PL/I FOR VSPC (VSPC PL/I)
5785-EAB

This IUP is a proper subset of the PL/I language, compatible at source level with the OS PL/I Optimizing Compiler, Release 3.0, and provides facilities appropriate for the VSPC interactive environment. It is a single-load, re-enterable module, and runs as a foreground processor under VSPC in an OS/VS1 or OS/VS2 (MVS) operating environment. VSPC PL/I provides a very powerful programming language designed with performance and ease-of-use as important considerations.

Notice G320-5806, Language Reference Manual SH20-2031, Terminal User's Guide SH20-2030, Installation Reference Guide SB20-2032, Systems Guide LY20-2312.

PROJECT EVALUATION AND CONTROL SYSTEM
5785-EAE

This IUP is designed to plan, track, and control projects with typical manning levels between 3 and 15 people. It is especially suited to DP development projects. The IUP offering consists of an integrated set of forms, procedures, and APL functions to establish the personnel resources required to produce a system or product and track the performance of project members in meeting the product schedule.

Notice G320-6088, PDOM SH20-2123, Systems Guide LY20-2375.

APL CONTINUOUS SYSTEM MODELING PROGRAM (APL/CSMP) FOR VSAPL
5785-KAE

This IUP consists of a set of interactive APL functions that enables the user to define and execute digital computer modules of continuous systems. These models are sets of mathematical equations which may contain predefined mathematical functions and special operation blocks supplied by APL-CSMP. Facilities allowing definition and change of parametric data and conditions, error bounds for computations, selection of the integration method, and control of the display of the results produced by the simulation run can also be included within the model.

The source language has a syntax very similar to that of the CSMP-III program product 5734-XS9.

Notice G320-6081, PDOM SH20-2115, and Quick Reference Guide GX20-2335.

DORTMUND LIBRARY SYSTEM
5787-DAA

The Dortmund Library System provides the cataloging and catalog search functions for a library information management system. The cataloging function handles monographs and serials. Updates to the data base are performed online. Sub-functions include add new document, modify catalog record, transfer record, add copy, and authority file control. Catalog search allows access by LC card number, ISEN, ISSN, call number, name, subject, title, publisher, document number, and miscellaneous numbers.

Notice G320-6173, PDOM SH20-2348, Librarian's Guide SH20-2347, Systems Guide LY20-2432.

THE LEUVEN LIBRARY SYSTEM-BATCH
5787-FAH

The Leuven Library System-Batch produces cataloging outputs (catalog cards, accession lists, COM catalogs) and the documents and listings necessary for circulation and acquisitions. This Installed User Program was designed to complement the Dortmund Library System IUP (5787-DAA) and the Leuven Library System-Online circulation and acquisition modules IUP (5787-FAJ).

Notice G320-6174, PDOM SH20-2350, Systems Guide LY20-2433.

LEUVEN LIBRARY SYSTEM-ONLINE
5787-FAJ

The Leuven Library Sytem-Online is an easy-to-use circulation and acquisition system. Designed as a complement to the Dortmund Library System (5787-DAA), the Leuven Library System-Online can help solve the circulation and acquisition problems of university, special, and national libraries.

Notice G320-6175, PDOM SH20-2352, Librarian's Guide SH20-2351, Systems Guide LY20-2434.

FREIGHT BILL AUDIT AND RATING SYSTEM
Goodyear Tire and Rubber Co., Akron, OH
5796-AEJ

This IUP is a unique traffic system that permits computer-generated computation of the lowest charge for most truck and rail shipments of one or more (straight or mixed) commodities from any origin to any destination for which the data base has been created. The system also features computer audit (reconciliation) of most carrier freight bills prior to payment. Programs are provided which may be used to create and maintain an extensive data base of the shipper's traffic pattern.

Notice G320-8071, PDOM SH20-1343, Systems Guide LY20-0925, Users Guide LY20-0938, .

COMPUTER GENERATED CORRESPONDENCE
Fidelity Union Life Insurance, Dallas, TX
5796-AER

This IUP allows letters to be requested in two ways: On demand through a 3270 visual display terminal or automatically from CFO daily cycle, agency and payroll systems. Pre-composed letters are stored on a DASD. Existing data bases are accessed to provide information such as policy number, name, address, etc., while variable data is entered when the letter is requested. The online and batch letter requests are combined, sorted by letter type and printed. During the print run, the pre-compose is extracted from the letter file and the variable information is inserted at its proper place. Usage statistics are maintained by letter type. To optimize DASD utilization and to avoid data duplication, all words in the pre-composed letter file are maintained as codes which point to word dictionaries. The facility exists to generate multiple copies of the same letter and also to prepare envelopes.

Notice G320-8094, PDOM SH20-1365.

PRODUCTIVITY AID:
3270 SCREEN IMAGE PREPROCESSOR FOR IMS AND IMS/VS
INA Corporation
5796-AFC

This IUP simplifies the design and implementation of IMS/3270 applications. Each 3270 screen format added to an IMS system necessitates the preparation of many detailed control statements as input to the Message Format Language Utility. Using a single control statement and only one card image for each line to be represented on screen, the Preprocessor generates the required IMS input statements. Each line of the screen image is coded exactly as it is to appear on the 3270 screen. Field control information (attribute bytes), which do not appear on the actual screen but occupy one screen character position at the beginning of each field, must also be coded to specify the desired field types. The Preprocessor output includes a printed representation of the screen layout in addition to generated control statements which may be printed or passed to the utility.

Notice G320-8099, PDOM SH20-1390, Systems Guide LY20-0946.

2927 DUAL PRINTER UTILITY PROGRAM
R. H. Donnelley Corporation
5796-AFK

This IUP from the supports two 1403 Printers mdl N1 connected to the 2927 Tape-to-Printer RPQ. The RPQ with this IUP provides for high volume production printing for direct mail addressing, labeling, letter writing and premium notice printing at low cost. Each printer is operated independently of the other. Tapes are prepared in previous operations in the desired format. Two volumes of a multi-volume file or two separate jobs operate simultaneously. This program will not run on the 2927 single printer model. FDP 5798-AKH provides comparable support for the single printer model.

Notice G320-8106, PDOM SH20-1544.

SMF GRAPHICAL ANALYSIS PROGRAM
Peoples Gas Light and Coke Company, Chicago, IL
5796-AFP

This IUP is designed to bridge the gap between detailed accounting data provided by OS or VS (VS2 with or without HASP) Systems Management Facility (SMF) and easy-to-read, summarized reports required by DP management. The IUP processes raw SMF Data and produces charts, tabular listings, reports and histograms, both detailed and summary. If your installation requires summarized graphs of system utilization, a job-step concurrence chart, sorted job-logs or job-step logs, a trail to help isolate performance problem areas, or a reformatted SMF data set to aid in the design of a DP billing or accounting system, then this IUP may be the solution.

Notice G320-8127, PDOM SH20-1618.

RAIL CAR MANAGEMENT SYSTEM
Hercules, Inc., Wilmington, DE
5796-AFR

This online IMS-based IUP allows management to develop and maintain an extensive base of information on each rail car with respect to financial, tracking and maintenance records. Reports on out-of-service, excessive idle time, daily activity, etc., are provided as well as data base inquiry as to car status. Car location messages are used to update car spotting information.

This IUP is designed to help improve utilization of rail fleets. Savings may be achieved by reduction in the numbers of rail cars to provide a given level of service or by providing a greater level of service with the same number of rail cars.

Notice G320-8102, PDOM SH20-1548, System Guides LY20-2056 and LY20-2071.

CONVERSION AID: DOS TO OS CONVERSION SYSTEM FOR JCL, COBOL, RPG AND SORT/MERGE
Envirotech, Salt Lake City, UT
5796-AFZ

This IUP automates the conversion process for JCL, COBOL, RPG, SORT and some utility programs.

DOS JCL and DOS programs are displayed side by side with their OS equivalents. The OS equivalents are punched with JCL ready for compilation and cataloging for testing. COBOL D programs are processed by the Language Conversion Program to bring them to the ANS COBOL level before conversion. COBOL programs with end-of-page indicators are modified for handling of the carriage control tape. All CALL subroutines are identified for further resolution. DOS RPG FILENAMES are converted to OS RPG DDNAMES through the use of cards provided during the conversion process. All SORT control cards are handled automatically. A management report is provided as part of the process which shows the status of the conversion on a dynamic basis.

The Envirotech Corporation converted 1,200 routines to OS/VS from four geographically separated divisions while consolidating their operations at Salt Lake City. They did this with one system programmer and three part-time clerical personnel in six months through the use of the Conversion System. They estimate that two-thirds of all time and effort were saved over manual alternatives.

Notice G320-8124, PDOM SH20-1610.

PROOF OF DEPOSIT AND TRANSIT SYSTEM
Houston National Bank, Houston, TX
5796-AGA

This IUP features the complete proof of deposit function, online correction of rejects, automatic balancing by transaction, and nonstop reader/sorter processing with divider slips for bundle totals.

The system also features use of destination headers for *killing* a high number of endpoints in two passes, automatic cash letters, multiple copy recaps, endpoint analysis, and sort pattern maintenance by user (Item Processing Department).

Major advantages include improved disposition of rejects, more accurate float, sort pattern changes controlled by Item Processing Department and audit trail of all items corrected.

For enhancements, see 5796-AKT and 5796-AKW (3890 Feature).

Notice G320-8118, PDOM SH20-1605.

3525 GENERAL PURPOSE UTILITIES
Parkview Markets, Cincinnati, OH
5796-AGE

This IUP takes advantage of the capabilities of the 3525 Card Punch which when equipped with special features can read and/or print as well as punch 80-column cards in a single pass. The major functions include interpret, print any data on any card, ledger update, reproduce, gangpunch, and resequence.

Notice G320-8111, PDOM SH20-1564.

FULL SCREEN 3270 SUPPORT FOR PL/I AND ASSEMBLER APPLICATION PROGRAMS UNDER TSO
Texas A & I University
5796-AGH

This IUP is a multifunction and multipurpose subroutine that provides an interface between the 3270 Information Display System and PL/I or Assembler programs running under TSO. The IUP provides convenient, meaningful access to all the features of the 3270 and isolates the programmer from the many intricacies of the device while still allowing complete control over every aspect of the terminal. Coupled with TSO, Full Screen 3270 Support for PL/I and Assembler application programs under TSO allows true interaction between a running program and a user at an IBM 3270 display terminal.

The IUP includes many features designed to speed program development. One of these is comprehensive error checking. Error messages are displayed at the terminal and associated with the erroneous CALL statement by offset from an entry point name, just as in normal PL/I error messages. A trace facility, which can be dynamically controlled, allows step-by-step examination of the results of each call to the program and indicates to the user at the terminal the command name and the offset and entry point name corresponding to the CALL

statement. For assembler users, the macros provided with the IUP automatically generate the appropriate parameters and parameter list for calling the program and use essentially the same notation as used by PL/I users.

Notice G320-8114, PDOM SH20-1569, Systems Guide LY20-2090.

INSTALLMENT LOAN CALCULATOR
5796-AGQ (CICS/DOS/VS)
5796-AGR (CICS/OS/VS)

This IUP is for online use by credit officers of banks and retail enterprises when making installment loans.

It supplants the use of rate books for fitting payments and percentages to satisfy loan requests. It allows the credit CICS for both DOS and OS with 3270 and/or 7770 audio response. It allows the credit officer to spend more time with the customer and develop an installment loan more closely related to the customer's wishes. The potential advantages are increased loan business due to more flexible terms, increased yield by inclusion of odd-day interest, reduction of errors by elimination of manual calculations and the replacement of expensive rate books and programmable calculators. It operates under CICS for both DOS and OS with 3270 and/or 7770 audio response system if desired.

Notice G320-8121, PDOM SH20-1607, Systems Guide LY20-2095.

GENERAL PURPOSE TAPE AND DISK SCANS
5796-AGY

This IUP provides the capability to decrease both programmer and computer time required to test new applications, debug existing errors, and create special reports for management. The two general purpose file scans handle fixed, variable, and undefined record formats on disk or tape, and search up to 14 fields for high, low, equal, not high, not low, and not equal conditions.

Notice G320-8166, PDOM SH20-1625.

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PRODUCTIVITY AID: CICS/VS ONLINE TEST/DEBUG II
5796-AHJ

This extended support IUP provides the programmer with the facilities to test and debug application programs and files while CICS/VS is operating, by entering command statements via a 3270 Information Display System.

Key Function, Facilities and Features:
- Display any location in main memory of the machine
- Alter any location within the CICS/VS job step boundaries
- Stop the execution of a specific CICS/VS task at a specific address within an application program
- Display and alter storage records on any data set available to the CICS/VS job step
- Immediately change storage records on file (ISAM, BDAM, VSAM, DL/I, and temporary storage)
- Open or close files online
- Able to console debug programs without interrupting the normal operation of the installation.
- Provide the ability to make program changes without reassembling or relink-editing
- Enables forcing of transaction dumps
- Enables the programmer to set up data conditions on disk and set up main storage conditions for test
- Allows programmer to step through program one instruction at a time, displaying registers and data at each step.

Notice G320-5710, PDOM SH20-1877.

PRODUCTIVITY AID:
IMS 3270 LOCAL COPY FOR ONLINE PRINTING
5796-AHL

This IUP from Hamilton Standard provides for online printing of IMS 3270 screens on a locally attached 3284 or 3286 printer under operator control. It performs a function comparable to remote printing under IMS. It is application independent and can be used effectively in debugging new applications as well as providing hard copy for existing applications. It can help improve data security by permitting an installation to implement only local copy capabilities where tighter control can be maintained.

Notice G320-8150, PDOM SH20-1721.

IMS LOGTAPE MANAGEMENT SYSTEM
5796-AHT

This IUP is a set of four Assembler written programs that manages information concerning LOGTAPES created by IMS/VS. The programs provide Logtape assignment and JCL for IMS/VS accumulation and recovery runs, and can be used for an installation's entire data base system or selected data bases.

Notice G320-8141, PDOM SH20-1707.

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COBOL MAINTENANCE AID
International Playtex
5796-AHY (DOS)
5796-AHZ (OS)

This IUP reads a source module, analyzes the procedure division, and assigns an arbitrary number to paragraph names. These numbers are then displayed in a tree-structure showing the next level (referenced paragraph) and listing the previous level (referencing paragraph). The source code in the paragraph is also listed. The objective of the IUP is to provide logic documentation for source programs to aid in modification or error correction and to be used as a status report during development and design validation.

Notice G320-8146, PDOM SH20-1716, Systems Guide LY20-2196.

FREIGHT BILL AUDIT
Ball Corporation
5796-AJB

This IUP is a freight bill auditing system designed to edit a freight bill for accuracy. A freight rate data base is accessed to verify that the tariff is the correct one, that the charges are accurate, and, if the extensions are correct, an entry to accounts payable is generated. The data base contains class, commodity, column commodity, and private filings rate types, along with carrier sensitivity and deficit weight and pallet rules. The system produces a report which shows the authorized payments by plant, subtotaled by carrier.

This IUP, written in RPG-II, though similar to the Freight Bill Audit and Dating System IUP (5796-AEJ), does not process many of the unusual or exceptional rate conditions nor does it process accessorial charges. A customer with a limited product line (as rated) with industrial rather than consumer customers would be the best potential prospect.

Notice G320-8147, PDOM SH20-1717, Systems Guide LY20-2194.

PRODUCTIVITY AID: DOS/VS DBDUMP UTILITY
FOR DL/I, DL/I-ENTRY, AND VANDL/I
Sagner, Inc.
5796-AJE

This IUP provides DL/I, DL/I-Entry and VANDL/I users with the ability to access, display, and optionally change data bases.

