BULLETIN NUMBER GT681, 20 MAY 1994

System Manager Version 8.1 API

Please find attached an API for version 8.1 of Global System Manager, Global System Manager PM, BOS, Global Configurator, Global File Converters, Global 3000 Speedbase Development System and Global 2000 Cobol.

Global System Manager
Global 3000 System Manager PM
BOS
Global 2000 Cobol
Global 3000 Speedbase Development
Global Configurator
Global File Converters
Version 8.1
Advanced Product Information

May 1994

/usr/wp/doc/misc/global/asmv8.1
ASMV8.1U0/71

This document is advance notice of a development project. It is provided to our resellers so that they can be aware of impending product release. This document represents our current intentions. Results from beta-test and feedback from this document may mean that our current plans are revised.

Contents:-

Chapter Page

1. INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

This API describes a release of Global System Manager and associated software. The release is called version 8.1; at the time of production of this advanced product information, the software is scheduled to be delivered in the last quarter of 1994.

1.2 STRUCTURE

The software release is in the following sections:

1.2.1 Global System Manager version 8.1

This is the module which all Global and Global 2000 applications require. Its structure is unchanged from version 8.0.

1.2.2 Global 3000 System Manager PM version 8.1

This is the module which all Global 3000 applications require; furthermore Global and Global 2000 applications can operate on this equally well as on System Manager. In general, its structure is unchanged from version 8.0, however the documentation and installation of this are slicker for version 8.1; the old `Speedbase Presentation Manager' concept has gone forever.

1.2.3 BOS version 8.1

System Manager and System Manager PM operate on a number of operating systems such as Unix, Windows and BOS. The BOS operating system is unique in that if System Manager or System Manager PM is ordered for BOS, the BOS operating system itself is included with System Manager automatically. Its structure is unchanged from version 8.0.

There are no enhancements to the BOS operating system for version 8.1.

1.2.4 Global Configurator version 8.1

This allows modification of System Manager to meet the particular requirements of a computer. Its structure is unchanged from version 8.0.

1.2.5 Global File Converters version 8.1

This allows batch file transfer between Operating Systems and file formats. Its structure is unchanged from version 8.0.

1.2.6 Global 3000 Speedbase Development System version 8.1

This allows programmers to write Speedbase programs.

Until version 8.0 many of the enhanced features which a programmer might need to use were part of Global 2000 Cobol; for version 8.1 we are making these facilities available to Global 3000 Speedbase developers as well as Global 2000 Cobol developers. For the purpose of this document we refer to these shared facilities as Common Development Components; however these will not appear on the price list; you will receive the Common Development Components when you order either Global 3000 Speedbase Development System or Global 2000 Cobol version 8.1.

The common development components are:

- All access methods described in the File Management Manuals
- Job Management
- System Subroutines
- Toolkit
- Debugger

1.2.7 Global 2000 Cobol

This allows programmers to write Cobol Programs and create System Manager TAPs.

Module MY (Speedbase Access Method) will be incorporated fully into Global 2000 Cobol at version 8.1 and will then cease to be available.

1.3 MAJOR FEATURES OF VERSION 8.1

New features are listed in section 2 below and described in full detail starting on page 11. This section highlights the major features.

The major new features of System Manager are a mail facility,

back-of-screen printing and major enhancements to the operation of printers on non-BOS System Managers.

The major new features of System Manager PM are a new status utility, easier database generations for C-ISAM databases and substantial improvements to the customisation utility.

The major new feature of File Converters is the Btrieve UCI support.

The major new features of the Global 3000 Speedbase Development System are support of up to 8 databases and up to 6 copy libraries, better support for C-ISAM and a vastly improved text editor.

The major new features of the Common Development Components are new access methods, 10 more entries on the link stack and an online help database for stop and exit codes.

The major new features of Global 2000 Cobol are Btrieve support in DMAM and substantial improvements to $FORM.

2. LIST OF FEATURES

This section acts as a reference list for the new features. They are all described in detail later.

2.1 GLOBAL SYSTEM MANAGER

See pages 11 to 13 for full details. One-line descriptions of the items start below:

- New $MAIL utility;
- New $GROUP utility;
- New $OPID utility;
- New SYSREQ J system request;
- New SYSREQ N system request;
- New SYSREQ T system request (pre version 8.1 SYSREQ T is now SYSREQ ?);
- New SYSREQ Y system request;
- New SYSREQ * system request;
- New SYSREQ " system request;
- New $DLIB utility;
- New $DIRP and $DIRCUS utilities;
- New $USAGE utility;
- Improvements to $DIR;
- Improvements to $VOL;
- Improvements to $CUS, $CUSA, and $MAINT;
- Improvements to $L;
- Improvements to $LIB;
- Improvements to $AUTH;
- Improvements to $FIND;
- Improvements to $S;
- Improvements to $U;
- Improvements to $STATUS;
- Improvements to $V;
- Improvements to $SP and $SPS;
- Improvements to the installation process;
- Option to suppress the sign-on screen;
- Removal of menu maintenance as a separate product;
- Software always distributed on high-capacity (G1A or O2A) media;
- Auxiliary (back-of-screen) printing;
- Disk partitioning to support SCSI disks larger than 2 Gb;
- Full support of volumes with a track size of 32 Kb, or larger;

ù Improvements to printer handling including better integration with the native operating system.

2.2 GLOBAL 3000 SYSTEM MANAGER PM

In addition to all the above features which are also included in System Manager PM there are further System Manager PM facilities. See pages 14 to 17 for full details. One-line descriptions of the items start below:

ù Presentation Manager installation part of System Manager installation;
ù Installation of demonstration programs optional;
ù $BASTS now supports C-ISAM databases;
ù $BADGN now supports C-ISAM database as input to generate a native database;
ù Various enhancements to $BADGN;
ù Various enhancements to $BARBL;
ù Offline help support;
ù $BACUS support for externalisation of currency symbol etc;
ù Problem fixed with colour handling;
ù Various enhancements to $BASAV;
ù New $BAST utility to provide more detailed database status
ù New version of $BADB
ù Simplified frame loading if no database needed
ù Abbreviated date format.

2.3 GLOBAL CONFIGURATOR

See page 18 for full details. One-line descriptions of the items start below:

ù Global Configurator continues to be distributed as a separate product;
ù Writes event log record when configuration file updated.

ù Allows newly defined console executive and printer executive flags to be defined.

2.4 GLOBAL FILE CONVERTERS

See page 18 for full details. One-line descriptions of the items start below:

ù Improvements to the SVC-61 DOS FILECONV utility;
ù Improvements to the PSAM MS-DOS Native Interface Program;
ù Many more MS-DOS functions supported by SVC-61;
ù Support of Btrieve databases via UCI;
ù New UCI functions for C-ISAM;
ù Problems with File Converter installation fixed.

