A Basic Introduction to Resource Definition in IMS - The IMS Stage Gen

Charles Ryan

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What is in this Presentation

- The IMS SYSGEN
  - Any manuals referenced are for IMS V710
  - All IMSGEN macros are described in the manual - Installation Volume 2
  - Useful tables to refer to
    - Chapter 1   Table 2   - Use of System Definition Macros
    - Chapter 2   Table 12 - Selecting the Appropriate IMS System Definition
    - Chapter 2   Figure 3 - Hierarchy of Stage 1 System Definition Macros
    - Chapter 3   Table 14 - Maximum occurrences of Each IMS System Definition Macro

BASICS

- The following pages are a summary of the various types of SYSGEN and the basic steps in the SYSGEN process
- This is covered in more detail in (SESSION S43)

BASICS

- Types of SYSGEN
  - ► MODBLKS
  - ► CTLBLKS
  - ► NUCLEUS
  - ► ON-LINE
  - ► ALL
  - ► MSVERIFY
  - ► BATCH

BASICS

- Selecting the correct type of SYSGEN to run
  - ► Chapter 2, Table 11 - Types of System Definition
  - ► Chapter 2, Table 12 - Macro Table - Selecting the Appropriate IMS System Definition

BASICS

► The basic steps in a SYSGEN

- Stage 1 - A collection of SYSGEN Macros
- Stage 2 - The result of assembling the STAGE1 SYSGEN macros
- JCLIN - Required step for SMP/E to be able to apply maintenance (uses STAGE 2 input)
- Re-apply unaccepted maintenance - Any USERMODs or other maintenance in APPLY status must be re-applied
- Security Gen - IMS Security Maintenance Utility (SMU) must be run after any SYSGEN

GENERAL SUGGESTIONS

- Keep an organized comment section in the STAGE 1 member
  - ► When were the changes made
  - ► What changes were made for each IMS GEN
  - ► What type of IMS GEN was run
  - ► Who made the changes

```
*************************************************************************
* XYZ COMPANY - IMSTEST SYSTEM
*
* DATE OF SYSGEN   : SEPTEMBER 21, 2001
* TYPE OF SYSGEN   : MODBLKS
*  CHANGE BY    DATE SOURCE CHANGED    DESCRIPTION
* ---------    ------------------    ------------------------------------
*    CR           SEPTEMBER 5, 2001    ADD FOLLOWING DATABASE MACROS FOR
*                                      DEPOSIT SYSTEM
*                                      ACCTPRIM, ACCTINDX
*    CR           SEPTEMBER 7, 2001    ADD FOLLOWING DEPOSIT SYSTEM
*                                      APPLCTN AND TRANSACT MACROS
*
*************************************************************************
```

GENERAL SUGGESTIONS

- Keep the STAGE 1 member organized
  - ► Macros may be placed in different orders - stick to a plan
  - ► Comment the general information in front of each section
  - ► You may wish to place further comments on individual entries

```
*********************************************************************
*    IVP DATABASES DEFINITION
*********************************************************************
         DATABASE DBD=IVPDB1,ACCESS=UP                HIDAM/OSAM
         DATABASE INDEX,DBD=IVPDB1I,ACCESS=UP          HIDAM/VSAM INDEX
         DATABASE DBD=IVPDB2,ACCESS=UP                 HDAM/VSAM
         DATABASE DBD=IVPDB2,ACCESS=UP                 HDAM/VSAM
         DATABASE DBD=IVPDB3,ACCESS=UP                 DEDB
         DATABASE DBD=IVPDB4                           MSDB
```

SYSGEN Macros

■ An introduction to the SYSGEN Macros

  ► Obsolete macros

  ► General configuration macros

  ► Applications, Databases, Transactions

  ► Communications

SYSGEN Macros

- **Obsolete Macros (IMS V610)**
  - ► SPAREA - If present in STAGE 1 it is ignored
- **NOTE:**
  - ► Certain parameters may be obsolete on currently used macros.
  - ► Such parameters will generally be accepted and syntax checked for compatibility with prior releases of IMS.

SYSGEN Macros

- Basic Configuration
  - ► IMSCTRL

Gen Type

All, MODBLKS, NUCLEUS, ETC.

