WT Area Program Libraries December 30, 1971. The OS/360 BTAM and DOS/360 BTAM SRL's GC30-2004 and GC30-5001, respectively, will be updated by Technical Newsletters to reflect this additional 2715 support. (See P69-94 for details of initial 2715 BTAM support and P70-44 for TCAM support.)
For External Alarm no additional Programming Support is required beyond that already provided by S/360 DOS and OS BTAM and OS TCAM for the 2715 TCU.

1800: The 1800/2790 Communication System

The 1800/2790 MPX Communication System provides support for the 2790 Data Communication System when attached to the IBM 1800 Data Acquisition and Control System via the 1800/2790 Adapter. The 1800/2790 MPX Communication System will be extended to include system control programs to support up to 1008 pulse counters per loop adapter. The system provides on-line diagnostics for the 1800/2790 Loop Adapter and for the 2791/2793 Area Stations. The Area Station diagnostic will be extended to support both the Pulse Count and External Alarm Contact Features.

The 1800 Macro Assembler

The capability of MPX is extended by the availability of the 1800 Macro Assembler. Several macros will be included in the Macro Library to aid the 1800/2790 user in reading, writing, and testing the pulse counters. Macros will also be provided to actuate the external alarm feature.

Core Storage Requirements

The additional macro subroutine to support Pulse Count and External Alarm features will add approximately 500 words to the 1800/2790 MPX Communication System.

Minimum System Requirements

The IBM 1800 Multiprogramming Executive System requires at least: an 1801/1802 Processor-Controller with a minimum of 16K words of core storage ... 1053 Printer or IBM 1816 Printer Keyboard ... 1442 Card Read Punch ... 1810 Disk Storage Unit, Model A1 or B1. However, the 1800/2790 Data Communication System requires an 1801 or 1802 Processor-Controller with 24K words of core storage and a 2310 A2 or B2 or 2311.

Delivery Data

The additional macros and the extensions to the 1800/2790 MPX Communication System to support the Pulse Count and External Alarm Contact Features are scheduled for availability in December, 1971.

The IBM 1800 MPX Introduction SRL (C26-3718) will be updated by TNL by October, 1970.

Publications Support

In addition to the TNL's for the programming SRL's as indicated above, TNL's will also be issued* to update the 2790 System Summary (GA 27-3016), 2790 Component Description (GA 27-3015). A TNL to the Physical Planning SRL (GA 27-3017) will be available before first customer shipment.

A TNL to the IBM 1800 Functional Characteristics SRL (A26-5918) will be available by October, 1970.

RPQ's

RPQ's to modify the new features will be accepted for processing and consideration 60 days after the date of this letter. Shipments of units with RPQ's will be a minimum of 120 days after FCS, with actual lead time dependent upon the degree of complexity of the RPQ.

Test Allowance

No additional time is allowed for the new features.

*One month following announcement

Sales Compensation Plan

Normal Sales Compensation Plan provisions apply.

Rental and Purchase Prices

On 2793 (may be combined with other available features.)

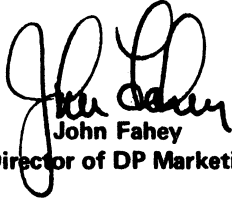| Feature	Feature No.	MAC	Purchase	MMMC	FIC
Pulse Counters, Basic	5550	$90	$4500	$13.00	PCR
Pulse Counters, Add'l	5551	16	800	1.00	PCR
Pulse Counter, Expansion	5552	38	1900	4.50	PCR
Visual Readout	8710	30	1500	1.00	PCR

(Prerequisite: Expanded Capability No. 3801 on 2715 TCU is required.)

On 2791-1 or 2793

Feature	Feature No.	MAC	Purchase	MMMC	FIC
External Alarm Contact	3690	$10	$500	$ .50	PCR

(Prerequisites: Expanded Capability No. 3801 on 2715 TCU and 1053 Attachment No. 8050 on the AS are required.)

Sales Manual Pages will be released shortly.

John Fahey
WTC Director of DP Marketing
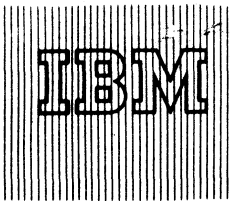
Product Announcement

THREE DISK STORAGE MACHINES WITHDRAWN FROM PRODUCT LINE

Effective October 1, 1970, the IBM 1301, 1405, and 2302 Disk Storage machines will be withdrawn from the product line.

Orders which are time-stamped in the branch office before October 1 will be accepted on an "as available" basis. Orders in the backlog for which units cannot be allocated by December 30 will be returned to the customer.

Customer-initiated deferment of orders beyond December 30 will result in cancellation.

RPQs ... The 2302 has been added to the list of restricted machines (which presently includes the 1301 and 1405) in the RPQ portion of the Sales Manual General Information Section 12.

Action Required ... Affected customers must be notified immediately in writing, and outstanding proposals must be updated to reflect these withdrawals.

Customers should be informed that there is a limited ability to satisfy requests for these machines, and the grace period implies no added ability to supply them.

John Fahey
WTC Director of DP Marketing

Attachment: General Information 12.1
Distribution: All Areas
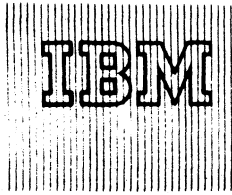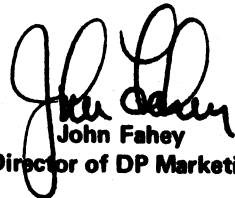
Product Announcement

WITHDRAWAL FROM NEW PRODUCTION OF THE:
2520 MODEL A1 CARD READ PUNCH
2520 MODELS A2 AND A3 CARD PUNCHES
2560 MODEL A1 MULTI-FUNCTION CARD
MACHINE

Effective immediately, the production status of the 2520 Models A1, A2, and A3 and the 2560 Model A1 produced in the U.S. is being changed from *"limited new"* to *"not in new production."* Additional orders will be filled with reconditioned machines. The currently published delivery schedule remains in effect.

Any remaining orders for new machines in existence at the time that limited new production was announced, which are not deferred, will be honored with new equipment.

All customers affected by this announcement must be notified immediately.

John Fahey
WTC Director of DP Marketing
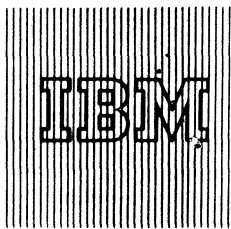
Product Announcement

DISK CAPACITY DOUBLED
ON S/360 MODEL 20 SUBMODEL 4

In response to your requests, System/360 Model 20 Submodel 4 customers can now double their on-line storage capacity. This is possible through the ability to attach the 2311 Model 11 to the Submodel 4, which increases the current maximum on-line storage from 5.4 to 10.8 million bytes.