2.5 GLOBAL 3000 SPEEDBASE DEVELOPMENT SYSTEM

See pages 19 to 22 for full details. One-line descriptions of the items start below:

ù $SDL improved to allow 6 copy libraries;
ù $SDL improved to allow 8 data dictionaries;
ù Hot key support;
ù Long date handling;
ù Abbreviated date input in windows;
ù BA$STA now supports C-ISAM databases;
ù Improvements to READ/FETCH NEXT/PRIOR KEY verbs;
ù Warning when locking the same record multiple times;
ù "DEPENDENT ON" processing now works correctly;
ù Dictionary generation numbers now updated correctly;

- New option in $SDM to enable edits on multiple meta dictionaries;
- $SDL improved to allow multiple length moves;
- $SDL improved to generate symbolic debug records;
- $SDL improved to support text file access method;
- $SDL improved to check for unbalanced structures
- $SDL improved to allow multiple organisations;
- $SDL improved to allow attributes on text fields;
- $SDL improved to allow DATE for date descriptions;
- $SDL support for offline help text;
- $SDE modification for refresh first screen on find;
- $SDE window error reporting improved;
- $SDE error N bug fixed;
- $SDE problem with deletes at the end of screen fixed;
- $SDE includes new option for case sensitive searches;
- $SDE supports the HOT option
- $SDE supports new date formats
- New user callable re-index facility
- New Speedbase Source Translation Utility.

2.6 COMMON DEVELOPMENT COMPONENTS

See page 23 for full details. One-line descriptions of the items start below:

- More Link Stack entries
- New GROUP$ subroutine;
- New OPNM$ subroutine;
- New GTDES$ and PTDES$ subroutines;
- New DSYSR$ and ESYSR$ subroutines;
- Improvements to $LIB
- Improvements to the DEVIN$ subroutine
- Improvements to $DEBUG
- Improvements to $DEV
- Improvements to $SCOMP
- Improvements to the ASSIG$ subroutine
- Improvements to $SEARCH
- Enhancements to NKM-C$ subroutine
- Enhancements to PROG$ subroutine
- Enhancements to the various conversion subroutines
- EXIT and STOP codes distributed in a database;
- New ERLIST utility to list EXIT and STOP codes

2.7 GLOBAL 2000 COBOL

See page 24 for full details. One-line descriptions of the items start below:

- Improvements to Installation
- New DOS file Access Method
- New Unix file Access Method
- New read-only Speedbase Access Method
- New read-only Speedbase C-ISAM Access Method
- New Native Indexed Sequential Access Method
- New DMAM Access Method for Btrieve/C-ISAM files
- Monitor page version of RSAM
- Monitor page version of ISAM
- New ISAM and RSAM access methods for Btrieve/C-ISAM files
- Monitor page version of DMAM
- Monitor page version of SPAM
- Monitor page version of SLOCK$
- New RDIMG$ subroutine;
- New TYPF$ subroutine;
- New DBKES$ subroutine;
- New DBUF$ subroutine;
- New WINDO$ and WRES$ subroutines;
- New $URMAIN utility

- ù Improvements to $FORM and screen formatting
- ù Improvements to $SETIRU
- ù Improvements to RCBUILD
- ù New $$DECP system variable
- ù New $$ULEV system variable
- ù New $$NCYR system variable
- ù New $$PM system variable
- ù New $$CRES system variable
- ù New $$SYSM system variable
- ù $COBOL work file renaming to ensure uniqueness;
- ù Improvements to $MJOB metajob initiator

3. TIMETABLE

The final release of System Manager version 8.1 is to take place in three tranches; all three tranches will commence beta testing on the same day. The tranches are:

Tranche I System Manager, System Manager PM, BOS, Configurator and File Converters. The configuration volumes will all be updated at that time with the assembler components to run version 8.1

Tranche II Global 3000 Speedbase Development System & Common Development Components

Tranche III Global 2000 Cobol & Common Development Components released with all documentation printed

The beta testing will be a relatively informal test. The constraints and regulations which appear in the handbook will not apply. All applications for beta tests cannot be satisfied; if you have a particular requirement for a beta test or believe that there is some area to be tested by you please fax Alan Underwood on 071-831 2116.

The current schedule is as follows. Resellers should receive an up-to-date report on the schedules (which will be more accurate than this) in the monthly Product Release Reports. The product release reports from End-of-May (published c 3 June) onwards will include thais information.

circa Friday 22nd July 1994; Beta test of all tranches enters QC

circa Friday 29th July 1994; Beta release

early September 1994; Tranche I (System Manager, System Manager PM, BOS, Configurator and File Converters) enters QC.

early October 1994; Tranche I (System Manager, System Manager PM, BOS, Configurator and File Converters) released with all documentation printed.

early October 1994; Tranche II (Global 3000 Speedbase Development System & Common Development Components) enters QC.

early November 1994; Tranche III (Global 3000 Speedbase Development System & Common Development Components) released with all documentation printed.

November 1994; Tranche III (Global 2000 Cobol) enters QC

December 1994; Tranche III (Global 2000 Cobol) released

Of course the above relies on successful testing.

4. PRICING AND POLICIES

In general, the pricing for all the above modules is unchanged from the current versions. You can upgrade for a copy charge to the new modules, although the copy charges for development upgrades have yet to be finalised.

5. DOCUMENTATION PROPOSED

5.1 DOCUMENTATION TO GO WITH THE BETA TEST

For the beta-test there is to be one piece of documentation:

- ù MSMNV8.0Y Notes outlining the contents of the software.

5.2 DOCUMENTATION TO GO WITH TRANCHE I

For tranche one of the software, the following are planned:

- ù MBSRV8.1 Global System Manager, System Manager PM, Configurator and File Converters release notice This A4 document explains the new facilities to be released in tranche one and explains the upgrade process.

- ù MSMMV8.1 Global System Manager Manual This A5 manual is an operating-system-independent guide to System Manager and System Manager PM. Please note that the old `Speedbase Presentation Manager' manual has been incorporated into this manual. Users of System Manager PM will find everything they need in this manual except for operating-system- specific items which are in the relevant Global Operating Manual. Users of the simple system manager will be able to ignore some of the chapters which do not apply to non-PM users.

- ù MSM1V8.1 Global Operating manual (Unix)
- ù MSM2V8.1 Global Operating manual (BOS)
- ù MSM3V8.1 Global Operating manual (DOS and Windows)
- ù MSM4V8.1 Global Operating manual (Novell and Windows)

  These describe the operating-system-dependent parts of System Manager and System Manager PM.

- ù Cnnnn Global Configuration Notes These A4 notes describe the detailed machine-specific parts of System Manager. The same configuration numbers will be used for version 8.1 system managers as for version 8.0 and 7.0. Clearly we would therefore need to update these documents to indicate that they refer to version 8.1 also. However we will also introduce, at version 8.1 the policy of writing-up what each variant-number provides in the configuration notes.