Class of Gen

DB/DC DBCTL, DCCTL

```
IMSCTRL   SYSTEM=(VS/2,(CTLBLKS,DB/DC),390),      X
          IRLM=YES,                               X
          IRLMNM=IRLM,                            X
          CMDCHAR=,                               X
          DBRC=(YES,YES),                         X
          DBRCNM=IVP71RC1,                        X
          DLINM=IVP71DL1,                         X
          DCLWA=YES,                              X
          IMSID=IVP1,                             X
          NAMECHK=(YES,S1),                       X
          MAXREGN=(005,512K,A,A),                 X
          MCS=(2,7),                              X
          DESC=7,                                 X
          ETOFEAT=(YES,YES,ALL),                  X
          MAXCLAS=016
```
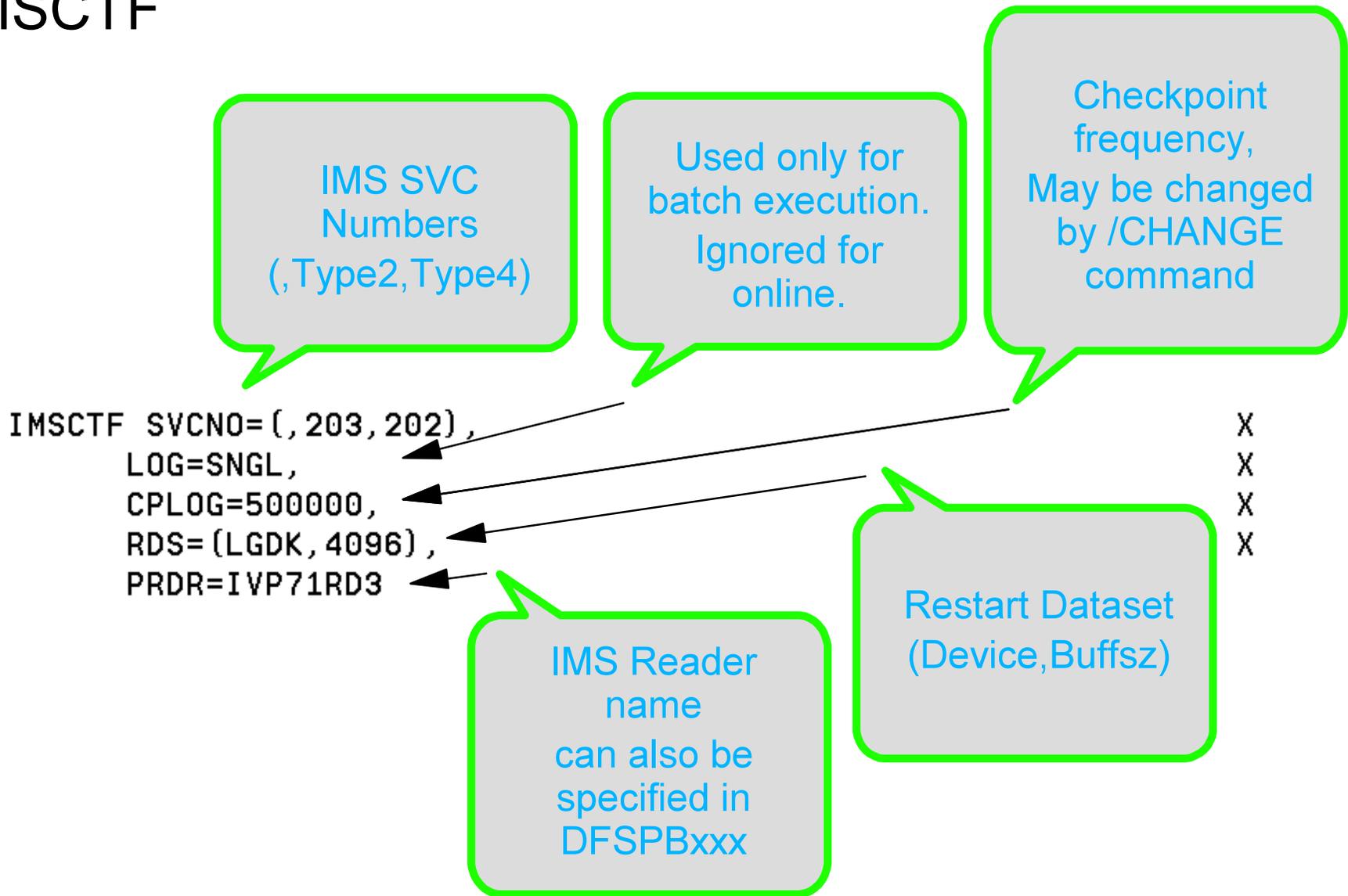
Specify names for DBRC and DLI procedures

SYSGEN Macros

- Basic Configuration
  - ► IMSCTF

IMS SVC
Numbers
(,Type2,Type4)

Used only for
batch execution.
Ignored for
online.

Checkpoint
frequency,
May be changed
by /CHANGE
command

```
IMSCTF SVCNO=(,203,202),                    X
       LOG=SNGL,                            X
       CPLOG=500000,                        X
       RDS=(LGDK,4096),                     X
       PRDR=IVP71RD3
```

IMS Reader
name
can also be
specified in
DFSPBxxx

Restart Dataset
(Device,Buffsz)

IBM.

SYSGEN Macros

- Basic Configuration
  - ►BUFPOOLS
    - – Specifies default storage buffer pool sizes for DB/DC and DBCTL environments.
    - – Detailed information in manual (Installation Volume 2)
    - – Many of these value may also be specified in DFSPBxxx or IMS Procedure

```
BUFPOOLS PSB=24000,                           X
         DMB=24000,                           X
         SASPSB=(4000,20000),                 X
         PSBW=12000
```

SYSGEN Macros

- **Basic Configuration**
  - ► FPCTRL
    - – Used only if Fast Path is to be used on this system
    - – If used, this macro must appear between IMSCTRL and IMSGEN macros
    - – Detailed information in manual (Installation Volume 2)
    - – NOTE: To remove Fast Path from a system requires an ON-LINE or ALL SYSGEN. After SYSGEN, SMPE TARGET zone should be rebuilt (INFOAPAR II08928)

```
FPCTRL OTHREAD=5,                                          X
       BFALLOC=(10,50,2048)
```

SYSGEN Macros

- Basic Configuration
  - MSGQUEUE
    - LGDK is a generic device specification for 3375, 3390, 3390 and future devices

```
MSGQUEUE  DSETS=(LGDK,LGDK,LGDK),                    X
          RECLNG=(336,3360),                         X
          BUFFERS=(5,6720),                          X
          SHUTDWN=100
```

If number of available records in any queue dataset reaches this point, shutdown will occur (ABENDU0756)

