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Systems

OS/VS2 Release Guide

VS2 Release 1.6

IBM

Second edition (March 1973)

This edition applies to release 1.6 of OS/VS2. Periodically, changes are made to the information herein: before using this publication in connection with the operation of IBM systems, consult the IBM System/360 and System/370 Bibliography, GA22-6822, and the IBM System/370 Advanced Function Bibiliography, GC20-1763, for the editions that are current and applicable.

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This publication describes the ordering and distribution procedures, special considerations, and maintenance activity of OS/VS2 release 1.6.

This publication provides information for installation managers, system programmers, and IBM Field Engineering personnel for planning OS/VS2 release 1.6.

The three parts of this publication are:

1. A functional summary of features available in this release, including special considerations for generating and running it.

2. A summary of maintenance activity to the operating system that includes a list of APARs fixed and PTFs resolved.

3. Ordering and distribution procedures for this release, including hardware and engineering change levels and documentation support.

Memorandum to: Users of OS/VS2

Subject: Release 1.6

This memorandum announces the availability of OS/VS2 Release 1.6.

This updated release contains over 1000 fixed APARs, 36 permanently resolved PTFs, and four integrated Component Releases. APAR fixes solve problems in function, reliability, and performance discovered in OS/360 and OS/VS1 as well as OS/VS2.

The following Component Releases are integrated into the system at Release 1.6:

Name	Feature No.	Reference
BTAM 3270 Dial Support	5013/5014	P73-32
Dynamic Support System (DSS)	N/A	P73-31
TCAM 4	5001/5002	P73-32
TSO Enhancements	5011/5012	P73-26

Details about ordering procedures, basic and optional material lists, and the Starter Operating System are available in the OS/VS2 Release Guide for Release 1.6, GC28-0601-1. Information about Release 1.6 items and maintenance activity is also available in the Release Guide.

Current Systems Programs and sort and language processors required for OS/VS that are a part of OS/MFT and OS/MVT should be extracted from OS/360 Release 21.6 or 21.7, when it becomes available. Some components from earlier releases will not function correctly on OS/VS. Appropriate PTFs should be applied.

OS/VS2 Release 1.0 will be current through the availability of Release 3.0 or the Release 3.0 update, if any, plus 6 months. At that time central and FE programming services for Release 1.0 will be withdrawn.

Customers who plan to install Release 1.6 should meet with their IBM representatives to review known restrictions, PTFs and EC requirements.

Contents

Summary of Amendments for GC28-0601-1 OS/VS2 Release 1.6

The format of this publication is different from the format of the OS/VS2 Release Guide for release 1.0. Please note the following differences, including the availability on other media of information that had previously been contained in the release guide:

APAR Text Description and Program Symptom Index

The APAR text description and the Program Symptom Index (PSI) have been removed. This information exists in the Early Warning System (EWS) microfiche service, which is maintained by Field Engineering (FE) Division and is updated weekly. Customers may subscribe to EWS under the System Library Subscription Service (SLSS). Contact your IBM representative or the IBM Branch Office serving your locality for ordering procedures.

Module Status and Module Directory

The module status and module directory reports have been removed. Since this information is essentially an index to the program listings on microfiche, it is now available with those listings under group number SJD2-0001. Contact your IBM representative or the IBM Branch Office serving your locality for ordering procedures.

Module Index

A module index has been created that provides a cross-reference between module and component, i.e., it shows in what component each module is located. This microfiche index is orderable with the module status and module directory under the same group number, SJD2-0001.

Ordering and Distribution

The ordering and distribution procedures use a common set of basic and optional material lists containing the same information as previously, but eliminating duplicate information.

Chapter 1: Functional Summary

The following information is contained in this chapter:

Release 1.6 Items
Release 1.6 Based Items
Release 1.6 Special System Generation Considerations
Release 1.6 Programming and Documentation Notes

Release 1.6 Items

The following Component Releases have been incorporated into the system at release 1.6:

TSO Enhancements
TCAM 4
DSS
VS2 BTAM 3270 Dial Support

Below is a detailed description of each component release:

TSO Enhancements

The following is a list of enhancements to TSO:

ACCOUNT

- New operand added to ADD subcommand:

  USERDATA (digits)–modifies an installation-defined data field in the User Attribute Data Set.

- New operand added to CHANGE subcommand:

  USERDATA (digits)–modifies an installation-defined data field in the User Attribute Data Set.

ALLOCATE

- New operands added:

  DUMMY–allocates dummy data sets.
  TRACKS–allocates space by tracks.
  CYLINDERS–allocates space by cylinders.
  RELEASE–deletes unused space when the data set is closed.

- Additional change:

  When the specified filename is in use, the user is prompted to either free and reallocate the file or to terminate the command.

Dynamic Allocation

- XCTL instructions have been replaced with branch instructions and VCONs.

EDIT

- New subcommand added:

  SEND–allows the terminal user to communicate with other terminal users or with the system operator while remaining in EDIT mode.

- New operand added to RUN subcommand.

  LIB–allows the user to run programs that require subroutines from private libraries.

OPERATOR

- New operand added to SEND subcommand: SAVE–saves a message in the SYS1.BRODCAST data set.

- Additional changes:

  The characters OPER are appended to messages from an operator console or terminal.

  A notice may be sent from the SYS1.BRODCAST data set to a terminal user.

Parse

- A plus sign (+) is added to the "REENTER" message whenever HELP messages are available. This indicates to the user that he may obtain additional information by entering a question mark.
- Parse will prompt for a replacement of an invalid subfield by providing the user-entered keyword followed immediately by a left parenthesis. Only the subfield need by entered in response to the prompt.
- Parse can provide the user operating in no-prompt mode with all diagnostic messages for an invalid input line.

PROFILE

- New operand added:

  LIST–allows the characteristics of a user's profile to be listed at the terminal.

RUN

- New operand added:

  LIB–allows the user to run programs that require subroutines from private libraries.

SEND

- New operands added:

  WAIT–allows the user to wait for each specified logged-on user to receive his message.

  NOWAIT–message will not be sent to specified logged-on users whose terminals are busy. The sender will be notified that the message was not sent or it will become mail in the SYS1.BRODCAST data set.

  USER(*)–allows a message to be sent to the issuer of the SEND command.

Publications Support -- The following publications support TSO Enhancements:

Technical Newsletter No. GN28-2537 to OS/VS2 TSO Command Language Reference, Order no. GC28-0646.

OS/VS2 TSO Enhancements Logic, Order No. SY28-0659.

TCAM 4

The following is a list of enhancements to the OS/VS2 release 1.0 TCAM program:

- Programming support for the 3270 Information Display System – TCAM now supports the local and remote 3270 Display System devices.
- Programming support for the 3670 Brokerage Communication System – Special functions supported include (1) the 3670 has the capability to accept broadcast data, and (2) the recording of 3670 error counters on SYS1.LOGREG and the capability to print the counters using EREP.
- Programming support for General Poll Capability of 2260 and 3270 Devices – General poll economizes line time and interrupt handling because invitation of every device connected to a control unit is accomplished by transmission of only one set of special polling characters.
- Programming support for the 2715 Transmission Control Unit – TCAM now supports the 2715 Transmission Control Unit by allowing variable length messages with no special length or end character specified.
- TSO/TCAM 3270 support – TSO/TCAM now provides modified typewriter mode support for the 3270 Information Display System.

- BSC1, BSC2, and BSC3 support – The capability exists to allow binary synchronous devices to be specified in the TCAM TERMINAL macro as BSC1, BSC2, or BSC3.
- TCAM-to-TCAM communications – TCAM now supports OS/VS1 TCAM-to-TCAM communications on switched and leased contention networks.
- Expanded mixed environment support – TCAM now provides combined use support of non-dedicated terminal ports, which may be used for either TCAM or TSO applications, for both leased and switched lines.
- New operator control – TCAM Operator Control now provides for more than serial processing of operator control commands by allowing commands to be processed while other commands are waiting for resources.
- Read/Write Disk Error Recovery Procedures (ERP) for TCAM message queues – An error message is written to the system console and the TCAM task is terminated if a permanent disk error occurs when reading or writing a record on a TCAM message queue.
- New user macro instructions – A variety of additional functions are performed by new macro instructions:

  COMMBUF – routes broadcast data to destinations specified in a TLIST.

  MHGET – available for use within the Message Handler. MHGET moves data from the current buffer into a user-specified work area or returns in a register the address of the data in the buffer.

  MHPUT – available for use within the Message Handler. MHPUT moves data from a user-specified work area into the current buffer.

  QRESET – resends output messages that have already been transmitted to an output device.

  SLOWPOLL – suspends further polling on a line when errors specified by the error mask occur.

  TYPETABL – builds a branch table for the MSGTYPE macro to use, thereby allowing the use of nested message types in a message.

Publications Support – The following publications support TCAM 4:

OS/VS TCAM Programmer's Guide, GC30-2034
OS/VS TCAM User's Guide, GC30-2025
OS/VS TCAM Level 4 Component Release Guide, GC30-2035
OS/VS TCAM Logic, SY30-2039
OS TCAM Concepts and Facilities, GC30-2022

DSS

Dynamic Support System (DSS) is a non-optional, interactive debugging program that assists Field Engineering Program System Representatives or user-authorized maintenance personnel to identify and temporarily correct causes of programming failures in VS2. DSS allows access to most components of VS2 from the system console. Twenty five commands in the DSS Command Language provide the facility to alter and move data, use alternate I/O routes, and monitor most control program events and services during system execution. When running, DSS has control of the system and can return control to VS2 for further operations without system restart processing. See "Release 1.6 Special System Generation Considerations" section for additional information pertaining to the fact that DSS is not optional.

The DSS user can:

- Display any portion of real storage or virtual storage and any register or system control block during system operation.
- Monitor hardware events recognized by the program event recording feature and certain program events that are detected using the monitoring feature.
- Stop the operation of the system at a given point, perform maintenance procedures, and then continue system operation.
- Save data acquired during DSS operation on sequential devices for later use.

Notes:

1. No permanent changes can be made by DSS. Any modification made to the system will not be carried over to the next IPL. DSS cannot modify itself, IPL, or NIP.
2. Since DSS takes control from the system on each activation, time dependencies cannot be maintained. Thus, DSS should not be used while a time-sensitive program, such as a time-sharing task, is running.
3. Unauthorized use of DSS must be prevented by installation procedures. The main protection offered by DSS is the fact that only the primary system console can be used for DSS operations.
4. The function of the COLLECT command has been changed as follows:

   When the length of the second operand is greater than the remaining space (size minus offset) in the collection area, the offset is reset to zero

   - before the data is moved, if there is not enough room for another data-field. Thus, a collection area is like a wrap-around buffer.
   - after the data is moved, if the remaining space in the collection area is less than one collection-area element, i.e., less than the length of dss-data-field. This avoids accidental displaying or setting of data beyond the end of the collection area.

Publications Support – The following publications support DSS:

OS/VS2 System Generation Reference, GC26-3792
OS/VS2 Planning and Use Guide, GC28-0600
OS/VS2 System Data Areas, SY28-0606
OS/VS2 I/O Supervisor Logic, SY26-3823
OS/VS2 IPL/NIP Logic, SY27-7243
OS/VS2 Supervisor Logic, SY27-7244
OS/VS2 Recovery Management Support Logic, SY27-7252
* OS/VS Dynamic Support System, GC28-0640
OS/VS System Generation Introduction, GC26-3790
OS/VS Dynamic Support System Logic, SY28-0641
IBM System/370 System Summary, GA22-7001

* Contains system level information in an appendix.