It can help save implementation time in testing data base applications by displaying data bases to verify change activity, scanning for the presence of segments and listing them for verification, and providing for the alteration of data contained in segments so that the user can correct erroneous data generated by application program errors.

Because this IUP provides wide ranging accessibility to data, the user should install it under security controls that will ensure the continued integrity of his data bases and files.

Notice G320-8156, PDOM SH20-1754.

SVS/MVS SYSTEM AND JOB IMPACT ANALYSIS
United Banks Service Co., Denver, CO
5796-AJF

This IUP is designed to assist customers in understanding the performance of an individual job within the OS/VS2 environment and its impact on the total system. This system can log the job related information provided by the operating system in the Task Control Block, Task Input/Output Table, Timer Control Table, and Page Frame Table. A series of three report programs can provide for the data reduction and presentation of the results. This series of programs can be used to help analyze such activities as communication userresponse, TSO perform-ance, and the impact of background jobs on the total system.

This system consists of four programs: a logging program which can run concurrently with SVS or MVS and three report programs for reduction of the data into meaningful reports. The logging program can be installed without any system modification. The program can be initiated/terminated from the system console, allowing for variable sampling periods and sampling intervals.

Notice G320-8149, PDOM SH20-1720, Systems Guide LY20-2217.

APPAREL BUSINESS SYSTEM/370
5796-AJG

This IUP is designed to provide a complete comprehensive and integrated system for the apparel manufacturer, featuring interactive data entry, online inquiry, and batch reporting. It uses 3270 Information Display terminals, operating under CICS/VS, in user departments for all data entry, inquiry and update functions required.

The functions of the system include order entry and analysis ... inventory control and contractor work in process ... component inventory - raw material requirements ... style bill of material with standard costing ... order allocation with warehouse pick tickets invoicing ... credit memos and credit analysis ... (sales personnel) commissions ... open item accounts receivable, including online cash/credit application ... sales analysis.

Notice G320-8152, Terminal Operator's Guide SH20-1560.

PRODUCTIVITY AID:
IMS HDAM RANDOMIZER ALGORITHM ANALYZER
INA Corporation
5796-AJL

This IUP is for IMS/360 and IMS/VS users to help them evaluate the effectiveness of their HDAM randomizing routines. An array of counts of synonyms developed for each Root Anchor Point is printed with additional information such as RAPs not used, counts of long chains, average long chain length and worst case long chain. Any number of randomizing routines can be evaluated in one session. Input can be from an existing OS file, an existing HISAM, HIDAM or HDAM file or a key file generated by the use of the DB PROTOTYPE IUP 5796-PBB. The INA Corp. uses the aid under batch and TSO control. The most significant benefit is the potential for improved transaction processing time achievable by moving from other access methods to HDAM. Additional benefits can come from fine tuning the HDAM randomizing routine and the possibility of avoiding data base reorganizations at a later time if the randomizing algorithm chosen is ineffective.

Notice G320-8157, PDOM SH20-1756.

STATUTORY/GAAP VALUATION SYSTEM
Carlin Black Systems Corp., Louisville, KY
5796-AJR

This IUP is designed to calculate statutory and GAAP reserves and premium items and details on policy values for year-end and interim valuation. The system also has the ability to process accident and health reserves, the ability to compute due, deferred and advance premiums on ninthly and tenthly modes, more comprehensive editing, audit trail provisions, and many additional reports not provided in '62 CFO valuation.

This product consists of 32 programs written in COBOL/VS. The programs fall into five basic categories: Valuation, Print, Maintenance/Conversion, Reserved Released, and Policy Exhibit. The Valuation category includes statutory and GAAP valuation for the following types of insurance: Life, Annuities, Accident & Health, Supplemental Benefits, Extra Life, and Paid-up.

Notice G320-5662, PDOM SH20-1786,

VSAM ACCESS ROUTINES
Central Hudson Gas and Electric, Poughkeepsie, NY
5796-AJW (OS/VS)
5796-AJX (DOS/VS)

This IUP is designed to provide easy access for full-function VSAM files through a variety of high-level languages. A standard CALL interface (from COBOL, FORTRAN, Assembler) to perform VSAM requests simplifies the application programmer's job; a step-by-step installation procedure and sample program assists the first-time VSAM user by providing jobs for VSAM object definition and examples of access to key-sequence and alternate index data sets. Comprehensive error codes and messages can isolate user or system errors.

Notice G320-8161, PDOMs SH20-7180 (OS/VS) and SH20-7181 (DOS/VS).

VIDEO SUPPORT AIDS
5796-AKK

This IUP consists of a series of batch and online programs which provides the VIDEO/370-CICS/DOS/VS user the following functions:

* Additional edit capabilities which can either reduce or eliminate the need for CICS/VS edit programming.
* Automatic generation of COBOL data definition statements in copy book format.
* Enhanced debug diagnostics which can shorten the time required for problem determination.
* Dynamic loading of VIDEO user edit routines thereby minimizing the effort required to add new and/or modified edit routines.
* Facilities to dynamically enable/disable both VIDEO formats and/or user edit processing.
* Enhanced ABEND recovery to provide greater VIDEO availability.
* Additional batch report capabilities.
* Simplified COBOL extract programming requirements.

Notice G320-5668, PDOM SH20-1811.

PROOF OF DEPOSIT AND TRANSIT SYSTEM - ENHANCEMENTS
Houston National Bank, Houston, TX
5796-AKT

This IUP offers the following enhancements to the prerequisite Proof of Deposit and Transit System, IUP 5796-AGA:

* Master Capture List is printed after the All Items File is balanced.
* Capture/Item Number printed on cash letters makes research easier.
* All reports print columnar.
* Full field capture allows the maximum characters in each check to be captured.
* Usability enhancements make modification and installation easier.

Notice G320-5687, PDOM SH20-1845.

STATEMENT PREPARATION SORT FOR THE 3890
Mercantile Safe Deposit & Trust Co., Linthicum, MD
5796-ALP

This IUP is designed for banks which perform cycle sorting and bulk filing to achieve the required check sorting and statement preparation which has become so labor intensive.

On-us checks, returned to the bank daily, are not sorted on the entire account number and hand filed as in most manual systems, but are merely split into a number of cycles--usually one cycle for each business day of the month. These cycled checks are then stored in bulk until their statement dates become due. On any particular cycle day (or statement day), customers extract from their statement file the accounts that have checks processed against them. These should match the checks that have been filed against that cycle.

The system will then build and optimize a fine sort based upon this set of account numbers. For each account number, a six-byte table entry is constructed, consisting of four bytes for the account number (in binary) and two bytes for the pocket destinations. The pocket codes are assigned in such a way that on the last pass (four passes are required) the system will insert separator documents between every account number in a technique called a cascade. After this pass, the checks will be in ascending account number order by pocket. Sequence checking is also performed during the sorting. Item counts and rejects are tracked for each pass. Jammed items are removed and treated as rejects.

During the last pass, the account numbers and the number of checks per account are captured. This file is sorted against the input file, and a listing is produced which shows the number of checks for each account and notes any error conditions that may have been detected (such as *overs* or *shorts*). The checks are then sent to the automatic statement rendering machines.

Notice G320-5715, PDOM SH20-1884.

VSAM CATALOG LIST
Joseph Schlitz Brewing Co., Milwaukee, WI
5796-ALQ (DOS/VS)
5796-ALR (OS/VS)

These IUPs produce concise VSAM Center status reports, providing summary data essential for monitoring day-to-day VSAM space utilization requirements. They are designed to be used as a replacement for the Center listings produced by the VSAM Center utility, IDCAMS.

Each program consists of two assembler language programs. Input comes from the VSAM Center and the Center utility, IDCAMS. Output is in the form of two reports:

- A VSAM Center listing in data set name sequence. This report provides the following information for each data set: volume ID ... allocation unit ... primary allocation ... secondary allocation ... number of extents ... number of control interval and control area splits ... control interval size for data area and index area ... record count ... record length ... key length ... relative key position ... any data set which has a C1 or CA split, or has gone into secondary allocation, will have the name flagged.
- A VSAM space listing for each storage volume. This report provides the following information by volume: cylinders allocated and available ... number of data spaces and clusters on volume ... for each cluster, the cluster name ... allocation unit ... primary allocation ... secondary allocation ... number of extents.

Notice G320-5716, PDOM SH20-1885.

ACTION CENTER SUPPORT SYSTEM
City of Garland, TX
5796-ALY (DOS/VS)
5796-ALZ (OS/VS)

This IUP is designed to provide rapid responses to consumer concerns and complaints, and to provide an analysis of that activity. It was written to aid the action center personnel in handling citizen concerns before they became complaints. Although it was designed to handle the needs of local government, it can be used by any organization that interfaces with a consumer of that organization's product or service.

The criteria of communication, action, responsiveness, and evaluation were used to design and develop the Action Control Support System. This system contains a series of online CICS/VS programs operating in either a DOS/VS or OS/VS environment supplemented by batch programs used to produce various management reports.

Notice G320-5717, PDOM SH20-1888, Systems Guide LY20-2271.

NURSE SCHEDULING SYSTEM
Fairview General Hospital, Cleveland, OH
5796-ANA

This IUP is designed to provide a personalized scheduling system with a limited nursing float pool, while maintaining standard scheduling policies: It assists in staffing to a patient care level and supports a call-in procedure. As a result of the scheduling and reporting, the system produces management reports.

The online system is accessed via video terminals to display or update core requirements. The programs are written in ANS COBOL and ASSEMBLER, and use Basic Mapping Support. The system runs under CICS/DOS/VS, and the principal access method is ISAM.

Notice G320-5721, PDOM SH20-1910.

DYNAMIC BTP GENERATOR SYSTEM FOR THE 3760
Marsh and McLennan, Inc., San Francisco, CA
5796-ANF

This IUP simplifies the work of a data entry supervisor and a computer operator at the point in time when completed batches on a 3760 cluster are ready for transmission to the host S/370.

Without this type of application, the data entry supervisor calls the computer operator and names the batches which are ready. The operator then punches control cards naming each batch and submits the control cards to the 3760 Batch Transfer Program (BTP). An alternative method utilizes a set of control cards naming all batches which can be generated at the 3760. This complete set is submitted to BTP each time the data entry supervisor notifies the operator that there are completed batches ready for transmission. Both alternatives tie up system and/or human resources that might otherwise be used more productively.

This IUP was developed to help complete the automation of data entry, starting with keying data at the 3760 station and ending with the cataloging of data sets at the S/370 host system.

Highlights:
- Standard Setup - Separate BTP decks are not required for different jobs or job groups. With this IUP, all data transfers are controlled by a single two-step procedure.
- Increased Scheduling Flexibility - A data entry supervisor can select jobs for transfer as they are completed or jobs may be accumulated for combined transfers. Control statements allow further control of data transfer.
- Efficient Resource Utilization - Partially completed jobs may be transferred to free up space on a 3791 disk. BTP executes faster by processing only jobs that have been specified by the data entry supervisor.
- Comprehensive Audit Trail - The IUP provides reports which are helpful in auditing and controlling data entry operations.

This IUP can significantly reduce the operator intervention, amount of voice communication, and machine resources otherwise necessary for data transfers between a 3760 data entry operation and a System/370 host system.

Notice G320-5724, PDOM SH20-1917.

DISK WORK FILE MANAGER
Fiberglass Canada, Ltd.
5796-ANK

A major obstacle to achieving partition independence in a DOS/VS environment is the allocation of temporary disk work files (typically needed by sorts, compilers, and application programs using work files). To allow job requiring disk work files to operate concurrently, in any partition, often involves constant manual control to avoid conflicting disk requirements. This degree of manual control is frequently difficult to achieve, and the alternative for many DOS/VS users is to always run such jobs in a particular partition with no attempt to balance partition workload. Both methods tie up either the programmer or the system resources which might otherwise be used more productively.

This IUP helps provide partition independence to DOS/VS users by dynamically allocating disk work files from pools of disk space which are internally maintained for each partition. A user may specify one or more pools for each partition; a pool of space assigned to one partition cannot be shared with other partitions. Typically requiring 2K bytes in the shared virtual area, this IUP handles program requests for disk work files by intercepting and modifying incoming job control statements. In this manner, the same job (and same JCL) running in two different partitions will automatically be assigned different temporary disk space areas.

Highlights:
- Simplified Multiprogramming - Programmers or operators are relieved of examining and altering JCL to avoid disk conflicts.
- Improved Throughput - Partition workload can be balanced better when jobs are no longer delayed because of conflicting work space requirements.
- Simplified Coding of Job Control Statements - Programmers need to specify only the number of tracks required for disk work files instead of having to determine and code exact disk locations. Furthermore, by regenerating the IUP, temporary work file locations can be altered without changing any existing JCL.
- Additional Protection of Permanent Files - This IUP eliminates the possibility of accidental destruction of permanent files caused by human errors in assigning temporary work space.

Notice G320-5741, PDOM SH20-1927.

HEALTH CARE SUPPORT/DL/I-PATIENT CARE SYSTEM
Duke University Medical Center, Durham, NC
5796-ANY

This IUP is a hospital-wide computer information system that provides a communication link between the admissions office, nursing stations, ancillary departments, accounting, and medical records. The system was developed to facilitate, expedite, and integrate the delivery of health care services and the operation of the hospital through efficient data processing.

It is a user-driven system through which service departments and nursing stations can manipulate and manage patient records. This is accomplished by entering doctors' orders through visual displays at the nursing stations. The orders are transmitted to the appropriate ancillary departments, as well as being added to the patient's data base record. The ancillary departments have the ability to display and/or print work to be done (worklists) and to enter results. Results may then be transmitted back to the nursing station in hard-copy form to become part of the chart, if desired. The result becomes part of the patient's data base record and is available for inquiry through a video display to authorized personnel. Cumulative summaries can also be produced. Charges for services are automatically collected and made available to the accounting system. Upon patient discharge, medical record abstracts are prepared.

The systems supports the ancillary departments at Duke; however, it is implemented in such a way that it can be easily modified to meet individual hospital needs. It can also be implemented in a modular fashion supporting the departments deemed necessary in each individual hospital.

Screens and procedures can be added or modified without programming changes. Processing is determined externally by the user, not by programming. The system builds on the data base established by the Hospital Care System/DL/I - Registration and Admissions.

Notice G320-5756, PDOM SH20-1955, Terminal Guide SH20-1956, Systems Guide LY20-2306, Design Guide LY20-2307.

ELEMENTARY MATHEMATICS
5796-APC

This IUP is designed to aid teachers in helping their students' master basic arithmetic skills and understand mathematical operations and concepts in these areas:

Whole Numbers	Proportions
Fractions	Percents
Decimals	Problem Solving
Rations	

The program provides individualized computer-assisted instruction for students that includes pre-tests. Although it covers topics typically in math curriculums in upper elementary and middle schools and is aimed at student in those schools, students whose mathematics performance is below grade level in junior and senior high schools and adult education courses have made effective use of the program. Facilities are also available that enable teachers to use the program to place students individually within the course based on proficiency, adjust time allowance for students, and obtain reports on student achievement.

Notice G320-5804, CDAM SH20-1966, Instructor's Guide SH20-1967.

POWER/VS CHARGE-BACK SYSTEM
5796-AQJ

This application enhances the installability and usability of the POWER/VS Cost and Performance Analyzer FDP (5798-CDG) with the following functions:

- Unit rate cards for the several categories of data processing cost to be allocated are produced.
- Monthly and yearly statements of allocated costs are produced.
- The programming capability to correct errors caused by POWER/VS job cards is provided.