- ù MCFMV8.1 Global Configurator manual

- ù MFCMV8.1 Global File Converters manual

- ù MBSMV8.1 Global Utilities manual This is not intended as a user manual. It should be kept by the reseller or the site supervisor. It is not supplied as part of System Manager; it has to be ordered separately. For version 8.1 this will include the full description of $LIB, removed from the Global 2000 Cobol User Manual; not merely the edited highlights of $LIB.

5.3 DOCUMENTATION TO GO WITH TRANCHE II

For Global 3000 Speedbase Development System users the following will be supplied:

- ù MSERV8.1 Global 3000 Speedbase Development System Release Notice This explains to users of version 8.0 Speedbase Development the differences between 8.0 and 8.1 and explains how to upgrade.

- ù MSE1V8.1 Global 3000 Speedbase Development System Language manual This explains the Speedbase Language.

- ù MSE2V8.1 Global 3000 Speedbase Development System User manual This explains the Utilities to develop Speedbase programs.

Users of Global 2000 Cobol and of Global 3000 Speedbase Development System get the Common Development Components (see section 1.2.6 on page 3 for details). The Common Development Components are part of Tranche II and come with the following documentation:

- ù MDE1V8.1 Global Development File Management manual This is similar to MK3V6.1

- ù MDE2V8.1 Global Development System Subroutines manual This is similar to MMK7V6.1

- ù MDE3V8.1 Global Development Toolkit manual This is similar to MMK8V6.. However it includes the write-up of the debugging system.

- ù MDE4V8.1 Global Development Job Management manual This is similar to MMK4V6.1

A further manual is supplied with the Common Development Components. This is

- ù MBSMV8.1 The Global Utilities Manual which will have been available since tranche I is supplied with the Common Development Components.

5.4 DOCUMENTATION TO GO WITH TRANCHE III

For Global 2000 Cobol users the following will be supplied in addition to the manuals supplied with the Common Development Components:

- ù MMKRV8.1 Global 2000 Cobol Release Notice This explains the differences between version 6.2 and version 8.1 and explains how to upgrade.

- ù MMK1V8.1 Global 2000 Cobol Screen Presentation manual This is similar to MMK1V6.1

- ù MMK2V8.1 Global 2000 Cobol Data Management manual This is similar to MMK2V6.1

- ù MMK3V8.1 Global 2000 Cobol User manual This is similar to MMK9V6.1. However the descriptions of the debugger and $LIB will moved to the Toolkit manual.

- ù MMK4V8.1 Global 2000 Cobol Screen Support manual This is similar to MMK6V6.1

- ù MMK5V8.1 Global 2000 Cobol Language manual This is similar to MMK5V6.1

No reference cards or Global Index will be produced; the existing Cobol reference cards will be withdrawn.

6. UPGRADES AND COMPATIBILITY BETWEEN VERSIONS

6.1 UPGRADING FROM EARLIER VERSIONS

For most users upgrading from versions 6.2, 7.0 and 8.0 of Global System Manager and Global System Manager PM, the upgrade will be smooth and seamless; exceptions are listed below:

Customisation can be preserved using the `Save' facility and re-instated once version 8.1 is installed.

Upgrade from version 6.0 and 6.1 will need to go through the same upgrade process for menus as was necessary for upgrade to version 6.2, 7.0 or 8.0.

Users of authorisation files may need to alter these because the facilities have changed substantially for version 8.1

Printer control files must be converted by running $CUS.

Configuration files from version 7.0 and 8.0 will run without change on version 8.1 System Manager PM. Earlier configuration files will need to be run through Configurator version 8.1 before use.

The issue of upgrading date for File Converters does not apply.

Source developed for version 3.0, 3.1 or 8.0 of Global 3000 Speedbase Development System will compile on version 8.1 without change. Source developed for version 2.3 will need to be changed to conform to the version 3.0-onwards Speedbase language.

Source developed for any version of Global 2000 Cobol will compile on version 8.1 without change. Subroutines from earlier versions may be mixed freely with currently developed code.

Taps developed under System Manager and System Manager PM versions 8.0 and 7.0 (both System Manager and Speedbase TAPs) will run under version 8.1

6.2 COMPATIBILITY BETWEEN VERSIONS

Version 8.1 cannot be mixed with earlier versions on BOS/LAN or MS-DOS LAN networks; all computers must be upgraded simultaneously.

In general version 8.1 will run all programs which ran on earlier versions. In particular Global 3000 Speedquery version 3.0H will operate on System Manager version 8.1. However no versions of Global 3000 Speedbase Development or Global 2000 Cobol other than version 8.1 will operate on version 8.1 of System Manager.

The computer-specific components described in Configuration notes will be updated when version 8.1 is released and allocated variant numbers to identify them. These new variants will operate with version 7.0 and 8.0 System Manager, however version 8.1 of Global System Manager requires the version 8.1 variants.

Global 3000 Speedbase Development version 8.1 requires version 8.1 of Global 3000 System Manager PM on which to operate. Version 8.1 of Global 2000 Cobol, Global File Converters and Global Configurator require version 8.1 of System Manager to operate.

Although all earlier configuration files will act as valid input into Global Configurator version 8.1, the configuration files resulting from version 8.1 configurator will only operate on version 8.1 System Manager.

In general, Speedbase programs developed under version 8.1 will run under version 8.0 System Manager PM with a few restrictions. The main one being that if the help text is relocated outside the program, the help text will not be available under version 8.0. Furthermore, the new date formats and "Hot key" support all require version 8.1 Presentation Manager.

Programs developed under version 8.1 of Global 2000 Cobol will run in version 8.1 onwards of System Manager. Furthermore if certain facilities are not used, they may be run on earlier versions. The exact list of such facilities will be published when tranche III is released.

7. DETAILS OF FEATURES

7.1 GLOBAL SYSTEM MANAGER

- ù The $MAIL utility allows mail messages to be sent to a particular user, a group of users, all users on a computer or all users on a network. In addition to standard mail messages, $MAIL includes an option to take telephone messages for another operator. The $MAIL utility is supplemented by a number of additional system requests (see below).

- ù The $GROUP utility allows a number of users to be treated as a "group". Certain $MAIL, $M and $STATUS commands operate on an entire group of users.

- ù The $OPID utility allows a 35 character long description and a 16 character short details description to be associated with a standard 4 character operator-id. It is expected that the long

description will be used to hold a full name and the short description to hold a telephone number.

- SYSREQ J allows $MAIL telephone message to be "jotted" down and sent to another operator.

- SYSREQ N allows an operator to read their mail messages.

- The use of SYSREQ T has been changed between version 8.0 and version 8.1. The version 8.0 functionality (e.g. display task status) has been moved to SYSREQ ? (see below). For version 8.1, SYSREQ T allows a pair of users to "talk" electronically.

- SYSREQ Y displays the long operator details established using $OPID (see above).

- SYSREQ * allows a customisable escape sequence to be sent to the terminal. This is expected to be useful when a T-switch, or equivalent, is used to switch screen sessions between System Manager and another operating system (e.g. Unix).