Highlights:

Lower cost for larger file capacity (an additional 5.4 million bytes of disk for a rental increase of $550)

Expanded application processing flexibility

Easier growth within Model 20 disk and disk/tape systems through smaller growth steps (e.g., Submodel 4 with 2311 Model 12 to a 2311 Model 11 to either Submodels 2 or 5)

Economy in number of disk packs required for the Submodel 4 customer.

Configurating ... To price out a system, use Submodel 4 prices for CPU, card I/O, printer and (where applicable) 2415 magnetic tape and I/O channel. Add the already published prices for the Submodel 2 storage control feature 7495 and one or two 2311 Disk Storage Drives Model 11. See table below for a typical Submodel 4 system with 2311s Model 11.

Note: Storage control feature 7496 remains a prerequisite to 2311s Model 12 with the Submodel 4. The 2311s Model 11 and 12 cannot be intermixed on Submodel 4.

Typical Model 20 Submodel 4 Disk System

	Rental
2020 BC4 (12K) CPU	$ 685
2560 A2 MFCM	460
2560 A2 Attach. (8100)	79
2203 A2 Printer	400
2203 Attach. (8084)	58
Storage Control (7495)	245
2311s Mdl 11 (2)	1,260
	$3,187

Programming ... Support already available for Model 20 disk and disk/tape configurations applies to the 2311s Model 11 and 12.

System Performance ... For the Submodel 4 with 2311s Model 11, performance will be the same as with the Model 12, except for the higher average and maximum random access time of the Model 11 due to its larger number of cylinders.

CONTENTS

Delivery ... First customer shipments of the Submodel 4 disk systems with 2311s Model 11 is scheduled for September 30, 1970. Also scheduled for September 30 are first customer shipments of MESs for field installation of Model 11 on the Submodel 4.

RPQs ... These will be accepted immediately. Response time will depend upon complexity.

Publications ... SRLs will be updated as they are reprinted to include the 2311s Model 11 for the Submodel 4.

Sales Compensation Plan ... Normal compensation plan provisions apply.

This announcement complements a previous announcement of 2415s on the Submodel 4 (DP Letter 70-281) in providing the lowest-priced member of the System/360 Model 20 family with a broad range of I/O flexibility and a structured growth path to the larger submodels.

803 PROOF MACHINE - WITHDRAWAL FROM THE WORLD TRADE PRODUCT LINE

Effective immediately, all models of the 803 Proof Machine are withdrawn from the World Trade product line. No further orders will be accepted.

All customers' orders with confirmed delivery schedules will be honored.

Supply items will continue to be available from the Information Records Division. Replacement endorser plates will be available through the normal established procedure.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas

Product Announcement

1260 ELECTRONIC INSCRIBER PRICE ADJUSTMENT

An increase in the base machine rental and purchase price for the 1260 Electronic Inscriber is announced.

This change in price, to be effective immediately for purchases and 90 days from date of announcement for rental units is summarized as follows:

Rental (MAC)	Purchase	MMMC	
$230	$11,500	$50	(Old)
262	13,100	65	(New)

Action Required ... All affected customers must be notified promptly.
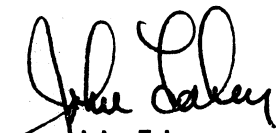
SYSTEM/360 MODEL 65 MULTIPROCESSING SYSTEM SIMPLER TO ORDER, EASIER TO CONFIGURE

Ordering and configuring a Model 65 Multiprocessing System is now easier because:

. The Multisystem Features 4951 and 4952 have been made standard features of a new model of the 2065 processing unit - the Model MP.

. The configuration control panel, previously included with Feature 4952, is available as a feature on either CPU.

. The Model MP eliminates the need to further upgrade the CPU model when additional storage is desired. Any 2065 Model H, I, IH, or J can be field changed to a Model MP.†

. Two to eight 2365 Model 13s may be attached to the Model MP. At least two 2365 Model 13s are required in any Model 65 Multiprocessing Configuration.

. The number of RPQs required to order a system is reduced.

. Staging the installation of a multiprocessing system is simplified.

Any 2065 Model I on order or installed as of today with feature 4951 or 4952 will be honored at the current prices in the sales manual. Any upgrades of the system to add memories must change to the Model MP. (See "Administrative Instructions" for handling models IH and J.)

A Configuration Ordering Guide and other details are on the reverse side.

John Fahey
WTC Director of DP Marketing

Distribution: **All Areas**

† Installed, purchased, single 2065 H, I, IH or J systems require an RPQ to upgrade to a Model MP CPU.

Configurations

For situations where multiprocessing is fully implemented (both CPUs installed), the following configurations are possible (see the diagram below):

512K system - include memory units inside left and inside right.

768K system - include memory units inside left and inside right and either outside left or outside right.

1024K system - include memory units inside left, inside right, outside left and outside right.

1280K, 1536K, 1792K or 2048K system - additional storage units beyond four, to a maximum of eight, may be added.

Each CPU must be equipped with Additional Storage Attachment features as follows: 1305 for 5th 2365, 1306 for 6th 2365, 1307 for 7th 2365 and 1308 for 8th 2365.

Also, Additional Wall sections must be ordered for 2365 model 13s as follows: 1315 on 5th 2365, 1316 on 6th 2365, 1317 on 7th 2365 and 1318 on 8th 2365.

The Configuration Control Panel

The configuration control panel must be included in the above configurations.

The panel (Feature 1505) may be ordered on either CPU and provides the MP operator with the following capability:

. Switching among the three modes: multisystem, partitioned, or 65.

. Manually assigning memory addresses to any physical memory.

. Switching I/O interfaces on or off line, with appropriately featured control units.

Staged Installations

Where multiprocessing capability is being staged (only one CPU installed), two storage units, as well as the configuration control panel, may be attached to either a left or right CPU. Attachment of more than two storage units (maximum of eight) requires spacer frames in place of the second CPU and may be implemented through RPQ procedures.

Program Test Allowance ... The test allowance for the 2065 MP is 60 hours.

Program Support ... None required beyond that already announced for multiprocessing.

Publications ... Sales and Systems Guide (GY20-0377) and a promotional brochure (G520-2056-1) as well as TNLs to these SRLs: S/360 Model 65 Functional Characteristics (GA22-6884) and S/360 Installation Manual - Physical Planning (GC22-6820). Initial copies have been shipped through Daps (except for GA22-6884—consult the Publications Release Letter for actual date of availability). Additional copies are available at the IBM Distribution Center, Mechanicsburg, Pa.

New Orders ... All outstanding proposals and all new orders must reflect these changes. Separate DPMOs are required for each system. Check "Yes" under Multi-system Number.

Administrative Instructions ... New purchase prices are effective immediately. New rental and M/A prices are effective immediately. Customers with installed or on-order IH or J Multiprocessing Systems are affected by this announcement. The country will advise affected branch offices of customers who must receive written notifications of price changes and:

1) Changes to be made to on-order machines by Alteration Machine Order.