VS2 BTAM 3270 Dial Support

VS2 BTAM 3270 Dial Support provides an extension to BTAM for support of the stand-alone remote 3275 Display Station with dial feature operating on a switched point-to-point (BSC2) connection.

BTAM has been modified in these three areas to support the 3275 Dial device: sense/status message recording, request-for-test handling, and two new READ/WRITE optypes to minimize timeout.

Publication Support – The following publications support VS2 BTAM 3270 Dial Support:

VS BTAM, GC27-6980-1

Technical Newsletter No. SN27-1401 to VS BTAM Logic, SY27-7246-0

Items based on Release 1.6 are announced but are not presently available. They will be available within six months of the availability of Release 1.6.

TCAM Extensions

- TCAM support of the 3705 in Network Control Program (NCP) mode.
- TSO/TCAM support of the 3705 in Network Control Program (NCP) mode.
- Speed selection for lines equipped with Dual Speed Modems (TCAM Host support only).
- Switched Network Backup when appropriate facilities are available (TCAM Host Support only).
- Manual Dial Operation is supported.

VSAM

Virtual Storage Access Method (VSAM) is a new access method designed for long-term data stability and as a suitable access method for data base applications.

3803/3420 Magnetic Tape Subsystem (6250 bpi density)

One new model of the 3803 Tape Control plus three new models of the 3420 Tape Unit offer increased capacity and speed to System/370 Model 135 through 195 users.

- Since DSS is not optional, you must allocate additional storage space for NUCLEUS, LINKLIB, and LPALIB. System level information about DSS is available in an appendix in OS/VS Dynamic Support System, GC28-0640.
- A new system data set, SYS1.DSSVM, is created. This data set contains DSS language processing routines, a nucleus map area, a work space area, a nucleus swap area, and DSS change pages. You should use the DATASET macro when generating SYS1.DSSVM because an improper VOLID and UNITTYPE may be generated if you don't.
- Before using TCAM 4 you should check the storage requirements to make sure that enough space can be allocated.
- If you have a 158/168 system and you want to use a starter system on these CPUs, you must order and use the updated Release 1.0 Starter Operating System provided with Release 1.6.
- The PARMTZ member of SYS1.PARMLIB provides a convenient means of overriding the SYSGEN-assigned time zone constant. The member is read at IPL, and its value replaces the SYSGEN value.

  The format of the PARMTZ member is:

  $\left\{\begin{matrix}E\\W\end{matrix}\right\}$,HH [.MM] [.SS]

  { } – choose one

  [ ] – optional

  where:

E	– the time is east of GMT
W	– the time is west of GMT
HH	– hours (value between 00 and 23)
MM	– minutes (value between 00 and 59)
SS	– seconds (value between 00 and 59)

  After an installation has set the SYSGEN time zone constant to indicate local time, the PARMTZ member can be used to set local daylight savings time. In this case the PARMTZ member would be stored in SYS1.PARMLIB at the first day of daylight savings time and scratched at the end of summer.

  The member must end before column 69 of the card.

- The distribution libraries have changed from a standard label (SL) format to a non-label (NL) format. To access the IEBCOPY control cards for copying to either a 2314, 2319, or 3330, type the following:

  ```
  START RDR,182,LABEL=(NL),DSNAME=LOAD010,VOL=SER=DLIBT1
  ```

  (If 182 is not the unit address of your tape drive, enter the correct address.)

  You should note this change under the section "Copy the Distribution Libraries to a Direct Access Volume," in OS/VS2 System Generation Reference, GC26-3792-1.

- If you plan to use OS/VS2 Release 1.0 to perform a system generation for Release 1.6, the following considerations should be noted:

  (1) A 300k region is needed to perform certain link edit and assembly functions. A reader procedure should be created that will raise the job step default region size to 300k.

  (2) Changes have been made to ASMS, the procedure used for assembly functions, and LINKS, the procedure used for link edit functions.

  Please note the underlined changes in the following procedures:

```
MEMBER NAME  RDR
//IEFPROC  EXEC PGM=IEFIRC,                          READER FIRST LOAD       ,02000001
//              REGION=48K,                          READER BASIC REGION     ,04000001
// PARM='80103005001024930010SYSDA  E00001A' DEFAULT OPTIONS                 ,06000001
//              BPPTTTOOOMMMIIICCCRLSSSSSSSSAAAAEFH  PARM FIELD              08000001
//*                                                                         10000001
//*                                                                         12000001
//*       B      PROGRAMMER NAME AND ACCOUNT NUMBER NOT NEEDED              14000001
//*              PROGRAM CAN BE ROLLED OUT                                  16000001
//*       PP     PRIORITY=01                                                18000001
//*       TTT    JOB STEP INTERVAL=30 MINUTES                               20000001
//*       OOO    PRIMARY SYSOUT SPACE=50 TRACKS                             22000001
//*       MMM    SECONDARY SYSOUT SPACE=10 TRACKS                           24000001
//*       III    READER/INTERPRETER DISPATCHING PRIORITY=249                26000001
//*       CCC    JOB STEP DEFAULT REGION=300K                               28000001
//*       R      DISPLAY AND EXECUTE COMMANDS=1                             30000001
//*       L      BYPASS LABEL OPTION=0                                      32000001
//*       SSSSSSSS SYSOUT UNIT NAME=SYSDA                                   34000001
//*       AAAA   COMMAND AUTHORITY FOR MCS=E000—ALL COMMANDS                36000001
//*              MUST BE AUTHORIZED                                         38000001
//*       EF     JCL AND ALLOCATION MESSAGE LEVEL DEFAULTS=01               40000001
//*       H      DEFAULT MESSAGE CLASS                                      42000001
//*                                                                         44000001
//*                                                                         46000001
//IEFRDER  DD   UNIT=2400,                           9 TRACK TAPE            ,48000001
//              LABEL=(,NL),                         UNLABELED               ,50000001
//              VOLUME=SER=SYSIN,                    VOLUME NAME             ,52000001
//              DISP=OLD,                            OLD DATA SET            ,54000001
//              DCB=(BLKSIZE=80,RECFM=F,BUFL=80,BUFNO=1)                     56000001
//IEFPDSI  DD   DSNAME=SYS1.PROCLIB,                 PROCEDURE LIBRARY       ,58000001
//              DISP=SHR                                                     60000001
//IEFDATA  DD   UNIT=SYSDA,                          SPOOL DEVICE            ,62000001
//              SPACE=(80,(500,500),RLSE,CONTIG),    AMOUNT                  ,64000001
//              DCB=(BUFNO=2,LRECL=80,BLKSIZE=80,RECFM=F,BUFL=80,            66000001
//              DSORG=PS)                                                    68000001
```

```
MEMBER NAME  ASMS
//ASMS    PROC                                                          07000000
//A     EXEC    PGM=ASMBLR                                             14000000
//SYSLIB     DD    DSN=SYS1.AMODGEN,DISP=(SHR,PASS)                    21000000
//       DD    DSN=SYS1.AMACLIB,DISP=(SHR,PASS)                        28000000
//SYSUT1 DD  DISP=(,DELETE),DSN=&&SYSUT1,SPACE=(1700,(6000,200)),      *35000000
//         UNIT=SYSDA                                                  42000000
//SYSUT2 DD  DISP=(,DELETE),DSN=&&SYSUT2,SPACE=(7294,(2000,133)),      *49000000
//    UNIT=(SYSDA,,,SEP=(SYSUT1))                                      56000000
//SYSUT3 DD  DISP=(,DELETE),DSN=&&SYSUT3,SPACE=(1700,(2000,200)),      *63000000
//         UNIT=SYSDA                                                  70000000
//SYSPRINT     DD    SPACE=(121,(1500,200),RLSE),                     X77000000
//    DCB=(RECFM=FB,LRECL=121,BLKSIZE=3509),SYSOUT=&CLASS              84000000
//SYSPUNCH    DD     DISP=OLD,VOLUME=(,RETAIN),DSN=SYS1.&OBJ.(&MOD)   91000000


MEMBER NAME  LINKS
//LK  EXEC PGM=IEWL,PARM='SIZE=(200K,30K)',                            00000010
//     REGION=256K                                                     00000020
//SYSUT1 DD  DSNAME=&&SYSUT1,DISP=(NEW,DELETE),SPACE=(3625,(400,50)),  000000030
//           UNIT=SYSDA                                                00000040
//SYSPRINT DD   SPACE=(121,(4000,3000),RLSE),SYSOUT=&CLASS,            X00000050
//   DCB=(RECFM=FB,LRECL=121,BLKSIZE=121),UNIT=(SYSDA,4)               00000060
//SYSPUNCH DD  DISP=SHR,VOLUME=(,RETAIN),DSNAME=SYS1.&OBJ              00000070
//SYSLMOD DD  DISP=OLD,UNIT=&UNIT,VOL=SER=&SER,                        000000080
//           DSNAME=&N..&NAME&P1&MOD&P2                                00000090
```

Programming Notes

- You can password protect page data sets by preallocating SYS1.PAGE and then using IEHPROGM to assign the password.

  To protect more than one SYS1.PAGE data set, IEHPROGM can be used as follows:

```
ADD       DSNAME=SYS1.PAGE,
          PASWORD2=PASS,
          VOL=3330=PAGE00
DELETEP   DSNAME=SYS1.PAGE,
ADD       DSNAME=SYS1.PAGE,
          PASWORD2=PASS,
          VOL=3330=PAGE00
```

  See OS/VS Utilities, GC35-0005-1, for further details concerning the proper JCL and for complete control card syntax.

- IOS ABEND codes have been improved by adding more information about the conditions that caused the ABEND.
- IOS channel program workspace definition has been changed for debugging purposes. See OS/VS2 I/O Supervisor Logic, SY26-3823-1, for additional information.
- The operating system may terminate abnormally if you fail to increase the size of the virtual SQA when processing jobs that use a large number of buffers (from 20 to 255). The I/O Supervisor keeps information on the current I/O situation in the virtual SQA. If enough free SQA space cannot be found for a job, the operating system terminates abnormally with a completion code of 101.

  Although insufficient SQA space could occur with any job, it is more likely to occur when the I/O Supervisor needs SQA space for a job with a large number of buffers. To avoid terminating abnormally, you should (1) reduce the number of buffers specified in the BUFNO subparameter of the DD statement's DCB parameter, or (2) have the operator increase the size of the SQA by specifying the SQA parameter at system initialization.
- The INITQBF restriction in OS/VS2 Release 1.0 no longer exists in Release 1.6. However, the parameter is not dynamically changeable via the IPL option.
- TSO ALLOCATE messages IKJ56103I and IKJ56112A have been changed so that a first level message, ENTER FREE OR CARRIAGE RETURN +, appears instead of the regular message. The regular message is now a second level message and appears only if you enter a question mark in response to the first level message.

Documentation Notes

The following changes apply to OS/VS OLTEP (VS1 Release 1 and VS2 Release 1), GC28-0636-1:

- The test requirements for several devices have been updated. Please note these changed requirements for devices to be tested.