- SYSREQ " provides a simple screen print when running on a PCWS terminal emulator.

- SYSREQ ? displays the task status information formerly displayed using SYSREQ T.

- A new Data File Librarian utility, $DLIB, is available. This allows any files (with the exception of program files) to be held in a Data File Library. THIS UTILITY SHOULD NOT BE CONFUSED WITH THE DATA LIBRARY FILE ORGANISATION! The standard librarian commands available in $LIB (e.g. Copy, Extract, Delete) are also available in $DLIB.

- $DIR has been enhanced to display details of any files that are deleted during copy and move operations. An additional alpha sort command (the X command) allows the starting character, within the 8-character filenames, to be specified. $DIR now includes an option, (the N option) to display the real names of files in a spool unit.

- A new program, $DIRP, is available. This utility is based on $DIR but in addition to the standard $DIR functions (e.g. Copy, Delete etc.) $DIRP allows the selected files to be passed to other utilities (e.g. $INSPECT, $PRINT, $L etc.). The customisation pop-up menu that selects the chained utility may be customised using $DIRCUS. The various improvements to $DIR (see above) have all been incorporated into $DIRP.

- A new utility, $USAGE, allows the use of the various file executive control blocks (file blocks, file channels and lock table entries) to be monitored.

- $VOL has been enhanced to display details of the members within data file libraries.

- $L now includes an option, the B command, to go back to the previous record.

- $REORG has been enhanced to cope with a track size of

32 Kb, or larger.

- $S has been enhanced to cope with a track size of 32 Kb, or greater. $S also displays the price-level information, and the BACNAT variant (if running on a System Manager (Unix) configuration).

- $U now displays the number of files per directory for direct access units. In addition, $U displays information about a 2 Gb, or larger, disk that has not been partitioned for use with System Manager.

- $V has been enhanced to cope with a track size of 32 Kb, or greater. $V now correctly forbids the allocation of bad tracks or alternate tracks on Discrete Data Files.

- A new flag in the Console section of the configuration file allows the option of suppressing the sign-on screen for serially connected consoles. This is expected to be most useful when the serial terminal is connected via a modem.

- System Manager is always distributed on high-capacity media (i.e. G1A 5¬" diskettes, O2A 3«" diskettes or tape). System Manager is now distributed on 3 volumes (BACRES, BEA and HAA).

- The separate Menu Maintenance product has been removed.

- In addition to offering options to install $MAIL, and related software, the System Manager installation procedure includes an option to install Presentation Manager. Note that Presentation Manager cannot now be installed separately.

- Auxiliary (back-of-screen) printing is supported on PCWS and the TCL NyCE terminal.

- In order to support hard-disks with a capacity of 2 Gb, or larger, a disk partitioning scheme has been implemented for SCSI disks (accessed using the ADAPTEC controller). Up to 62 partitions per disk are allowed.

- System manager now supports volumes with a track size of 32 Kb, or larger. The problems in version 8.0 $CUS, $REORG, $S and $V have been fixed.

- A number of problems with the System Manager printer handling have been fixed, including better integration with the native operating system.

- The dialogue for SYSREQ S has been improved.

- The dialogue for SYSREQ B has been improved.

- The $LIB list and print commands now include the unit of the library in the title of the report. A problem in the EXD command has been fixed.

- A sub-menu offering a choice of System Manager functions (e.g. $STATUS, $U) has been added to the default System Manager menu.

- The System Manager authorisation has been tightened - by-passing authorisation checking by simply deleting

the $AUTH file has been prevented. The number of partitions with unique menu entries has been increased from 4 to 9. $AUTH now warns if a $AUWK$ work-file is already present on SYSRES. Security has been improved - $AUTH only allows a fixed number of attempts to sign-on. The sign-on retry limit is customisable.

ù V8.1 $AUTH is incompatible with version 8.0 $AUTH - users are advised to read the Release Notice if attempting to mix version 8.0 and version 8.1 computers on the same network.

ù System Manager customisation (i.e. $CUS, $CUSA and $MAINT) has been improved. Enhancements have been made to configuration file maintenance: This option now writes a record to the System Manager log file and allows the new console and printer executive flags to be customised. It is now possible to customise a single console (rather than processing every console sequentially). The name of the report file can now be specified. $CUS now checks that the number of partitions does not exceed the maximum possible. The $CUS configuration maintenance option includes a menu entry to chain directly to the = .NNNN customisation utility. Printer customisation now allows up to 32 translation characters (the limit for version 8.0 was 16). It is now possible to delete the customisation for a non-existent printer.

ù The user-level customisation retro fitted to System Manager version 8.0 is available in version 8.1.

ù A new create diskette SYSRES option has been added to the System Maintenance functions. This option creates a bootable SYSRES to allow $VOLSAV and $TAPE to be used to restore a complete system in the event of a catastrophic hard-disk failure.

ù Several new flags have been added to the System Manager printer customisation. It is now possible to customise the printer handling to ignore mount messages, to honour mount messages in the middle of files, to throw a page at the end of each print file and to suppress the printing of alignment patterns.

ù Note that pre-V8.1 printer control files MUST be run through version 8.1 $CUS.

ù The $STATUS "send message" function allows a message to be sent to all the users in a group. This option is also available in $M. Note also that $M has been improved so that it is now possible to re-select an operator-id after specifying a message. The presence of the normally invisible file-server is displayed by $STATUS when running on System Manager (Novell). A problem with $STATUS and event logging has been fixed (i.e. accurate details are now written to the event log file). A reply of <CTRL B> to the $BYE "FILES IN USE" retry message overrides the open file checking so that a route is always available from System Manager to the host operating-system. The $STATUS "NEXT PAGE?" prompt now by-passes job management. A problem in the PRI command, which resulted in multiple lines in the report, has been fixed. A problem in the LOC command, which resulted in a spurious PLEASE ASSIGN prompt, has been fixed.

ù The various copy options of $F (e.g. COP, CCF, MOV) allow the size of the output file to be increased by a fixed size (reply +NNNN to the FILE SIZE prompt) decreased by fixed size, (reply -NNNN to the FILE SIZE prompt) or increased by a percentage of the current file size, (reply %.NN to the FILE SIZE prompt).

ù The "USE WIDE MODE?" prompt in $INSPECT has been removed, allowing it to be used under job management on all screens.

ù Several problems in the spooler have been fixed. Keying <ESCAPE> to the baseline prompt now exits the spooler. The problem that occasionally results in a file being printed twice has been fixed. The problem that caused a PGM CHK - 11 to occur when printing split files has been fixed. The System Manager spooler now interfaces correctly to host operating system "intelligent spoolers".

ù A new `AL' option has been added to the spooler. If this option is enabled then pre-V6.2 print files are treated as always having alignment pattern. This option is only available in $SP.

ù A special reply of <CTRL A> to the Spooler mount message prompt indicates that the stationery has not changed but you wish to continue printing using the existing stationery.