2) Changes to installed rental machine specifications by MES.

3) Changes to M/A machines requiring Amendments to Maintenance Agreements.

| Description	Feature	MAC	Purchase	MMMC	FIC
2065 MP		$16,935	$704,600	$570	– –
CPU Right	1501	NC	NC	NC	NC
CPU Left	1502	NC	NC	NC	NC
Config. Control Panel	1505	360	17,675	10	PCR

Attachment Features for the 2365 Model 13

Outside Right Memory (Feature 4901)
Inside Right Memory (Feature 4902)
Inside Left Memory (Feature 4903) — No Charge
Outside Left Memory (Feature 4904)

Configuration Ordering Guide for 65 Multiprocessor
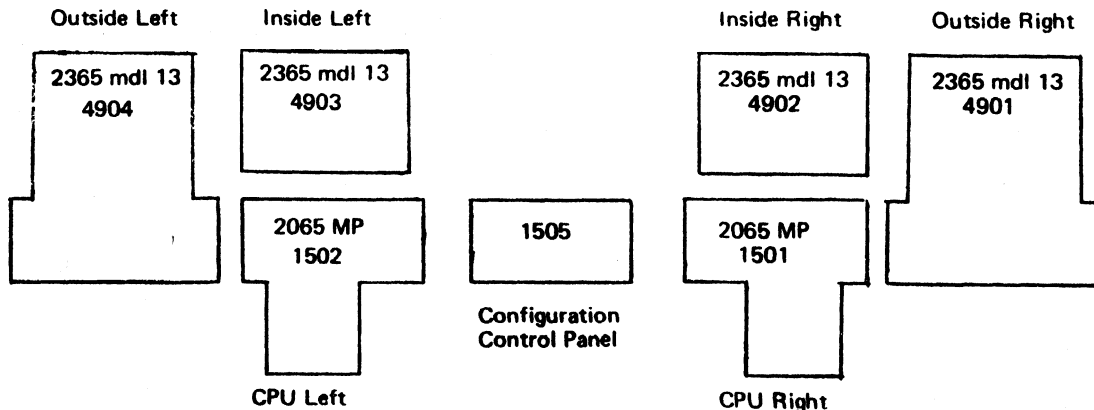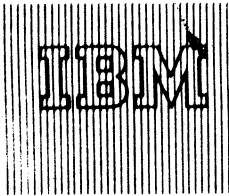
Product Announcement

2400 BPS TRANSMISSION FOR 2845 and 2848 DISPLAY CONTROL UNIT

The 2845 and 2848 Display Control Units can now communicate at speeds of 2400 bits per second (240 characters per second), with a System/360 equipped with a 2701 data transmission unit and terminal adapter Type III.

Clocking must be provided by the modem and your Teleprocessing Coordinator should be consulted for appropriate modem.

The following features must be specified when ordering 2400 bps:

On the:	Feat.	MAC	Purch	MMMC	FIC
2845 & 2848	#9013	NC	NC	NC	NC
2701	#4657	131	5600	8.75	PCR

ADDITIONAL 4800 BPS CAPABILITY

Effective immediately, 4800 bps binary synchronous communication facility is extended to include multi-point communications between 1130, 1800, System /360 Model 20, 2715 Model 2, and 2780 as tributary stations to System/360 (Model 25 and over) via a 2701 or 2703 transmission control unit or via a Model 25 integrated communication adapter.

The 3978 Model 14 modem will support this facility. For other modems consult your Teleprocessing Coordinator.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas
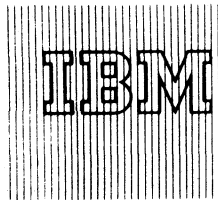
Product Announcement

**IBM 2311, Models 1, 11, and 12
and IBM 2841 Model 1:**

Production Status

50 HERTZ

Effective immediately, the production status for the 50 Hertz IBM 2311 Models 1, 11, and 12 and the IBM 2841, Model 1, is changed to "As Available."

Existing 50 Hertz orders scheduled for shipment on or *before* December 31, 1970, will be filled. A customer-initiated deferment of an existing order scheduled for shipment on or before December 31, 1970, will result in the reclassification of the order to "As Available."

The "As Available" status will apply also to existing 50 Hertz orders which:
    (a) are scheduled for shipment after December 31, 1970 AND
    (b) require new equipment.

This status does NOT apply if availability of new equipment is individually negotiated with the plant by September 30, 1970.

New 50 Hertz orders will be accepted on an "As Available" basis.

60 HERTZ

WT DP Product Announcement Letters 69-222 (3/31/69) and 69-227 (4/18/69) announced a "Not in New Production" status for the 60 Hertz IBM 2311 Models 1, 11, and 12 and IBM 2841 Model 1. This announcement letter (70-329) does *not* change the 60 Hertz 2311/2841 "Not in New Production" status.

However, WT DP Product Announcement Letter 69-257 (7/3/69), which announced a *limited* production program of "New" 60 Hertz IBM 2311 Models 1, 11, and 12 on an individually-scheduled basis from Mainz, West Germany, is withdrawn effective immediately.

Existing 60 Hertz orders for "New" equipment scheduled under Letter 69-257 for shipment on or *before* December 31, 1970 will be filled. A customer-initiated deferment of such an existing order will result in the reclassification of the order to "Reconditioned."

The "Reconditioned" status will also apply to existing 60 Hertz orders which:
    (a) are scheduled for shipment after December 31, 1970 AND
    (b) require new equipment.

This status does not apply if availability of new equipment is individually negotiated with the plant by September 30, 1970.

Reconditioned 60 Hertz 2311, Models 1, 11, and 12 and 2841 Model 1 are still available, on an "Individually Scheduled" basis, from the San Jose plant.
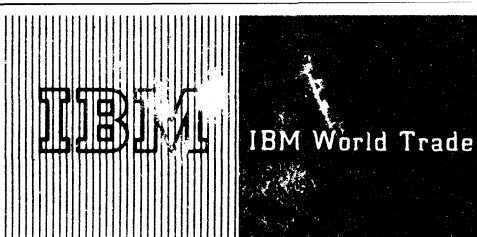
ACTION REQUIRED

All customers affected by this announcement must be notified promptly.

John Fahey
WTC Director of DP Marketing

References: WT DP Product Announcement
                  Letter Nos. 69-222, 69-227,
                  and 69-257.

Distribution: All Areas

Marketing Announcement

MAINTENANCE OF NON-IBM EQUIPMENT

System Maintenance Management

IBM World Trade no longer offers maintenance of non-IBM equipment. IBM World Trade will continue to offer System Maintenance Management contracts for the maintenance coordination for IBM systems containing common carriers or non-IBM equipment. Though this contractual service is designed primarily for large complex systems, any system requiring multi-vendor service may be included.

Multiple Supplier System Bulletin Revision Available

This Bulletin has been revised to state IBM World Trade's practices regarding IBM maintenance of non-IBM equipment.