Together, these two packages provide management with an excellent tool for allocating data processing costs to user departments in a DOS/VS environment.

Notice G320-5809, PDOM SH20-2044, System Guide LY20-2352.

EPIC:SOCRATES ONLINE MAINTENANCE SYSTEM
Evansville-Vanderburg School Corp., Evansville, IN
5796-AQW

EPIC:SOCRATES is a well-known IBM product used throughout the education environment for the scheduling of students in secondary schools, vocational schools, community colleges, and colleges. Now EPIC:SOCRATES users can realize the advantages of online inquiry and update to the EPIC:SOCRATES scheduling files with this IUP.

Notice G320-5814, PDOM SH20-2049.

EPIC:SOCRATES ONLINE MAINTENANCE SYSTEM
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Notice G320-5814, PDOM SH20-2049.

THE 3800 HIGH VOLUME PRINTING PROGRAM
Donnelly Marketing, Des Moines, IA
5796-ARA

This IUP can print high volume output online to the 3800 Printing Subsystem. The product was designed to maximize throughput rates of the 3800 while minimizing utilization of system resources.

The use of QSAM for processing of the input print image records allows the program to be device independent of the storage media used to hold the print image records.

A wide variety of input record formats are supported; blocked or unblocked, fixed or variable, and ASA carriage control characters or no control characters. In addition, reformatting of 3-line mailing labels (4-up or 5-up) is done by the program allowing these labels to be printed on either a 3800 or an impact printer.

Keyword parameters specified by the operator facilitate control over each execution of the program. The 3800 features of FLASH, COPYMOD characters sets (CHAR), table recognition characters (TRC), and BURST can be used along with the IUP.

Notice G320-5821, PDOM SH20-2057.

IMS/VS RESPONSE TIME MONITOR
Philadelphia National Bank, Philadelphia, PA
5796-ARB

This IUP is a realtime, table driven system of IMS/VS programs which interact to measure the transaction scheduling capability of an IMS/VS DC System. The user sets the criterion for acceptable response time for each message and the response time monitor measures these response times at regular intervals while the IMS/VS control region is active. Message classes, whose response times exceed the user-selected criteria, are logged and time stamped and the IMS master terminal operator is notified as delays occur. Action can then be taken to alleviate the response time problem or investigate it further. The IMS/VS Response Time Monitor assists IMS operations personnel in avoiding serious response problems.

Notice G320-5822, PDOM SH20-2058.

THE BANK TELLER 3600 APPLICATION PROGRAM
East New York Savings Bank, New York, NY
Prudential Savings Bank, New York, NY
5796-ARD

This IUP, subsequently referred to as the 3600 AP, is designed to run in a 3600 Finance Communication Controller. The 3600 AP accepts teller transactions which are edited, verified, transmitted to a central computer, and recorded into a 3600 file for later retrieval. Additionally, it accepts messages from the central computer in response to transmitted transactions and produces the required output such as magnetic stripe encoded data, printed passbooks and other documents, and display panel messages. The 3600 AP also provides control functions which are completely processed within the controller and are not transmitted to a central computer. These functions are invoked by terminal transactions and give the branch control over the operation of the system.

The Bank Teller 3600 Application Program has many built-in functions which enhance the total teller operation, permit branch control over the system, and support the efficient use of the 3600 Finance Communication System. Some of the functions which enhance the teller operation are:

- Full transaction prompting for input and output
- Floating teller capability
- Electronic journaling

- Magnetic stripe processing
- Automatic re-entry of off-host transactions

The programming techniques used allow this program to support as many as fifteen (15) workstations without a need for overlay structures. Output edition techniques permit flexible user document design and a large variety of display messages.

The teller applications which can be implemented using this application program include savings accounts, club accounts, utility payments, loan payments, teller checks, money orders, demand deposit accounts (DDA), and new loans.

This program can interface with a variety of central site environments. It supports the use of BiSynch line control or synchronous data link control.

Notice G320-5761, PDOM SH20-1964, Systems Guide LY20-2310.

IBM 3800 - 90-DEGREE PRINT PROGRAM
New York State Legislature, Albany, NY
5796-ARE

This IUP provides printing at 90 degrees to normal printer output. Full pages are rotated 90-degrees one at a time and printed using the 90-degree characters provided. Applications requiring printing at greater density than 60 or 80 lines per page can be run on the 3800 printing subsystem using the paper width rather than the paper depth for printing. Many 3800 installations can benefit from the flexibility of being able to use either 8 1/2" x 11" or 11" by 8 1/2" form sizes without changing the paper in the machine. For 14 7/8" by 11" paper, using the width of the paper as the depth allows 36 percent more lines to be printed at 12 lines per inch, thereby reducing 3800 monthly use charge by the same percentage.

Notice G320-5825, PDOM SH20-2061.

IMS/VS ONLINE DATA MANAGEMENT UTILITY
Blue Cross Hospital of Missouri
5796-AQZ

This IUP provides the IMS/VS user the facility for catalog and DASD management. The terminal user may display catalog, volume table of contents (VTOC), and directory information for a data set; catalog, uncatalog, and scratch data sets; display, rename, or scratch a partitioned data set (PDS) member; rename a DASD data set; send messages to the OS/VS console; and maintain OS/VS catalog indexes. This IUP provides a productivity tool for application development programmers and system programmers with interactive facilities not previously available under IMS/VS. It has proven to be useful to operations personnel when restarting systems which have failed.

Notice G320-5820, PDOM SH20-2056.

THE 3800 HIGH VOLUME PRINTING PROGRAM
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5796-ARA

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Notice G320-5822, PDOM SH20-2058.

IBM 3741 REPORT GENERATOR
American Can, Greenwich, CT
5796-ARC

This IUP provides a high-level language capable of generating reports on the 3741 mdls 3 and 4. Present data stored on diskettes can be summarized, totaled, or abstracted. The 3741 user now is able to quickly and easily create meaningful reports in response to management requests. The 3741 Report Generator was developed to provide 3741 locations the ability to use existing data and resources in a more productive manner.

The 3741 Report Generator improves the utilization of the 3741 by providing a language which does not require detailed data processing knowledge. The fill-in-the-form approach to programming simplifies report creation. Once a report is created, the 3741 Report Generator saves it in a library of programs. Programs thus stored may be executed at any time without recompiling. The compilation function requires the 3741 ACL Translator (#1350) and the additional 4K storage (#4975).

Notice G320-5823, PDOM SH20-2059.

THE BANK TELLER 3600 APPLICATION PROGRAM
East New York Savings Bank, New York, NY
Prudential Savings Bank, New York, NY
5796-ARD

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The teller applications which can be implemented using this application program include savings accounts, club accounts, utility payments, loan payments, teller checks, money orders, demand deposit accounts (DDA), and new loans.

This program can interface with a variety of central site environments. It supports the use of BiSynch line control or synchronous data link control.

Notice G320-5761, PDOM SH20-1964, Systems Guide LY20-2310.

IBM 3800 - 90-DEGREE PRINT PROGRAM
New York State Legislature, Albany, NY
5796-ARE

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Notice G320-5825, PDOM SH20-2061.

OS/VS1 PRIORITY QUEUE AGING PROCESSOR
5796-ARG

This IUP is designed to ensure a consistent level of service for all jobs processed in a system. Under the IUP, all jobs are periodically aged or advanced in priority within the input queue. Thus, low priority jobs will eventually reach the highest dispatching priority and be executed in a timely fashion.

Notice G320-6050, PDOM SH20-2067.

DOS/VS CHAINED CHANNEL COMMAND PRINT SUBROUTINE
5796-ARH

This IUP provides a significant performance improvement for print programs during execution. Benchmark results have shown improvements in both CPU utilization and job throughput when running under POWER/VS. The subroutine is entered via a COBOL or Assembler call statement. The subroutine will execute with or without POWER/VS. Three classes of calls are honored:

1. Open call ... defines the overflow options of having the subroutine count lines or the main program doing it.

2. Execute call ... passes the data to be printed, the type of control desired (before or after spacing or skipping), and receives a return code.

3. Close call ... terminates the print and forces the final print lines when necessary

Notice G320-5828, PDOM SH20-2066.

DL/I-CICS/VS TEST PROGRAM
State Industries, Inc.
5796-ARN

This IUP is a CICS/VS transaction which allows a programmer to enter DL/I calls on a formatted screen and display the results (segment retrieved, DL/I return code) at the terminal. To use the program, the programmer enters the PSB name, which PCB within the PSB is to be used (default is first), type of call ('GU', 'GNP', 'GN', 'ISRT', 'REPL', 'DLET', gets with hold), and SSA (actual format). The SSA can contain a command code. The data returned to the terminal includes a character and HEX display of the first 160 bytes of the segments retrieved, the DL/I return code, the concatenated key, segment name, etc. (basically all the information returned in the PCB). A paging facility allows viewing of portions of the data base record in excess of 160 bytes.

Notice G320-6053, PDOM SH20-2072.

Maintenance, Engineering and Store Systems

The following IUPs (5 modules) together constitute a maintenance system developed by North Central Airline. They are IMS/VS based and offer a multi-industry solution to problems related to control of maintenance, preventive maintenance, inventory control, and scheduling of capital investments.

Notice G320-6055, PDOM SH20-2074, User's Guide SH20-2075.

PROBLEM/CORRECTION REPORTING
5796-ARP

This IUP is the first of five modules. It permits the entering of each maintenance problem that is related to each major unit or equipment. The system offers the capability to display any or all outstanding problems on any major piece of equipment at any time. This information enhances maintenance scheduling and results in increased productivity of maintenance personnel. Once the maintenance item has been performed, the corrective action is entered into the system to close the problem. Corrective action is tied to the respective problem closed.

CATALOG INQUIRY/PARTS ORDERING
5796-ARQ

This IUP is the second of five modules. It is designed to help the user determine the company's unique part number (up to 10 digits) when requesting a part from the stockroom. Most parts of equipment carry a manufacturer's part number (15-20 or more digits). By keying in this number, the system cross-references to the unique company part number and displays the full description of the respective part. If neither the unique company part number or the manufacturer's part number is known, the system provides the user the ability to enter the keyword of the part (i.e., tire, valve, pump, etc.). The system would display those parts that have a similar keyword. The display includes the full keyword, part description, manufacturer's part number, and the company's unique part number. From the list displayed, the user utilizers the light-pen to select the part required.

The part selected is printed out in the respective location of the stockroom where it is retrieved by the stock clerk and delivered to the user location.

COMPONENT MAINTENANCE
5796-ARR

This IUP is the third of five modules. It maintains parts removal, parts installed, and maintenance accomplished for individual units of equipment. The history of these actions is maintained by this module.

Model assemblies for all equipment type are maintained for comparison purposes.

TIME ON PARTS/FORECASTING
5796-ARW

This IUP is the fourth of five modules. It enhances the maintenance system's capability to forecast maintenance dates for each unit of equipment. The time a unit of equipment is utilized is put into the system on a period basis. The frequency of reporting *times* to the system would vary as related to the type of equipment being monitored. (The term *times* may mean different things to different parts.)

When an allowable *times* or *usage* is established for a type of equipment and/or component, the forecasting facility of the system will compare the accumulated actual time or usage against the established allowable time or usage to determine the amount of time or usage remaining. By dividing the remaining time or usage by the average time or usage per day of that particular unit of equipment, the system calculates not only the suggested date that maintenance should be scheduled but also what specific maintenance items should be accomplished.

RELIABILITY
5796-ARX

This IUP is the last of the five modules. It produces user requested reports for removal frequency and history for any type of part. These reports permit reliability analysis of a part's performance to be accomplished from chronological facts over time.

Systems Guide LY20-2363.

COMPUTER-GRAPHICS AUGMENTED DESIGN AND MANUFACTURING SYSTEM (CADAM®)
5796-ATA, B, C, D, E, F, G, H, J
Lockheed Corporation

CADAM® Marketing Assistance and Proposals

Marketing assistance in the areas of proposal preparation, demonstrations, benchmarks, installation planning, and education is available from the IBM DP Engineering Support Center, Manufacturing Industry Marketing, 3424 Wilshire Blvd, Los Angeles, CA 90010.

Written proposals must be reviewed and approved by the Manager of the Engineering Support Center before submittal to customers.@SS@

CADAM is an interactive graphics system. It is the result of over ten years of continuous development effort and has been thoroughly proven in large-scale production use at Lockheed's three largest operating companies.

Manufacturing Industry Marketing has formed a team of graphics specialists at its Engineering Support Center to help you sell and install these programs. The center can directly assist you in all aspects of your CADAM system marketing efforts ... qualifying prospects ... determining feasibility ... preparing justification ... participating in executive calls ... demonstrating the system ... selecting configurations ... planning conversions and training ... reviewing proposals ... closing orders.

To assist your marketing efforts, the Engineering Support Center will also hold seminars and workshops for you and your customers describing CADAM facilities and typical application areas where the CADAM system has been productively used.

To take advantage of this support, call or write:

Engineering Support Center
3424 Wilshire Boulevard
Los Angeles, California 90010
213-736-4668 or 285-4668 (IBM dial network)

Program No.   Program Name
5796-ATA CAD-only interactive Module
5796-ATB CAD/CAM Interactive Module
5796-ATC Data Management Module
5796-ATD Hardcopy Module
5796-ATE APT Interface Module

5796-ATG Statistical Data Module
5796-ATH Accounting Information Module
5796-ATJ Geometry Interface Module

Notice G320-6063, User Training Manual SH20-2035, NC supplement to User Training Manual SH20-2036.

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3270 FULL SCREEN SUPPORT FOR COBOL USING TSO
5796-ATK

This IUP provides the COBOL programmer with the ability to utilize the facilities of the 3270 under TSO without being concerned with the details of formatting the screen. The IUP is invoked with five easily coded CALL statements and uses the COBOL WORKING-STORAGE SECTION to specify parameter lists.

EMERGENCY LOG TERMINATOR
5796-ATN

NO LONGER AVAILABLE effective January 4, 1984.

This IUP is to be used when an IMS/VS system log tape cannot be otherwise closed through normal programs and procedures. This typically occurs following a catastrophic failure such as a power failure.

Expeditious closing of the IMS/VS system log tape is required to attempt IMS/VS emergency restart as soon as possible after a system failure. This is frequently successfully done by the existing IMS/VS System Log Termination Utility Program (DFSLOTO). When DFSLOTO is not successful, such as when the system dump is not available, due to a power failure, the log must be closed in some other way before an emergency restart can be attempted. In both online and batch IMS/VS environments, the properly closed log is also needed to effect data base recovery. To ensure the integrity this requires, use of the IMS write ahead log facility is a prerequisite for this IUP.

Note: Central Service will be withdrawn effective April 4, 1984.

Notice G320-6070, PDOM SH20-2105.

IMS/VS MESSAGE REQUEUER (MR)
5796-ATP

This IUP is an IMS/VS operational aid which permits an installation to reinsert input and output messages back into an IMS/VS system from IMS/VS log tapes after IMS/VS has normally or abnormally terminated. The messages are reinserted with their original time stamp and are inserted in original time sequence. An audit trail is produced which records messages that could not be reinserted because of changes in the IMS/VS environment such as the elimination of transaction codes or logical terminal names. This is an extended support IUP.

Notice G320-6071, PDOM SH20-2106.

PC/3600 TRANSACTION DOCUMENTER AND CROSS REFERENCES
5796-ATR

This IUP provides two reports which assist in the development, operation, and maintenance of application programs created with the Program Customizer for 3600 (DOS/VS and OS/VS).

Notice G320-6077, PDOM SH20-2110.