Device type	Test Requirements
IBM 2701 IBM 2702 IBM 2703	Telecommunications lines must be offline and unallocated in order to be tested by OLTEP. Also, all users of the lines (applications programs and program access methods) must have terminated their use of the lines and have given the lines back to the operating system prior to testing. The IBM 2702 and the IBM 2703 require at least two lines, including line 0, for testing.
IBM 3270	Locally attached 3270 devices can be tested by OLTEP while they are online or allocated only if they have been allocated to BTAM (Basic Telecommunications Access Method). Otherwise, these devices must be offline to the operating system and not allocated to any user.
Remote TP Terminals [1]	The remote terminals must be attached to an IBM 2701, 2702, 2703, 3704, 3705, or 7770 control unit in order to be tested by OLTEP. The TP line from the control unit to the remote terminals must be offline and unallocated in the operating system. Once OLTEP has control of the line, no other user should access it. OLTEP retains control of the line until testing on the remote terminal is complete and another device is selected at ENTER-DEV/TEST/OPT time. A special OLTEP data set of symbolically named data must exist before the remote terminals are tested.

- Modification of the default values for the optional parameters used to define an OLTEP job step has caused the following change:

  "DSNAME=DUMMY" should be replaced by "DUMMY" in the INPUT DD, SYMSYM DD, SERLOG DD, ACCIN DD, and SYSABEND DD statements.

---

[1] Teleprocessing terminals supported by OLTEP include 1030, 1050, 1060, 1130, 2020, 2260, 2265, 2715-II, 2721, 2740, 2741, 2760, 2770, 2780, 2979, and TOUCH-TONE* devices.

*Trademark of Bell System

The following information is contained in this chapter:

APAR list
Program Temporary Fixes (PTFs) resolved

APAR List

The following is a list of APARs fixed in Release 1.6:

OS41592	OS41596	OS53639	OS56208	OS57687
OS41593	OS41597	OS54155	OS56209	OS57691
OS41594	OS41598	OS54262	OS56213	OS57692
OS41595	OS41599	OS54268	OS56217	OS57694
OS41596	OS41601	OS54269	OS56222	OS57695
OS41597	OS41602	OS54271	OS56226	OS57699
OS41598	OS41603	OS54273	OS56230	OS58434
OS41599	OS41604	OS54274	OS56231	OS58435
OS41601	OS41605	OS54276	OS56234	OS58440
OS41602	OS41606	OS54277	OS56303	OS58444
OS41603	OS41607	OS54280	OS56307	OS58446
OS41604	OS41608	OS54283	OS56312	OS58451
OS41605	OS41609	OS54290	OS56318	OS58454
OS41606	OS41610	OS54297	OS56320	OS58456
OS41607	OS41611	OS54299	OS56332	OS58457
OS41608	OS41612	OS54300	OS56606	OS58602
OS41609	OS41613	OS54471	OS56610	OS58670
OS41610	OS41614	OS54921	OS56611	OS58988
OS41611	OS41615	OS54922	OS56614	OS58992
OS41612	OS45117	OS54923	OS56615	OS58993
OS41613	OS48276	OS54926	OS56617	OS58994
OS41614	OS50190	OS54929	OS56624	OS58995
OS41615	OS50192	OS54930	OS56626	OS58997
OS45117	OS50208	OS54931	OS56629	OS58998
OS48276	OS51065	OS54933	OS56630	OS59003
OS50190	OS51078	OS54935	OS56631	OS59004
OS50192	OS51090	OS54942	OS56889	OS59006
OS50208	OS51097	OS54948	OS56891	OS59008
OS51065	OS51783	OS54956	OS56898	OS59011
OS51078	OS51787	OS54959	OS56902	OS59012
OS51090	OS51796	OS55236	OS56906	OS59015
OS51097	OS52502	OS55381	OS56907	OS59016
OS51783	OS52506	OS55382	OS56908	OS59020
OS51787	OS52791	OS55383	OS56912	OS59024
OS51796	OS52946	OS55385	OS56915	OS59025
OS52502	OS52951	OS55387	OS56918	OS59027
OS52506	OS52955	OS55389	OS56920	OS59028
OS52791	OS52958	OS55391	OS57087	OS59038
OS52946	OS52960	OS55392	OS57173	OS59039
OS52951	OS52963	OS55393	OS57322	OS59040
OS52955	OS52969	OS55402	OS57324	OS59162
OS52958	OS52971	OS55404	OS57325	OS59165
OS52960	OS52972	OS55420	OS57332	OS59166
OS52963	OS52984	OS55593	OS57334	OS59169
OS52969	OS52995	OS55923	OS57345	OS59170
OS52971	OS53603	OS55925	OS57355	OS59171
OS52972	OS53605	OS55926	OS57356	OS59174
OS52984	OS53606	OS55927	OS57357	OS59175
OS52995	OS53610	OS55932	OS57360	OS59180
OS53603	OS53611	OS55941	OS57661	OS59181
D60-OP2C	OS53617	OS55944	OS57673	OS59184
OS41592	OS53627	OS55948	OS57674	OS59188
OS41593	OS53628	OS55958	OS57681	OS59189
OS41594	OS53632	OS56202	OS57684	OS59194
OS41595	OS53636	OS56206	OS57685	OS59195

OS59235	OY00027	OY00115	OY00178	OY00238
OS59501	OY00028	OY00116	OY00179	OY00239
OS59503	OY00029	OY00117	OY00180	OY00240
OS59508	OY00030	OY00118	OY00181	OY00241
OS59509	OY00031	OY00119	OY00182	OY00242
OS59523	OY00032	OY00121	OY00184	OY00243
OS59524	OY00033	OY00122	OY00185	OY00244
OS59533	OY00034	OY00123	OY00186	OY00245
OS59538	OY00035	OY00125	OY00187	OY00246
OS59961	OY00036	OY00126	OY00188	OY00247
OS59967	OY00037	OY00127	OY00189	OY00248
OS59970	OY00038	OY00128	OY00190	OY00250
OS59972	OY00039	OY00129	OY00191	OY00251
OS59976	OY00040	OY00130	OY00193	OY00252
OS59987	OY00041	OY00131	OY00194	OY00253
OS60002	OY00042	OY00132	OY00195	OY00254
OS60004	OY00043	OY00133	OY00196	OY00255
OS60005	OY00044	OY00134	OY00197	OY00257
OS60007	OY00045	OY00135	OY00198	OY00258
OS60011	OY00050	OY00136	OY00199	OY00261
OS60012	OY00052	OY00137	OY00200	OY00263
OS60013	OY00054	OY00138	OY00201	OY00264
OS60311	OY00055	OY00139	OY00202	OY00265
OS60316	OY00056	OY00140	OY00203	OY00266
OS60320	OY00057	OY00141	OY00204	OY00267
OS60335	OY00058	OY00142	OY00205	OY00271
OS60341	OY00059	OY00143	OY00206	OY00272
OS60792	OY00060	OY00144	OY00207	OY00273
OS60814	OY00062	OY00145	OY00208	OY00274
OS60820	OY00064	OY00146	OY00209	OY00275
OS61043	OY00065	OY00147	OY00210	OY00276
OS61058	OY00066	OY00149	OY00211	OY00277
OS61077	OY00067	OY00150	OY00213	OY00278
OS61099	OY00068	OY00151	OY00214	OY00279
OS61761	OY00070	OY00152	OY00215	OY00280
OS61771	OY00071	OY00153	OY00216	OY00283
OS61772	OY00072	OY00154	OY00217	OY00284
	OY00073	OY00155	OY00218	OY00285
	OY00074	OY00156	OY00219	OY00286
OY00001	OY00076	OY00157	OY00220	OY00287
OY00002	OY00080	OY00158	OY00221	OY00288
OY00004	OY00100	OY00159	OY00222	OY00289
OY00007	OY00101	OY00160	OY00223	OY00290
OY00009	OY00102	OY00161	OY00224	OY00292
OY00010	OY00103	OY00163	OY00225	OY00293
OY00012	OY00104	OY00166	OY00226	OY00294
OY00013	OY00105	OY00168	OY00227	OY00295
OY00019	OY00106	OY00169	OY00228	OY00296
OY00020	OY00107	OY00170	OY00229	OY00297
OY00021	OY00108	OY00171	OY00230	OY00299
OY00022	OY00109	OY00172	OY00232	OY00300
OY00023	OY00110	OY00174	OY00234	OY00301
OY00024	OY00111	OY00175	OY00235	OY00303
OY00025	OY00113	OY00176	OY00236	OY00307
OY00026	OY00114	OY00177	OY00237	OY00309

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OY00922	OY00995	OY01070	OY01189	OY01253
OY00924	OY00996	OY01071	OY01190	OY01254
OY00925	OY00997	OY01072	OY01191	OY01255
OY00926	OY00998	OY01073	OY01192	OY01256
OY00927	OY00999	OY01074	OY01193	OY01257
OY00928	OY01002	OY01075	OY01194	OY01258
OY00929	OY01003	OY01076	OY01195	OY01259
OYC0930	OY01015	OY01077	OY01196	OY01260
OY00931	OY01016	OY01078	OY01197	OY01264
OY00932	OY01017	OY01079	OY01198	OY01265
OYC0934	OY01018	OY01090	OY01200	OY01268
OY00935	OY01019	OY01091	OY01201	OY01269
OY00936	OY01020	OY01092	OY01202	OY01284
OY00937	OY01021	OY01093	OY01203	OY01289
OY00938	OY01022	OY01094	OY01204	OY01300
OY00939	OY01023	OY01095	OY01205	OY01377
OY00940	OY01024	OY01096	OY01206	OY01378
OYC0941	OY01025	OY01097	OY01207	OY01380
OY00942	OY01026	OY01098	OY01208	OY01381
OY00943	OY01027	OY01100	OY01209	OY01383
OY00944	OY01028	OY01101	OY01210	OY01384
OY00947	OY01029	OY01102	OY01212	OY01385
OYC0949	OY01030	OY01103	OY01213	OY01386
OY00951	OY01031	OY01104	OY01215	OY01388
OY00953	OY01032	OY01105	OY01216	OY01469
OYC0954	OY01033	OY01106	OY01217	OY01470
OY00955	OY01035	OY01107	OY01218	OY01471
OY00956	OY01036	OY01108	OY01219	OY01474
OY00957	OY01037	OY01109	OY01220	OY01750
OY00958	OY01038	OY01112	OY01221	OY01751
OYC0960	OY01042	OY01162	OY01222	OY01752
OYC0961	OY01043	OY01163	OY01223	OY01754
OY00962	OY01044	OY01164	OY01227	OY01802
OY00963	OY01045	OY01165	OY01228	OY01812
OY00964	OY01046	OY01166	OY01229	OY01948
OYC0969	OY01047	OY01167	OY01230	OY02005
OYC0970	OY01048	OY01168	OY01231	
OY00971	OY01049	OY01169	OY01232	
OY00972	OY01050	OY01170	OY01233	
OY00973	OY01051	OY01171	OY01234	OY00123
OY00974	OY01052	OY01172	OY01235	OY00125
OY00975	OY01053	OY01173	OY01236	OY00137
OY00977	OY01055	OY01174	OY01237	OY00148
OY00978	OY01056	OY01175	OY01238	OY00262
OY00979	OY01057	OY01176	OY01240	OY00315
OY00980	OY01058	OY01177	OY01241	OY00353
OY00981	OY01059	OY01178	OY01242	OY00368
OY00982	OY01060	OY01179	OY01243	OY00673
OY00983	OY01061	OY01180	OY01244	OY00680
OY00984	OY01062	OY01181	OY01245	OY00685
OY00985	OY01063	OY01182	OY01246	OY00872
OY00986	OY01064	OY01183	OY01247	OY00892
OY00987	OY01065	OY01184	OY01248	OY01382
OY00988	OY01066	OY01185	OY01249	OY01800
OY00989	OY01067	OY01186	OY01250	
OY00992	OY01068	OY01187	OY01251	
OY00994	OY01069	OY01188	OY01252	