- IBM's maintenance objective is to perform maintenance service only for equipment manufactured for or marketed by IBM.

- Upon request, IBM may procure maintenance (via subcontract) for supporting motor generators, chillers, or backup power supplies which IBM specifies.

- Systems Maintenance Management contracts are available for coordination services involving Customer Engineering, communications common carriers, and/or non-IBM equipment suppliers.

Each IBM customer, except those which IBM presently has commitments to maintain non-IBM equipment (guidance concerning these commitments should be obtained from DP Marketing Country Headquarters), is to be provided with a copy of the revised Multiple Supplier System Bulletin by September 15. Subsequently, each new IBM customer is to be provided with a copy of the Bulletin. Copies should also be made available to customers and prospects upon request. When the Bulletin is issued to a customer, record of the delivery is to be kept in the branch office. A sample customer letter is attached.

John Fahey
WTC Director of DP Marketing

Attachments [4]:   [1] Customer Letter . . . [2 thru 4] General Information
3.1, 3.3, and 4.3.

Supplement: See supplement applicable to your country as listed on the reverse side.

Distribution: All Areas

Supplement to DP Letter 70-331-A

    Attachment: General Information 9.1
    Distribution: All Areas except Australia, New Zealand, Japan,
                        South Africa and Selected European Countries

Supplement to DP Letter 70-331-B

    Attachments [3]:   General Information 65.5, 65.7 and 65.9
    Distribution: Selected European Countries, Australia, New Zealand,
                        South Africa, Japan and Canada

Supplement to DP Letter 70-331-C

    Attachment: General Information 9.1
    Distribution: South Africa

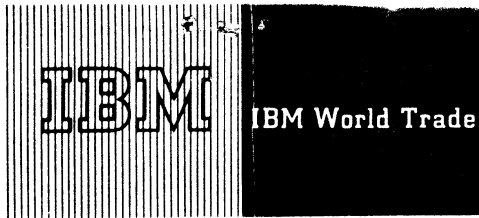Supplement to DP Letter 70-331-D

    Attachment: General Information 9.1
    Distribution: Selected European Countries

Supplement to DP Letter 70-331-E

    Attachment: General Information 9.1
    Distribution: Australia and New Zealand

Supplement to DP Letter 70-331-F

    Attachment: General Information 9.1
    Distribution: Japan

Product Announcement

PRICE REDUCED FOR 2770 KEYLOCK SECURITY FEATURE

Keylock (4695), a key-operated power-on switch for the 2772 Multi-Purpose Control Unit, can now be be offered to 2770 System users at reduced cost.

This feature was announced in DP Letter 70-289 for $5 rental, $150 purchase. It is now available at the following prices:

Rental (MAC)	Purchase	MMMC	FIC
$35 SUC*	$35	NC	PCR

Action Required ... Affected customers must be notified promptly in writing. Alteration DPMO's covering this change are to be submitted by the branch office, and all outstanding proposals must be updated.

* Single Use Charge

PRICE CHANGE FOR 1800 RPQ's

Effective December 1, 1970 the new prices for installed RPQ's C08037 (S/360 Selector Channel to 1800) and C08084 (2311/2841 attachment to S/360 Selector Channel to 1800) are as follows:

	C08037		C08084	
	From	To	From	To
MAC	$135	$328	$100	N/C
Purchase	5,400	13,115	3,800	N/C
MMMC	5	19	.25	N/C

The above two RPQ's are withdrawn effective this date since standard feature #7710 (Selector Channel) on the 1826, providing similar function was announced in DP Letter No. 69-261. Orders for these RPQ's in the backlog will be honored provided delivery is accepted in accordance with currently assigned delivery schedules.

An engineering change upgrading C08037 to the same functional level as standard feature #7710 (Selector Channel) will be made in the field.
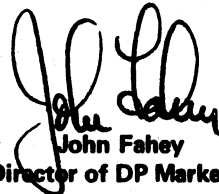
### CONTENTS

MAGNETIC TAPE PRODUCTION STATUS CHANGE

Effective immediately the following machines are withdrawn from new production:

    2401 Models 1, 3, 6 - 50 Hz
    2401 Models 1, 2, 3 & 5 - 60 Hz
    2415 Models 3 & 6 - 50 Hz
    2804 Model 1 - 50 Hz

Existing orders within the published World Trade delivery schedule will be honored. New orders and orders for equipment scheduled or deferred beyond the current delivery schedule should be classified "As Available."

All affected customers must be notified immediately.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas
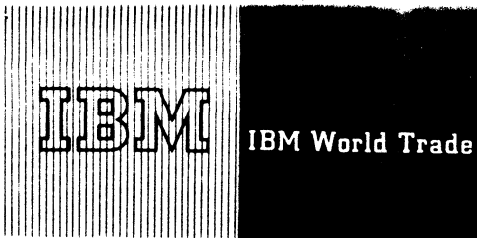
Product Announcement

FOUR MACHINE TYPES AFFECTED BY PRODUCTION STATUS CHANGE

Effective immediately, the IBM 2085 Processing Unit, 2365 Processor Storage Model 5, 2385 Processor Storage and the 2820 Storage Control are in limited new production. IBM can no longer commit a new machine to a specific order.

Existing orders for new machines scheduled for delivery on or before the dates below will be honored with new equipment.

Orders for new machines scheduled for delivery after the dates below will be honored with new equipment if the current delivery date was within the published delivery schedule at the time of order entry. Other orders for new equipment scheduled after these dates must be reclassified to normal mix.

A customer-initiated delivery deferment of an existing order for a new machine may result in reclassification of the order to normal mix.

Action Required ... Affected customers must be notified promptly in writing.

Unit	Date
2085	12/31/70
2365 Mdl. 5	12/31/70
2385	12/31/70
2820	12/31/70

John Fahey
WTC Director of DP Marketing
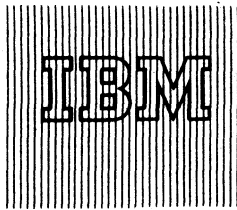
Distribution: All Areas

Marketing Announcement

SYSTEM/370-QUESTIONS AND ANSWERS

Attached are questions and answers relative to System/370. Used judiciously, this material will help you answer your customer's inquiries.

This material is not to be reproduced for customers.