GLOBAL SHARED ACCESS METHOD (GSAM)
5796-ATX

This IUP is a set of programs designed to provide safe and easy access to VSAM data from multiple jobs running concurrently under MVS. It provides record-level integrity, thus permitting simultaneous updating of records located in the same control area or control interval. There is no modification to MVS, instead Global Shared Access Method supplies a simple interface to an existing set of VSAM I/O request options. File access control can be tailored to the needs of many users and particular data bases, yet data integrity and security are maintained across the system.

Notice G320-6083, PDOM SH20-2117, Programmer's Guide SH20-2118, Systems Guide LY20-2372.

3800 SYSTEM DESIGN AND DOCUMENTATION AID
5796-ATY

This IUP provides data processing organizations using OS/VS COBOL and a 3800 Printer with the ability to standardize and more easily maintain installation documentation. Using the Hierarchy plus Input-Process-Output (HIPO) technique, standardized documentation for installation management activities is produced on the 3800 Printer in the form of Visual Table of Contents (VTOCs) and HIPO diagrams. Commands are in 8-character images which are submitted either through cards or TSO. The program is a series of modules written in OS/VS COBOL.

Notice G320-6082, PDOM SH20-2116.

DOS/VS HEALTH CARE SUPPORT/DL/I-PATIENT CARE SYSTEM
5796-ATZ

This IUP is a hospital-wide computer information system that provides a communication link between the admissions office, nursing stations, ancillary departments, accounting, and the Medical Records Departments. The original OS/VS version of the system (5796-ANY) was developed by the Duke University Medical Center in Durham, North Carolina. The system was designed to facilitate, expedite, and integrate the delivery of health care services and the operation of the hospital through efficient data processing. It is a user-driven system through which the service departments and nursing stations may manipulate and manage patient records.

Notice G320-5756, PDOM SH20-1955, Installation Guide SH20-2119, Terminal Operator's Guide SH20-1956, Systems Guide LY20-2306, Design and Coding Guide LY20-2307.

LABORATORY DATA MANAGEMENT SYSTEM II
University of Alabama in Birmingham
5796-AWC

This IUP is the system currently supporting the laboratories at the University of Alabama in Birmingham. This IUP assists the laboratory in handling patient and laboratory data associated with total processing of laboratory requisitions from their receipt to the production of the patient's cumulative test results report. It supports all sections of the laboratory including microbiology, blood bank, and pathology. Its primary objectives are to reduce the clerical workload, reduce error, decrease turn-around time and produce a patient's cumulative summary of test results.

Notice G320-6080, PDOM SH20-2126.

IBM 3800 PAGE FORMATTING SERVICES
5796-AWE

This IUP was developed to take advantage of almost all IBM 3800 features and benefits with minimal education and effort on the part of the application programmer. Using a forms specification language in COBOL data definition format, this IUP generates COBOL subroutines and test data to produce sample IBM 3800 documents. Both batch and TSO procedures are provided for this phase. Once tested and acceptable, these IUP generated subroutines can be called by PL/I, Assembler, or COBOL application programs to produce the desired IBM 3800 documents in a production environment.

Notice G320-6089, PDOM SH20-2125.

IBM 3790 BASIC KEY TO DISK SYSTEM
5796-AWF

This IUP provides an alternative to keypunch or 3740 Data Entry units for batch data entry in a 3790 distributed environment using 3277 mdl 2 displays. The package was not designed for high-volume, high-speed transcriptive data entry as is the 3760/3790. It is intended to supplement interactive data entry applications with the ability to do low volume batch data entry with minimal editing by end-users. All of the functions of a 129 or 3742 are supported with the exception of auto record advance, multipunch, and prompting.

Notice G320-6090, PDOM SH20-2127.

CICS/DOS/VS IBM 3270 CONTROL FOR REMOTE 3600 SYSTEMS
5796-AWG

This IUP consists of a set of CICS/VS application programs which provides certain PC/3600 control functions to a 3270 terminal operator.

Notice G320-6091, PDOM SH20-2128.

LABORATORY DATA ACQUISITION SYSTEM
5796-AWH

The laboratory data acquisition system provides operational support facilities to acquire data from automated clinical laboratory instruments directly into a computer. The system is an extension of the Laboratory Data Management System II IUP (5796-AWC) and is designed to be used in conjunction with it. The system supports a Series/1 attached over a communication link to a S/370.

Notice G320-6095, PDOM SH20-2163, Systems Guide LY20-2413.

PATIENT CARE SYSTEM - RADIOLOGY
Parkland Memorial Hospital, Dallas, TX
5796-AWJ

This IUP operates as an application under the Patient Care System IUP. The system provides for entry of radiology orders (from nursing stations), including multiple procedures on one requisition. Result reporting may be free form text for abnormal x-rays or text generation by the entry of a three-letter code for normal x-rays. Interim results are printed at the nursing station. The system also provides for the printing of requisitions and flash cards, logging of patients, statistical gathering and reporting, and capturing and displaying of film history.

Notice G320-6092, PDOM SH20-2159, Terminal Operator's Guide SH20-2160.

HEALTH CARE SUPPORT DL/I
UTILIZATION REVIEW SYSTEM
Forsyth Memorial Hospital, Winston-Salem
5796-AWN

This IUP is an online tracking and data maintenance package that assists the hospital in performing these required procedures. The online functions permit utilization review personnel to enter, review, and update the patient's record. The daily and monthly statistical reports for daily hospital operations and institutional reporting requirements are produced by the system.

The IUP is compatible with and complimentary to the prerequisite Health Care Support DL/I - Patient Registration System (5798-CCB) and the Health Care Support DL/I - Admission System (5798-CCC).

Notice G320-6157, PDOM SH20-2173.

CICS/VS ONLINE PROMPTING FACILITY
Consolidated Edison Company of New York
5796-AWQ

This IUP provides a CICS/VS operator with prompting information. It allows the operator the facility of using new applications immediately with little or no required operator instruction manuals. It is beneficial for a new operator unfamiliar with currently operational applications and/or an experienced operator who is using an application to which new options and/or functions have been added.

Notice G320-6158, PDOM SH20-2175, Systems Guide LY20-2420.

THE 3D MESH GEOMETRY MODULE
Lockheed Corporation
5796-AWR

This new IUP adds the capability to construct and manipulate three dimensional (3D) networks of nodes and connectors to the previously announced Computer Graphics Augmented Design and Manufacturing (CADAM®) System. These networks are referred to as mesh models or mesh geometry.

The mesh geometry can be constructed either by using previously created two-dimensional (2D) geometry or by inputting 3D data directly. Additionally, by assigning identification numbers, data types, and attributes to the mesh geometry it can be used as input data to finite element modeling programs. Finite element models can be filed or retrieved, and can be managed using standard CADAM data management programs. The models may contain regular 2D CADAM geometry as well as the 3D mesh geometry. Such models are used in structural analysis, heat transfer analysis, fluid dynamics and similar applications.

® Registered trademark of Lockheed Corporation.

Notice G320-6063-1, PDOMs SH20-2179 and SH20-2181.

THE 3D SURFACE GEOMETRY MODULE
Lockheed Corporation
5796-AWT

This new IUP adds three dimensional (3D) surface design capability to the previously announced Computer Graphics Augmented Design and Manufacturing (CADAM®) System. This can be accomplished either by converting previously constructed two-dimensional (2D) geometry or by inputting 3D data directly. The types of surfaces that may be constructed are rule surfaces, bicubic surfaces, and surfaces of

revolution. Additionally, the user may create 3D splines or space curves to aid in the construction of the surfaces.

Data management facilities are provided so that a large number of surfaces may be stored and recalled within a drawing. Drawings with 3D data are also compatible with all of the data management capabilities of the CADAM system.

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Notice G320-6063-1, PDOMs SH20-2180 and SH20-2182.

IBM 3800 - 90 DEGREE PRINT PROGRAM
5796-AWX

This IUP is the DOS/VS version of the IBM 3800 - 90 Degree Print Program IUP (5796-ARE).

It provides printing at 90 degrees to normal printer output.

Notice G320-5825, PDOM SH20-2061.

3850 CARTRIDGE OFF-SITE STORAGE SYSTEM
Borden, Inc.
5796-AWZ

The objective of this IUP is to help automate the ejection, off-site storage, and retrieval of 3850 virtual DASD volumes (2 cartridges per volume). These virtual volumes contain duplicate copies of actual production data sets. The virtual volumes are scheduled to remain off-site for a length of time determined by a user defined control statement.

When a volume returns from off-site storage it can be re-entered into the 3850, where the expired data sets are automatically scratched and the volumes are re-used.

Notice G320-6063-3.

COMMERCIAL BANK 3600 TELLER APPLICATION PROGRAM
5796-AXK

The Commercial Bank 3600 Teller Application Program offers improved customer service and enhanced teller productivity by utilizing the distributed intelligence capabilities of the 3600 Finance Communication Controller. The program is designed to support the full spectrum of teller transactions in a retail-oriented commercial bank, including teller reporting requirements and a general settlement report for the branch.

Notice G320-6161, PDOM SH20-2183, Systems Guide LY20-2422.

VSAM SELECTIVE RESTORE (OS/VS)
Royal Indemnity Company
5796-AXL

This IUP was developed to selectively recover a VSAM cluster, an alternate under, or a path from, a volume backup created by the IDCAMS EXPORTRA command. For the user who has a requirement to recover specific VSAM data from a backup volume, this IUP helps provide both greater flexibility and productivity by eliminating the need to recover the entire backup volume. Output listings provided by the IUP are useful as audit trails of the current status of the recovery operation.

Notice G320-6156, PDOM SH20-2172.

DISPLAY MONITOR FOR TPNS
Continental Casualty Company
5796-AXN

This IUP provides a user of the TPNS program product (5740-XT4) with a quick and easy method of monitoring the activity of a simulated device on the screen of an actual 3270 terminal. This can help maximize productive testing with the simulated network, which can result in faster application implementation and lower development costs.

Notice G320-6167, PDOM SH20-2340.

BOND QUOTE SYSTEM
5796-AXY

This IUP provides bond traders a full range of data and analysis on U. S. Government and Federal debt obligations. The system's history file is updated daily with the previous day's market closing prices. Traders can interactively produce bond yield comparison reports on a current or historical basis. The system also calculates implied yield curves which aid in analyzing a series of bond transactions.

Notice G320-6172, PDOM SH20-2345, Systems Guide LY20-2430.

DISCOVER: THE CAREER GUIDANCE SYSTEM
5796-AYA ... Base
5796-AYB ... Secondary School Version
5796-AYC ... Adult/College Version

DISCOVER: The Career Guidance System is a systematic career guidance program which uses computer technology to assist the user in the career decision process. The program will be offered in two versions.

The Secondary School Version (5796-AYB) offers a comprehensive system to assist students in grades seven through twelve and their guidance counselors in the career decision and college selection processes.

The Adult/College Version (5796-AYC) is designed to address the unique career guidance needs of college students and adults. Interactive modules assist the user in such areas as clarifying values, organization of the occupational world, effective decision making, and mid-career job changes.

The DISCOVER Base IUP (5796-AYA) is required for installation of these programs. The Base will support either version or both versions of the DISCOVER System. DISCOVER operates under CICS/VS.

Notice G320-6176, PDOM SH20-2082-1 (AYA).

JES2 INFORMATION RETRIEVAL SYSTEM FOR CMS
5796-AYD

This IUP is productivity aid that allows the CMS user to monitor and control the status of jobs run on any MVS/JES2 system whose JES2 DASD is accessible to the IUP. Jobs can be monitored at any point after they enter the MVS/JES2 system up until they become active on a printer. This allows the user to monitor long-running jobs even while they are executing. If an MVS/JES2 system is running under the VM system, the IUP optionally allows the user to cancel, hold, purge, release, or route jobs to alternate destinations. Output for a particular job may be viewed in total or the user may view only selected data sets. The major benefits from using this IUP are increased programmer productivity through faster test turnaround, and printer/operations savings by eliminating unwanted printer listings.

Notice G320-6334, PDOM SH20-2356.

FILE COMPRESSION AND REPORTING SYSTEM FOR SPM-II
National Board of Medical Examiners
5796-AYG

This IUP helps reduce the systems and applications programmer effort to support and use the Source Program Maintenance Online II (SPM-II) FDP (5798-CFT). With this IUP, an SPM-II user can obtain improved direct access space utilization as well as information to help management enforce department standards.

Notice G320-6332, PDOM SH20-6132.

INTER-REGION ACCESS METHOD
Girard Bank, Philadelphia, PA
5796-AYH

This IUP enables one MVS job or user task to exchange data with another MVS job/task without placing unusual constraints on either one. At Girard Bank, this program is being used to provide communication from one APL user to another, from one APL user to IMS and vice-versa, from IMS to a user-written online application, and from MVS system exits to a generalized *collector* address space.

Notice G320-6335, PDOM SH20-6135.

GRAPHIC TRAINING AIDS
Westinghouse Electric Corporation
5796-AYJ

This IUP is a set of training aids designed to teach the use of the CADAM® IUP. It consists of an outline for classroom instruction and 150 terminal exercises based on a set of CADAM drawings which contain written instructions and geometric examples. To receive instruction in a particular CADAM function, the student retrieves the appropriate drawing from the library and follows the instructions which appear on the 3250 screen. Two CADAM IUP modules are prerequisites for this program: 5796-ATA or 5796-ATB, and 5796-ATC.

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Notice G320-6336, PDOM SH20-6163, Systems Guide LY20-9004.

VIRTUAL SPOOLED READER DISPLAY SYSTEM FOR CMS
Brigham Young University, Salt Lake City, UT
5796-AYK

This IUP provides a VM/370 CMS user the ability to browse through spooled data in the user's virtual reader. Commands such as *page forward* and *page backward* are provided. The user may change the file name or file class, transfer the file to another reader queue, search a given character string, or create a new spool file by extracting records from an existing spool file or by merging multiple spool files. Among the prime uses of this facility are inspection of compiler listings prior to printing and analysis of dumps. It is particularly useful with large spool files where reading the file onto a minidisk may fail because of the file size.

Notice G320-6338, PDOM SH20-6137.

HEALTH CARE SUPPORT/DL/I-MEDICAL RECORD ABSTRACT SYSTEM
5796-AYL

This IUP is an online data base system that assists the medical records department in tracking, collecting, analyzing, and reporting data from the patient's medical record.

Notice G320-6341, PDOM SH20-6140, Systems Guide LY20-9006.

PATIENT CARE SYSTEM - DATA MANAGER
5796-AYQ

This IUP is a general-purpose data base access routine to be used within the structure of the Health Care Support/DL/I-Patient Care System IUP (5796-ANY) or DOS/VS Health Care Support/DL/I-Patient Care System IUP (5796-ATZ). The Data Manager routine allows Patient Care System users access to any DL/I data base by coding simple commands in screen formats or in data collection lists. This provides the ability to add, retrieve, update, or delete any classification of data without the need for programming, thus increasing productivity.

Notice G320-6343, PDOM SH20-6142.

PATIENT CARE SYSTEM - EDIT
5796-AYR

This IUP is a general-purpose edit routine to be used within the structure of the Health Care Support/DL/I-Patient Care System IUP (5796-ANY), or DOS/VS Health Care Support/DL/I-Patient Care System IUP (5796-ATZ). The edit routine allows Patient Care System users to include edit specifications in screen formats or in data collection lists. Functions of the program include range checking, table checking, table translation, left/right justification, field concatenation, alpha/numeric checking, date checking and edit overrides. This program will provide the ability to edit most data fields without the need for programming, thus increasing productivity.

Notice G320-6344, PDOM SH20-6143.