PTFs Resolved

The following is a list of PTFs resolved in Release 1.6:

PTF Number	Component
UY70001	5742-SC1-14
UY70002	5742-SC1-U0
UY70003	5742-SC1-G0
UY70004	5742-SC1-07
UY70005	5742-SC1-CB
UY70006	5742-SC1-D7
UY70008	5742-SC1-20
UY70009	5742-SC1-CB
UY70010	5742-SC1-20
UY70011	5742-SC1-01
UY70012	5742-SC1-C5
UY70013	5742-SC1-06
UY70014	5742-SC1-C5
UY70015	5742-SC1-C2
UY70016	5742-SC1-C3
UY70017	5742-SC1-06
UY70019	5742-SC1-D7
UY70020	5742-SC1-08
UY70021	5742-SC1-B2
UY70022	5742-SC1-06
UY70023	5742-SC1-T4
UY70024	5742-SC1-D1
UY70025	5742-SC1-C5
UY70026	5742-SC1-C3
UY70028	5742-SC1-D0
UY70031	5742-SC1-D0
UY70032	5742-SC1-20
UY70035	5742-SC1-20
UY70038	5742-SC1-C3
UY70040	5742-SC1-CA
UY70041	5742-SC1-08
UY70042	5742-SC1-C5
UY70045	5742-SC1-10
UY70018	5742-SC1-21
UY70027	5742-SC1-CD
UY70039	5742-SC1-CA

Chapter 3: Ordering and Distribution

The following information is contained in this chapter:

Ordering procedures
Distribution procedures
Basic material list
Optional material list
Hardware engineering change levels
Documentation support

Ordering Procedures

To order OS/VS2 release 1.6, contact your IBM representative or the IBM Branch Office serving your locality. It is no longer necessary to fill out a Program Order Form; your IBM representative places the order for you.

All new users of VS2 should order the Starter System as well as the Distribution Libraries. The initial system generation cannot be performed without the Starter System.

If additional features, such as the Starter System, are desired after your order has been received, you may order them through your IBM representative or the local IBM Branch Office.

System control programs such as the Emulator programs that are not shipped in the distribution libraries are available to VS2 users at no additional cost. They must be ordered separately. To order these or for additional information, contact your IBM representative or the local IBM Branch Office.

Distribution Procedures

OS/VS2 Release 1.6 is distributed only on magnetic tape. The number of user volumes required is specified in the basic and optional material lists.

The Distribution Libraries are distributed as unloaded partitioned data sets. These can be loaded to various direct access devices using the IEBCOPY utility in the Starter System. For additional information on installation procedures, see OS/VS2 System Generation Reference, GC26-3792.

You get one copy of machine readable material containing a Starter Operating System for restoring to a 2314/2319 or a 3330. Order the basic material by selecting one of the following feature numbers:

Feature Number	Residence	Track/Density	No. of Tape Volumes
6000	2314/2319	9 track/800 BPI tape	1
6001	2314/2319	9 track/1600 BPI tape	none (DTR)
6002	3330	9 track/800 BPI tape	1
6003	3330	9 track/1600 BPI tape	none (DTR)

DASDI and DUMP/RESTORE precede the dumped disk pack data on a restore tape.

*6999 Starter System not ordered.

Note: See "Release 1.6 Special System Generation Considerations" if you have a 158/168 system.

*Use this number if you have retained a Starter Operating System from a previous release.

Basic Program Material List

The basic program material list identifies the available systems and data sets contained on the unloaded distribution library tapes. You get one copy of machine readable material consisting of OS/VS2 Distribution Libraries. Order the basic program material by selecting one of the following specify numbers:

Specify Number	Track/Density	No. of Tape Volumes
9027	9 track/800 BPI tape	2
9029	9 track/1600 BPI tape	1

Note: To initially generate the system, a Starter Operating System is required.

The following is a list of data sets contained on the unloaded distribution library tapes:

SYS1.AOS00	SYS1.AOSCE	SYS1.AMACLIB
SYS1.AOS03	SYS1.AOSC2	SYS1.AMODGEN
SYS1.AOS04	SYS1.AOSC5	SYS1.AOS07
SYS1.AOS05	SYS1.AOSC6	SYS1.AOS20
SYS1.AOS06	SYS1.AOSD0	SYS1.AOS21
SYS1.AOS10	SYS1.AOSD7	SYS1.AOSG0
SYS1.AOS11	SYS1.AOSD8	SYS1.AOST3
SYS1.AOS12	SYS1.AOSU0	SYS1.AOST4
SYS1.AOSA0	SYS1.APARMLIB	SYS1.ACMDLIB
SYS1.AOSB0	SYS1.APROCLIB	SYS1.AHELP
SYS1.AOSB3	SYS1.ASAMPLIB	SYS1.ATCAMMAC
SYS1.AOSCA	SYS1.ALPALIB	SYS1.ATSOMAC
SYS1.AOSCD	SYS1.AGENLIB	SYS1.AUADS

In addition to the basic program material, one copy of each of the following publications is also provided:

OS/VS2 Release Guide (Release 1.6), GC28-0601-1

TNL No. GN26-0705 to OS/VS2 System Generation Reference, GC26-3792

Optional Program Material List

The Optional Program Material (Source Libraries) is available from DP-PID on 9 track 800 or 1600 BPI tapes.

Any assemblies done utilizing OS/VS2 SYMBOLICS must have SYS1.AMODGEN concatenated to SYS1.AMACLIB and SYS1.APVTMACS. SYS1.AMODGEN contains Stage II SYSGEN macros, some of which are called by other modules in the system. If you do not specify TSO in your system, you must concatenate SYS1.ATSOMAC to SYS1.AMACLIB, SYS1.AMODGEN and SYS1.APVTMACS. SYS1.ATSOMAC contains macros which may be required during the assembly of non-TSO modules.

An assembly of the source code may result in object code which is not the same byte for byte, as the object code in the distribution libraries. This is due to differences in macro expansion which do not affect execution of the modules.

The machine readable material contains the system control program source code in SYSIN format; the code is divided into nine component groups.

Order optional material by selecting one or more of the following feature numbers:

Feature Number	Group	Track/Density	No. of Tape Volumes
7801	Installation Processors	9/800	1
7802	Installation Processors	9/1600	1
7805	Utilities	9/800	1
7806	Utilities	9/1600	1
7809	Data Management	9/800	1
7810	Data Management	9/1600	1
7813	BTAM/ISAM	9/800	1
7814	BTAM/ISAM	9/1600	1
7817	Prob. Deter/Diagnostics	9/800	2
7818	Prob. Deter/Diagnostics	9/1600	2
7821	Control Program	9/800	3
7822	Control Program	9/1600	3
7825	TSO	9/800	3
7826	TSO	9/1600	3
7829	TCAM/Graphics	9/800	1
7830	TCAM/Graphics	9/1600	1
7833	DSS	9/800	1
7834	DSS	9/1600	1

The relationship between system control program components and the nine component groups is as follows:

Feature Number	Group	Components	Component IDs	Microfiche Order Numbers
7801/7802	Installation Processors	Assembler	5742-SC1-03	SJD2-0890
		Linkage Editor	5742-SC1-04	SJD2-0860
		Loader	5742-SC1-05	SJD2-0870
7805/7806	Utilities	IBCDMPPS	5742-SC1-I0	SJD2-0750
		IBCDASDI	5742-SC1-I1	SJD2-0760
		ICAPRTBL	5742-SC1-I2	SJD2-0800
		IEHDASDR	5742-SC1-U0	SJD2-0770
		IEHLIST	5742-SC1-U2	SJD2-0060
		IEHPROGM	5742-SC1-U3	SJD2-0070
		IEBCOPY	5742-SC1-U6	SJD2-0170
		IEBGENER	5742-SC1-U7	SJD2-0180
		IEBUPDTE	5742-SC1-U8	SJD2-0190
		IEBEDIT	5742-SC1-U9	SJD2-0050
		IEBPTPCH	5742-SC1-UA	SJD2-0200
		IEHMOVE	5742-SC1-UC	SJD2-0160
		IEHINITT	5742-SC1-UD	SJD2-0020
		IFHSTATR	5742-SC1-UE	SJD2-0030
		IEHATLAS	5742-SC1-UF	SJD2-0780
		IEBTCRIN	5742-SC1-UG	SJD2-0580
		IEBISAM	5742-SC1-UH	SJD2-0220
		IEBDG	5742-SC1-UJ	SJD2-0230
		IEBCOMPR	5742-SC1-UK	SJD2-0210
7809/7810	Data Management	SAM	5742-SC1-D0	SJD2-0660
		OPEN/CLOSE/EOV	5742-SC1-D1	SJD2-0830
		PAM	5742-SC1-D2	SJD2-0670
		CATALOG	5742-SC1-D3	SJD2-0080
		DADSM	5742-SC1-D4	SJD2-0840
		OCR	5742-SC1-D5	SJD2-0600
		MICR	5742-SC1-D6	SJD2-0680
		DAM	5742-SC1-D7	SJD2-0690
		Password Protect	5742-SC1-DC	SJD2-0110
		3505/3525 Spt.	5742-SC1-DD	SJD2-0590
7813/7814	BTAM/ISAM/VSAM	BTAM	5742-SC1-20	SJD2-0560
		3735 Macros/Util.	5742-SC1-22	SJD2-0490
		ISAM	5742-SC1-D8	SJD2-0810
		VSAM	5742-SC1-DE	SJD2-1220
7817/7818	Prob. Deter/Diagnostics	OLTEP	5742-SC1-06	SJD2-0550
		GTF	5742-SC1-11	SJD2-0430
		AMASPZAP	5742-SC1-12	SJD2-0440
		AMDPRDMP	5742-SC1-13	SJD2-0450
		AMBLIST	5742-SC1-14	SJD2-0880
		AMDSADMP	5742-SC1-15	SJD2-0460
		AMAPTFLE	5742-SC1-16	SJD2-0470
		AMDPRDMP (EDIT)	5742-SC1-18	SJD2-0480
		OBR/EREP	5742-SC1-CD	SJD2-0420
		RMS	5742-SC1-CE	SJD2-0270