John Fahey
WTC Director of DP Marketing

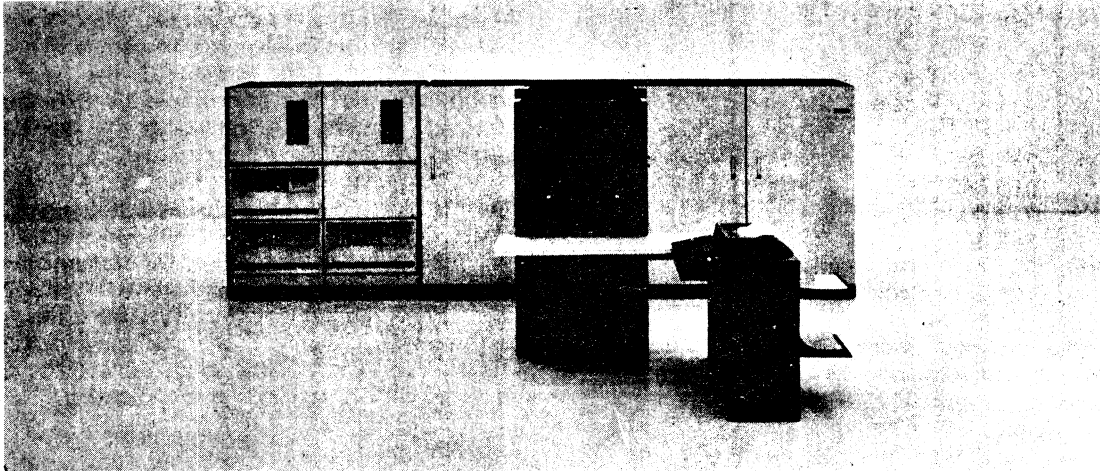**Attachment:** S/370 Questions and Answers

Distribution: New Business Practices Countries Only

Trade Data Processing

HERE'S A POWERFUL COMPATIBLE ADDITION TO THE 370 FAMILY ALONG WITH NEW I/O COMPATIBILITY

THE SYSTEM/370 MODEL 145

.   *Improved price/performance*

.   *System/360 compatibility*

.   *Integrated emulation*

.   *OS/DOS emulator*

.   *Processor Storage Increments
   (114,688 bytes to 524,288 bytes)*

.   *Increased processing speeds*

.   *Advanced technology*

.   *Wide choice of I/O equipment*

A versatile and economic growth system for both commercial and scientific applications, the Model 145 boasts significant price/performance improvements plus increased function over the Models 30 and 40 without requiring major reprogramming. Like the recently announced S/370 Models 155 and 165, the 145 has more and faster channel capabilities, increased means of checking for processor errors, and built-in serviceability features.

Offering an instruction execution rate of 5.4 to 8.8 times that of a Model 30 and 3.2 to 4.9 times that of a Model 40 for most instruction streams, this new model further extends the widely accepted System/360 architecture and philosophy of full upward systems compatibility.

Through integrated emulation under DOS and OS, programs can be executed on the Model 145 that were written for execution on the 1401/1440/1460 and 1410/7010. In addition, the OS/DOS emulator program in conjunction with the Model 145's standard OS/DOS compatibility feature is provided to ease the transition for the DOS user when migrating to OS.

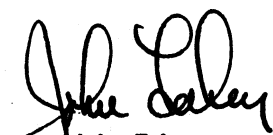## THE 2319 DISK STORAGE FACILITY FOR THE MODEL 145

.   *87 million bytes in single facility*

.   *Expandable up to 233 million bytes with 8 drives
   (2319 with combinations of 2312s, 2313s and 2318s)*

.   *312,000 bytes per second data rate*

.   *60 millisecond average access time*

The 2319 in conjunction with the Model 145 Integrated File Adapter offers customers a low cost, modular, large capacity and high speed direct access facility for general data storage, work data sets, and programming systems residence.

In attaching to the Model 145 through the Integrated File Adapter feature, the 2319 facility utilizes three interchangeable 2316 disk packs to provide 87 million bytes of on-line storage.

Additional capacity is possible through combinations of 2312, 2313, or 2318 disk storage modules attached to the 2319 (up to a total of eight drives including the 2319).

Programming support under DOS and OS is the same as that announced for the 2314 where configuration requirements are met.

John Fahey
WTC Director of DP Marketing

Attachments [7] :   [1 thru 4] Machines 2880, 3145.1, 3145.3, 3345-3360 . . .
                   [5 thru 7] Systems 370/145.1, 370/145.3 and 370/145.5

Distribution: Argentina, Australia, Brazil, Canada, Israel, Japan, Mexico,
               New Zealand, South Africa, Venezuela and Selected
               European Countries

THE SYSTEM/370 MODEL 145

Four Processor Models

The System/370 Model 145 is offered in four models:

Bytes of Processor Storage

FED	114,688
GE	163,840
GFD	212,992
H	262,144
1st H Increment	393,216 - Requires 3345 Model 1
2nd H Increment	524,288 - Requires 3346 Model 1

- 3345 Main Storage Frame Model 1: Adds 131,072 bytes of processor storage which, with the Model H, provides 393,216 bytes of storage for the system.

- 3346 Main Storage Frame Model 1: Adds 262,144 bytes of processor storage which, with the Model H, provides 524,288 bytes of storage for the system.

Advanced Technology

The Model 145 utilizes advanced processor storage implemented by monolithic technology to provide a new dimension of performance and reliability. The packaging density has been significantly improved. Information storage is based upon bi-polar, semi-conductor storage cells having non-destructive read capabilities and on the use of large-scale integration techniques to achieve 128 bits and their associated driving and selection circuitry on a single chip. The Model 145's CPU cycle time is 202.5 to 315 nanoseconds, depending upon the type of internal operation being performed.

Another advantage of the new technology is in the significant price/performance improvement when compared with previous System/360 models. The instruction execution rate of the Model 145 for most instruction streams is in a range of 5.4 to 8.8 times that of a Model 30 and 3.2 to 4.9 times that of a Model 40. The 145, offering core sizes greater than the Model 40, features more channels, faster channels, ability to attach recently announced I/O units, new functions, and an attractive price.

Channels

The first selector channel and the byte multiplexor channel are standard.

Three additional high-speed selector channels can be attached. The byte multiplexor channel is functionally equivalent to the byte multiplexor channel on the System/360 Models 30 and 40.

Sixteen sub-channels are standard on the byte multiplexor channel with the option to increase to 32, 64, 128, or 256 sub-channels. This option is particularly significant in teleprocessing applications.

A special feature, the Channel Word Buffer, is available on selector channels to permit the channel to operate at 1.85 megabytes per second. If unbuffered, the data rate would be 820 KB. The maximum system data rate with the Word Buffer installed is 5.3 megabytes per second.

Another enhancement available optionally on the Model 145 selector channel is the Block Multiplexor feature. This feature is required for attachment of the 3330 Direct Access Storage Facility and the 2305-2 Fixed Head Storage Facility. By adding this feature to his selector channels, the user may increase the efficiency of the channel when using those devices equipped with Rotational Position Sensing.

Input/Output

High performance, large capacity direct access storage is offered at low cost with the new 2319 Disk Storage Facility attached via the Integrated File Adapter feature. The three-drive 2319 also attaches combinations of the 2312, 2313, or 2318 to permit up to eight drives total. In addition, the 2314-A01 Control Unit may be channel attached.

When specified, the Integrated File Attachment is permanently assigned to Selector Channel 1 and no other devices may be attached to this channel. Additionally, only selector channels 2 and 3 are available when this feature is installed. Selector Channel 2 then becomes standard.