JOB DOCUMENTATION AND OPERATIONS SETUP REPORTING SYSTEM
5796-AYT

This IUP is designed to assist the operations department with the task of documentation, including run book information, and production job setup.

Notice G320-6340, PDOM SH20-6139.

VSAM FREESPACE UTILITY
Johns Hopkins Hospital
5796-AYX

The purpose of this IUP is to produce a report showing how control area free space has been used in an existing VSAM key-sequenced data set. This information can be used to assist in optimizing performance and DASD space utilization.

Notice G320-6346, PDOM SH20-6145.

COMPUTER-AIDED ENGINEERING DESIGN SYSTEMS
5796-AZA ... Frame Analysis System
5796-AZB ... Finite Element System
5796-BBZ ... Graphics System

The Computer-Aided Engineering Design Systems, CAEDS®, IUPs offer interactive graphics computer-aided design (CAD) of structural and mechanical products. The three CAEDS IUPs are designed to offer the end user productivity gains in generating input and engineering models for analysis and design evaluation using the IBM 3277 Graphics Attachment Workstation (RPQ 7H0284).

- The Graphics System (5796-BBZ) provides pre- and post-processing capabilities for model generation and checking, interface to the CADAM® system through the 3-D Mesh Geometry Module (5796-AWR), interface to finite element analysis programs (such as the ANSYS*, MSC/NASTRAN**, Frame Analysis System and Finite Element Analysis System IUPs), and graphics output of user models before and after analysis. Both two- and three-dimensional geometry are supported.

- The Frame Analysis System (5796-AZA) provides static and dynamic, limit (plastic), and buckling analysis of general structures which can be represented by interconnected beams. Both two- and three-dimensional structures are supported. In addition, both the original and deformed structures can be graphically displayed.

- The Finite Element Analysis System (5796-AZB) includes all of the capabilities of the Graphics System IUP, pre- and post-processing, and analysis of structures that can be represented by finite elements. The analysis capabilities are for two- and three-dimensional structures for static, dynamic and heat conduction.

The Frame and Finite Analysis IUPs can be run interactively or in a combination of interactive and batch processing modes.

Notice G320-6439, PDOM SH20-6174.
5796-AZA: PDOM SH20-2587, User Manual SH20-2587,
5796-AZB: PDOM SH20-2583, User Manual SH20-2588,
5796-BBZ: PDOM SH20-2586, User Manual SH20-2591

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®   CADAM is a registered trademark of Lockheed Corporation.

*   A product of Swanson Analysis System, Inc.

**   A product of Macneal-Schwendler Corporation.

3800 LINE INSERTER
5796-AZK

This IUP enables vertical column-dividing lines and grid structures to be printed on IBM 3800 reports.

Notice G320-6393, PDOM SH20-6174.

AUTOMATED PROJECT PLANNING AND EVALUATION SYSTEM
IPM DP Services
5796-AZR

This IUP is designed to automate the scheduling and tracking procedures described in IBM's Independent Study Program; Managing the Application Development Process. IBM DP Services uses this system for managing their application development projects.

Notice G320-6399, PDOM SH20-1238.

BANK TELLER 3600 APPLICATION PROGRAM/COMMERCIAL EXTENSIONS
5796-AZX

The Bank Teller 3600 Application Program/Commercial Extensions IUP is a full-function commercial bank teller support system. The IUP supports both SDLC and BiSync communications, complete off-host processing, and item truncation.

The major commercial bank extensions to the Bank Teller 3600 Application Program IUP (5796-ARD) include:

- Full teller cash drawer control
- Batch and sequence number control
- Pay/get display with end-of-customer processing
- Truncation of debit and credit tickets at the teller window
- Support of extended 3600 Controller memory (over 56K bytes)
- Support of 3610 mdl 4 passbook RPQ printing
- Elimination of magnetic card requirements for branch, teller and supervisor identification
- Alphabetic input for printing names on checks, etc.

This IUP does not require installation of the Bank Teller 3600 Application Program IUP (5796-ARD) as a prerequisite for its use.

Notice G320-6396, PDOM SH20-6178, Teller's Manual SH20-6179, Systems Guide LY20-9016.

IBM 3614/3624 ONLINE APPLICATION and REPORTING SYSTEM
First American Bank of Nashville
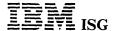### 5796-BBH
5796-BBJ

These IUPs provide online programs running under CICS/VS to manage a network of 3614/3624 Automated Teller Machines, as well as offline batch programs which are comprised of operational and management reports designed to run this network effectively.

These programs represent a major extension of the First American Bank Automated Teller Host Support System IUP (5796-ANH) and Enhancements IUP (5796-AQT). New features Include:

- A comprehensive level of support for 3624.
- Support for direct-attached 3614/3624s.
- Interface to the COLTS program product (5746-F57) for loop-attached automated teller machines.
- Interface to the new IR/5 Error Log Analysis Report Generation (ELARG) program.
- Support for 4 additional transactions.
- Payment form
  - Fast Cash   )
  - Split deposit   )   3624 multi-line feature only
  - Bill Payment   )
- New multi-bank sharing and remote site reconciliation feature.
- New usability enhancements.

Customers who have the previous First American Bank IUPs (5796-ANH and 5796-AQT) installed, should install 5796-BBH to support 3624s and to provide the enhanced support listed above.

Customers who do not have the previous First American Bank IUPs installed should install 5796-BBJ which contains a complete set of enhanced programs.

Notice G320-6428, PDOM SH20-2555, Systems Guide LY20-9028, Operations Manual SH20-2556, Terminal User's Guide SH20-2557.

INTERACTIVE MAPPING FACILITY
State Farm Mutual Automobile Insurance Company
5796-BDN

The Interactive Mapping Facility creates colorful cartographic maps of regions in the United States on the 3279 Color Display and 3287 Color Printer. It provides full-screen prompting to produce a statistical map in one of the following formats: County map of a state, zip code map of a city, census region map of the United States, and state map of the United States. Major system components include a flexible data entry capability, the ability to produce a summary report listing all of the variables used to produce a map, the ability to adjust a map to the desired dimensions, and a HELP facility which provides an explanation for each input area. This IUP enables vertical column-dividing lines and grid structures to be printed on 3800 reports.

Notice G320-9131, PDOM SH20-2689.

INTEGRATED PUBLISHING SYSTEM - HOST
5796-BDP

The Integrated Publishing System provides text entry, interactive full-page composition, and output to an online phototypesetter for quality publications such as brochures, reports, manuals, books, and magazines. Using any of the three editors in the system, the user may enter and edit text on a 3270 Terminal using VM-resident code, or on the Series/1 using the Text Entry and Edit FDP (5798-RAR). Text is stored in the VM system in a controlled access text data base. Document pages may be defined using a graphics display and the text can be composed into page areas. Completed pages may be sent to the phototypesetter via tape or online interface.

Notice G320-9128, Systems Guide LY20-9073, Control Operator's Guide SH20-2683), Text Entry User's Guide SH20-2682, Interactive Pagination User's Guide SH20-2684, General Information Manual G320-9178.

DISTRIBUTED COMPUTING SYSTEM:
5796-NFW (EVENT-DRIVEN EXECUTIVE - System/7)
5796-PGH (EVENT-DRIVEN EXECUTIVE HOST
COMMUNICATION FACILITY - System/370)

The Distributed Computing System provided by these two IUPs consists of a S/370 host computer and one or more S/7s. The combination can use the individual capabilities of both systems to good advantage, and new S/7 application programs can be prepared without disturbing the operation of installed programs.

The Event-Driven Executive Host Communication Facility provides online or batch host communications for the transmission of data and S/7 programs; BSCA, ACCA, or SBCU options for S/7 - S/370 communications link (SBCU with OS/MVT only); and online source program entry, edit, and submission for assembly to the S/370 host program preparation facilities via commands from the S/7 Operator Station (#5028) or remote operator terminals.

The system is designed to provide the user with the advantages of a host-satellite approach to computer networks. It enables S/7 application programs to utilize the power of an attached host system for optimum data analysis and reporting. Additionally, it has the key objective of simplifying the application program preparation functions through the use of utility programs supplied with the Event-Driven Executive IUP.

The host can be used to prepare S/7 application programs and to execute host programs which operate in conjunction with S/7 programs. For example, data can be sent from a S/7 to the S/370 for processing and results returned to the S/7 for display. The system has been designed with special emphasis on the ability to attach multiple S/7s to a single S/370 host processor.

The Event-Driven Executive is designed to be a highly responsive system supervisor controlled by a Command Set to facilitate the generation of data acquisition and control programs for event-driven applications. Central to this objective is the support of multiple independent, time-dependent, or event-driven applications with minimum interaction.

Notice G320-5677, PDOMs (S/370) SH20-1819 and (S/7) SB30-0812, Systems Guides (S/370) LY20-2241 and (S/7) LB30-0813.

IMS VERSION 2.3 PRODUCTIVITY AIDS:
5796-PBC ... DATA BASE DOCUMENTATION (IMSMAP)
5796-PBE ... APPLICATION TESTING (Test IMS Facilities)

These IUPs support the design, development, testing, and documentation of IBM data bases and application programs.

User productivity in the installation and test phases of IMS applications can be increased by effective use of these versatile IUPs. This acceleration of application development and installation can be considered a basis for customer cost savings.

PBC: Notice G320-1523, PDOM SH20-1305, Systems Guide LY20-0773.

PBE: Notice G320-1523, PDOM SH20-1307, Systems Guide LY20-0775.

ADVANCED STATISTICAL ANALYSIS PROGRAM (ASTAP)
5796-PBH

This IUP is oriented primarily toward providing engineers with a powerful tool for use in the design and reliability analysis of linear and nonlinear electrical networks, but it can be used to simulate any physical system that can be represented by a network model.

ASTAP can perform DC and AC steady-state as well as transient analysis. In addition, a Monte Carlo statistical simulation can be performed in conjunction with DC, AC, or transient analysis to predict the effect of component variations on network performance. A common user-oriented language is provided for describing the network to be analyzed in any of these modes.

A model library facility provides for the storage of device models that can be recalled for use in specifying circuits. Entire circuits can also be stored and recalled for later analysis.

Notice G320-8063, PDOM SH20-1118, Systems Guide LY20-0764.

PRODUCTIVITY AID:
DATA COMMUNICATIONS ANALYZER (DC ANALYZER)
5796-PCA

DC ANALYZER is a design evaluation tool to assist the user in the comparative evaluation of IMS data communication design alternatives with a potential reduction of effort and expense.

It provides statistics on service times and throughput of messages processed in the IMS system. The messages, defined by the user, are processed by a test message processing program tailored to simulate application programs and access prototype data bases.

No actual teleprocessing hardware is necessary. Feeding of messages, at a rate specified by the user, is controlled by a batch message driver program. Results of each evaluation run are printed showing service times by type of message and throughput under the test conditions.

The user can analyze the results, revise the specifications for the proposed system and run DC ANALYZER again. Repetitive processing of the test case under a variety of design combinations provides relative timings so the user can select the design best suited to his needs.

DB PROTOTYPE IUP (5796-PBB) can be used to generate test data bases for DC ANALYZER. If DB PROTOTYPE is not used, generation of the test data bases in the format required by DC ANALYZER becomes the responsibility of the user.

DC ANALYZER uses the standard features of OS or OS/VS (all releases) and IMS 2.3 DB/DC system.

Notice G320-1532, PDOM SH20-1368, Systems Guide LY20-0937.

PRODUCTIVITY AID: DOSMAP - DL/I
5796-PCW

This IUP is a logical approach to better documentation and communication related to DL/I DOS/VS data bases. It builds and prints a pictorial layout of the data base descriptions and program specification blocks.

The program should be run each time the data base is changed. The printouts serve as a handy reference to assist in visualizing logical and physical relationships within the data base. They can act as visual aids for training and as a recording medium to retain the historical and current status of the data bases. The maps can also be used as a reference when the data base requirements of current and proposed applications are compared and evaluated.

Notice G320-8159, PDOM SH20-1769, Systems Guide LY20-2208.

PRODUCTIVITY AID: IMSMAP/VS
5796-PCY

This IUP is a documentation aid which produces pictorial representations of data base structures. These maps, which are produced on a line printer, graphically represent the many characteristics of an IMS/VS data base. In addition to producing maps, IMSMAP/VS can print a detailed report describing the characteristics of each data base description.

IMSMAP/VS is an extension of IMSMAP (IUP 5796-PBC). IMSMAP is a prerequisite for IMSMAP/VS. IMSMAP/VS provides both support for IMS/VS data bases and additional features not available in IMSMAP.

Notice G320-1538, PDOM SH20-1539, Systems Guide LY20-2050.

PRODUCTIVITY AID: TEST IMS/VS UTILITIES
5796-PDA

This IUP is designed to aid in testing and checking out application program code by automating the functions of organizing, displaying, and comparing test data. If performed manually, those functions can consume a large portion of customer programming manpower. This set of programs can assist the programmer in effectively managing test data and more rapidly evaluating test results.

Test IMS/VS Utilities, an enhancement of Test IMS Utilities (IUP 5796-PBE), provides support for IMS/VS data bases and adds new functions to Test IMS Utilities. Test IMS Utilities is a prerequisite for Test IMS/VS Utilities.

Notice G320-1540, PDOM SH20-1541, Systems Guide LY20-2052.

JOB CONTROL LANGUAGE EDITOR
5796-PDC

This IUP is designed to bring to the batch user of OS/MFT, OS/MVT, OS/VS1, OS/VS2 an easily used text editing capability for Job Control Language. It will expedite any conversion effort involving modifications such as converting from OS to VS or from one I/O device to another.

Notice G320-1542, PDOM SH20-1552, Systems Guide LY20-2064.

PMS IV NETWORK PLOTTING PROGRAM
5796-PDE

This IUP is a set of programs which produces network diagrams (PERT charts) of projects which are being planned and controlled by the PMS IV program product.

It is designed to use the normal output datasets of PMS IV as its input. There are a variety of options that make it easy to use and flexible. The charts are drawn on the system line printer so that the program requires no additional hardware investment.

Notice G320-5531, PDOM SH20-1556, System Guides LY20-2068 and LY20-2069.

AUDIT-SOURCE CODE COMPARE (DOS/VS)
IBM Corporate Information Systems Department
5796-PDF

This IUP analyzes the differences between two versions of a program's source code. The variations detected by this audit/control tool are highlighted on a message listing which, in turn, becomes a vehicle the user can use to verify that only authorized changes are made to an installation's sensitive programs. The Audit-Source Code Compare program has been used by the IBM Corporate Information Systems Department audit/control group as a tool to assure that only authorized changes are made to the installation's programs.

The program has been tested under DOS/VS Release 30. Although there are no special hardware requirements, the 3330 Disk Storage file must be used unless appropriate source code changes are made. Minimum system configuration with the 3330 is S/370 mdl 125, with two magnetic tape units, one 3330, card reader and line printer.

The program can be executed on a S/370 mdl 115 if the appropriate source code changes are made for use of the 3340 Direct Access Storage Facility.

Notice G320-5532, PDOM SH20-1567.

INTERACTIVE QUERY AND REPORT PROCESSOR (IQRP)
5796-PDG

This IUP is a terminal-oriented information retrieval system which operates under the control of CICS/OS/VS and allows a terminal user to extract information and reports from direct access data sets.

As a general purpose system, it is adaptable to a wide variety of needs and conditions and can be employed directly by the end user, at a terminal, to generate a wide variety of applications.