Feature Number	Group	Components	Component ID's	Microfiche Order Numbers
7821/7822	Control Program	Scheduler SMF	5742-SC1-00	SJD2-0090
		Mapping Macros	5742-SC1-01	SJD2-0540
		SMF	5742-SC1-02	SJD2-0010
		Checkpoint/Rest.	5742-SC1-09	SJD2-0820
		Sysout Writer	5742-SC1-B2	SJD2-0790
		System Restart	5742-SC1-B3	SJD2-0330
		Allocation	5742-SC1-B4	SJD2-0350
		Q Manager	5742-SC1-B5	SJD2-0360
		Initiator	5742-SC1-B6	SJD2-0370
		Termination	5742-SC1-B7	SJD2-0380
		Commands	5742-SC1-B8	SJD2-0390
		Reader/Interpreter	5742-SC1-B9	SJD2-0400
		IPL	5742-SC1-C1	SJD2-0250
		Overlap Supervisor	5742-SC1-C2	SJD2-0640
		IOS	5742-SC1-C3	SJD2-0700
		DIDOCS	5742-SC1-C4	SJD2-0300
		Supervisor	5742-SC1-C5	SJD2-0260
		FETCH	5742-SC1-C7	SJD2-0650
		DASD ERP	5742-SC1-CA	SJD2-0710
		Unit Record ERP	5742-SC1-CB	SJD2-0720
		Tape ERP/VES	5742-SC1-CC	SJD2-0040
		Extended SVC Router	5742-SC1-CF	SJD2-0530
		Floating Pt. Simul.	5742-SC1-CP	SJD2-0140
		PVTMACS		(Symbolics only)
7825/7826	TSO	TSO EDIT	5742-SC1-T0	SJD2-0240
		TSO TEST	5742-SC1-T1	SJD2-0130
		TSO Utilities	5742-SC1-T2	SJD2-0120
		TSO Data Mgmt.	5742-SC1-T3	SJD2-0740
		TSO Scheduler	5742-SC1-T4	SJD2-0410
		Link/Loadgo Prompter	5742-SC1-T5	SJD2-0850
		TSO Supervisor	5742-SC1-T7	SJD2-0320
		TSO TRACE	5742-SC1-T9	SJD2-0100
7829/7830	TCAM/Graphics	GSP	5742-SC1-07	SJD2-0280
		TCAM	5742-SC1-21	SJD2-0570
		GAM	5742-SC1-G0	SJD2-0290
		TSO Subrtns for TCAM	5742-SC1-T8	SJD2-0730
7833/7834	DSS	DSS	5742-SC1-10	SJD2-0130

Note: Module status, module directory, and module index reports are available under microfiche order number SJD2-0001.

Current System Programs

The following Current System Programs can be used with OS/VS2. The programs can be extracted from Release 21.6 of OS.

COBOL F	Note 1
COBOL F Library	Note 1
Full ANS COBOL V2	
Full ANS COBOL V2 Library	
FORTRAN G	
FORTRAN H	
FORTRAN G & H Library	
FORTRAN Syntax Checker	
PL/I F	Note 2
PL/I Library	
PL/I Syntax Checker	
Sort/Merge	

Notes:

1. Program withdrawn, but will operate with VS2.
2. Teleprocessing support is not available in this environment since QTAM is not supported by VS, and PL/I F does not support TCAM.

   Please contact your FE representative to determine what PTFs might be required for these CSPs to operate correctly with VS2.

The following are the minimum engineering change levels necessary to support the listed devices:

Model 155II

EC 263031
EC 261766

Model 158

EC 262936 plus REAs 02-045-041 through 02-045-049
EC 262951 plus REA 02-57-118

3830 Control Unit

EC 427556

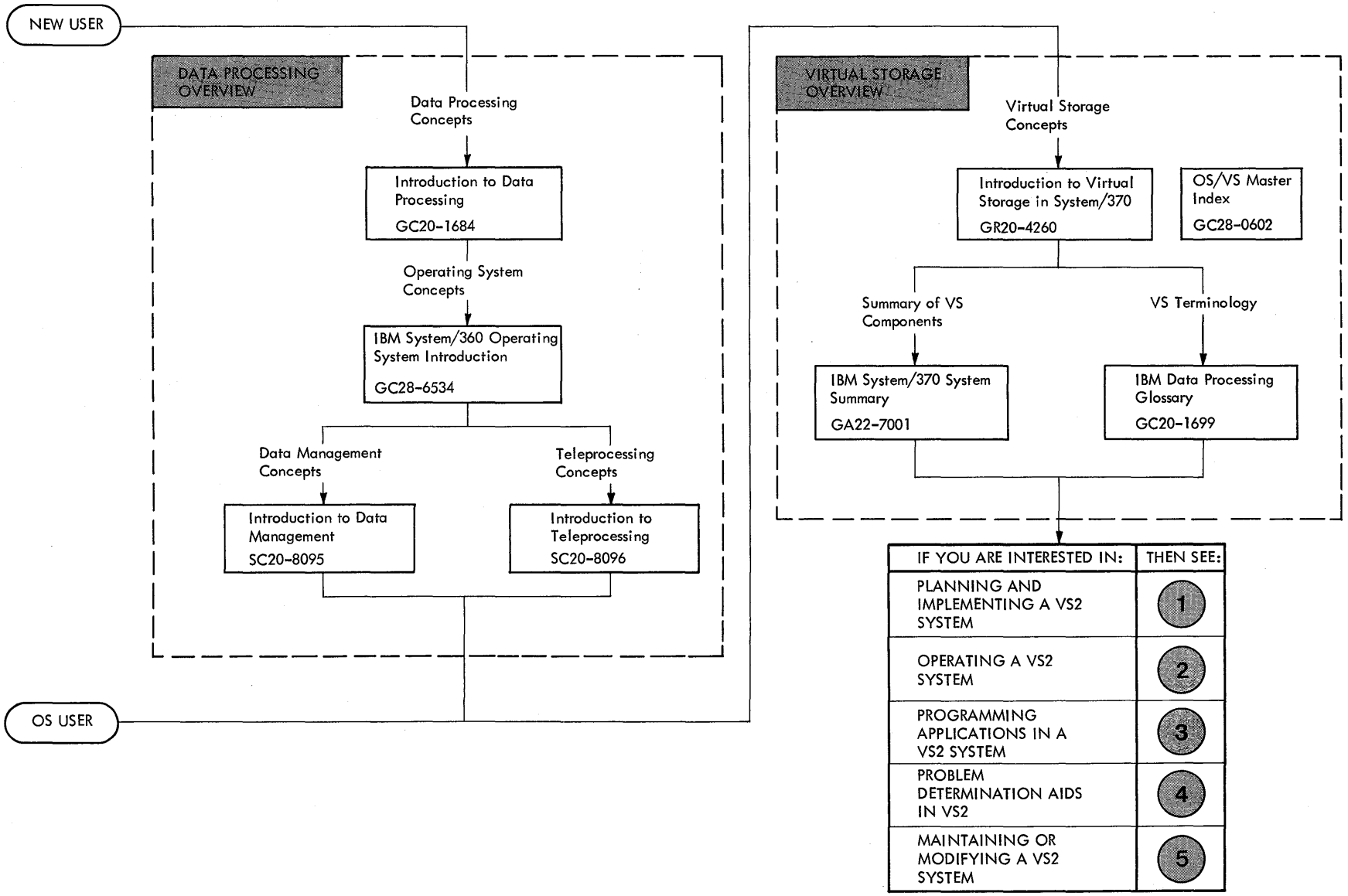
3275 Dial Device

EC 718549

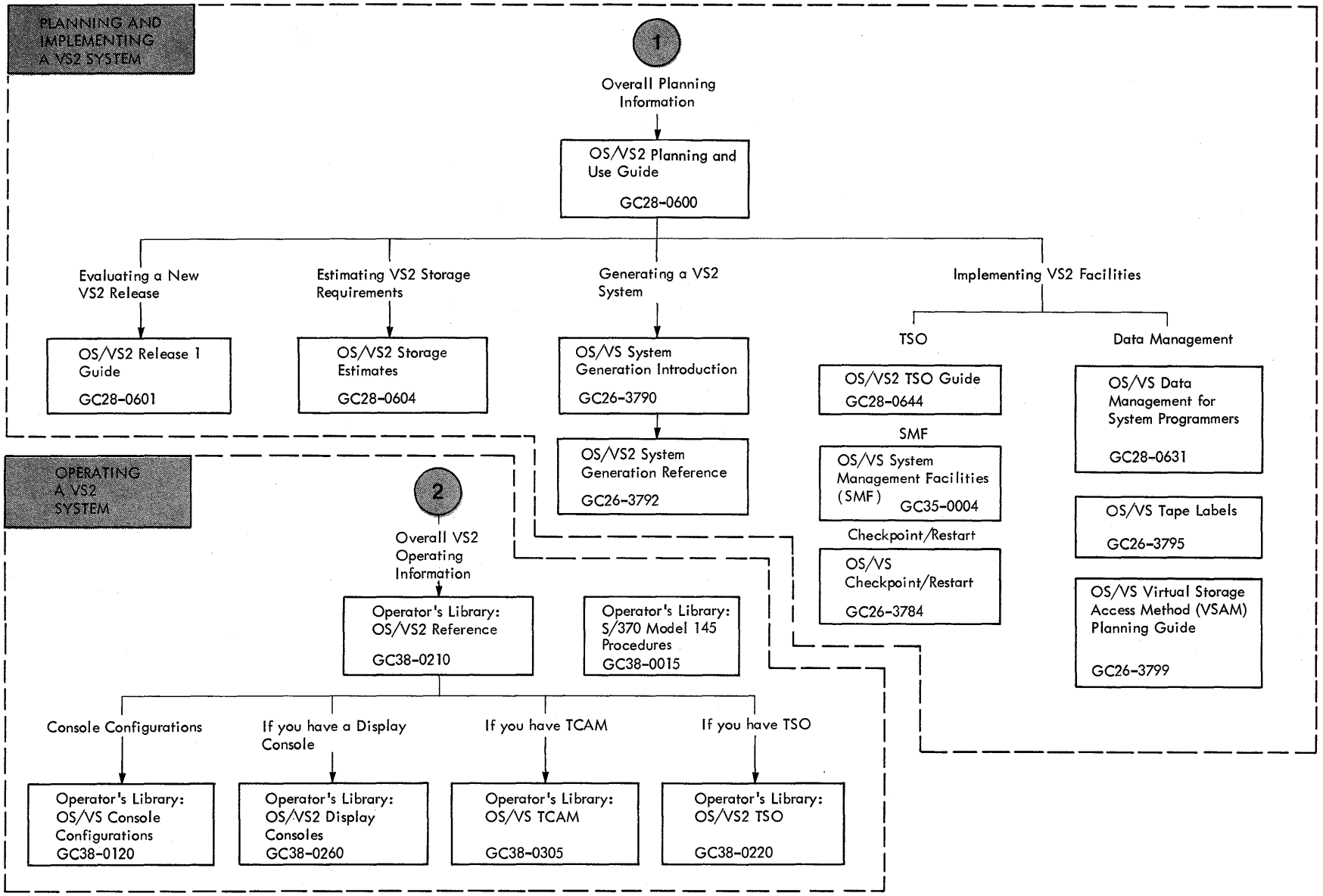
3411 Control Unit

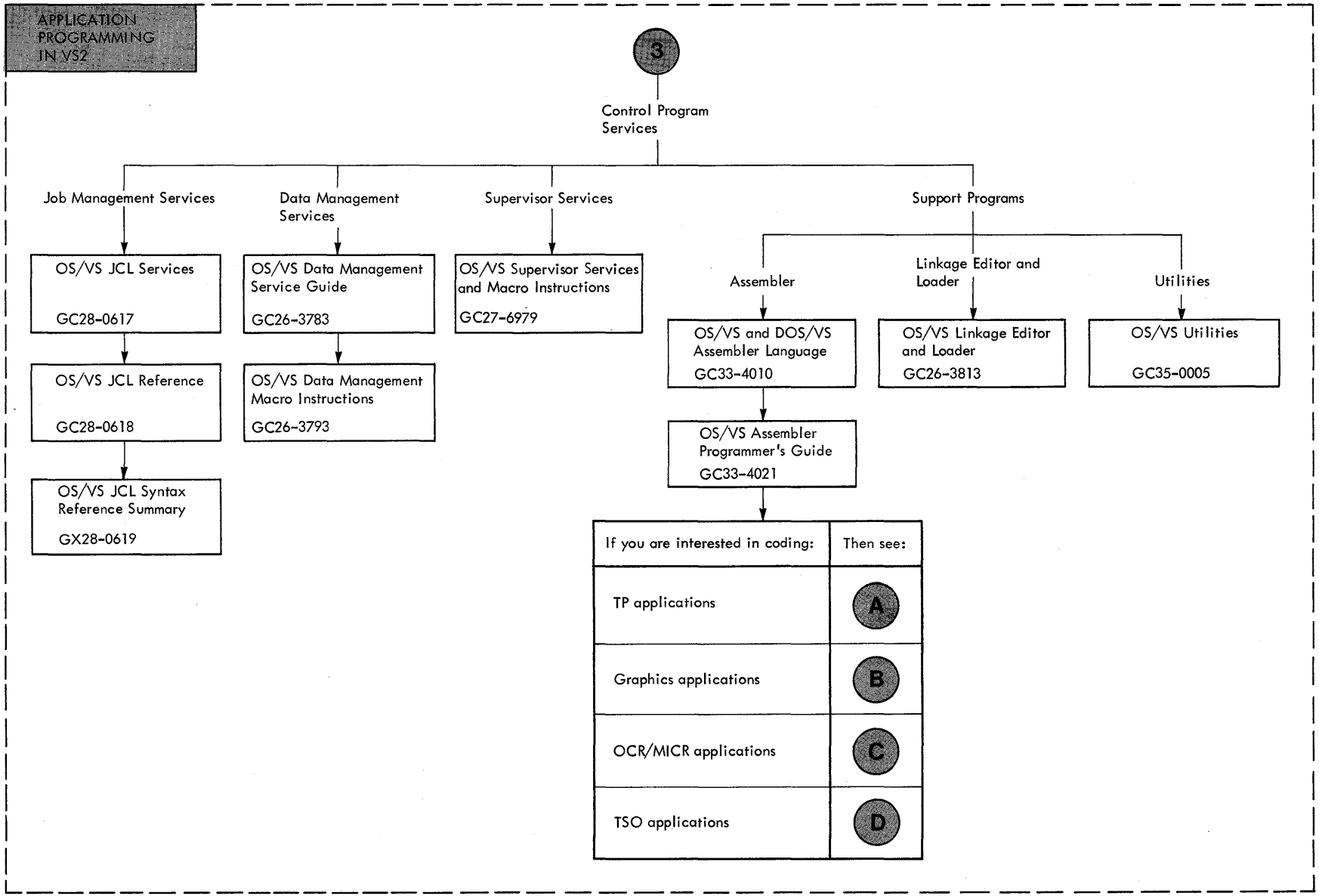
EC 733733

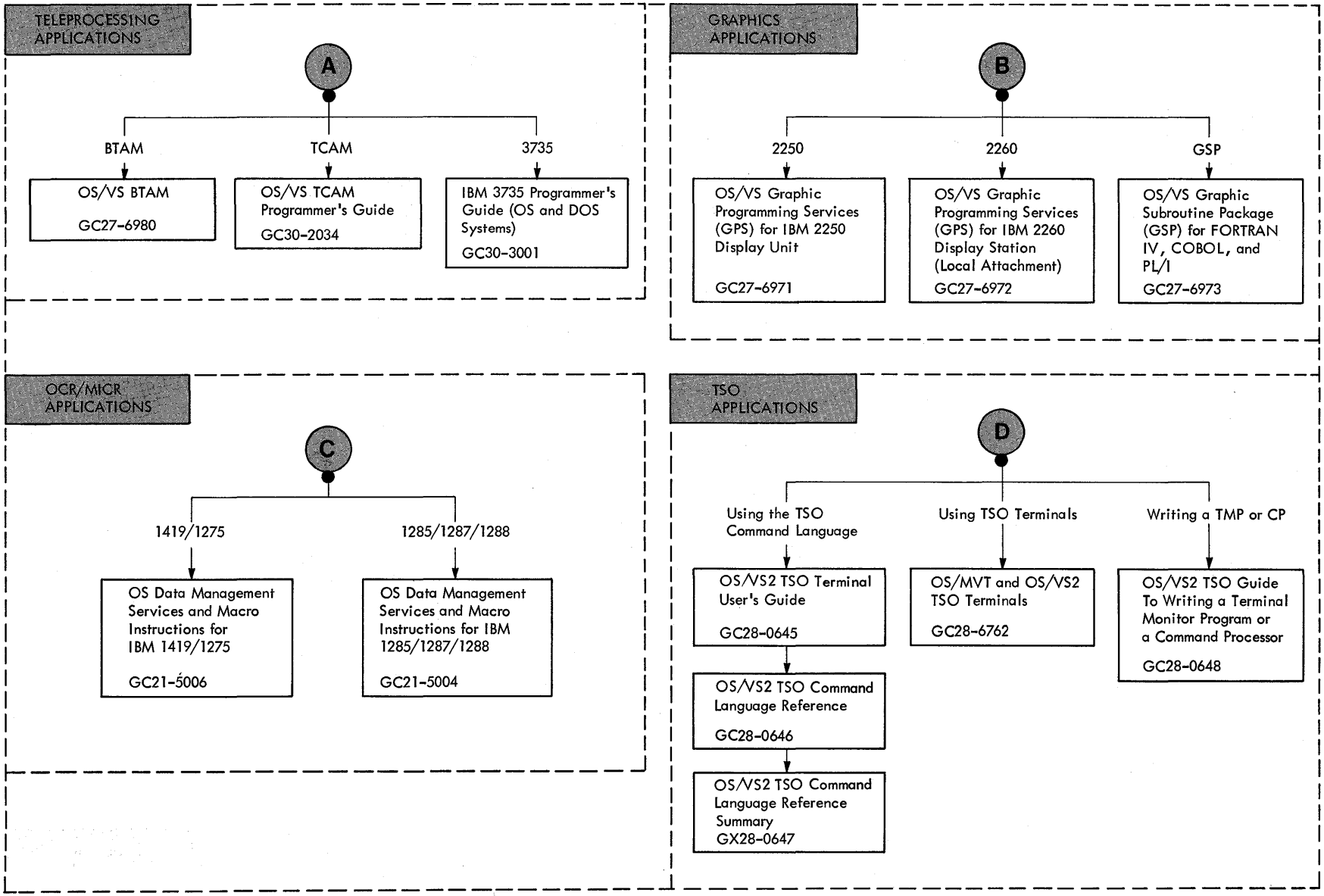
The following chart shows OS/VS2 publications arranged according to user application: Following the chart is a list of OS/VS2 publications with the appropriate order numbers and TNL numbers, if any.



IF YOU ARE INTERESTED IN:	THEN SEE:
PLANNING AND IMPLEMENTING A VS2 SYSTEM	1
OPERATING A VS2 SYSTEM	2
PROGRAMMING APPLICATIONS IN A VS2 SYSTEM	3
PROBLEM DETERMINATION AIDS IN VS2	4
MAINTAINING OR MODIFYING A VS2 SYSTEM	5


PLANNING AND IMPLEMENTING A VS2 SYSTEM
1
Overall Planning Information
OS/VS2 Planning and Use Guide
GC28-0600
Evaluating a New VS2 Release
Estimating VS2 Storage Requirements
Generating a VS2 System
Implementing VS2 Facilities
OS/VS2 Release 1 Guide
GC28-0601
OS/VS2 Storage Estimates
GC28-0604
OS/VS System Generation Introduction
GC26-3790
OS/VS2 System Generation Reference
GC26-3792
TSO
Data Management
OS/VS2 TSO Guide
GC28-0644
SMF
OS/VS System Management Facilities (SMF)
GC35-0004
Checkpoint/Restart
OS/VS Checkpoint/Restart
GC26-3784
OS/VS Data Management for System Programmers
GC28-0631
OS/VS Tape Labels
GC26-3795
OS/VS Virtual Storage Access Method (VSAM) Planning Guide
GC26-3799
OPERATING A VS2 SYSTEM
2
Overall VS2 Operating Information
Operator's Library: OS/VS2 Reference
GC38-0210
Operator's Library: S/370 Model 145 Procedures
GC38-0015
Console Configurations
If you have a Display Console
If you have TCAM
If you have TSO
Operator's Library: OS/VS Console Configurations
GC38-0120
Operator's Library: OS/VS2 Display Consoles
GC38-0260
Operator's Library: OS/VS TCAM
GC38-0305
Operator's Library: OS/VS2 TSO
GC38-0220


APPLICATION PROGRAMMING IN VS2
3
Control Program Services
Job Management Services
Data Management Services
Supervisor Services
Support Programs
OS/VS JCL Services
GC28-0617
OS/VS JCL Reference
GC28-0618
OS/VS JCL Syntax Reference Summary
GX28-0619
OS/VS Data Management Service Guide
GC26-3783
OS/VS Data Management Macro Instructions
GC26-3793
OS/VS Supervisor Services and Macro Instructions
GC27-6979
Assembler
Linkage Editor and Loader
Utilities
OS/VS and DOS/VS Assembler Language
GC33-4010
OS/VS Linkage Editor and Loader
GC26-3813
OS/VS Utilities
GC35-0005
OS/VS Assembler Programmer's Guide
GC33-4021
If you are interested in coding:
Then see:
TP applications
A
Graphics applications
B
OCR/MICR applications
C
TSO applications
D