ù In the Spooler, keying <CTRL C> to the operator-id prompt in the DE option will list the operators in the "default list"" together with the defaults that have been modified for each operator in the list.

ù The maximum number of split files that $VIEW can cope with has been increased to 10. A problem with the $VIEW string search instructions has been fixed.

ù $FIND can now be used to find a volume name. Improvements have been made to its selection criteria. In addition, $FIND can now search for listing files within spool units.

ù A problem in $EXEC when the time is 23.59 on the last day of the month has been fixed.

ù It is now possible to suppress the contract protection message on serial screens.

ù The menu handler now correctly calls the LOGOF$ subroutine. A problem with the display of overlaid SSA-style menus that caused a "black-hole" effect on the screen has been fixed. Various problems with auto-selected menus have been fixed. A problem that caused a comma prompt to sometimes follow a menu password has been fixed.

ù All informative status-line messages now contain the time that the message was sent.

ù The System Manger help-text has been extensively revised.

ù <SYSREQ> <SPACE> includes ALL the available standard system requests in the primary includes pop-up menu. In addition, a new (optional) function has been added to <SYSREQ> <SPACE> to allow end-user system requests

to be run from a secondary pop-up menu

- ù A new utility, $UMMAIN is available to allow a menu of end-user system requests to be defined for use by <SYSREQ> <SPACE>.

7.2 GLOBAL 3000 SYSTEM MANAGER PM

In addition to all the above features on page 11 to 13 which are also included in System Manager PM there are further System Manager
PM facilities.

- ù Speedbase Presentation Manager is installed as part of System Manager installation. The installation of the demonstration programs to SYSRES is now optional.

- ù The $BASTS utility did not support Unix C-ISAM databases at all. Attempts to use it resulted in the following error message:

  Database not found, in use, or invalid type.

  The utility now correctly supports both native GSM and Unix C-ISAM databases. The database format will now be displayed in the first window with the database name and unit.

  The record details window for native GSM databases will not change.

  The record details window for Unix C-ISAM databases will show "Actual" records rather than "Free" records. In addition the columns headed "Total" and "%" will contain the literal "N/A" meaning not applicable.

  The help text for the record details window has been updated to reflect the new capability.

- ù The $BASTS utility would abort with program check 11 on very small (usually test) databases consisting only of the root index block and no index pool blocks. This problem has now been fixed.

- ù The $BADGN utility now supports a C-ISAM Database as input to generate a Native Database.

- ù When the $BADGN utility encountered a database corruption it issued the error message:-

  ERROR - Possible Database corruption detected - Perform Rebuild ($BARBL)

  and paused for several seconds before the message disappeared. For version 8.1 the user must key <CR> to acknowledge this and any other fatal error message.

- ù The $BADGN utility has the following enhancements:

  - ù The physical disk unit is displayed alongside the entered (logical) unit for all database files.

  - ù The database generation number is displayed.

  - ù The "record type" window now has an F1 pop-up facility to display extended information about the current record type. Information displayed

is:-

- 2 character record ID
- 6 character record name
- 30 character record title
- maximum record count
- actual record count
- free record count

Note that the actual record count is relevant only for regeneration from on-line databases.

ù The $BARBL utility has the following enhancements:

ù The physical disk unit is displayed alongside the entered (logical) unit for all database files.

ù All run time data errors are written to a report file rather than displaying on the baseline. The error report is written to unit $PR. If there is any problem opening the error report file, error messages will be displayed on the baseline as before.

A warning message is issued to the baseline at the end of the run if any such errors occurred.

ù The version 8.1 $SDL Compiler offers the option of locating the window help text outside of the executable part of the frame. The version 8.1 Presentation Manager has been enhanced to locate this offline text and display it as before. This feature should be invisible to the Presentation Manager user, it is provided to allow larger programs to be executed while still retaining the help facility. Another reason for adding this facility is to make it easier to provide help text in different languages without recompiling programs in future releases. Note that if a version 8.1 frame that uses this feature is executed on a version 8.0 system the user will get "Sorry ... No Help available" message. The version 8.1 Presentation manager will work with either in line or offline window help. Windows in different frames in the same application can use in line or offline help.

ù Presentation Manager now updates GSM's colour tables whenever it changes colour. This fixes the problem of the colour changing after returning from a System Request.

ù $BACUS now supports changing of the symbols for Leading $, Zeros, Asterisks and Comma insertion characters. These changes are stored in the T>...file. This change enables UK users to change their reports to print the English Pound sign instead of the Dollar.

ù A frame using any of the statements:

```
FETCH NEXT rtidx KEY key-val
FETCH PRIOR rtidx KEY key-val
READ NEXT rtidx KEY key-val
READ PRIOR rtidx KEY key-val
```

currently gets exception 25502 (requested key not found) when the index value changes from the specified "key-val". The next/prior record is still returned in the record area BUT is locked as there is no "NOLOCK"

clause on the statement. This problem is corrected.

ù A frame can currently READ/FETCH with lock, the same record into multiple data record areas by utilising the

```
ACCESS rt SUBSTITUTING "xx"
```

statement. Each record area can be modified and rewritten to the database, but only the last update is permanent.

The index file can be corrupted in this situation (if index fields change) resulting in the need for a database rebuild.

Several applications have been found that have this code structure but don't rewrite from both record areas. These applications do not get database corruption as a result of this problem. A fix for this problem that only catches the cases where a 2nd rewrite or delete occurs that would cause database corruption or lost updates has been included with version 8.1. The 2nd rewrite/delete will now get a STOP 25502 error code.

ù If a Window was coded with the structure, say:

```
WINDOW W2 USING AAIDO1 DEPENDENT ON (Z-ACTI)
.....
SCROLL 3 BY 4 SPLIT 1 OFFSET 1
.....
04 05 AAACTI   X CNV YN
```

The index AAIDO1 is made up of a data field, say AAACTI.

The Window executive behaves as you would expect while within the scrolled area even if you change AAACTI however if you are at the end of the scrolled area and change AAACTI then go forward (or at the start and go back) the Window executive ignores the "DEPENDENT ON" clause.

This has been changed in version 8.1 to always take notice of the "DEPENDENT ON" clause.

ù The routine BA$OPN was issuing an EXIT 25532 when it should have been an EXIT 25526, this has been corrected.

ù The new Speedbase Database Status utility is named $BAST. It is based on the old $BASTS utility but provides more detail and several options, including two print options. This utility will co-exist with $BASTS.

Once a database has been specified, an options window is displayed.

The options are:

1. Record Type display. This is the default option. This option provides a display similar to the old $BASTS utility.

2. Index Display. This option displays details of all database indexes.

3. Short Status report. This option provides

a short report of the database status, consisting of the database summary and details of record types.

4. Long Status Report. This option provides a long report of the database status, consisting of the database summary, details of record types and details of all indexes.