The IUP's language facility, which is a flexible, non-procedural, and powerful tool, is designed to allow the end-user to create his own applications. The user can enter inquiries in a language similar to English which can easily be tailored to each particular application area or to each user's own requirements. The functions provided by the language include a complement of arithmetic operations, sorting, totaling, and output formatting. Both file inquiry and updating can be restricted through the use of the security system. Reports can be printed at the user's terminal under the control of CICS/OS/VS or directed to the system printer for later processing. A batch processing mode can also be utilized by using the system card reader for inquiry input and the system printer for report outputs.

Notice G320-1554, PDOMs Book I SH20-1561, Book II SH20-1562, GI Manual GB21-9903, User's Reference Card GB21-9902, Terminal User's Guide SH20-1561, Op/Install Guide SH20-1563, Systems Guide LY20-2072, Marketing Guide ZZ20-3424.

WIDEBAND COMMUNICATION PROGRAM
5796-PDJ

This IUP is a complete system for transmitting tapes or sequential data sets between locations on a communications network. It is capable of transmitting data at speeds from 1200 bps to 230.4k bps over leased, point-to-point lines under control of BTAM and OS/VS. Data can be transmitted directly from tape-to-tape, tape-to-spool, spool-to-tape, or spool-to-spool from a local to a remote location. Locally, data can be transferred between spool and tape or spool and sequential data sets.

Store and forward capability is provided through routing tables defined at installation. Checkpoint/Restart is provided. Data security features include data set compaction, optional keyword-driven scrambling of sensitive data and routing verification. Data compaction is designed to eliminate consecutive characters and allow most printable characters to be transmitted in less than eight bits, providing the potential for significant savings in transmission time. Offline support utilities can provide spool maintenance and statistical reports on transmission activity. Data may be sent and received simultaneously by executing multiple copies of the program concurrently.

The online transmission programs are written in Assembler and the statistical report programs are written in PL/I Optimizer (5734-PLI) and require the PL/I Transient Library (5734-LM5) during execution. The minimum system requirement is a S/370 mdl 135 running under OS/VS1 or a S/370 mdl 145 running under OS/VS2.

Notice G320-5540, PDOM SH20-1670, Systems Guide LY20-2181.

APL ECONOMETRIC PLANNING LANGUAGE
5796-PDW

This IUP is an interactive planning language based upon APL.

It provides features for dealing with economic variables (primarily time-series), such as data analysis and transformation, tabular and graphic display, parameter estimation, model solution and file handling. It requires the installtion of the APL Shared Variable Programming RPQ 5799-AJF.

The practicing economist, business forecaster, or teacher is provided with easy-to-use tools by interactive model building and model solving. Care has been taken to user much of the power inherent in APL, using its available set of primitive functions and its compact data handling and logic capabilites.

Notice G320-5535, PDOM SH20-1670, Systems Guide LY20-2074.

INTRODUCING ... THE COMPUTER
5796-PDX

This IUP, which runs under ITS, is designed to provide an understanding of computers and data processing.

The course covers An Introduction to Data Processing ... An Electronic Data Processing System ... Data Recording Media ... Storage Devices ... Central Processing Unit ... Input/Output operation ... Input/Output devices ... Advanced Data Processing Concepts.

This IUP is designed to teach individuals who come in contact with electronic data processing and its terms, but are not concerned with the details of programming. These instructions can enhance understanding and contribute to better overall job performance.

Notice G320-5536, PDOMs SH20-1657 and SH20-1724.

ASSEMBLER H/CMS INTERFACE
5796-PEJ

This IUP makes available to VM/370 CMS users the benefits of OS Assembler H performance improvement and language extensions. During installation of the interface, the user can make optional modifications to suit normal assembly requirements. These modifications allow alteration of the default values for assembler options, establishment of the DD names for assembler data sets, and selection of the machine intruction set the assembler is to support. After installation is completed, a simple CMS command with assembly time options is used to invoke Assembler H to assemble user specified files. Programs written for Assembler F and OS/VS Assembler can also be assembled with Assembler H. ALC source program input may be from CMS files, OS data sets or OS partitioned data sets. To use Assembler H/CMS Interface, the user must also have the OS Assemlber H, Version 5 program product (5734-AS1) basic material.

Notice G320-5541, PDOM SH20-1671.

HIPODRAW
5796-PFF

This IUP provides significant productivity improvements in application development. It provides machine-generated HIPO diagrams for DOS/VS and OS/VS users in either batch mode or in interactive mode with either TSO or VM/CMS.

The primary advantages of HIPODRAW are: It automates documentation maintenance as well as document generation ... it provides a consistent and high quality format for all HIPO diagrams. The use of the IUP may also encourage programmers and analysts to keep the documentation current, because it:

- Automates the preparation of HIPO documentation.
- Greatly simplifies HIPO diagram maintenance.
- Has a straightforward series of statements as input.
- Produces high quality HIPO diagrams on a line printer.
- Supports standard and custom print trains.
- Provides diagrams which conform to the recommendation in the publication *HIPO - A Design Aid and Documentation Technique*, GC20-1851.

Notice G320-5546, PDOMs SH20-1728 and SH20-1821, Systems Guide LY20-2201.

CONVERSION AID: FORTRAN
5796-PFG

This IUP assists in converting various non-System/370 FORTRAN dialects to System/370 executable code.

Conversion is accomplished by a combination of translation, documentation, hand modification, re-compilation, and object-time library simulation.

The IUP provides automatic conversion where feasible, manages semantic and syntactical differences, provides documentation aid for manual conversion, is easy to learn, use, and modify, and is modular and extendable.

Notice G320-8154, PDOM SH20-1727, Systems Guide LY20-2199.

DISK VOLUME MAP
5796-PFL

This data management control aid for the systems programmer IUP provides the following information: distribution of data on the disk volume, which data sets should be compressed, and availability of space. It utilizes the OS/VS IEHLIST utility output to graphically display a schematic map of the entire disk volume. A data set table, arranged in alphabetical order, provides detailed, comprehensive information about each data set. Optionally, a list of all members in the partitioned data sets and of all entries in the catalog will be provided automatically without having to separately specify each data set. To help avoid abnormal program terminations due to the lack of available space, the data set table flags those partitioned data sets in need of compression. Expired data sets are flagged so they can be deleted and the space utilized for other data sets.

This IUP requires the IEHLIST utility and is written in assembler language. Minimum systems requirements are the universal instruction set, a 192K (real or virtual) region or partition, direct access device for temporary work files, printer with the universal character set and print line length of at least 112 characters, and the direct access storage device being analyzed, e.g., a 3330, 3340, 3344, 3350, 2311 or 2314.

Notice G320-5550, PDOM SH20-1755.

PRODUCTIVITY AID: TSO CODES UPDATE SYSTEM
5796-PFR

This IUP can be used by a TSO System Administrator to automatically create unique passwords for TSO users. It can eliminate manual updating of the passwords and help increase the security and manageability of the TSO password facilities. Because the TSO/Codes Update System uses both the Julian date and time of day as input to its randomizing routine, the same series of passwords should not be reproduced within a 100-year cycle, and likely will never be reproduced.

The IUP is designed to be used with 'SNAP-OUT' form-type mailers which are readily available from various form vendors. The program prints the new password, name and address, and any user message on the cover sheet of the special form. This cover sheet is removed and held as the master listing and is used for the auditing process. The new password and message are printed only on the cover sheet and on the inside part of the form. This is accomplished by the arrangement of carbons within the form-type mailer envelope. The new password is visible only when it is separated from the envelope portion of the multipart form. The use of these forms can reduce the amount of handling, thereby helping to increase security and potentially decreasing maintenance costs.

The TSO/Codes Update System is made up of two programs. The first phase of the two stage process uses the actual TSO User Attribute Data Set (UADS) and a user address file as input. The program verifies that the two files match and identifies any discrepancies. Unique passwords are created for each valid USERID in the TSO System. Each password is made up of two alphabetic and three numeric characters.

For each valid TSO User, the program prints a multiline user-provided message and the new password on the mailer-type form which is then mailed to each TSO User. This same form and program can be used to audit the TSO security system. The auditor merely changes the message requesting return of the form with a management signature. If a form is not returned, the USERID can be disabled or deleted from the system by the TSO administrator. The first phase program also places each new password and USERID on a future change data set. The change data set is later used as input to the second phase program which makes updates directly to tne TSO User Attribute Data Set. This automatic method is much faster and can be more secure than the present TSO password change facility.

Notice G320-5653, PDOM SH20-1805.

APL FORECASTING AND TIME SERIES ANALYSIS
5796-PFX

This IUP is a multi-workspace system which provides the user with interactive model solving that employs the Time Series Analysis techniques developed by Box and Jenkins. It offers the business analyst, forecaster or production planner a procedure for the identification, specification, estimation, diagnosis and determination of model forecasts and results. These forecast results are computed for future values based on current and past data values. Output is presented in report data format. Many facilities to aid model building and forecasting are provided such as: seven data transformation facilities and twelve plot routines; not restricted to the order of model or degree of differencing both for seasonal and non-seasonal models; diagnostics for the models include standard error with t value and confidence bands, correlation matrix and residual plots, thereby offering a high degree of flexibility for the user.

Notice G320-5664, PDOMs SH20-1806 and SH20-1807, System Guide LY20-2235.

IMS TRANSACTION PROFILES
5796-PGG

This IUP was developed to process IMS log information collected from IMS installations in surveys conducted by the GUIDE and SHARE User Organizations. Reports on the results of these surveys are available to customers through their IBM systems engineers. The IUP produces reports which can reveal a broad spectrum of characteristics of the transaction workload on an IMS DB/DC system. The information can provide early recognition of problem situations and identify the individual transaction processing programs involved. The increased understanding of the transaction workload can also provide the user with confidence in the ability of the system to absorb added applications or help to identify when the capacity of the system should be increased.

Highlights:
- Processes standard IMS/360 or IMS/VS log tapes.
- No overhead imposed on the online system.

- Multi-faceted profile reports provide concise characterization of workload.
- Time-sequenced (period) profile reports reveal short-term variations in workload.
- Transaction code list identifies the most used transactions and their characteristics in each period.
- Audit report individually identifies *abnormal* transactions.
- Transaction code profiles reveal the behavior of individual transactions.
- Fully defaulted input parameters provide for data selection and control.

Audit and Control Features:
- Input parameter validation and feedback.
- Information messages on usable data.
- Summary counts of records read and used.

Notice G320-5667, PDOM SH20-1810.

OS/VS1 PERFORMANCE TOOL (VS1PT) Release 3
5796-PGL

VS1PT is a software monitor that measures the performance of an existing S/370 operating under VS1. It uses statistical sampling, event counting, and event tracing to record selected system status information.

VS1PT Release 3 includes several enhancements:

- Enhanced system programmer control
- Reduced operator intervention
- Monitor options selected via new control card format
- Graphic time plots printed in order requested
- Enhanced dispatchability analysis
- Data base utility for inventory listings of measurement data
- Reduced overhead for report generation
- Overall report enhancements.

Notice G320-5680, PDOM SH20-1837, Systems Guide LY20-2243.

APL STATISTICAL LIBRARY:
5796-PGQ (APLSV AND APL/CMS)
5796-PHW (VS APL)

These IUPs are designed for use in solving problems in statistics and linear programming. They are written in the APL language for ease of use by statisticians, engineers, research workers, business analysts, and others who solve statistical problems. The interactive operation of the Statistical Library simplifies usage, allows concentration on problem solving, and reduces the delays and some of the sources of error encountered using batch mode. Users may perform analyses as needed, thus obtaining faster solutions and increasing their productivity.

The functions provided include the following general categories:

Descriptive Statistics
Inferential Statistics
Analysis of Variance
Regression Analysis
Correlation Analysis
Quality Control
Nonlinear Least Squares
Reliability Analysis
Linear Programming

IUP 5796-PGQ requires the installation of APL Shared Variables Release 2.1 PRPQ (5799-AJF) or APL Shared Variables Release 3 PRPQ (5799-AQC). In an APL/CMS environment, the tape should be converted via the installation procedure described in the *APL/CMS Installation Manual* (SC20-1845) under "Using the Conversion Utility Programs."

Notice G320-5688, PDOM SH20-1841, Quick Reference Guide GX20-2001.

BATCH TERMINAL SIMULATOR II (BTS II)
5796-PGT

BTS II, an Extended Support IUP, is a terminal simulator that allows online IMS/VS application programs to be tested in an IMS/VS batch environment without the use of telecommunications hardware. Extensive debugging facilities enable the BTS II user to test batch applications as well as those intended to run in a telecommunications environment.

Key Functions, Facilities, and Features

- Supports conversational or nonconversational as well as BMP, MSG, and batch application programs
- Provides extensive debugging and trace facilities for both batch and telecommunications applications
- Permits the testing of online application programs without the installation of telecommunications hardware
- Supports the IMS/VS message formatting service (MFS) function for the 3277 Display Stations, mdls 1 and 2, and 3278 Display Stations, mdls 2, 3 and 4, as well as for 3284/3286 Printers
- Simulates the message queuing and application program scheduling functions of the IMS/VS data communications feature. This allows the support of conversational programming and program-to-program transaction routing
- Supports testing of application programs written in COBOL, Assembler or PL/I
- Provides automatic program documentation by printing 3270 input and output formats and by tracing the interaction between IMS/VS and an application program
- Full-screen support for TSO simulating IMS/VS operation from 3270 terminals under TSO.

Notice G320-5686, PDOM SH20-1844.

PRODUCTIVITY AID: APL FUNCTION EDITOR
5796-PGX (APLSV)
5796-PGY (VS APL)

This IUP is a comprehensive package for the development and modification of APL functions. It brings to the APL user a powerful interactive tool which can be used to edit in context, search, copy, or list any function in his workspace. The resulting ease of modification provides greater productivity through the automation of time-consuming activities like variable name changing and searching through functions for particular character strings.

The Editor is patterned after the CMS Editor of VM/370. Those functions of the CMS Editor which appeared useful for the editing of APL functions are implemented. Several more, uniquely useful in an APL environment, give the Editor more function.

Notice G320-5689, PDOM SH20-1846, Systems Guides LY20-2247 (APLSV) and LY20-2248 (VS APL).

BATCH MONITOR FOR VM/370
5796-PGZ

This IUP allows a VM/370 CMS terminal user to direct jobs which do not require conversational supervision to one of four virtual *batch* machines. The major highlights of the program include: terminal user inquiry into *batch* machine workload, scheduling of batch jobs on a job size basis, systems workload balancing, and extensive control and restart facilities. The major potential benefit to a user of this program is increased CMS terminal user productivity.

This program was designed to help the programmers, scientists, and researchers at the Research Center who use VM/370 CMS with facilities for their batch program activities. Use of the IUP at the Research Center contributes to CMS user productivity and better computer system utilization.

Installing the IUP requires user alterations to six VM/370 CP and CMS modules; less than 50 executable assembler statements are affected. As with any user alterations of IBM System Control programming, these alterations create an exposure to potential field engineering billing for program support. Prospective users should be provided with a copy of Information Bulletin for Customers Alterations to IBM Supplied Program (G120-2238) to help them evaluate this exposure.

Notice G320-5691, PDOM SH20-1851, Systems Guide LY20-2249.

CONVERSION AID:
SMF JOB DATA COMPRESSION AID (JDCA)
5796-PHN

This IUP and its companion, the Storage Device Migration Aid (SDMA), IUP 5796-PHP, are tools designed to help OS or OS/VS installations manage their tape, DASD, and MSS configurations.

JDCA produces a base file of edited and reduced System Management Facilities (SMF) data. This base file can be used by SDMA. Consequently, JDCA is a prerequisite for SDMA. In addition, JCDA base file data can be printed, rearranged, or summarized by user-written programs. In this latter case, JDCA can simplify the task of processing SMF's variable-length records.

