IBM speakers reviewed the following:

- ° VM/SP Release 3

- ° VM/SP and High Performance Option (HPO) Releases 3.1

- ° VM System Integrity Announcement

- ° VM Interactive Productivity Facility (VM/IPF) Release 5

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VM/SP Release 3
Addtional Enhancements
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ABSTRACT

In February, 1983 IBM announced Release 3 of VM/SP. Some of the major enhancements which are a part of this release include the new System Product Interpreter, enhancements to the existing System Product Editor and the Programmable Operator, support for SQL/DS Release 2 and VSAM Release 3, and some new functions which will aid application program development.

On June 10, 1983, IBM announced some additional capabilities which would be included as a part of VM/SP Release 3. This paper describes these new functions and enhancements.

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VM/SP RELEASE 3

VM/SP Release 3 provides a wide range of enhancements in many different areas, including the support of SQL/DS, some new and improved System Product Editor functions, the System Product Interpreter, some Programmable Operator enhancements, some additional IUCV support, and some other CMS enhancements to aid in application program development.

In June, 1983 IBM announced some additional capabilities which are included in VM/SP Release 3. The following new functions and enhancements will be discussed in this paper:

• Update-in-Place Capability

• Additional VSAM Support

• CMS Performance Enhancements

• New Devices supported under VM/SP

• CMS VSAM 3380 DASD Support

• Removal of the CMSSEG Discontiguous Shared Segment

• Other General CMS Enhancements

UPDATE-IN-PLACE CAPABILITY

A new update-in-place capability is being provided for CMS files which reside on a CMS mini-disk which is formatted with a blocksize of 512, 1K, 2K, or 4K bytes. Currently, whenever a physical CMS block is changed, a new block is allocated on the disk, the changed block is rewritten to the newly allocated block, and an alternate directory is constructed in case of a file system error. Now, if a file has the update-in-place capability, the changed block will be re-written to it's previous location on the disk.

The update-in-place capability will be indicated with a file mode number of 6. The update-in-place capability will only be available via the FSWRITE interface. Any application or CMS command which uses the FSWRITE interface to make changes to a file will be able to take advantage of the update-in-place capability. CMS commands such as COPYFILE or the System Product Editor which create a temporary file and then rename it or copy it over to the original file name, will not be able to take advantage of this.

ADDITIONAL VSAM SUPPORT

In February, 1983, it was announced that VSAM Release 3 will be supported on VM/SP Release 3. The following additional VSAM support will also be included in VM/SP Release 3.

VSAM Assembler Language macros support.

In VM/SP Release 3, a specific level of the VSAM Assembler Language macros will be supported. All VSE/VSAM macros will be supported at a Release 3 level, and a subset of the OS/VSAM macros which are applicable in the VM environment will be supported at an MVS 3.8 level. All OS/VSAM requests will continue to be mapped to VSE/VSAM requests and then executed. Thus, any installations which wish to use the OS/VSAM support must have the VSE/VSAM Release 3 Program Product installed on their VM system. Some OS and VSE macros (GET, PUT, etc.)which are needed to write programs which use VSAM will be shipped with the VM/SP Release 3 system.

VSEVSAM Command

The new VSEVSAM command will be used to build a VSEVSAM maclib which will contain the VSE VSAM macros. This maclib will be needed in order to assemble programs which contain VSE VSAM macros. The VSEVSAM command will build the maclib from the VSE VSAM Licensed Optional Machine Readable Materials tape. The VSE macros which are shipped as a part of VM/SP Release 3 will also be built into the VSEVSAM maclib when the VSEVSAM command is issued.

CATCHECK Command

The CATCHECK command can be used to verify that a complete catalog structure exists on a VSAM disk. The CATCHECK command will invoke the VSAM catalog check service aid, which will perform a catalog analysis and print the results. The CATCHECK command may be issued with or without DOS being set on.

CMS PERFORMANCE ENHANCEMENTS

Some changes have been made to CMS which will improve the performance of the CMS system.