Specify Device Type for message queue datasets

QBLKS,SHMSG,LGMSG

SYSGEN Macros

- **Basic Configuration**
  - ► SECURITY
    - – Specifies security features to be in effect during IMS execution, unless overridden at system initialization.
    - – If present, overrides any security options specified on either COMM or IMSGEN macros.
    - – Detailed information in manual (Installation Volume 2)

```
SECURITY TYPE=(AGNEXIT,NORACTRM,NOTRANEX,NOSIGNEX),          X
         SECLVL=(NOTRAN,NOSIGN),                             X
         TERMNL=YES,                                         X
         SECCNT=2,                                           X
         PASSWD=YES,                                         X
         TRANCMD=YES
```

SYSGEN Macros

- Basic Configuration
  - IMSGEN
    - Specifies the assembler and linkage editor data sets and options
    - Also specifies system definition output options and features
    - Must be the last macro in the STAGE 1 input and followed by assembler END statement
    - Detailed information in manual (Installation Volume 2)

SYSGEN Macros

- Basic Configuration
  - ► IMSGEN (Sample Part 1)

```
IMSGEN ASM=(HLASM,SYSLIN),ASMPRT=OFF,                       X
       LKPRT=(XREF,LIST),LKSIZE=(880K,63K),LKRGN=900K,      X
       SUFFIX=I,                                            X
       SURVEY=YES,                                          X
       NODE=(IVPEXE71,                                      X
       J93.I71A27.DBDC,                                     X
       J93.I71A27.DBDC),                                    X
       OBJDSET=J93.I71A27.DBDC.OBJDSET,                     X
       PROCLIB=YES,                                         X
       USERLIB=J93.I71A27.DBDC.ADFSLOAD,                    X
       UMAC0=,                                              X
       MACSYS=SYS1.MACLIB,                                  X
```

SYSGEN Macros

- Basic Configuration
  - ▶ IMSGEN (Sample Part 2)

```
              MODGEN=SYS1.MODGEN,                                              >
              UMAC1=,                                                          >
              UMAC2=,                                                          >
              UMAC3=,                                                          >
              ONEJOB=(YES,YES),                                               >
              JCL=(IMSGEN,                                                     >
              ACTINFO1,                                                        >
              'PGMRNAME',H,                                                    >
              (CLASS=A,MSGLEVEL=(1,1),REGION=32M,NOTIFY=JBUTTER),             >
              (USER=JBUTTER)),                                                 >
              SCL=(,,(TIME=600)),                                              >
              UJCL1=,                                                          >
              UJCL2=,                                                          >
              UJCL3=,                                                          >
              UJCL4=,                                                          >
              UJCL5=
        END  ,
```

SYSGEN Macros

- **Applications and Databases**
  - ► Define what databases, application programs, and transactions will be used by this IMS system
  - ► Many of the following items may be changed with a MODBLKS gen and Online Change
  - ► The following pages are for non-Fast Path definitions

SYSGEN Macros

- Applications and Databases
  - ► DATABASE Macro

```
DATABASE DBD=IVPDB2,ACCESS=UP,RESIDENT          COMMENTS...
```

DBDNAME
of
database

Type of Access
EX,UP,RD,RO

May be changed
with
/START DB
command

SYSGEN Macros

- Applications and Databases
  - ► APPLCTN Macro
    - Transaction Class may be specified for transactions using this program
    - PGMTYPE=(TP,,3) specifies transactions will run as Class 3
    - If CLASS is specified on TRANSACT Macro this is ignored
    - LANG= parm is only used when GPSB is specified

```
APPLCTN PSB=aaaaaaaa,PGMTYPE=BATCH            BMP Program
APPLCTN PSB=bbbbbbbb,PGMTYPE=(TP,,1)          TP  Program
APPLCTN GPSB=IVPREXX,PGMTYPE=TP,LANG=ASSEM    REXXTDLI Sample
```

SYSGEN Macros

- Applications and Databases
  - APPLCTN Macro - other parameters
    - RESIDENT | DOPT
      - RESIDENT   PSB to be made resident at system initialization
      - DOPT   PSB to be loaded each time a program is used
    - GPSB   Generated PSB
    - SYSID   For multiple IMS system configuration
    - SCHDTYP   SERIAL | PARALLEL
      - SERIAL   Program may only run in one region at a time
      - PARALLEL   Program may run in more than one region

Applications and Databases

- The TRANSACT Macro specifies transaction codes for use with the prior APPLCTN macro
  - ► More than one TRANSACT Macro may follow an APPLCTN Macro
  - ► Where options are specified on both APPLCTN and TRANSACT Macro - TRANSACT Macro specification is used
  - ► Detailed information in manual (Installation Volume 2)
  - ► Following page shows some examples

Applications and Databases

■ Some examples

```
APPLCTN   PSB=DFSSAM03
TRANSACT CODE=DSPINV,PRTY=(7,10,2),INQUIRY=YES,MODE=SNGL
SPACE 2
APPLCTN   PSB=DFSSAM04
TRANSACT CODE=ADDPART,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
TRANSACT CODE=ADDINV,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
TRANSACT CODE=DLETPART,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
TRANSACT CODE=DLETINV,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
```

Transaction Code

Scheduling Priority
(normal,limit,count)

INQUIRY=NO
INQUIRY=(YES,NORECOV)
INQUIRY=(YES,RECOV)I

MODE=SNGL
MODE=MULT
Controls when database buffers are written to log.