JDCA provides a number of useful options for controlling the data in the base file. It also provides summary reports for estimating the validity of the SMF data processed. JDCA can process SMF data from up to nine OS or OS/VS systems.

For additional information, see SDMA, IUP 5796-PHP.

Notice G320-5714, PDOM SH20-1882, Systems Guide LY20-2268.

CONVERSION AID: STORAGE DEVICE MIGRATION AID (SDMA)
5796-PHP

This IUP generates a series of reports from the base file created by the Job Data Compression Aid (JDCA) IUP (5796-PHN). These reports include information about data sets and jobs. The information in the reports can be custom tailored by use of one or more filters. The filters enable the customer to study the specific data sets and jobs of interest.

JDCA and SDMA are designed to simplify migration to a new I/O configuration, but they can also be used for other purposes. They can help:

- Detect the need for I/O configuration upgrades.
- Determine the changes to be made.
- Plan migration to the new configuration.
- Monitor the progress of migration.
- Estimate the date of the next I/O configuration upgrade.
- Monitor compliance with installation standards.
- Improve system performance by optimizing data set placement and characteristics.

JDCA and SDMA, if used together, provide many of the functions supported by IBM Marketing Aid 1 (MA/1). New reports are included that simplify detailed migration planning.

Users of these IUPs will be able to keep all of the reports produced and use them freely for their own purposes. These IUPs enables users to get involved with I/O configuration studies at an early date and assume the primary responsibility for processing the data and analyzing results.

S/370 users of SDMA can benefit from a special optional service. They can send a data set produced by JDCA/SDMA to IBM for analysis. The data submitted is descriptive in nature. It characterizes the user's installation and the way the installation operates. No data relating to data set names or their content, programmer names, accounting information, etc. is transmitted in this data set. The customer will receive a report from IBM that compares his installation with the other installations that have also used this service. That information can help identify areas for improvement.

Notice G320-5714, PDOM SH20-1883, Systems Guide LY20-2269.

APL STATISTICAL LIBRARY - VS APL
5796-PHW

See 5796-PGQ.

MASS STORAGE CONTROL TABLE MAINTENANCE PROGRAM
5796-PHY

Proper operation of the 3850 MSS is possible only if data in the Mass Storage Control's (MSC) Table Data Sets is valid. This IUP is designed to help the system programmer maintain these important data sets. It provides an interactive, conversational approach for maintaining them. It can substantially reduce the time required to perform system programmer and operator functions, including problem diagnosis, corrective actions, and queries regarding operational status.

The IUP executes under TSO or with a TCAM interface. It can be used from the operator's console to query status of the MSS via MSC table analysis. It can also be used in a Display Only mode or for Display and Update. All actions taken and associated output are logged to provide an audit trail.

Highlights: The IUP offers formatted and interpreted listings of the Mass Storage Control Table Data Sets. It allows the user to change selected tables using symbolic parameters and all tables by using hexadecimal dumps (even to the systems console) and specifying changes in hexadecimal format.

The benefits provided for the installation include:

Reduction of elapsed time in 3850 recovery situations.
Improved usability for system programmers and operators.
Increased MSC Table security.

Functions provided for the installation include:

Audit trail of all actions taken.
Direct access to MSC Tables.
Inquiry for MSS status.
Display Only or Display and Update mode of operation.
3270 Terminal support.

Notice G320-5742, PDOM SH20-1928, Systems Guide LY20-2294, Marketing Guide ZZ20-3503.

CMS EXEC ENHANCEMENTS
5796-PJA

This IUP is designed to provide additional functions to expand the usefulness of the VM/370 CMS EXEC language.

It is a standard CMS command module which runs in the transient area and allows the EXEC writer to perform multiplication, division, and residue operations as addition and subtraction ... obtain current date and time in EXEC variables ... obtain read or virtual device type information ... search a file in a specific column for a particular character string ... search a list of values for a particular value ... determine if a member is defined in a library and obtain the starting record number of the member in the library and the size of the member ... obtain the values of specific parameters or options from the EXEC argument list and supply default values if no value was provided ... obtain the value of an option which follows a specific keyword and supply a default if the keyword is not in the option list ... return the values of local EXEC variables to the next higher level ... punch, stack, or type data which contains a specific number of embedded blanks and strings greater than eight characters ... read any record in a CMS file into EXEC variables ... place a CMS file on the console stack ... obtain data from the File System Table when only part of the file ID is known ... obtain virtual machine user ID or system level number ... set global EXEC variables which may be accessed from command to command.

Notice G320-5728, PDOM SH20-1922, Systems Guide LY20-2279.

APL DECISION TABLE PROCESSOR AND CODE GENERATOR
5796-PJB

This IUP is a set of interactive APL programs designed to help the user construct and maintain a library of limited entry decision tables and to compile the decision tables into procedural code in a high-level language (COBOL, PL/I, APL, ALGOL). The usual concerns of program debugging can thereby be eliminated, allowing the end-user to concentrate on the decision-making logic of the application.

Decision tables can be edited and validated for completeness and consistency. ALGOL, APL, COBOL, and PL/I code generators are provided. APL programs can be generated for immediate execution and testing. Programs in the other languages can be filed on a data set and be used as input to other language processors. A full coverage test case sequence for validating the object code is optionally produced.

A questionnaire processor is available as part of this system to guide an application user through a series of yes-no to produce a decision table map. The questionnaire is also useful for interactive checkout of table logic.

Notice G320-5738, PDOM SH20-1924, Systems Guide LY20-2282.

APL GPSS:
5796-PJF ... APLSV
5796-PJG ... VS APL

These IUPs are designed for use in carrying out simulation studies. They are written in APL and employ a modified subset of the GPSS language for ease of use by scientists, engineers, and analysts. The simple block diagram language of GPSS provides a quick, easily learned method of describing models. The interactive operation, under APL, allows concentration on problem solving and reduces the delays and some sources of error encountered in batch mode. Also, an investigator can have direct control over a simulation study and can expect to increase productivity by getting results more rapidly than in batch mode.

Notice G320-5745, PDOM SH20-1942, Reference Card GX20-2002, Systems Guides (PJF) LY20-2297 and (PJG) LY20-2298.

TELPAK OPTIMIZATION PROGRAM
5796-PJH

This IUP is designed to analyze and inventory private lines and generate a least cost Telpak network. The program also prints circuit reroute orders to AT&T and creates an updated version of the total circuit inventory.

Notice G320-5747, PDOM SH20-1943.

IMS SPACE MANAGEMENT UTILITIES II
5796-PJJ

The IMS Space Management Utilities II, an Extended Support IUP, can help to improve system performance and programmer productivity. They are designed to detect and report Hierarchical Direct (HD) pointer discrepancies, to provide statistics and information for HD tuning and to assist with segment restructuring and reloading during data base reorganization.

IMS Space Management Utilities II also designed to assist in managing OS/VS and IMS/VS data space.

Key Functions, Facilities, and Features

The following groups of programs and cataloged procedures are available:

- Hierarchical Direct Pointer Checker/H.D. Tuning utility - which monitors space utilization and then detects and reports physical or logical direct pointer problems.
- HDAM Physical Block Reload utility for reloading HDAM data bases during the reorganization process in physical block sequence. Conversion of non-HDAM data bases is made easier via this utility.
- Data Space Monitor utility can be used to track IMS data base growth rates, to assist in predicting the needs for reorganization or compression.
- Data Base Segment Restructuring utility provides the ability to modify individual segments and hierarchy within a data base.

Notice G320-5753, PDOM SH20-1952.

PRODUCTIVITY AID: DB PROTOTYPE II
5796-PJK

DB PROTOTYPE II, an Extended Support IUP, is a design evaluation tool that provides performance statistics of initial IMS data base designs through the use of skeletal data bases and application program models. It provides many new features including an analytic modeling facility to estimate data base space and CPU and input/output time requirements, support of COBOL, PL/I, and Assembler for program modeling, and new ease-of-use facilities.

Key Functions, Facilities, and Features

- Provides CPU and input/output timings through an analytic modeling facility, reducing or eliminating the requirement to construct prototype data bases to obtain these data
- Generates, according to control card specifications a prototype data base that closely emulates the real data base. All valid DL/I data base structures are supported
- Generates and executes call sequence prototypes against the prototype data base or actual data base
- Prints detailed timing and performance statistics for analysis by the user. The initial run of DP PROTOTYPE II establishes a design base. Successive runs with varying design parameters allow analysis of alternative designs.
- Provides support to evaluate use of IMS/VS functions including IMS/VS access methods, secondary indexes, program isolation, batch checkpoint/restart, and variable-length segments.

Release 2.0

Provides the data base designer with both analytical and simulation tools which help find the right combination of design variables more effectively and at a lower cost than conventional hit-or-miss methods.

Major enhancements for Release 2 include:

- An analytic tool, DBCAP, for estimating the CPU time and I/O time required by the DL/I calls of an IMS/VS application program.
- All known fixes for Release 1.

Notice G320-5754, PDOM SH20-1953.

PRODUCTIVITY AID: DISPLAY EDITING SYSTEM for CMS
5796-PJP

This IUP is a full-screen editing system for VM/370 CMS. It is designed to use the features of both local and remote terminals. In addition to a comprehensive array of cursor and command oriented date manipulation functions, the IUP has direct usability in a wide range of user applications. Display terminals supported are the 3277 Model 2 and 3278 Model 2, including both the Text Processing and APL keyboards.

The Display Editing System accommodates CMS files of all types, including program source material, documentation, and data. It permits users to change portions of the display without program interventions. By placing the cursor on the position(s) requiring change, the user may re-enter the correct character(s). The Display Editing System checks for modifications made to the display image and makes permanent copies of the changes to the file.

The use of this IUP may provide substantial productivity gains resulting from reduced keystroke requirements, improved system response times, and efficiencies in both CPU resource utilization and data transmission.

Notice G320-5762, PDOM SH20-1965, Systems Guide LY20-2311.

APL ADVANCED STATISTICAL LIBRARY (STATLIB2)
5796-PJR (APLSV)
5796-PJT (VSAPL)

These IUPs extend the statistical functions available in the previously released APL Statistical Library IUPs (5796-PGQ and 5796-PHW). The STATLIB2 IUPs consist of a set of 10 APL workspaces containing topics selected from the fields of multivariate analysis, time series analysis, and non-parametric statistics. STATLIB2 complements the APL Statistical Library, together they constitute a complete statistical library offering for the APL user. The functions provided include:

Multivariate Analysis - Factor Analysis ... Canonical Correlation ... Multiple Partial Correlation ... Classification Analysis ... Multivariate Analysis of Variance (MANOVA) ... Multivariate Analysis of Covariance ... Discriminate Analysis.

Time Series Analysis - Exponential Smoothing ... Autoregressive Methods ... Multi-input Transfer Model Analysis ... Spectral Analysis

Non-paramentric Statistical Tests - Two Sample Cases ... K Sample Cases, both for nominal and ordinary levels of measurements ... Various

Non-parametric measures of correlations. IUP 5796-PJR requires the installation of APL Shared Variables Release 2.1 (5799-AJF PRPQ WE1191) or APL Shared Variables Release 3 (5799-AQC PRPQ MG6282).

Notice G320-5811, PDOM SH20-1948, Quick Reference Guide GX20-2021.

APL COMPUTER-AIDED INSTRUCTION COURSE
5796-PJW

This IUP consists of a set of APL workspaces which constitute a self-teaching computer-aided instruction course for learning APL. The course is designed for problem solvers and programmers who want to learn to write APL programs.

Notice G320-5812, PDOM SH20-2046.

MSS TRACE/SMF CORRELATION AID
5796-PJX

This IUP consists of a set of programs developed to assist an installation with a 3850 Mass Storage Subsystem in evaluating system and subsystem performance.

Workload balancing and problem determination for the 3850 requires knowledge of both host CPU and MSS activity. Correlation of event activity between CPU hosts and MSS requires the use of common data elements recorded in each of the respective activity journals, System Management Facility (SMF), and MSS Trace. The IUP analyzes data collected by SMF and MSS Trace and generates reports and time-based plots of activity within the MSS and host CPU, thus allowing correlation of these two sources over time. The correlation will show processing peaks and can aid in work rescheduling to reduce or eliminate system or subsystem saturation periods. Situations such as cylinder faulting can be directed and investigated by correlation of SMF job, step and data set information-with the stage/destage activity as recorded by MSS Trace.

To realize the full recording capabilities of this IUP, the user must install the job Data Compression Aid IUP (5796-PHN); collect full SMF data and process this data with the JDCA IUP. However, the MSS Trace/SMF Correlation Aid IUP may be used without JDCA to process only on MSS Trace data.
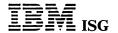
Notice G320-5810, PDOM SH20-2045, Systems Guide LY20-2318.

HOST REMOTE NODE ENTRY SYSTEM
5796-PJY

This IUP enables a S/370 operating under the control of OS/VS1 to function as a remote terminal (workstation) for submitting jobs to a central S/370 to be executed under any OS/VS environment. The S/370 need not be dedicated to the remote job entry. Local batch jobs, online systems, and remote job entry terminals can process under the VS1 system concurrent with the transmission of other jobs to another OS/VS host system by the VS1 entry node programs.

Notice G320-5813, PDOM SH20-2047, GI Manual GB21-9862, Systems Guide LY20-2351.

...Feature (Specify #9583, #9584) This feature will extend the central service support for the Host Remote Node Entry System (5796-PJY) until December 31, 1981. The original central service period for this program ended on January 20, 1979. Customers ordering the new feature will receive a current level of the program and documentation which corrects errors reported since the the expiration of the original support period.

APL DATA INTERFACE:
5796-PJZ ... VS APL under TSO
5796-PKB ... VS APL under VSPC

This IUP is intended for business planners, forecasters, analysts, production controllers, researchers, and other professionals who manipulate large amounts of data. It was developed within IBM to provide professionals having no programming skills with an online, easy-to-use tool for satisfying most of their own data processing requirements. At IBM, this IUP helps to reduce programming costs and delays while providing decision makers with immediate answers to unanticipated questions.

Working at an APL terminal, an end-user describes the data file to be processed via interactive, prompting messages and is then able to process queries into the data. User data can originate from an external DOS or OS system, and information in two separate files can be linked together through common data.

An end-user can extract information using 'and/or' logic, 'less than' or 'equal to' relational terms and computed values. Functions are provided to manipulate extracted information in standard ways; i.e., sum, count, sort, subtotal, and accumulate statistics. Knowledge of APL is not necessary, although the full power of APL is available to the end-user who may require further data manipulation and who can program in APL.

The program supports a full range of expected users, from a single user/file to a multi-user/file environment with provisions for system administration and security.

Notices G320-5758 and G320-5815 (PJZ), PDOM SH20-1954, Systems Guide

DL/I DOS/VS SPACE MANAGEMENT UTILITIES
5796-PKF

The DL/I DOS/VS Space Management Utilities, Extended Support IUP, can help to improve system performance and programmer productivity. They are designed to detect and report Hierarchical Direct (HD) pointer discrepancies, to provide statistics and information for HD tuning and to assist with segment restructuring and reloading during data base reorganization.

The following groups of programs and cataloged procedures are available:

- Hierarchical Direct Pointer Checker/H.D. Tuning utility – which monitors space utilization and then detects and reports physical or logical direct pointer problems.
- HDAM Physical Block Reload utility for reloading HDAM data bases during the reorganization process in physical block sequence. Conversion of non-HDAM data bases is made easier via this utility.
- Data Space Monitor utility can be used to track IMS data base growth rates, to assist in predicting the need for reorganization or compression.
- Data Base Segment Restructuring utility provides the ability to modify individual segments and hierarchy within a data base.