The recently announced I/O units, the 3330 Direct Access Storage Facility, the 3211 Printer, 2305 Fixed Head Storage Facility, 3215 Console Printer-Keyboard, 3210 Console Printer-Keyboard, and 2821 Model 6 Control Unit are all attachable to the 145. In addition, all currently announced System/360 I/O devices are attachable except 1052 Model 7, 1231, 1285, 1404, 1412, 1418, 1428, 1445, 1827, 2150, 2301, 2302, 2361, 7340 and 7772 Model 3.

Reliability and Serviceability

The 145's performance and availability is further enhanced by the following:

- Reliability and Serviceability ... Features such as micro instruction and channel command retry capabilities are offered. Automatic micro instruction retry will occur on most instructions. Channel retry will be via programming assistance to retry failing I/O operations, if the device has been engaged. If not, micro instruction retry is automatic via hardware.

- Error Checking and Correction Code ... This is for processor storage which provides automatic correction of all single-bit errors and detection of double-bit errors. The combined hardware and program capability monitors the CPU and I/O units and assists in determining their status by providing the ability to detect the intermittent errors and then log meaningful error status information for both CPU and I/O down to the failing device.

- Console File ... This is used to load control storage with the 145's microprogram, microdiagnostics, and diagnostics to locate faults or check out the system. The data is stored on removable, read-only magnetic disk cartridges, several of which are shipped with each system.

Compatibility

Generally, all programs written for a System/360 (Model 25 and up) will operate on a System/370 Model 145 having a comparable hardware configuration, with the following exceptions: Time dependent programs, programs deliberately written to cause program checks, programs using machine dependent data (e.g., machine logs), programs using the ASCII bit, programs which depend upon the non-usable lower core area being smaller than 704 bytes, programs which depend upon devices or architecture not implemented in the 145.

Operations of the 145 are not necessarily compatible with any model of System/360 for those functions specified to be model dependent in the IBM System/360 Principles of Operation, or programs that depend upon validity of data after the system power has been turned off and restored.

As an optional feature, the Model 145 provides the compatibility for multiprogrammed execution of 1401/1440/1460 and 1410/7010 programs and other System/360 programs under operating system control. The 1401/1440/1460 and 1410/7010 programs may exist in any partition or region of core, and all are included in the normal system input job stream. Emulator programs for 1401/1440/1460 and for 1410/7010 will be available for both OS/360 (MFT and MVT) and DOS/360 users, and will be available when the first systems are shipped.

145 Processing Unit

General and floating point registers are implemented in high-speed circuits. Reloadable control storage is used to permit emulator and control routines to function. The CPU cycle time is 202.5 to 315 nanoseconds depending on the operations being performed.

Standard Features

Includes commerical instruction set, interval timer, time-of-day clock, store and fetch protection, byte-oriented operand feature, byte multiplexor channel, OS/DOS compatibility features, 14 new instructions, console file, control registers, movable control store boundary and one selector channel.

Instructions Available

The same instructions introduced on the System/370 Models 155 and 165 will also be available on the 145.

Minimum Configuration

In addition to a 3145 Processing Unit, each S/370 Model 145 requires a direct access storage device on the standard selector channel 1 (or the Integrated File Adapter feature with one direct access storage device), line printer, card reader, and 3210 Console Printer-Keyboard Model 1 or a 3215 Console Printer-Keyboard.

Delivery ... Initial shipments of the 3145 will begin in August 1971 from Endicott (60 Hertz) and in October 1971 from Mainz (50 Hertz and 60 Hertz). Initial shipments of 3345 and 3346 will begin in May 1972 from Endicott (60 Hertz) and from Mainz (50 Hertz and 60 Hertz).

Published delivery schedules will be available in 120 days. Delivery dates will be assigned sequentially, however, orders involving multiple units of one type are subject to an extension of schedules. Confirmation of shipping schedule must be received by Branch Office prior to delivery commitment to customer.

RPQs ... Attachment RPQs may be submitted immediately. Other RPQs may be submitted 90 days after announcement. Response time and delivery (if approved) will depend upon the complexity of the request.

Demonstration Capability ... Available with 2319 Disk Storage Facility in Endicott, March 1971; France, May 1971; Germany, June 1971; other facilities will be announced at a later date.

Sales Compensation Plan ... The standard provisions of the DP Sales Plan apply. The point values assigned for on-scheduled installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

Sales Compensation Plan (Continued)

SCHEDULE A: On-Schedule Installation

Machine Type	Points
3145	11,000
3345	900
3346	2,000

SCHEDULE B: Out-of-Territory

Machine Type	Points
3145	13,000

SE Skill Classification ... Systems Engineering Services related to the IBM System/370, Model 145 are available at the General Skill Classification rate or at a higher rate as determined by the System Operating Environment. See Sales Manual, SE Section 2.

Installation Programs ...Installation programs reviews will be required for all System/370 Model 145 proposals and/or orders. System/370 Model 145 is not on the WTHQ designated list. To determine your review requirements, contact the Installation Programs Manager in your country. See Sales Manual, GI Section 4.

Educational Allowance ... The Educational Allowances stated below apply to the MAC and Purchase prices only and do not apply to the MMMC.

Program Test Allowance ... Program test allowances are:

Unit	Model	Hours
3145	FED	18
3145	GE	21
3145	GFD	24
3145	H	25
3345	1	3
3346	1	5

Orders and Movements Codes ...

Product Category	97
DPL Code	2
Systems Type	3845

Programming Support ... The Model 145 is supported with OS/360 (MFT and MVT) and DOS. See P70-109A for details.

Publications Support ... Various publications have been made available to support System 370 Model 145 announcement activities. These provide information for product familiarization and educational purposes, and marketing and technical data pertinent to the System. These publications and their supply sources are categorized by use key indicating availability status outside IBM. For detailed use key information, refer to Sales Manual, General Information Section 13. Other System 370 Model 145 publications in process of development will be distributed when released. [Initial quantities will be distributed through DP Automatic Publications Service (DAPS) and announced in the weekly Publications Release Letter.]