Fast Path Definitions

- Definition of Databases, Applications and Transactions using Fast Path
  - ► Mostly similar to the above non-Fast Path examples

Fast Path Definitions

- DATABASE
  - ► Very much the same as for non Fast Path
    - – Fast Path databases will be resident regardless of RESIDENT option
    - – ACCESS=EX is not valid for Fast Path DEDB databases

```
******************************************************************************
*    FAST PATH SAMPLE DATABASES DEFINITION
******************************************************************************
        SPACE 2
        DATABASE DBD=DBFSAMD1              GENERAL LEDGER - MSDB
        DATABASE DBD=DBFSAMD2                     TELLER - MSDB
        DATABASE DBD=DBFSAMD3,ACCESS=UP CUSTOMER ACCNT - DEDB
```

Fast Path Definitions

- APPLCTN
  - ► FPATH parameter
    - – FPATH=NO - Not Fast Path exclusive
    - – FPATH=YES - Fast Path exclusive
    - – FPATH=size - Implies Fast Path exclusive
      - Determines EMH Buffer size required to run this transaction

```
APPLCTN   PSB=DBFSAMP3,PGMTYPE=(TP),FPATH=256
```

EMH Buffer Size specified

Fast Path Definitions

- RTCODE
  - ► The RTCODE macro is used one or more times with the APPLCTN macro statement that defines an IMS Fast Path application
  - ► A TRANSACT macro that specifies an IMS Fast Path exclusive transaction generates an internal RTCODE macro statement

Fast Path Definitions

- TRANSACT
  - ► Similar to non-Fast Path TRANSACT specification
    - SMU cannot define a Fast Path exclusive transaction as able to issue commands
    - Detailed information in manual (Installation Volume 2)

SYSGEN Macros

- Communications Macros
  - ► This section does not apply to DBCTL systems
  - ► Types of Communication Environments
    - – BTAM (BSAM, GAM and ARAM)
    - – Switched Communication Devices
    - – MSC - Multiple System Coupling
    - – VTAM Communications Macros
  - ► Table 2 - Use of System Definition Macros (Chapter 1)
    - – shows what macros are used for each environment
  - ► Complete coverage of this topic is beyond the scope of this presentation.

SYSGEN Macros

- Communications Macros
  - For further details, please review the following manuals
    - Administration Guide - Transaction Manager
      - Provides detailed information about how to plan, design, and define a network to be used with IMS Transaction Manager
    - Installation Volume 2 - System Definition and Tailoring
      - Provides detailed information about the syntax of each macro and its options

SYSGEN Macros

- Communications Macros
  - COMM
    - General communication options
      - Not associated with any particular terminal type
      - Always required for VTAM terminal types
      - Optional for BTAM (BSAM, GAM, ARAM) terminal types
      - May specify other options
    - Should be placed prior to any other communication macros in STAGE 1 source

SYSGEN Macros

- ## Communications Macros
  - ### COMM (Example)

Number of VTAM Receive Any buffers and size RECANY=(num,size)

VTAM APPLID specify one unless using XRF or RSR

Many options may be specified on the COMM macro

```
COMM RECANY=(5,4095),                                    X
     APPLID=IVP71CR1,                                    X
     PASSWD=IVP71CR1,                                    X
     OPTIONS=(PAGING,TIMESTAMP,MFSTEST,FMTMAST,          X
     NOUSEMSG,NOMSPEX,NOMSLEX,                            X
     VTAMAUTH,BLKREQD),                                  X
     COPYLOG=ALL
```

Control output to secondary master terminal

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SYSGEN Macros

- Communications Macros
    - ► CONFIG   configuration for a switched 3275 terminal
    - ► IDLIST   terminal security list for switched 3275

SYSGEN Macros

- **Communications Macros**
  - ► CTLUNIT   Specify 2848, 2972, and 3271 information

```
CTLUNIT ADDR=C1,MODEL=2
```

SYSGEN Macros

- **Communications Macros**
  - ► An example showing CTLUNIT and other macros

```
*****************************************************************************
*               REMOTE 3270 LINE GROUP                                      *
*               AMDDM LINE - LTERMS CTRL,SEGUNDO                             *
*****************************************************************************
         SPACE
     LINEGRP   DDNAME=DD3270R,UNITYPE=3270,CODE=EBCDIC,               X
               EDIT=(AMDDMOUT,DFSPIXT0)
     LINE      ADDR=0C9
       CTLUNIT ADDR=C1,MODEL=2
         SPACE
MSTR   TERMINAL ADDR=40,FEAT=(2,COPY,PFK,CARD,PEN),PAGDEL=YES,EDIT=YES
         NAME   T3270A
         NAME   (CTRL,MASTER)            ◄──────────────────────┐
         NAME   3TRL                                            │
         NAME   LTERM3MB                                        │
         NAME   LTERM3MC                                        │
         NAME   LTERM3MM                                        │
         TERMINAL  ADDR=C2,UNIT=3286,FEAT=2,BUFSIZE=132         │
         NAME   (SEGUNDO,SECONDARY)      ◄──────────────────────┘
         NAME   T3270P1
```

> LTERM CTRL is primary master (3270 terminal), LTERM SEGUNDO is secondary master (3286 printer)

SYSGEN Macros

- Communications Macros
  - LINEGRP
    - Refer to Customization Guide manual for details of physical terminal input and output edit exits
    - Cannot be same exit routine specified on TRANSACT macro

| DDNAME in IMS procedure | Device Type | User supplied (physical terminal output edit exit, physical terminal input edit exit) |

```
LINEGRP     DDNAME=DD2740M2,UNITYPE=2740,EDIT=(DFSCTT00,DFSPIXT0)
```

SYSGEN Macros

- Communications Macros
  - LINE
    - Any LINE macro must be followed by at least one TERMINAL macro

```
LINE   ADDR=0B3,RESP=TERM,MODEL=(2,120)
```