Option 1 - Record Type Display

Selecting option 1 shows for each record type:

a) Record number within database structure.
b) Record ID and name.
c) Record description.
d) Maximum number of records defined for the record type. (For Global databases only) No limit on Unix C- ISAM.
e) Actual number of records currently stored.
f) Number of free record slots. Global databases only.
g) The % of free records to maximum. Global databases only.
h) The data file number where the record type resides.

Note: The first line is used to show the Index pool.

You may move the cursor up and down through the display by using the up/down arrow keys or the Page Up/Down keys.

You may select a record type by pressing Enter or End, and a window displaying all defined indexes for that record type will be displayed. Selecting the INDEX POOL in this manner, will display all indexes in the database.

Option 2 - Index Display

Selecting option 2 displays all indexes in the database. For each index it shows:

a) The number of the index within the database structure.
b) The index name.
c) The index length.
d) The number of segments within the index.
e) The number of levels of indexing.
f) In addition, the top part of the index window displays details of the record type to which the index belongs.

To return to the "record type" window press End.

Option 3 - Short Status Report

Selecting option 3 produces a short report of the database status. The short report includes:

- summary status
- record type details

This may be produced under control of Job Management.

Option 4 - Long Status Report

Selecting option 4 produces a long report of the database status. The long report includes:

- summary status

ù The database backup utility $BASAV has been modified to:
- display physical units alongside the logical units
- upgrade HELP text available when utility requests floppy disks to be mounted.

Load Backup Volume AGA 1 on unit B for AGPR cycle A ..
- record type details
- index data

This may be produced under control of Job Management.

ù A complete new version of $BADB is available.

This new version provides the capability of converting the database to use a new dictionary by dumping the database to sequential (machine independent) files and regenerating the C-ISAM database with conversion on the way. Note that C-ISAM files are not machine independent.

An option is provided for deleting all the files of a database with one screen. Both native and C-ISAM databases are supported by this option however the program must be running on a Unix computer.'

The ability to interface the C-ISAM database to the Informix Database system is provided.

The $BADB equivalent to $BARBL is the overlay $BADBC. This overlay has been modified to write data errors to a report file in the same way as $BARBL.

ù $BA no longer requires the entry of a database name for frames that do not need it.

7.3 GLOBAL CONFIGURATOR

ù SDCOPY has been enhanced to allow multiple files to be copied.

ù Global Configurator continues to be distributed as a separate product;

ù Writes a record to the System Manager log file if event logging is enabled.

ù Allows newly defined console executive and printer executive flags to be defined.

7.4 GLOBAL FILE CONVERTERS

ù The SVC-61 based DOS FILECONV utility has been enhanced to include a new conversion type that allows report files (type RS) to be imported and exported. A $F-style file selection option has been added.

ù Two new conversion types that copy any type for System Manager file (including directory information) is now available. These conversion types allow utilities to be copied intact using DOS or Unix utilities (e.g. Comms packages) from one System Manger environment to another.

ù The PSAM based MS-DOS Native Interface Program has been enhanced to operate on disks (and diskettes) with 16-bit FAT

tables. Earlier versions expected 12-bit FAT tables.

ù Many more MS-DOS functions are now supported by SVC-61:

Function	Description
0EH	Select disk
19H	Get default disk drive
1BH	Get allocation table information for default drive
1CH	Get allocation table information for specific drive
2AH	Get system date
2BH	Set system date
2CH	Get system time
2DH	Set system time
30H	Get MS-DOS version number
36H	Get free disk space
39H	Create directory
3AH	Delete directory
3BH	Set default directory
3CH	Create or open and truncate file
3DH	Open file
3EH	Close file
3FH	Read from file
40H	Write to file
41H	Delete file
42H	Move file points
43H	Get or set file attributes
47H	Get default directory
4EH	Find first match
4FH	Find next match
56H	Rename file
57H	Get or set file date and time
5AH	Create uniquely named file
5BH	Create new file

ù The C-ISAM UCI for System Manager (Unix) now supports several new functions.

ù A Btrieve UCI for System Manager (DOS, Windows and Novell) is now available.

ù The serialisation problem within the File Converter installation job has been fixed.

7.5 GLOBAL 3000 SPEEDBASE DEVELOPMENT SYSTEM

ù The number of Copy libraries supported by $SDL has been increased from 3 to 6.

ù The number of dictionaries supported by $SDL has been increased from 4 to 8.

ù The $SDL compiler will now allow "DATE" as well as "D" for date descriptions in the DATA and WINDOW DIVISIONS.

ù A new option "HOT" has been added to window fields that enables fields to be entered without the use of a "Enter" key. This can be used on fields of any length. When the user has input the number of characters in the field the field is accepted without a "Enter" or "Carriage Return". This option also works on accept statements.

ù There are changes to the handling of dates:

ø Long dates in PF constructs. Adding a FMT "L" option to the item describing the date in the PF construct and making sure the field is at least 10 characters will result in a date of

the form DT-DL$ outputs.

- ø Long dates in Window constructs. Adding a FMT "L" option to the item describing the date in the Window will result in a 10 character field with output by DT-DL$ and input by DL-DT$. Note that the compiler used to allow other FMT options which corrupted the length of the date field - these are not invalid. No FMT option leaves the processing as before.

- ø Move of Alphanumeric to Date. Provided the frame is compiled on this version of the compiler or later (V8.1) the Presentation Manager routine will try to do a DL-DT$ conversion, if this fails it tries a DS-DT$ conversion, if this fails it tries a pure numeric form such as DDMMYYYY if this still fails it gets an exception as before. Note this will not cause any problem for existing code such as MOVE "01/01/94" TP DATITEM or MOVE "01012084" TO DATITEM will store the date as 1840101.

- ø Move of Date to Alphanumeric. This operates as in the past and uses DT-DS$ conversion. A new verb "MOVEL" has been provided for ding a DT-DL$ conversion; the format is the same as the "MOVE" verb.

- ø Initialisation of Data Division Date Fields. The manual says you can have type 2 or 3 strings or "dd/mm/yyyy" in a "VALUE' clause (section 5.4.4 of Development manual); in fact only type 2 was accepted (Hex). This oversight has been corrected.

ù Two new FMT options have been added to "D" or "DATE" fields in windows. These are "6" for six character input of the form DDMMYY and "8" for eight character input of the form DDMMYYYY. These options are particularly useful when used in conjunction with the "HOT" option of 2.14.

After input the date is redisplayed in normal format, i.e. DD/MM/YYYY for FMT "6" or DD/MM/YYYY for FMT "8".

These options will still work with $$USA.

ù The BA$STA run time subroutine (entry point B$STA) did not adequately support Unix C-ISAM databases. In version 8.0 it returns in the user parameter block the value 999999 for both the A1SIZE and A1FREE variables.