TELEPROCESSING APPLICATIONS
A
BTAM
TCAM
3735
OS/VS BTAM
GC27-6980
OS/VS TCAM Programmer's Guide
GC30-2034
IBM 3735 Programmer's Guide (OS and DOS Systems)
GC30-3001
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B
2250
2260
GSP
OS/VS Graphic Programming Services (GPS) for IBM 2250 Display Unit
GC27-6971
OS/VS Graphic Programming Services (GPS) for IBM 2260 Display Station (Local Attachment)
GC27-6972
OS/VS Graphic Subroutine Package (GSP) for FORTRAN IV, COBOL, and PL/I
GC27-6973
OCR/MICR APPLICATIONS
C
1419/1275
1285/1287/1288
OS Data Management Services and Macro Instructions for IBM 1419/1275
GC21-5006
OS Data Management Services and Macro Instructions for IBM 1285/1287/1288
GC21-5004
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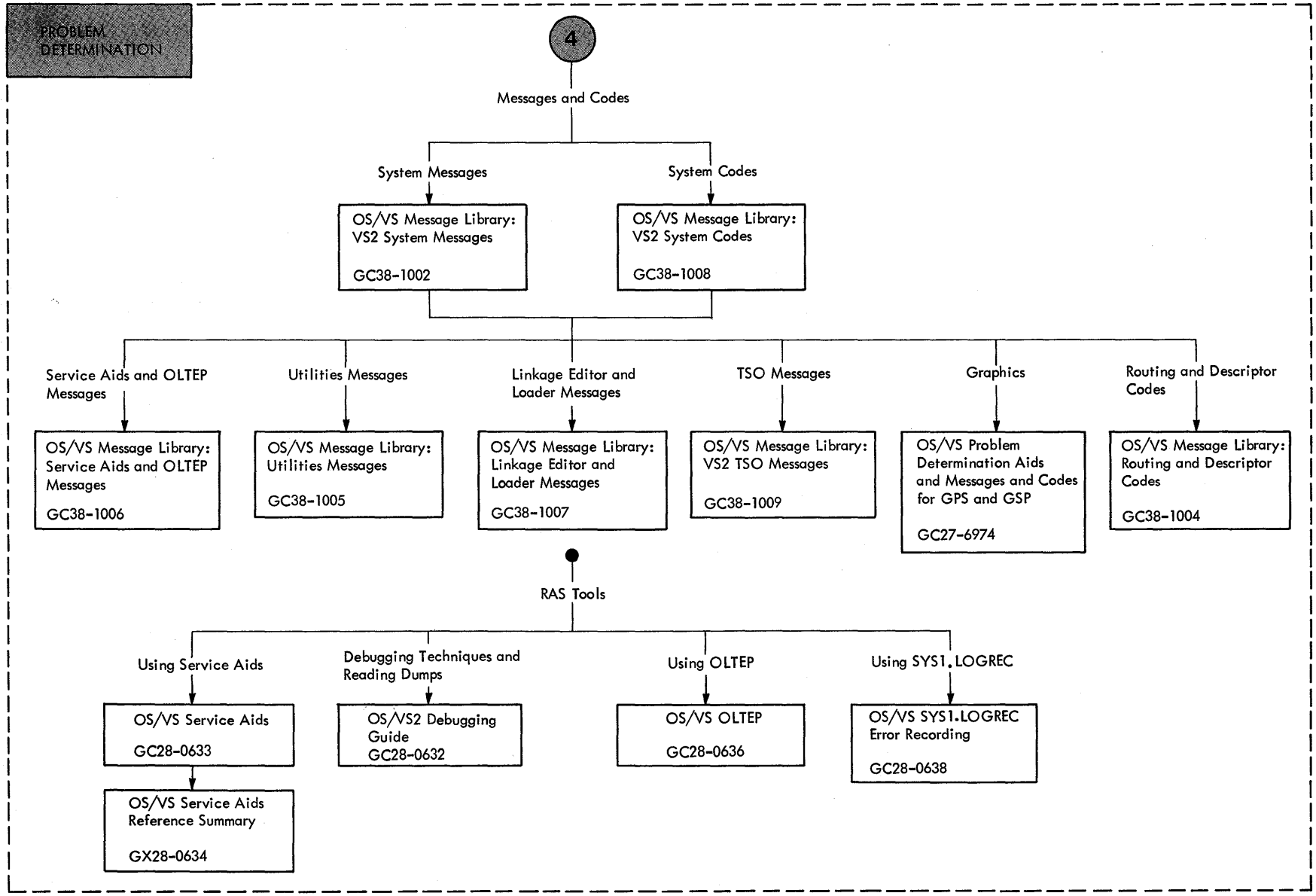
Using the TSO Command Language
Using TSO Terminals
Writing a TMP or CP
OS/VS2 TSO Terminal User's Guide
GC28-0645
OS/MVT and OS/VS2 TSO Terminals
GC28-6762
OS/VS2 TSO Guide To Writing a Terminal Monitor Program or a Command Processor
GC28-0648
OS/VS2 TSO Command Language Reference
GC28-0646
OS/VS2 TSO Command Language Reference Summary
GX28-0647


PROBLEM DETERMINATION
4
Messages and Codes
System Messages
System Codes
OS/VS Message Library: VS2 System Messages
GC38-1002
OS/VS Message Library: VS2 System Codes
GC38-1008
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Utilities Messages
Linkage Editor and Loader Messages
TSO Messages
Graphics
Routing and Descriptor Codes
OS/VS Message Library: Service Aids and OLTEP Messages
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OS/VS Message Library: Utilities Messages
GC38-1005
OS/VS Message Library: Linkage Editor and Loader Messages
GC38-1007
OS/VS Message Library: VS2 TSO Messages
GC38-1009
OS/VS Problem Determination Aids and Messages and Codes for GPS and GSP
GC27-6974
OS/VS Message Library: Routing and Descriptor Codes
GC38-1004
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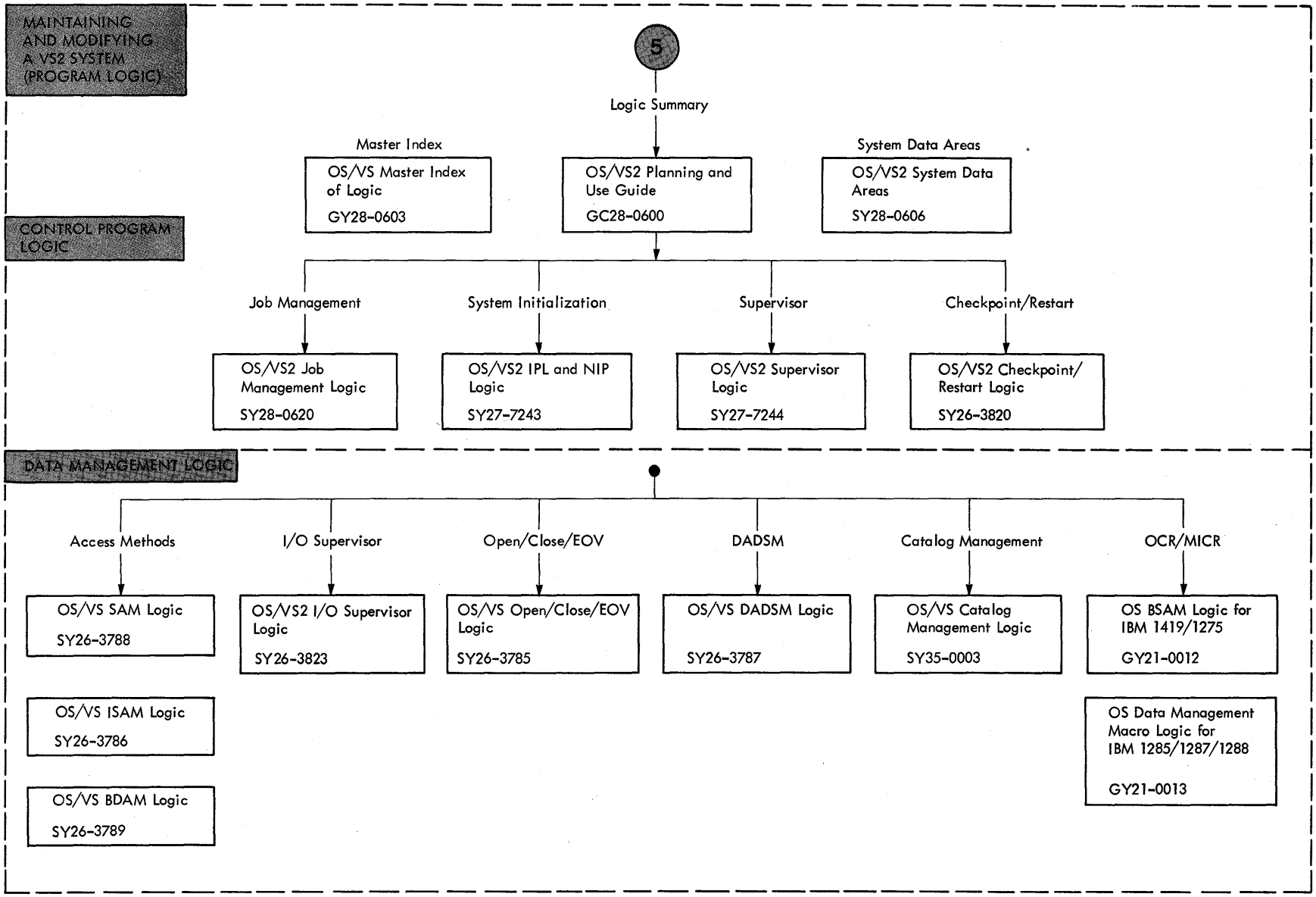
Using OLTEP
Using SYS1.LOGREC
OS/VS Service Aids
GC28-0633
OS/VS2 Debugging Guide
GC28-0632
OS/VS OLTEP
GC28-0636
OS/VS SYS1.LOGREC Error Recording
GC28-0638
OS/VS Service Aids Reference Summary
GX28-0634


MAINTAINING AND MODIFYING A VS2 SYSTEM (PROGRAM LOGIC)
5
Logic Summary
Master Index
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GY28-0603
OS/VS2 Planning and Use Guide
GC28-0600
System Data Areas
OS/VS2 System Data Areas
SY28-0606
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Job Management
System Initialization
Supervisor
Checkpoint/Restart
OS/VS2 Job Management Logic
SY28-0620
OS/VS2 IPL and NIP Logic
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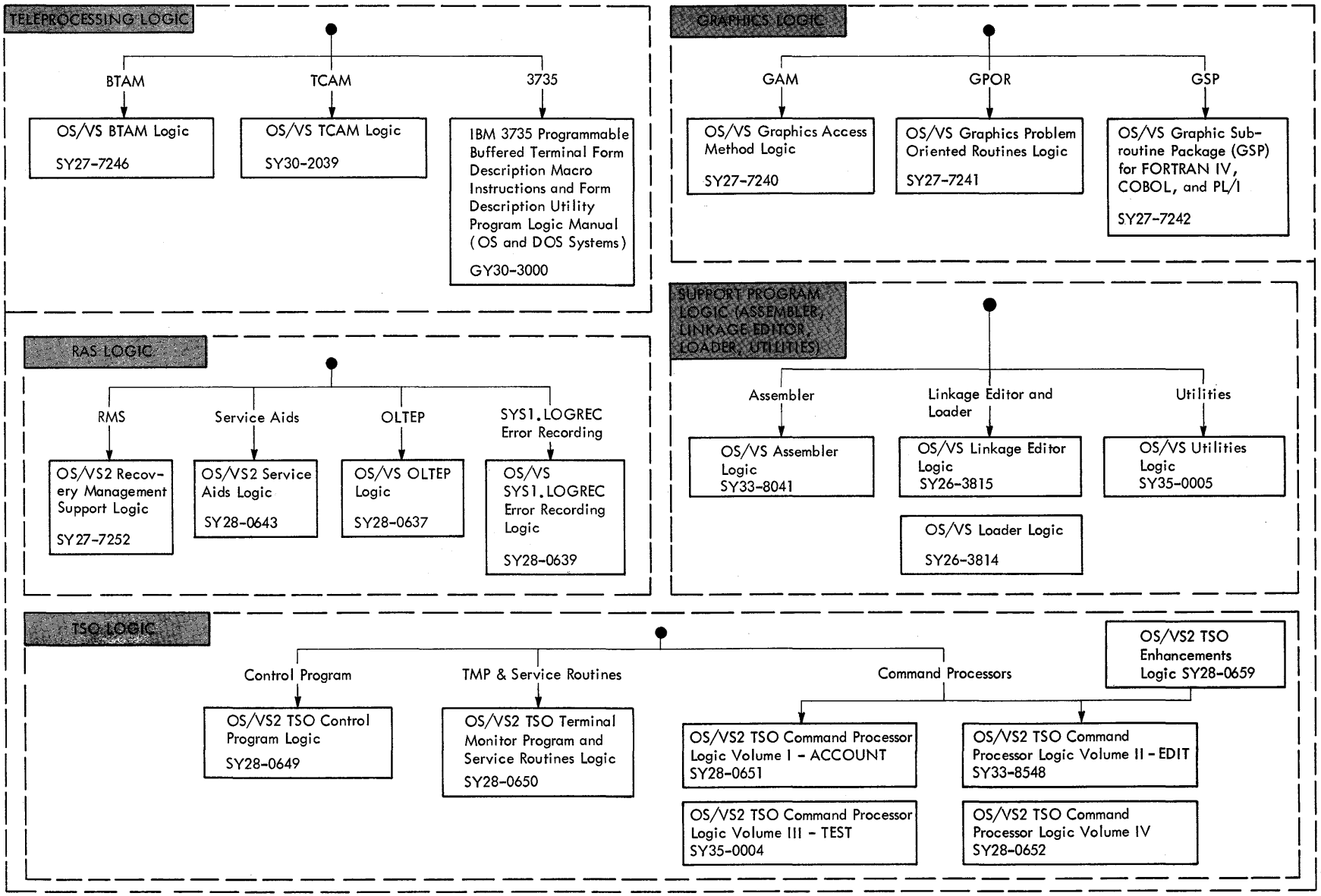
SY26-3785
OS/VS DADSM Logic
SY26-3787
OS/VS Catalog Management Logic
SY35-0003
OS BSAM Logic for IBM 1419/1275
GY21-0012
OS/VS ISAM Logic
SY26-3786
OS Data Management Macro Logic for IBM 1285/1287/1288
GY21-0013
OS/VS BDAM Logic
SY26-3789