SYSGEN Macros

- Communications Macros
  - ► LINEGRP and LINE (Device Type 2740)

```
LINEGRP       DDNAME=DD2740M2,UNITYPE=2740,EDIT=(DFSCTTO0,DFSPIXT0)
       LINE   ADDR=0B3,RESP=TERM,MODEL=(2,120)
         TERMINAL ADDR=C5,EDIT=(YES,YES),FPBUF=120
      NAME   2740M2K
      NAME   N27402P1,EDIT=(YES,ULC)                      11/28/73
      SPACE
   TERMINAL ADDR=C6,EDIT=(YES,YES)
      NAME   2740M2L
      NAME   N27402P2,EDIT=(YES,UC)                       11/28/73
```

SYSGEN Macros

- Communications Macros
  - ► LINEGRP and LINE (SPOOL dataset example)

```
**************************************************************************
*     IVP SPOOL LINE GROUP
**************************************************************************
         LINEGRP   DDNAME=(IVPSPL1,IVPSPL2,IVPSPL3),UNITYPE=SPOOL
         LINE      BUFSIZE=166
SPOOL001   TERMINAL FEAT=AUTOSCH
         NAME   IVPSPL1
```

For SPOOL line groups, up to 20 names may be specified

UNITYPE for SPOOL dataset

SYSGEN Macros

- Communications Macros
  - Multiple Systems Coupling (MSC) Macros
    - MSPLINK
      - Defines a physical link between systems
    - MSLINK
      - Defines a logical link between systems
    - MSNAME
      - Provides a name for the remote and local systems

SYSGEN Macros

- Communications Macros
  - NAME
    - Defines a logical terminal name (LTERM) to be associated with a physical terminal (PTERM)
  - POOL
    - Defines a pool of logical terminals to be associated with a set of switched communications lines.
    - Follows all LINE macros within a switched line group.
  - SUBPOOL
    - For switched communications lines defines, defines a set of logical terminal within a POOL of logical terminals.
    - For VTAM LU6.1 devices, used between groups of NAME macro statements to LU6.1 LTERM subpools.

SYSGEN Macros

- Communications Macros
  - STATION
    - Defines physical and logical characteristics for System/3 or System/7 connection
  - TERMINAL
    - Defines physical and logical characteristics of VTAM nodes or non-VTAM terminals
  - TYPE
    - Defines the beginning of a set of communications terminals and logical terminal description macro statements which include TERMINAL and NAME.
  - VTAMPOOL
    - Required for parallel session support
    - Begins the definition of VTAM LU6.1 LTERM subpools

SYSGEN Macros

- Sample STAGE 1 source (IVP IV3C201T)

```
******  ****************************** Top of Data ******************************:
000001 *
000002 ****************************************************************************
000003 * INSTALL/IVP IMS 7.1
000004 *
000005 * SKELETON: DFSIXSC1
000006 *
000007 * FUNCTION: STAGE 1 SOURCE FOR A DBT SYSTEM
000008 ****************************************************************************
000009 *
000010 ***********************************************************@SCPYRT**
000011 *                                                                    *
000012 *          LICENSED MATERIALS - PROPERTY OF IBM                       *
000013 *                                                                    *
000014 *          "RESTRICTED MATERIALS OF IBM"                             *
000015 *                                                                    *
000016 *          5655-B01 (C) COPYRIGHT IBM CORP. 1989,1999                *
000017 *          ALL RIGHTS RESERVED.                                      *
```

Sysgen Macros

- Sample STAGE 1 source

```
000018 *                                                                      *
000019 *            US GOVERNMENT USERS RESTRICTED RIGHTS -                    *
000020 *            USE, DUPLICATION OR DISCLOSURE RESTRICTED BY               *
000021 *            GSA ADP SCHEDULE CONTRACT WITH IBM CORP.                   *
000022 *                                                                      *
000023 ***************************************************************@ECPYRT**
000024 *
000025 * IMSCTRL MACRO --
000026 *
000027          IMSCTRL  SYSTEM=(VS/2,(CTLBLKS,DB/DC),390),               X
000028                   IRLM=YES,                                        X
000029                   IRLMNM=IRLM,                                     X
000030                   CMDCHAR=,                                        X
000031                   DBRC=(YES,YES),                                  X
000032                   DBRCNM=IVP71RC1,                                 X
000033                   DLINM=IVP71DL1,                                  X
000034                   DCLWA=YES,                                       X
000035                   IMSID=IVP1,                                      X
```

SYSGEN Macros

- Sample STAGE 1 source

```
000036                        NAMECHK=(YES,S1),                    X
000037                        MAXREGN=(005,512K,A,A),              X
000038                        MCS=(2,7),                           X
000039                        DESC=7,                              X
000040                        ETOFEAT=(YES,YES,ALL),               X
000041                        MAXCLAS=016
000042 *
000043 * IMSCTF   MACRO --
000044 *
000045          IMSCTF SVCNO=(,203,202),                           X
000046                 LOG=SNGL,                                   X
000047                 CPLOG=500000,                               X
000048                 RDS=(LGDK,4096),                            X
000049                 PRDR=IVP71RD1
000050 *
000051 * MSGQUEUE MACRO --
000052 *
```