This problem has been corrected as follows:

A1SIZE = 999999 (as there is no maximum number of records in a Unix C-ISAM database)
A1FREE = A1SIZE - actual_no_records

which makes it conceptually consistent with Speedbase-format databases. To calculate the actual number of records for the record type, use a statement of the form

SUBTRACT A1FREE FROM A1SIZE GIVING TOT-RECS

after the call to B$STA.

ù When a meta dictionary is edited with the version 8.0 $SDM utility, the generation number is incremented every time the "Amend Meta Dictionary" option (frame $SDMC) is executed. This results in gaps in generation numbers in the real database dictionary.

The version 8.1 $SDM utility has been improved to increment the

generation number just prior to generating the real database dictionary. This ensures the meta dictionary and real database dictionary always have the same generation number and there are no gaps in the database generation numbers.

ù The $SDMC2 overlay currently allows entry of lower case (invalid) field names when defining index segments. The CNV option will now automatically convert these to uppercase.

ù $SDM now has an extra option enabling editing of multiple meta dictionaries in one session without having to exit to the menu.

ù The $SDL compiler has been modified to support instructions of the form:-

```
MOVE V1(S1:L1) TO V2(S2:L2)
```

Where:- V1 & V2 are PIC X type variables or group items. S1 & S2 are numeric constants or variables specifying the start character/byte in Vx. L1 & L2 are numeric constants or variables specifying the length of each string.

Note that incorrect formatting of this statement can result in ERROR 298 COLON (:) EXPECTED.

ù An optional symbolic Debug record can be produced by $SDL. This is activated by the "SD" option at compile time. The values displayed by the debug utility are the same as $COBOL would display with a similar variable allowing the $DEBUG "N" option to be used on Speedbase programs.

ù Text File access method has been added at the FD level. It is coded in a similar way to $COBOL but without the "ORGANIZATION" statement.

Example:-

```
FD FRED ORGANIZATION OR$83
    ASSIGN TO UNIT ___ FILE ___
    KEY IS ____
    RECORD LENGTH IS ____
01 FILLER
    03 FILLER PIC X(512)                    * BUFFER
```

Note as with $COBOL the BUFFER is only needed if you are writing the file.

ù The $SDL compiler will now produce a warning message if you code a structure as follows:-

```
IF ------      or      DO ------
.....                  .....
DO ---                 IF ----
.....                  .....
END                    ENDDO
ENDDO                  END
```

The message is :- WARNING 297 - UNBALANCED DO/IF STRUCTURE.

ù The temporary work files produced by $SDL have been renamed to ensure uniqueness.

ù The $SDL compiler will now allow ORG or ORGANIZATION or ORGANISATION in FD's for compatibility with $COBOL.

ù The $SDL compiler will support calls such as:-

```
ENTER WINDOW W1 (NROW/NCOL)
```

Where:-

NROW = New start row/line for the window as Numeric constant or variable 9(4) COMP.

NCOL = New start column for the window as Numeric constant or variable 9(4) COMP.

This feature is optional and if used results in a small routine called XA$MOV being loaded with the frame. Note that frames compiled with this feature will still run on version 8.0 Presentation Manager.

If NROW or NCOL is zero its value reverts to the value in the original window description.

ù The $SDL compiler will now allow options "TTL", "ERR", "A12", "A13" and "A14" on TEXT and "....." type fields in a Window. This allows more flexibility in colour selection.

ù The compiler could produce a "duplicate R-TERM" error in the occasional compile, adding something else in the program would usually avoid the problem. This could also result in incorrect code generation of the R-TERM construct. This problem is fixed in version 8.1.

ù The ability to store window help text outside the executable/loaded program space is provided in $SDL. A new compile option "HT" has been added to activate this feature. If "HT" is not used the compiler will produce in line help as in previous versions.

An associated change is made to version 8.1 Presentation Manager to make use of this feature. If a frame with offline help text is run on version 8.0 Presentation manager then the user will get a "Sorry ... No Help Available" message. Version 8.1 $SDL and Presentation Manager support both in line and offline window help.

The new layout of an Executable Binary file is now:-

Header record 34(16) bytes - includes length of loadable code and pointer to Symbolic Debug record.

Loadable Code.

Trailer record 6 bytes.

Offline help records if any - type #00C0 including a length field.

Symbol records if a Controlling frame - 16 bytes each followed by a null 16 bytes.

Symbolic Debug record if any - type #000B including a length field.

ù The ADD/FMT options on a PF detail line are only valid for referenced variables.

If a ADD/FMT option was used with a local PF detail line it resulted in the catch all WARNING 6- END OF LINE NOT SEEN message. This has now been amended to WARNING 299- INVALID FOR LOCAL PF VARIABLE message.

If both ADD and FMT were used with a referenced variable in the order ADD .. FMT the WARNING 6 message was also issued, in the order FMT .. ADD everything was OK. This has now been fixed so the order of the ADD and FMT options is not significant.

If the ADD option was used with a referenced variable for the source that was not described as a COMP variable incorrect values were accumulated, the compiler did and still does check that the accumulator is COMP. The compiler now issues a ERROR 300- SOURCE FOR ADD MUST BE COMP message. Note that the COMP specification should only be on the original declaration of the variable not in the PF construct.

ù The $SDE editor will now refresh the 1st screen when a find next from another screen takes you to the middle line of the first screen.

ù The $SDE editor will now show the correct line when an error is on the last line of a window.

ù The $SDE editor no longer gets a ERROR N when rejecting an existing file and selecting a new one to edit.

ù In $SDE, various problems occurred with "Delete Block" when the last line being deleted coincided with the last line displayed on the screen. The editor now moves the screen up one line in this situation - this fixes such problems as "Voids" straight after a "Delete block" causing scrambled files.

ù The $SDE editor now updates GSM's colour tables whenever it changes colour. This fixes the problem of the colour changing after returning from a System Request.

ù A new command option, K, has been included in $SDE to allow for case insensitive searches. This option operates in a similar way to the "F"/"Repeat last search" commands. This means searching for "Test" will find for example "TEST" and "test" and "tesT" and "TeSt" etc. The operation of the Find string "F" and global replace Command "R" is unchanged.

ù Using version 8.0 $SDE, any UF2 options were deleted during window editing, this problem is now fixed. The new $SDL options "TTL, "ERR", "A12", "A13" and "A14" are also supported.

ù In $SDE, support for the "HOT" option has been added to window editing.

ù In $SDE, support has been added for treating "DATE" as a synonym for "D". Support has been added for date FMT options "L", "6" and "8" during window editing. The field will be displayed as DD/MM/YY or DD/MM/YYYY during window editing as appropriate.

ù A new utility, STRANS is available to facilitate the translation of Speedbase source code into foreign languages.

ù A new subroutine BA$RBL provides a user callable facility to re-index a specified record type, or all record types in a database. BA$RBL is stored on C.$BALIB.

The routine is called by the statement:

CALL B$RBL USING dbid rcid opr swcol swrow
where dbid = database ID
rcid = record ID. If = spaces, or omitted, re-index ALL record types
opr = operator response flag set to "Y" if pause for response required before continuing
Default is "N".
swcol = LHS column of status window (1-34)
Default is 17.
swrow = top row of status window (1-18)
Default is 18.