Notice G320-6072, PDOM SH20-2107.

VSAMZAP
5796-PKG (DOS/VS)
5796-PJQ (OS/VS)

These IUPs are intended for the VSAM user who needs the ability to inspect and modify individual records in any type of VSAM data set. Both provide either card or system console input and printer output, and support password protection of data sets.

these programs can be valuable in the repair of records damaged by programming or I/O errors as well as establishing special conditions for testing.

Notice G320-5826, PDOM-DOS/VS SH20-2063, PDOM-OS/VS SH20-2062.

BULK DATA TRANSFER
5796-PKK

This IUP provides users of NJE for JES2, HASP/NJI, and ASP/NJI with the capability to transfer data sets from one node in a network to another. This requirement is common to a number of customers who wish to transmit large data files between geographically separated systems or co-located systems via the channel-to-channel adapter.

This IUP is compatible with programming RPQ P09009 under HASP/NJI; therefore, bulk data transfer can be implemented between this IUP in one node of a network and the programming RPQ in another node of the same network. Use of this IUP with NJE for JES2, HASP/NJI, and ASP/NJI allows bulk data transmission between any combination of these environments.

Notice G320-6060, PDOM SH20-2088, Systems Guide LY20-2367.

PL/I FILE CREATION PROGRAM FOR APL DATA INTERFACE
5796-PKP

This program enhances three versions of the APL Data Interface IUPs: 5796-PKA for VSAPL under CMS, 5796-PKB for VSAPL under VSPC with VS TSIO, and 5796-PJZ for VSAPL under TSO. The purpose of the program is twofold:

- Performance is improved in the file create process because PL/I is more efficient in this operation than APL. This can result in significant time savings when large files need to be created on a regular basis.
- The program extends the domain of numeric data to include double word floating point representation. This permits the APL Data Interface IUPs to appropriately handle real numbers with up to 15 digits of precision.

Notice G320-6066, PDOM SH20-2102.

FORTRAN H EXTENDED OPTIMIZATION ENHANCEMENTS
5796-PKR

This IUP provides users of the FORTRAN H Extended Compiler and Library program products with a higher level of program optimization. The resulting compiled programs approach the quality of the best programs normally written by skilled Assembler language programmers.

Notice G320-6064, PDOM SH20-2100.

QUERY-BY-EXAMPLE VM/370 CMS
5796-PKT

This IUP is a high-level, interactive language facility which provides easy access to data by end-users not necessarily skilled in data processing techniques. It features a unique, two-dimensional, user interface which is simple to use yet powerful and flexible. It can be easily learned in a few hours.

Query-By-Example (QBE) provides a powerful facility for answering complex queries which can be expressed by the end-user in familiar terminology and logic.

Operations which can be performed during an interactive session with QBE include retrieval, insertion, deletion, update, and creation of data in the form of tables. These operations may be performed on entire tables, entire rows, entire columns or on one or more individual data elements.

QBE is designed to operate with the System Extensions program product (5748-XE1) or the Basic System Extensions program product (5748-XX8).

Notice G320-6062, PDOM SH20-2077, Terminal User's Guide SH20-2078.

IMS-APL DATA LINK FOR TSO
5796-PKW

This IUP was developed to satisfy the need to link a personal computing facility (APL) with a user's IMS data base system. This link allows an APL user to submit IMS transactions to one or several IMS systems from an APL workspace; the output can be returned to the workspace for display or further manipulation.

Notice G320-6065, PDOM SH20-2101, Systems Guide LY20-2369.

VM/370 SPOOLING SUPPORT FOR LOCAL 328X PRINTERS
5796-PKZ

This IUP provides VM/370 users with the ability to spool and print CMS files on a local 3284, 3286, 3287, 3288, or 3289 hardcopy printer. Currently, users must print their files on the system printer or use the PF key to copy the screen image to a local hardcopy printer.

This IUP supports the Data Analysis - APL feature and the Vertical Forms Control feature on the 328X printers. All of the current 3272 or 3274 buffer sizes are supported.

Notice G320-6073, PDOM SH20-2079.

STAIRS/VS TRAINING COURSE
5796-PLF

This IUP, a computer-based training course, teaches personnel individually at terminals how to use the important online commands of STAIRS/VS. The course enables end-users to take advantage of the full complement of commands for selecting and accessing documents from STAIRS data bases. The IUP operates with the Interactive Instructional System program product (5748-XX6).

The IUP is designed for a wide variety of personnel including administrative, managerial, and professional who are end-users of either STAIRS/VS (5740-XR1) or STAIRS/DOS/VS (5746-XR4).

No formal prerequisites are needed to complete this course. However, familiarity with use of the IBM 3270 terminal is helpful.

Notice G320-6078, CDAM SH20-2111, Reference Card GX20-2331.

DATA EXTRACTION, PROCESSING AND RESTRUCTURING SYSTEM
5796-PLH

The Data Extraction, Processing and Restructuring System is a data restructuring tool used for conversion of files into DL/I data bases for distributed data processing, planning, research or query. It can also be used to audit the validity of data in a data base.

Notice G320-6160, PDOMs SH20-2177 and SH20-2178.

ADMINISTERING THE INTERACTIVE INSTRUCTIONAL SYSTEM
5796-PLJ

This computer-based training IUP is for personnel who are administrators of the Interactive Instructional System (5748-XX6). The course teaches the major functions of an administrator, IIS system components, and high activity IIS administrator commands. Included are how to set up and use IIS files, how to provide basic author and student services, and how to estimate resource requirements for IIS operations. Consideration is given to both central site and remote location student support. Although certain parts of the course are applicable for administrators with the IMS versions of IIS, there are differences in this environment which are not addressed. Therefore, the course is only for installation with IIS operating in environments other than IMS.

Notice G320-6094, PDOM SH20-2162.

RACF CODES UPDATE SYSTEM
5796-PLK

This IUP is a fully automated password generation and auditing system. It provides the installation with the ability to update RACF user-type passwords and/or audit their users within any desirable time frame. With the use of the RACF/Codes Update System (RACF/CUS), a RACF installation can centralize the control of the password assignment and change functions which are normally a RACF user's responsibility.

The RACF/CUS is designed to be used with snap-out form-type mailers, which are readily available from various form vendors. The program prints the new password, name and address, and any user message on the cover sheet of the special form. This cover sheet is removed and held as the master listing and is used for the auditing process. The new password and message are printed only on the cover sheet and on the inside part of the form. This is accomplished by the arrangement of carbons within the mailer envelope. The new password is visible only when it is separated from the envelope portion of the multi-part form.

Notice G320-6093, PDOM SH20-2161.

PL/I LANGUAGE CONSTRUCTION PREPROCESSOR
CAMBRIDGE SCIENTIFIC CENTER
5796-PLL

This IUP is a generally applicable preprocessor for PL/I, similar in many ways to the built-in preprocessor, but much more efficient when a large number of new language statements must be defined. Using it, one may create a "language within a language" (i.e., a set of commands for simulation, data base access, graphics, etc.) which will be translated to PL/I code. The program will take as input a file consisting of new language commands and, optionally, interspersed PL/I statements and produce a file of PL/I statements acceptable as input to the PL/I compiler. Command names can be identified by context, so that it is unnecessary to prohibit their use as PL/I variable or array names. The user must supply an external PL/I procedure for each new language statement to generate the appropriate expansion. The user is allowed full use of the PL/I language (as opposed to the limited use permitted by the built-in preprocessor). Efficiency is achieved by pre-compiling the language expansion routines and by avoiding any extra processing for an unreferenced command.

Notice G320-6096, PDOM SH20-2164, Systems Guide LY20-2414.

A DEPARTMENTAL REPORTING SYSTEM, VERSION II
5796-PLN

A Departmental Reporting System is a general-purpose time-sharing application system designed for direct use by the business professional. It provides an organization with a single comprehensive system to assist in applications involving data analysis inquiry, and report generation.

New Features available in Version II include:

- Extended support
- Use of VSAPL Release 3, and support for the CICS/VS, VM/CMS, VSPC and MVS-TSO environments
- Full-screen processing
- Additional report formatting facilities
- Preprocessing capability (sorting, selecting and computing)
- Graphic presentation
- New computation and calculation capabilities
- Multifile data inquiry
- Express mode processing
- Command stacking
- Terminal independence
- Significant performance improvements.

Notice G320-6097, PDOM SH20-2165, Systems Guide LY20-2415.

APL HANDBOOK OF TECHNIQUES WORKSPACE
5796-PLP

This IUP provides users of VS APL with a machine-readable equivalent of the publication: *The APL Handbook of Techniques* (S320-5996). It may be installed on VS APL systems running with VSPC, VM/370-CMS, and TSO. (Note: The APL interface to TSO is provided by the IUP VS APL for TSO, 5796-ALB). With this IUP, users of the *APL Handbook of Techniques* may develop new APL applications quickly and efficiently. With the use of English-like expressions such as "Costdata Beside Years", application development time may be reduced appreciably.

Notice G320-6153, PDOM SH20-2170, The APL Handbook of Techniques S320-5996.

VSE PERFORMANCE TOOL (VSE/PT)
5796-PLQ

VSE/PT, an extended support IUP, is a software monitor that measures the performance of an IBM system operating under DOS/VSE, SSX/VSE or DOS/VS in a non-VM/370 environment. It uses both statistical sampling and event tracing to record system status on an output data file. This data is used later to produce a series of reports on both hardware and software performance during selected time intervals.

Notice G320-6155, PDOM SH20-2171, Systems Guide LY20-2418.

INTERACTIVE CIRCUIT DESIGN
5796-PLR

This IUP is a powerful general purpose circuit analysis and design program implemented in APL. Because it was developed to be user-oriented and is highly interactive, one may now accomplish in minutes what previously took hours and days via conventional batch processing methods. This savings in turnaround time can substantially reduce circuit design costs while improving the quality of the design.

Notice G320-6164, PDOM SH20-2336, Systems Guide LY20-2423.

THE JES3 MONITORING FACILITY II (JMF II)
5796-PLW

The JES3 Monitoring Facility II (JMF II) provides the MVS/JES3 user with information on the activities and resource utilization of JES3. This information can be used to assist in evaluating the performance of an existing MVS/JES3 system and to understand the impact of particular JES3 functions on the entire system. Used on a regular basis, JMF II can assist in identifying changes in the JES3 environment which may affect overall JES3 performance. This information may also be useful in planning for future growth of the system.

Notice G320-6159, PDOM SH20-2176, Systems Guide LY20-2421.

APL MULTIVARIATE TIME SERIES ANALYSIS
5796-PLX

This IUP is an interactive model-solving system that extends the scalar techniques developed by Box and Jenkins (available in the Forecasting and Time Series Analysis IUP 5796-PFX) to the domain of more than one variable, according to a method by Pandit and Wu.

The user may perform analysis manually, in dialogue mode, or may choose to have the data analyzed automatically via preset options. Typical applications for this product include economic, sales and budget forecasting, utility and inventory studies, yield projections, quality control, and other disciplines concerned with forecasting future values.

Notice G320-6169, PDOM SH20-2174.

VS APL EXTENDED EDITOR AND FULL SCREEN MANAGER
5796-PLY

This IUP is a powerful extension to the VS APL program product (5748-AP1) and the Yale University IUP, VS APL for TSO (5796-ALB).

The extended editor is written in S/370 Assembler language and runs under the Conversational Monitor System (CMS) or the Time Sharing Option (TSO) of OS/VS. It is a replacement for the standard editor (del-editor) of VS APL for these environments and utilizes the 3270 Information Display System to enhance programmer productivity. It supports the hardware, full screen editing features of the 3270 Display System and also supports 2741 devices in non-full screen mode.

The full screen manager is an auxiliary processor that enables the APL programmer to manipulate the 3270 console in full screen mode. It is similar to the APL 124 auxiliary processor for VSPC and CICS but has additional capabilities not available in the VSPC and CICS versions. The full screen manager auxiliary processor enables the APL programmer to create full screen APL applications that enhance the human factors of user interactions.

Notice G320-6168, PDOM SH20-2341, Systems Guide LY20-2426.

SOURCE COMPARE/AUDIT UTILITY
5796-PLZ

The Source Compare/Audit Utility accepts text input from two files and produces various print/update/summary files detailing source line matches, insertions, deletions and reformats. Input files can be sequential data sets, OS/VS partitioned data sets or partitioned data set members.

The Source Compare/Audit Utility features speed, capability, simplicity of use and accuracy through a unique algorithm which maintains synchronization by locating the largest sets of matching lines between data sets. It then recognizes missing or added lines by their occurrences between matching sets. This mechanism is unique and highly accurate.

Notice G320-6163, PDOM SH20-2361.

VM REALTIME MONITOR
5796-PNA

This IUP provides a comprehensive mechanism that can be used to detect realtime problems, analyze system performance, measure the effects of system changes, and assist the operators in running and controlling the total system. The IUP incorporates many new philosophies and provides detailed system statistics that are not easily available through other means. The monitor is totally command-, timer-, and table-driven, and presents information in realtime on any terminal or display supported by the VM/370 control program. This IUP will simplify the entire process of performance analysis in a VM/370 environment and management of a VM/370 installation.

Notice G320-6165, PDOM SH20-2337, Systems Guide LY20-2424.

APL WORKSPACE STRUCTURE ANALYZER
5796-PNB

This IUP is a productivity aid to analyze and document the structure of APL programs. It is designed for both original program authors as well as others who must describe and/or understand single or related APL programs. The IUP is intended to give an ordered overview of an APL workspace. It displays the nested hierarchy of related APL programs as well as the use of variables and line labels. These and other features are provided to aid in program improvement and debugging as well as

workspace partitioning. Statistics, which include line and operator counts, provide additional insight into the complexity of the APL workspace. A special group of functions is provided to analyze FORTRAN source programs similarly.

Prerequisite for installing this IUP under TSO is the IUP VS APL for TSO (5796-ALB).

Notice G320-6170, PDOM SH20-2344, Systems Guide LY20-2429.

TELEPROCESSING VIRTUAL MACHINE (TPVM)
5796-PNC

This IUP is an application program designed to provide remote minicomputers with the ability to access and utilize the facilities of the VM/370 system via BiSynch telecommunications links. The basic TPVM functions are:

- Read/write access to VM/370 user mini-disks from remote minicomputers with full password protection for user files.
- Asynchronous execution of programs in VM/370 and the remote system.
- Synchronization of tasks between the systems using status files.

Applications using TPVM include hierarchical distributed laboratory automation systems, product assurance testing, microprocessor software development, and auto emission testing, among others.

Notice G320-6328, PDOM SH20-2358, Systems Guide LY20-2435.

DOCUMENT COMPOSITION FACILITY TRAINING COURSE
5796-PNE

This IUP is a computer-based training course that teaches personnel who prepare documents how to mark up and format documents using the Document Composition Facility (5748-XX9). The course operates under the IBM Interactive Instructional System program product (5748-XX6).

Notice G320-6331, CDAM SH20-6130, Student Materials SH20-6131.

AUDIT FILE COMPARE PROGRAM
5796-PNF

This IUP aids auditors and management in the control and verification of differences between two data files. Auditors are concerned with selectively identifying and sizing variances between files that may have only a few data elements in common, or may be different generations of the same file. Audit File Compare permits the users to select the data elements to be compared and can report on all differences or differences over a specified threshold value, quantify variances in arithmetic fields on a percentage basis, and identify differences in character fields. It will also identify duplicated records in either file or records unique to either file.

Notice G320-6339, PDOM SH20-6138, Systems Guide LY20-9005.