SYSGEN Macros

- Sample STAGE 1 source

```
000053              MSGQUEUE DSETS=(LGDK,LGDK,LGDK),              X
000054                       RECLNG=(336,3360),                  X
000055                       BUFFERS=(5,6720),                   X
000056                       SHUTDWN=100
000057 *
000058 * FPCTRL    MACRO --
000059 *
000060              FPCTRL OTHREAD=5,                            X
000061                     BFALLOC=(10,50,2048)
000062 *
000063 * BUFPOOLS MACRO --
000064 *
000065              BUFPOOLS PSB=24000,                          X
000066                       SASPSB=(4000,20000),                X
000067                       PSBW=12000,                         X
000068                       DMB=24000,                          X
000069                       FORMAT=(24000,256),                 X
000070                       FRE=30
000071 *
```

SYSGEN Macros

- Sample STAGE 1 source

```
000072 * SECURITY MACRO --
000073 *
000074           SECURITY TYPE=(AGNEXIT,NORACTRM,NOTRANEX,NOSIGNEX),       X
000075                    SECLVL=(NOTRAN,NOSIGN),                          X
000076                    TERMNL=YES,                                      X
000077                    SECCNT=2,                                        X
000078                    PASSWD=YES,                                      X
000079                    TRANCMD=YES
000080 ***************************************************************************
000081 *     IVP DATABASES DEFINITION
000082 ***************************************************************************
000083           DATABASE DBD=IVPDB1,ACCESS=UP              HIDAM/OSAM
000084           DATABASE INDEX,DBD=IVPDB1I,ACCESS=UP       HIDAM/VSAM INDEX
000085           DATABASE DBD=IVPDB2,ACCESS=UP              HDAM/VSAM
000086           DATABASE DBD=IVPDB2,ACCESS=UP              HDAM/VSAM
000087           DATABASE DBD=IVPDB3,ACCESS=UP              DEDB
000088           DATABASE DBD=IVPDB4                        MSDB
000089 ***************************************************************************
```

SYSGEN Macros

- Sample STAGE 1 source

```
000090 *    IVP BATCH/BMP APPLICATION DEFINITION
000091 **********************************************************************
000092          SPACE 2
000093          APPLCTN PSB=DFSIVP6,PGMTYPE=BATCH              HIDAM/OSAM-ASSEM
000094          SPACE 2
000095          APPLCTN PSB=DFSIVP61,PGMTYPE=BATCH             HIDAM/OSAM-PASCAL
000096          SPACE 2
000097          APPLCTN PSB=DFSIVP62,PGMTYPE=BATCH             HIDAM/OSAM-C
000098          SPACE 2
000099          APPLCTN PSB=DFSIVP64,PGMTYPE=BATCH             HIDAM/OSAM-COBOL
000100          SPACE 2
000101          APPLCTN PSB=DFSIVP65,PGMTYPE=BATCH             HIDAM/OSAM-REXX
000102          SPACE 2
000103          APPLCTN PSB=DFSIVP7,PGMTYPE=BATCH              HDAM/VSAM
000104          SPACE 2
000105          APPLCTN PSB=DFSIVP8,PGMTYPE=BATCH              DEDB/VSAM
000106          SPACE 2
000107          APPLCTN PSB=DFSIVP9,PGMTYPE=BATCH              HIDAM/OSAM OLIC
```

SYSGEN Macros

- Sample STAGE 1 source

```
000108              SPACE 2
000109              APPLCTN PSB=DFSIVPA,PGMTYPE=BATCH          HIDAM LOAD
000110              SPACE 2
000111              APPLCTN PSB=DFSIVPB,PGMTYPE=BATCH          HDAM  LOAD
000112              SPACE 2
000113              APPLCTN PSB=DFSIVPC,PGMTYPE=BATCH          DEDB (DB LOAD)
000114              SPACE 2
000115  **********************************************************************
000116  *    IVP NON-CONVERSATIONAL APPLICATIONS DEFINITION FOR DB/DC
000117  **********************************************************************
000118              SPACE 2
000119              APPLCTN PSB=DFSIVP1,PGMTYPE=TP             HIDAM/OSAM
000120                TRANSACT CODE=IVTNO,MODE=SNGL,                         X
000121                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000122              SPACE
000123              APPLCTN PSB=DFSIVP2,PGMTYPE=TP             HDAM/VSAM
000124                TRANSACT CODE=IVTNV,MODE=SNGL,                         X
000125                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
```

SYSGEN Macros

- Sample STAGE 1 source

```
000126              SPACE 2
000127 **********************************************************************
000128 *    IVP CONVERSATIONAL APPLICATION DEFINITION FOR DB/DC
000129 **********************************************************************
000130              SPACE 2
000131              APPLCTN PSB=DFSIVP3,PGMTYPE=TP                HDAM/VSAM-ASSEM
000132                TRANSACT CODE=IVTCV,SPA=(80,),MODE=SNGL,                  X
000133                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000134              APPLCTN PSB=DFSIVP31,PGMTYPE=TP               HDAM/VSAM-PASCAL
000135                TRANSACT CODE=IVTCP,SPA=(80,),MODE=SNGL,                  X
000136                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000137              APPLCTN PSB=DFSIVP32,PGMTYPE=TP               HDAM/VSAM-C
000138                TRANSACT CODE=IVTCC,SPA=(80,),MODE=SNGL,                  X
000139                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000140              APPLCTN PSB=DFSIVP33,PGMTYPE=TP               HDAM/VSAM-JAVA
000141                TRANSACT CODE=IVTCJ,SPA=(80,),MODE=SNGL,                  X
000142                   MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000143              APPLCTN PSB=DFSIVP34,PGMTYPE=TP               HDAM/VSAM-COBOL
```