LISTFILE, QUERY, and RENAME migration

The CMS LISTFILE, QUERY, and RENAME commands have be made re-entrant and moved to the CMS shared nucleus. Previously, these commands executed in the CMS transient area at location X'E000', and were loaded from the system disk with the CMS LOADMOD command each time they were executed. Performance of these commands will be improved since they will no longer have to be loaded each time they are requested.

XEDIT File-in-Storage Interface

A new interface has been defined in XEDIT which will allow programs and EXECs to access a file which is in the XEDIT ring. This will improve performance since programs and EXECs can avoid having to do DISK I/O and using the CMS program stack. This new XEDIT file-in-storage interface will be implemented via the SUBCOM interface.

Two examples of system functions which use this new interface are the LISTFILE and NAMEFIND commands. When the LISTFILE command with the new XEDIT option is issued from the XEDIT environment, the output of the LISTFILE command will be placed in the file currently being edited via the XEDIT file-in-storage WRITE interface instead of being placed in the stack or displayed on the console. When the NAMEFIND command with the new XEDIT option is issued while the NAMES file is in storage, the NAMEFIND command will use the new XEDIT file-in-storage READ interface to read the NAMES file instead of reading it off the disk.

NEW DEVICES SUPPORTED ON VM/SP

Two new devices will be supported in VM/SP Release 3 which were not previously announced:

3430 Magnetic Tape Subsystem

The 3430 Magnetic Tape Subsystem will be supported on VM/SP Release 3. The 3430 device is a dual density tape drive which transfers data at the rate of 312,500 bytes per second.

4245 Impact Printer

The 4245 Impact printer, which prints at a rate of 2000 lines per minute will be supported on VM/SP Release 3. All applications which currently utilize the 3211 printer will continue to run on the 4245 printer.

CMS VSAM 3380 SUPPORT

The 3380 Direct Access Storage Device will now be support by CMS VSAM on VM/SP Release 2 and 3. Only the OS/VSAM environment will be supported. Any installation which wishes to use the 3380 OS/VSAM support must have the VSE/VSAM Program Product installed.

REMOVAL OF THE CMSSEG DISCONTIGUOUS SHARED SEGMENT

In VM/SP Release 3, the CMSSEG Discontiguous Shared Segment has been eliminated. All of the modules which were a part of CMSSEG have been merged into the CMS shared nucleus. Some duplication of modules and functions which were in both the CMS nucleus and the CMSSEG DCSS have been removed. The installation and maintenance of the VM/SP system will be made easier with the removal of the CMSSEG DCSS.

OTHER CMS ENHANCEMENTS

Some other CMS Enhancements have been provided to enhance application development capabilities.

EXECOS Command

A new command, EXECOS has been provided to allow an EXEC2 or System Product Interpreter EXEC to reset the OS environment when it completes. EXECOS will perform the same cleanup which was done when a CMS EXEC completed. A STRINIT will not be performed and user storage will not be cleared.

Specifically, EXECOS will reset the following:

- STAE exits

- STIMER exits

- SPIE exits

- STAX exits

- SSTAT extension

- TXTLIBs

- MACLIBs

- LINKLIST (LINKSTRT and LINKLAST)

- OS environment flags (OSSFLAGS)

- VSAM cleanup

GLOBALV Enhancement

The GLOBALV command has been enhanced to take advantage of the EXECCOMM facility whenever when setting a global variable. Previously, both the

EXEC variable name and it's value needed to be specified on the GLOBALV command when a global variable was to be set. Now only the variable name need be specified and internally, the GLOBALV command will use EXECCOMM to get the variable's value.

TELL and DEFAULTS commands enhancement

Users can now specify which CP command which will be used by the CMS TELL command to send a message. The CMS DEFAULTS command should be used to set the CP command which the user wishes TELL to use. The CP commands allowed are: MSG, MSGNOH, SMSG, and WNG. The DEFAULTS command will accept any of these four commands however when the TELL command is issued, the virtual machine must have the authorization to use the specified CP command or the message will not be sent.

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