SRL Machine Manuals

Principles of Operation	GA22-7000-00
IBM System/370 System Summary	GA22-7001-00
System/370 Input/Output Configurator Model 1	GA22-7002-00
IBM System/370 Model 145 Operating Procedures	GA24-3554-00
IBM System/370 Model 145 Functional Characteristics	GA24-3557-00
Planning Guide for 3211 Printer	GC24-5085-00

SRL Program Manuals

IBM S/360 DOS, Program Planning Guide, For MCAR/CCH Function, for IBM System/370 Model 145	GC24-5078-00
IBM S/360 OS Program Planning Guide for the DOS Emulator on the IBM S/370 Models 145 and 155 – TNL to C24-5076-00	GN24-5422-00
Emulating the IBM 1401, 1440, and 1460 on the IBM System /370 Model 155 using OS/360 TNL to C27-6945-00	GN27-1341-00
Emulating the IBM 1410 and 7010 on the IBM System/370 Model 155 using OS/360 TNL to C27-6946-00	GN27-1342-00
Emulating the IBM 1401, 1440, and 1460 on the IBM System /370 Model 155 using DOS/360 TNL to C33-2004-00	GN33-7005-00
Emulating the IBM 1410 and 7010 on the IBM System/370 Model 155 using DOS/360 TNL to C33-2005-00	GN33-7006-00

Promotional Material

System/370 Model 145 Promotional Brochure	G520-2292-00

Proposal Inserts

System/370 Model 145 Proposal Insert	G221-0551-00
IBM 2319 Direct Access Facility Proposal Insert	G221-0565-00

Fact Folder

System/370 Model 145 Facts Folder	G520-2398-00

Marketing Guide

A Guide to the IBM System/370 Model 145	GC20-1734-00

Publications Available after Announcement

Physical Planning (60Hz)	GC22-7004
Physical Planning (50HZ)	GC19-0004
TNL to GC28-6514	GN33-8085
TNL to GC26-3756	GN33-8086
TNL to GY26-3700	GY33-8034
TNL to GC24-3414	GN33-8090
TNL to GY26-3642	GY33-8038
FE Brochure (Mallard)	––
S/370 Model 145 Marketing Manual	––

Prices ...

3145 Processor Units

Model	MAC	Purchase	MMMC
FED			
GE			
GFD			
H			

Rental Plan: Purchase Option:
Warranty: Maintenance Plan:
Education Allowance: Per Call:

*

Model changes of the processing units are field installable.

FEATURES		MAC	PURCHASE	MMMC
Channel to Channel Adapter	1850			
Direct Control	3274			
Emergency Power-Off				
2 switches	3621			
up to 12	3622			
Selector Channel No. 2	6982			
Selector Channel No. 3	6983			
Selector Channel No. 4	6984			
Channel Word Buffer	8810			
Integrated File Adapter	4650			
Extended Precision Floating Point	3910			
1401/40/60 Compatibility	4457			
1401/40/60,1410/7010 Compat.	4458			
Block Multiplexor Channel				
1st Selector Chnl.	1421			
2nd " "	1422			
3rd " "	1423			
4th " "	1424			
3210-1 Adapter	7844			
3210-2 Adapter	7845			
3215 Adapter	7855			
Main Storage Frame Adapter				
3345	4901			
3346	4902			
Additional Multiplexor Subchannels				
32 Subchnls.	4951			
64 Subchnls.	4952			
128 Subchnls.	4953			
256 Subchnls.	4954			

*

Feature 4650, Integrated File Adapter, is not recommended for field installation. All other features are field installable and the purchase price includes installation.

*Prices and allowances will be announced on announcement date.

Main Storage Frames ...

Machine Type	MAC	Purchase	MMMC
3345			
3346			

Rental Plan: Per Call:
Purchase Option: Maintenance Plan:
Warranty: Ed. Allowance:

*

Processor Storage Combinations ... Processing units require the following specific processor models and storage types to configure the system. Models and types cannot be used other than as stated on the following chart:

Models	Capacity	3145	3345-1	3346-1
FED	112K	Yes	None	None
GE	160K	Yes	None	None
GFD	208K	Yes	None	None
H	256K	Yes	None	None
H	384K	Yes	1	None
H	512K	Yes	None	1

THE 2319 DISK STORAGE FACILITY

The 2319 Disk Storage Facility contains three independent disk storage modules and associated control. It attaches to the Integrated File Adapter feature of the S/370 Model 145. Five additional disk storage drives are possible by attaching combinations of 2312, 2313, or 2318 Disk Storage units to the 2319. Interchangeable data storage is provided via the 2316 Disk Packs.

SPECIFICATIONS:

On-Line capacity (bytes)	87,528,000
Track capacity (maximum bytes)	7,294
Cylinder capacity (maximum bytes)	145,880
	(20 tracks)
Pack capacity (maximum bytes)	29,176,000
Access time (ms.)	
average random	60
maximum	130
minimum	25
Rotational speed (rpm)	2,400
Rotational period (ms.)	25
Data rate (bytes/second)	312,000

Limitations ... Attachment of 2312, 2313, or 2318 Disk Storage units to the 2319 is limited to five additional drives. Details considering configuration changes in the field will be addressed in the sales manual pages for the 2319.

Delivery ... First customer shipments of the 2319 60 Hertz facilities begin in August 1971, coincident with Model 145 60 Hertz shipments from Endicott; first customer shipments of 2319 50 Hertz and 60 Hertz facilities begin in October 1971 coincident with Model 145 50 Hertz and 60 Hertz shipments from Mainz.

Published delivery schedule will be available in 120 days. Delivery dates will be assigned sequentially, however orders involving multiple units of one type are subject to an extension of schedules. Confirmation of shipping schedule must be received by Branch Office prior to delivery commitment to customer.

RPQs ... RPQs may be submitted 120 days after announcement date. Response time and delivery (if approved) will depend upon the complexity of the request.

Programming Support ... Support for the 2319 will be provided at first customer shipment by DOS and OS (MFT and MVT). Support is the same as that presently provided for the 2314 DASF. See P70-109A for details.

Program Test Allowance ... Pre-installation program test allowance for the 2319 is five hours.

Sales Compensation Plan ... Standard provisions of the DP Sales Plan apply. The point values assigned for On-Schedule Installation (Schedule A) and Out-of-Territory (Schedule B) are as follows:

SCHEDULE A:	Machine Type	Points
	2319	1,000

SCHEDULE B:	Machine Type	Points
	2319	650

Education Allowance ... A 10% Education Allowance applies to the MAC and Purchase Price of the 2319 and does not apply to the MMMC.

Orders and Movements Codes ... The same as for the System/370. Model 145.

Publications ... IBM 2319 Disk Storage Component Summary, GA26-1606-0, offers a description and basic information for the 2319. Initial quantities will be distributed through DP Automatic Publications Service (DAPS) and announced in the weekly Publications Release Letter.
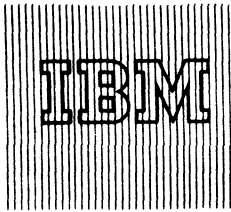
Product Announcement

CHANGE IN PRODUCTION STATUS OF THE 1316 DISK PACK

Effective immediately, the 1316 Disk Pack is in "Limited New Production."

Effective March 31, 1971, production will be terminated and production status changed to "as available." The repair program presently in existence will be maintained.

ADDENDUM TO DP LETTER NO. 70-325 DATED JULY 31, 1970:

DISK CAPACITY DOUBLED ON S/360 MODEL 20 SUBMODEL 4

The first paragraph under *Highlights* should read:

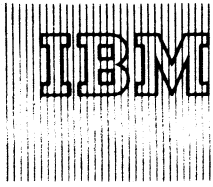Lower cost for larger file capacity (an additional 5.4 million bytes disk for a rental increase of $555).