The database must be open with exclusive access prior to calling

this routine. All parameters except the first (DBID) are optional.

Examples:-

1. .....
   77 SWCOL PIC 9(2) COMP
   VALUE 18
   77 SWROW PIC 9(2) COMP
   VALUE 15
   .....
   CALL B$OPN USING "INVTR" "FLS" #01
   CALL B$RBL USING "INVTR" "IN" "N" SWCOL SWROW

   Re-index record type IN in database INVTR.
   No operator intervention

2. CALL B$RBL USING "INVTR"

   Re-index ALL record types in database INVTR.

3. CALL B$RBL USING "INVTR" " " "Y"

   Re-index all record types, but pause for operator OK between record types. This method could be used to re-index only selected record types with the one subroutine call.

Exceptions:-

1 - Database not open
2 - Database doesn't have exclusive access
3 - DB dictionary not found or in use
4 - DB dictionary invalid type
5 - Database dictionary corrupt
6 - DB/Dict generation no mismatch
7 - Database corrupt
8 - Record ID invalid
9 - Record has no indexes
11 - Insufficient memory to begin re-index
12 - Key errors during re-index
13 - Can't open Unix C-ISAM channel

Any fatal error detected during re-index will result in an error message in the status window, and the program will stop. The database would be left corrupted and a partial rebuild would be necessary.

The routine resides on library C.$BALIB and will be linked in when compiling the calling SDL frame. The routine calls the system subroutine FREE$ and so the $MCOB library must be specified under the LNK option.

Note that the first parameter is the database ID, not the database file name.

Remember that the database must be open prior to the call to B$RBL. If the B$OPN routine is used to open the database, it would be better to be done in an overlay as the B$OPN routine is large, the call to B$RBL would then be better placed in a separate overlay to enable the maximum free memory to be used for working buffers.

7.6 COMMON DEVELOPMENT COMPONENTS

- The total number of Link Stack entries has been increased from 28 to 38.

- The GROUP$ subroutine is available to return the

details of a group of users.

- ù The OPNM$ subroutine is available to return the full name of an operator-id.

- ù The GTDES$ and PTDES$ subroutines are available to read and write long volume descriptions.

- ù The DSYSR$ and ESYSR$ subroutines are available to disable and re-enable System Requests.

- ù The DEVIN$ subroutine has been enhanced to return the number of files in the directory and also to indicate that a domain is larger than 2 Gb. DEVIN$ also automatically examines system-A units on System Manager (Unix).

- ù $DEBUG has been enhanced to allow the tracking of Speedbase listings. The format of listing files produced by the version 8.1 $SDL compiler is compatible with that expected by the version 8.1 debugger.

- ù $DEV has been enhanced to include dialogue for Speedbase compilations (option H).

- ù $LIB now includes an "Unlink stub" command.

- ù The ASSIG$ subroutine includes an option to return the complete assignment table.

- ù The NKM-C$ subroutine has been enhanced to recognise Gigabyte (230) quantities.

- ù The PROG$ subroutine now accepts a 3rd parameter (stub unit-id)).

- ù All the date conversion subroutines that handle short-dates now recognise the start-century year.

- ù The EXIT and STOP codes are distributed in a pair of ISAM files ($$ERREX and $$ERRST). A utility, $ERLIST, is available to display details of EXIT and STOP codes.

- ù $SCOMP includes a new "SB" Speedbase source file type. The name of the report file produced by $SCOMP can now be specified.

- ù $SEARCH will now search listing (i.e. type RS) files. The name of the report file produced by $SEARCH can now be specified. $SEARCH now includes primitive filename wildcard handling (e.g. a reply of S. <CTRL B> will select all the S. files on the specified unit.

7.7 GLOBAL 2000 COBOL

- ù A new access method (NUAM) has been produced that allows direct access to Unix files when used on System Manager (Unix) configurations.

- ù A new access method (NDAM) has been produced that allows direct access to MS-DOS files when used on System Manager (DOS, Windows, Novell) configurations.

- ù A new access method (NIAM) has been produced that allows direct access to C-ISAM files when used on

System Manager (Unix) configurations. This access method utilises the C-ISAM record locking mechanism.

- A new access method (SPAM) has been produced that allows read-only access to Global Speedbase databases.

- A new access method (SPAM - C-ISAM option) has been produced that allows read-only access to C-ISAM Speedbase databases.

- A new version of the DMAM access method is available that allows files to be held in C-ISAM format, for System Manager (Unix), or Btrieve format, for System Manager (DOS, Windows and Novell).

- Monitor page versions of the RSAM, ISAM, DMAM and SPAM access methods are now available. Monitor page versions of RSAM, ISAM and DMAM allow the data to be held as C-ISAM files.

- Monitor page versions of the ASSIG$ and SLOCK$ subroutines are now available.

- The RDIMG$ subroutine is available to read the screen image of ANY screen on a computer.

- The TYPF$ subroutine is available to move characters into the type-ahead buffer after those characters already in the buffer.

- The DBKES$ subroutine is available to return DMAM index key segment data so that it can be examined by an application.

- The DBUF$ subroutine is available to detect if a partition has characters in its display buffer.

- The WINDO$ and WRES$ subroutines are available to enhance Screen Formatting.

- The $URMAIN utility is available to maintain the User System Request index file.

- The $FORM attribute T (which displays output fields showing only a single trailing space) now works. A new attribute, V, has been added to specify that responses that fail screen formatting's validation should still be passed to the validation routine so that it can interpret them specially. The temporary work file produced by $FORM has been renamed to ensure uniqueness.

- $SETIRU allows the creation of the dummy ISAM stub file required for ISAM/C-ISAM and NIAM/C-ISAM.

- RCBUILD allows ISAM/C-ISAM, DMAM/C-ISAM and DMAM/Btrieve translation tables to be created and maintained.

- The $$DECP system variable is available containing the character currently used as the decimal point.

- The $$ULEV system variable is available to indicate the maximum number of users available on the system (i.e. the user level number).

- The $$PM system variable is available to indicate

whether Speedbase Presentation Manager is installed on the computer.

- ù The $$CRES system variable is available to hold the Unix or Btrieve error code of the last operation from the Universal Channel Interface (UCI).

- ù The $$SYSM system variable is available to indicate the host operating system (0 = BOS; 1 = Unix; 2 = DOS or Windows; 3 = Novell).

- ù $$NCYR holds the start year of the century.

- ù The temporary work files produced by $COBOL have been renamed to ensure uniqueness. The compiler displays the name and unit of the source file on completion.

- ù $MJOB has been enhanced to honour the $DLIB dialogue.

- ù The FMODE$ subroutine is available to switch a screen into formatted mode without clearing the display.

8. INDEX

Item Page
Item Page
Item Page