TELEPROCESSING LOGIC
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SY27-7246
OS/VS TCAM Logic
SY30-2039
IBM 3735 Programmable Buffered Terminal Form Description Macro Instructions and Form Description Utility Program Logic Manual (OS and DOS Systems)
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SYS1.LOGREC Error Recording
OS/VS2 Recovery Management Support Logic
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SY28-0637
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SY28-0639
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OS/VS Linkage Editor Logic
SY26-3815
OS/VS Utilities Logic
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OS/VS2 TSO Control Program Logic
SY28-0649
OS/VS2 TSO Terminal Monitor Program and Service Routines Logic
SY28-0650
OS/VS2 TSO Command Processor Logic Volume I - ACCOUNT
SY28-0651
OS/VS2 TSO Command Processor Logic Volume II - EDIT
SY33-8548
OS/VS2 TSO Command Processor Logic Volume III - TEST
SY35-0004
OS/VS2 TSO Command Processor Logic Volume IV
SY28-0652

Planning and Implementing a VS2 System	Base Order Number	Applicable TNLs
OS/VS2 Planning and Use Guide	GC28-0600-2	None
OS/VS2 Release 1.6 Guide	GC28-0601-1	None
OS/VS2 Storage Estimates	GC28-0604-0	None
OS/VS2 System Generation Introduction	GC26-3790-1	None
OS/VS2 System Generation Reference	GC26-3792-1	None
OS/VS2 TSO Guide	GC28-0644-0	None
OS/VS System Management Facilities (SMF)	GC35-0004-3	None
OS/VS Checkpoint/Restart	GC26-3784-1	GN26-0754
OS/VS Data Management for System Programmers	GC28-0631-1	GN26-0759
OS/VS Tape Labels	GC26-3795-0	GN26-0746,GN26-0747
OS/VS Virtual Storage Access Method (VSAM) Planning Guide	GC26-3799-0	None
OS TCAM Concepts and Facilities	GC30-2022-1	None
Operating a VS2 System		
Operator's Library: OS/VS2 Reference	GC38-0210-0	None
Operator's Library: OS/VS Console Configurations	GC38-0120-2	GN24-5458
Operator's Library: OS/VS2 Display Consoles	GC38-0260-0	None
Operator's Library: OS/VS TCAM	GC38-0305-0	None
Operator's Library: OS/VS2 TSO	GC38-0220-0	None
Operator's Library: S/370 Model 145 Procedures	GC38-0015-1	None
Application Programming in VS2		
OS/VS Programmer's Reference Digest	GC24-5091-1	None
OS/VS JCL Services	GC28-0617-2	None
OS/VS JCL Reference	GC28-0618-1	GN28-2539
OS/VS JCL Syntax Reference Summary	GX28-0619-1	None
OS/VS Data Management Services Guide	GC26-3783-1	GN26-0749
OS/VS Data Management Macro Instructions	GC26-3793-1	GN26-0748
OS/VS Supervisor Services and Macro Instructions	GC27-6979-1	GN27-1400,GN27-1405
OS/VS and DOS/VS Assembler Language	GC33-4010-0	GN33-8145,GN33-8148
OS/VS Assembler Programmer's Guide	GC33-4021-0	GN33-8146,GN33-8150
OS/VS Linkage Editor and Loader	GC25-3813-0	GN26-0752,GN26-0638
OS/VS Utilities	GC35-0005-1	None
Teleprocessing Applications		
OS/VS BTAM	GC27-6980-1	None
OS/VS TCAM Programmer's Guide	GC30-2034-2	None
OS TCAM User's Guide	GC30-2025-1	None
IBM 3735 Programmer's Guide (OS and DOS Systems)	GC30-3001-2	GN30-3003,GN30-3004
Graphics Applications		
OS/VS Graphic Programming Services (GPS) for IBM 2250 Display Unit	GC27-6971-0	GN27-1391
OS/VS Graphic Programming Services (GPS) for IBM 2260 Display Station (Local Attachment)	GC27-6972-0	GN27-1392
OS/VS Graphic Subroutine Package (GSP) for FORTRAN IV, COBOL, and PL/I	GC27-6973-0	GN27-1393
OCR/MICR Applications		
OS Data Management Services and Macro Instructions for IBM 1419/1275	GC21-5006-2	GN26-0744,GN26-0755
OS Data Management Services and Macro Instructions for IBM 1285/1287/1288	GC21-5004-2	GN21-5147,GN21-7658

TSO Applications	Base Order Number	Applicable TNLs
OS/VS2 TSO Terminal User's Guide	GC28-0645-0	None
OS/VS2 TSO Command Language Reference	GC28-0646-0	GC28-2537
OS/VS2 TSO Command Language Reference Summary	GX28-0647-0	None
OS/MVT and OS/VS2 TSO Terminals	GC28-6762-1	None
OS/VS2 TSO Guide to Writing a Terminal Monitor Program or a Command Processor	GC28-0648-0	None
Problem Determination		
OS/VS Message Library: VS2 System Messages	GC38-1002-0	GN28-2557
OS/VS Message Library: VS2 System Codes	GC38-1008-0	GN28-2558
OS/VS Message Library: Service Aids and OLTEP Messages	GC38-1006-2	None
OS/VS Message Library: Utilities Messages	GC38-1005-2	None
OS/VS Message Library: Linkage Editor and Loader Messages	GC38-1007-1	GN26-0753
OS/VS Message Library: VS2 TSO Messages	GC38-1009-0	GN28-2559
OS/VS Problem Determination Aids and Messages and Codes for GPS and GSP	GC27-6974-0	GN27-1344
OS/VS Message Library: Routing and Descriptor Codes	GC38-1004-2	None
OS/VS Service Aids	GC28-0633-1	GN28-2540
OS/VS Service Aids Reference Summary	GX28-0634-1	None
OS/VS2 Debugging Guide	GC28-0632-0	GN28-2560
OS/VS OLTEP	GC28-0636-1	None
OS/VS SYS1.LOGREC Error Recording	GC28-0638-1	None
OS/VS Dynamic Support System	GC28-0640-0	None
Maintaining and Modifying a VS2 System (Program Logic)		
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OS/VS Master Index of Logic	GY28-0603-0	None
OS/VS2 Planning and Use Guide	GC28-0600-2	None
OS/VS2 Job Management Logic	SY28-0620-0	None
OS/VS2 IPL and NIP Logic	SY27-7243-0	SN27-1406
OS/VS2 Supervisor Logic	SY27-7244-0	SN27-1403
OS/VS2 Checkpoint/Restart Logic	SY26-3820-0	None
OS/VS2 System Data Areas	SY28-0606-0	None
Data Management Logic		
OS/VS SAM Logic	SY26-3788-1	SN26-8028
OS/VS ISAM Logic	SY26-3786-1	SN26-8030
OS/VS BDAM Logic	SY26-3789-1	SN26-8029
OS/VS2 I/O Supervisor Logic	SY26-3823-2	None
OS/VS Open/Close/EOV Logic	SY26-3785-2	None
OS/VS DADSM Logic	SY26-3787-2	SN26-8023
OS/VS Catalog Management Logic	SY35-0003-2	None
OS BSAM Logic for IBM 1419/1275	GY21-0012-1	GN26-8026,GN26-8034
OS Data Management Macro Logic for IBM 1285/1287/1288	GY21-0013-1	GN21-5169,GN21-7659
Teleprocessing Logic		
OS/VS BTAM Logic	SY27-7246-0	SN27-1398,SN27-1401
OS/VS TCAM Logic	SY30-2039-2	None
IBM 3735 Programmable Buffered Terminal Form Description Macro Instructions and Form Description Utility Program Logic Manual OS and DOS Systems	GY30-3000-0	GY30-3500

Graphics Logic	Base Order Number	Applicable TNLs
OS/VS Graphics Access Method Logic	SY27-7240-0	SN27-1389
OS/VS Graphics Problem Oriented Routines Logic	SY27-7241-0	None
OS/VS Graphic Subroutine Package (GSP) for FORTRAN IV, COBOL, and PL/I	SY27-7242-0	SN27-1390
RAS Logic		
OS/VS2 Recovery Management Support Logic	SY27-7239-1	SN27-1407
OS/VS2 Service Aids Logic	SY28-0643-0	None
OS/VS OLTEP Logic	SY28-0637-1	None
OS/VS SYS1.LOGREC Error Recording Logic	SY28-0639-1	None
OS/VS Dynamic Support System Logic	SY28-0641-0	None
Support Program Logic (Assembler, Linkage Editor, Loader and Utilities)		
OS/VS Assembler Logic	SY33-8041-0	SN33-8152
OS/VS Linkage Editor Logic	SY26-3815-0	SN26-8020,SN26-8033
OS/VS Loader Logic	SY26-3814-0	SN26-8022,SN26-8032
OS/VS Utilities Logic	SY35-0005-0	SN35-0008
TSO Logic		
OS/VS2 TSO Control Program Logic	SY28-0649-0	None
OS/VS2 TSO Terminal Monitor Program and Service Routines Logic	SY28-0650-0	None
OS/VS2 TSO Command Processor Logic Volume I - ACCOUNT	SY28-0651-0	None
OS/VS2 TSO Command Processor Logic Volume II - EDIT	SY33-8548-0	None
OS/VS2 TSO Command Processor Logic Volume III - TEST	SY35-0004-0	None
OS/VS2 TSO Command Processor Logic Volume IV	SY28-0652-0	None
OS/VS2 TSO Enhancements Logic	SY28-0659-0	None

OS/VS2 Release Guide
GC28-0601-1

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Clarity Accuracy Completeness Organization Index Figures Examples Legibility

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Number of latest Technical Newsletter (if any) concerning this publication: _____
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