SYSGEN Macros

- ## Sample STAGE 1 source

```
000144              TRANSACT CODE=IVTCB,SPA=(80,),MODE=SNGL,        X
000145                 MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000146          APPLCTN PSB=DFSIVP35,PGMTYPE=TP           HDAM/VSAM-REXX
000147              TRANSACT CODE=IVTCX,SPA=(80,),MODE=SNGL,        X
000148                 MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000149          SPACE 2
000150  ***********************************************************************
000151  *    IVP DEDB AND MSDB APPLICATION DEFINITIONS FOR DB/DC
000152  ***********************************************************************
000153          SPACE 2
000154          APPLCTN RESIDENT,PSB=DFSIVP4,FPATH=256      DEDB
000155            TRANSACT CODE=IVTFD,MODE=SNGL,            X
000156                 MSGTYPE=(SNGLSEG,RESPONSE,1)
000157          SPACE 2
000158          APPLCTN RESIDENT,PSB=DFSIVP5,FPATH=256      MSDB
000159            TRANSACT CODE=IVTFM,MODE=SNGL,            X
000160                 MSGTYPE=(SNGLSEG,RESPONSE,1)
000161  ***********************************************************************
```

SYSGEN Macros

- Sample STAGE 1 source

```
000162 *    IVP APPLICATIONS DEFINITION FOR DB/DC, DCCTL
000163 *******************************************************************
000164          SPACE 2
000165          APPLCTN GPSB=IVPREXX,PGMTYPE=TP,LANG=ASSEM   REXXTDLI SAMPLE
000166            TRANSACT CODE=IVPREXX,MODE=SNGL,                         X
000167                MSGTYPE=(SNGLSEG,NONRESPONSE,1)
000168          SPACE 2
000169 *******************************************************************
000170 *    IMS SAMPLE DATABASES DEFINITION
000171 *******************************************************************
000172          SPACE 2
000173          DATABASE DBD=DI21PART,ACCESS=UP                 HISAM/VSAM
000174          EJECT  ,
000175 *******************************************************************
000176 *    IMS SAMPLE APPLICATION DEFINITION - CICS IVP
000177 *******************************************************************
000178          SPACE 2
000179          APPLCTN PSB=DFHSAM04,PGMTYPE=BATCH
```

SYSGEN Macros

- Sample STAGE 1 source

```
000180              SPACE 2
000181              APPLCTN PSB=DFHSAM14,PGMTYPE=BATCH
000182              SPACE 2
000183              APPLCTN PSB=DFHSAM24,PGMTYPE=BATCH
000184              SPACE 2
000185              APPLCTN PSB=DFHSAM05,PGMTYPE=BATCH
000186              SPACE 2
000187              APPLCTN PSB=DFHSAM15,PGMTYPE=BATCH
000188              SPACE 2
000189              APPLCTN PSB=DFHSAM25,PGMTYPE=BATCH
000190              EJECT   ,
000191 ******************************************************************
000192 *    IMS SAMPLE APPLICATION DEFINITION
000193 ******************************************************************
000194              SPACE 2
000195              APPLCTN  PSB=DFSSAM01,PGMTYPE=BATCH
000196              SPACE 2
000197              SPACE 2
```

SYSGEN Macros

- **Sample STAGE 1 source**

```
000198              APPLCTN  PSB=DFSSAM02
000199              TRANSACT CODE=PART,PRTY=(7,10,2),INQUIRY=YES,MODE=SNGL
000200              SPACE 2
000201              APPLCTN  PSB=DFSSAM03
000202              TRANSACT CODE=DSPINV,PRTY=(7,10,2),INQUIRY=YES,MODE=SNGL
000203              SPACE 2
000204              APPLCTN  PSB=DFSSAM04
000205              TRANSACT CODE=ADDPART,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000206              TRANSACT CODE=ADDINV,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000207              TRANSACT CODE=DLETPART,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000208              TRANSACT CODE=DLETINV,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000209              SPACE 2
000210              APPLCTN  PSB=DFSSAM05
000211              TRANSACT CODE=CLOSE,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000212              SPACE 2
000213              APPLCTN  PSB=DFSSAM06
000214              TRANSACT CODE=DISBURSE,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000215              SPACE 2
```

SYSGEN Macros

- ## Sample STAGE 1 source

```
000216              APPLCTN  PSB=DFSSAM07
000217              TRANSACT CODE=DSPALLI,PRTY=(7,10,2),INQUIRY=NO,MODE=SNGL
000218              SPACE 2
000219              APPLCTN  PSB=DFSSAM08,PGMTYPE=BATCH
000220              SPACE 2
000221              APPLCTN  PSB=DFSSAM09,PGMTYPE=BATCH              GENERAL PURPOSE
000222              SPACE 2
000223     ********************************************************************
000224     *    FAST PATH SAMPLE DATABASES DEFINITION
000225     ********************************************************************
000226              SPACE 2
000227              DATABASE DBD=DBFSAMD1                 GENERAL LEDGER - MSDB
000228              DATABASE DBD=DBFSAMD2                        TELLER - MSDB
000229              DATABASE DBD=DBFSAMD3,ACCESS=UP CUSTOMER ACCNT - DEDB
000230              DATABASE DBD=DBFSAMD4,ACCESS=UP CUSTOMER  LOAN - HDAM/VSAM
000231              EJECT   ,
000232     ********************************************************************
000233     *    FAST PATH SAMPLE APPLICATION DEFINITION
```