John Fahey
WTC Director of DP Marketing

Attachments [7] :   [1 thru 6] Machines 526-536, 2085.1, 2260-2265, 2301-2303, 2772.1, 2772.3 . . . [7] Systems 1050.1

Supplement**[4] :   [1] Machines 3155.1 ... [2 thru 4] Systems 370.1, 370.3 and 370.5

Distribution: All Areas

** New Business Practices Countries Only

Marketing Announcement

RELATIONS WITH DATA SERVICERS AND SUBSCRIBERS

Organizations Affected

Those organizations traditionally identified as service bureaus, as well as many other users of IBM systems in many industries, offer data processing services on a fee basis, in many cases competing with our own equipment and service offerings, including Data Center Services (DCS). (Some of these data servicing arrangements require the use of terminals and some do not.) The marketing practices outlined herein apply to all organizations identified and defined as follows:

Servicer — A user of IBM equipment (excluding DCS) who regularly provides data processing services on a fee basis (whether such services are a primary or secondary function of the organization). This does not include IBM DP customers selling a minor part of their free capacity on an irregular basis. Joint users of DP equipment are normally excluded.

Subscriber — Any organization which subscribes to the above defined servicer on a fee basis (excluding IBM DCS customers.)

General Policy

IBM personnel engaged in marketing in a data servicers' environment must be particularly careful to observe the following IBM policies:

IBM strives for uniform, non-preferential treatment of customers in order not to provide one customer with an unfair advantage over another.

IBM does not endorse the services, nor provide assistance in marketing the services, of any other organization.

Communications with Servicers

All communications with data servicers or with other customers relative to their data servicing activities that concern equipment, programs, application guidance, terms, conditions, and policies must be in writing or immediately confirmed by letter and signed by branch management. If, in the opinion of branch management, the subject of the communication is of such significance that a positive customer acknowledgment is appropriate, a confirming letter from the customer or counter-signing of our communication should be obtained.

References to Services

Prospective subscribers will frequently ask, "What organizations offer the required services?" In answer, IBM personnel will make reference to our own DCS as being among those that offer the services. IBM does not endorse the services of any other organization. IBM personnel must not make any statement regarding the scope, quality, price, etc. of services offered by any other organization.

Participation in Meetings

IBM personnel are prohibited from acting as intermediaries. IBM personnel are not allowed to arrange or host meetings between servicers or prospective servicers and subscribers or prospective subscribers. If invited, IBM personnel may attend such meetings provided it is made clear to all present that IBM is not recommending nor endorsing in any way whatsoever any particular organization or servicer/subscriber arrangement. IBM participation must be limited to discussions pertaining to IBM machine capabilities and IBM distributed programs. IBM personnel must not participate in discussions relative to the merits of specific servicer/subscriber relationships, advantages of programs or support provided by servicers, economic justification, fees, contract provisions, or make statements regarding the scope, quality, price, etc. of services offered by the data service.

Statement of Responsibilities

Many data service offerings are based on, or include portions of, IBM Type I and II programs, program products, other programming distributed by IBM, applications briefs, technical publications, procedure proposals, etc. It is extremely important that we reemphasize to servicers and subscribers that the overall responsibility for achievement of their application objectives remains with them.

All IBM equipment recommendations to servicers and subscribers (or IBM letters confirming orders obtained without proposal) must include an appropriate paraphrase, authorized by branch management, that addresses all pertinent customer responsibilities. (See "Proposal Statements Required — Customer Responsibilities." in General Information Section 9 of the DP Sales Manual.

See the reverse side of this letter for pertinent questions and answers relative to this letter.

John Fahey
WTC Director of DP Marketing

Distribution: All Areas

Questions and Answers

1. May IBM personnel participate in seminars for prospective on-line terminal subscribers?

    Yes, however, prior to accepting an invitation to participate in such a seminar, IBM personnel must make Data Servicers fully aware of the ground rules discussed under "Reference to Servicers" and "Participation in Meetings."

2. May IBM personnel participate in on-line terminal demonstrations for prospective terminal subscribers?

    Yes, however, IBM personnel must not influence the selection of which servicer and/or subscriber shall be asked to demonstrate. Following the ground rules discussed under "Reference to Servicers", the potential subscriber must make his own arrangements for demonstration directly with the servicers of his choice.

3. May IBM personnel "make selling calls" with representatives of data servicers on subscribers or potential subscribers?

    No.

4. May IBM submit a proposal for equipment to a servicer who intends to present the IBM proposal along with their overall data service proposal to one or more subscribers?

    Yes, except that the IBM proposal and the servicer's proposal must be kept distinctly separate. Joint or counter-signed proposals are not allowed. The IBM proposal must not mention any subscriber or prospective subscriber by name. The IBM proposal must not mention any items that properly belong in the servicer's proposal such as advantages of servicer programs and procedures, economic justification, fees, contract provisions, etc.

5. May IBM personnel participate in the preparation of servicer proposals for subscribers?

    IBM does not participate in the preparation of Servicer proposals. IBM personnel may provide information regarding applications briefs (i.e. published and distributed by an Industry Department) or participate in the preparation of new general applications briefs provided IBM has received prior written agreement from the servicer that the new general applications briefs may be discussed with or made available to any other customer including other Data Servicers.

6. May IBM present a proposal for IBM products to a prospective servicer?

    Yes, but the proposal must not mention by name or by implication any prospective subscribers. All proposals must clearly state that it is the servicers' responsibility to determine the economic justification for utilization of the proposed IBM products.

7. Will IBM review proposals?

    IBM proposals to servicers will continue to be subjected to the DP Installation Program procedure. However, this is an internal IBM requirement; no statement may be made to any customer implying that this internal procedure represents any guarantee or assurance of performance. IBM will not countersign, "assure" or otherwise endorse non-IBM proposals.

8. May IBM submit a proposal for an IBM stand-alone system directly to a terminal prospect in competition with a servicer's proposal that is based on utilization of IBM terminals?

    Certainly, IBM may actively and fairly compete for the end user's business. However, if the end user is committed to acceptance of a servicer proposal, normal competitive ground rules apply. (See "Competition, Customer Commitments to Competitors" in General Information Section 1 of the DP Sales Manual.) Any questions should be referred to Country Counsel and Industry Relations.

9. Suppose a customer's systems are used for both internal applications and data servicing. How should these instructions be applied?

    If the customer provides data servicing on a regular scheduled basis and/or a major part of his capacity is dedicated to Data Services, these instructions must be followed regarding any activities related to data services. For example, if the planned workload for an on-order system includes any data servicing applications, then all information regarding specifications, delivery date, related programs, etc., must be in writing as specified under "Communications with Servicers", as stated in the text of this letter.