SYSGEN Macros

- Sample STAGE 1 source

```
000234  ****************************************************************
000235          SPACE 2
000236          APPLCTN   PSB=DBFSAMP1,PGMTYPE=BATCH        DEDB LOAD
000237          SPACE 2
000238          APPLCTN   PSB=DBFSAMP2,PGMTYPE=BATCH        HDAM LOAD
000239          SPACE 2
000240          APPLCTN   PSB=DBFSAMP3,PGMTYPE=(TP),FPATH=256
000241          TRANSACT  CODE=FPSAMP1,MSGTYPE=(SNGLSEG,RESPONSE)
000242          SPACE 2
000243          APPLCTN   PSB=DBFSAMP4
000244          TRANSACT  CODE=FPSAMP2,MODE=SNGL
000245          SPACE 2
000246          APPLCTN   PSB=DBFSAMP5,PGMTYPE=BATCH        HDAM MISC.
000247          SPACE 2
000248          APPLCTN   PSB=DBFSAMP6,PGMTYPE=BATCH        DEDB MISC.
000249          SPACE 2
```

SYSGEN Macros

- ## Sample STAGE 1 source

```
000250  ************************************************************************
000251  *    IVP COMMUNICATIONS NETWORK DEFINITION
000252  ************************************************************************
000253            SPACE 2
000254  ************************************************************************
000255  *
000256  * THE IVP SYSTEMS
000257  * MAKE USE OF 5 TERMINALS --
000258  *
000259  *        MVS MASTER CONSOLE    - IMS LTERM NAME = WTOR
000260  *
000261  *        IMS MASTER CONSOLE    - IMS LTERM NAME = PMASTER
000262  *        IMS SECONDARY MASTER  - IMS LTERM NAME = SMASTER
000263  *
000264  *        IMS USER TERMINALS    - IMS LTERM NAME = USER1
000265  *        IMS USER TERMINALS    - IMS LTERM NAME = USER2
000266  *
000267  *
```

SYSGEN Macros

- Sample STAGE 1 source

```
000268 * THE MVS MASTER TERMINAL IS DEFINED AUTOMATICALLY.
000269 *
000270 * THE SECONDARY MASTER IS DEFINED AS A PRINTER LINE GROUP. (A SPOOL
000271 * LINE GROUP IS ALSO AVAILABLE FOR USE AS A SECONDARY MASTER)
000272 *
000273 * THE USER MUST MAKE A CHOICE IN THE DEFINITION OF THE OTHER
000274 * TERMINALS.  THIS SAMPLE STAGE 1 SOURCE DECK INCLUDES SAMPLE
000275 * TERMINAL DEFINITIONS FOR THE FOLLOWING TERMINAL TYPE --
000276 *
000277 *             VTAM 3270 LOCAL
000278 *
000279 * THE IVP IS NOT DEPENDENT UPON NODE (LINE/PTERM) NAMES.
000280 *
000281 * LTERM NAMES AND TRANSACTION CODES ARE USED TO ESTABLISH TERMINAL
000282 * SECURITY.
000283 *
000284 * THE USER MUST ENSURE THAT THE SELECTED TERMINALS ARE PROPERLY
000285 * DEFINED TO VTAM AND MVS.
```

SYSGEN Macros

■ Sample STAGE 1 source

```
000286 *
000287 * THE MESSAGE FORMAT SERVICES USED BY THE IVP TRANSACTIONS ARE
000288 * DEFINED FOR A DEVICE TYPE OF 3270-A02 (A 24X80 SCREEN SIZE).
000289 * IF THE TERMINALS WHICH ARE SELECTED SPECIFY A DIFFERENT TYPE,
000290 * THEN THE MFS SOURCE WILL HAVE TO BE CHANGED.
000291 *
000292 ***********************************************************************
000293         SPACE 2
000294 *
000295 * COMM     MACRO --
000296 *      THE APPLID OPERAND SPECIFIES VTAM APPLID FOR THE IMS CONTROL
000297 *         REGION.
000298 *         THE PASSWD OPERAND SPECIFIES APPLICATION PASSWORDS.
000299 *         THESE OPERANDS MUST MATCH THE APPLICATION IDENTIFICATION
000300 *         SPECIFIED IN THE  VTAM ACB(S) FOR THESE IMS DB/DC
000301 *         SYSTEMS.
```

SYSGEN Macros

- ## Sample STAGE 1 source

```
000302              COMM RECANY=(5,4095),                              X
000303                   APPLID=IVP71CR1,                              X
000304                   PASSWD=IVP71CR1,                              X
000305                   OPTIONS=(PAGING,TIMESTAMP,MFSTEST,FMTMAST,    X
000306                   NOUSEMSG,NOMSPEX,NOMSLEX,                      X
000307                   VTAMAUTH,BLKREQD),                            X
000308                   COPYLOG=ALL
000309          EJECT ,
000310 *****************************************************************
000311 *    IVP PRINTER LINE GROUP
000312 *****************************************************************
000313          LINEGRP   DDNAME=IVPPRT1,UNITYPE=PRINTER
000314           LINE       ADDR=000
000315            TERMINAL
000316              NAME   (SMASTER,SECONDARY)
000317              NAME   IVPPRT1
000318          EJECT ,
```

SYSGEN Macros

- ## Sample STAGE 1 source

```
000319 ***********************************************************************
000320 *    IVP SPOOL LINE GROUP
000321 ***********************************************************************
000322          LINEGRP   DDNAME=(IVPSPL1,IVPSPL2,IVPSPL3),UNITYPE=SPOOL
000323           LINE       BUFSIZE=166
000324 SPOOL001   TERMINAL FEAT=AUTOSCH
000325             NAME   IVPSPL1
000326          EJECT ,
000327 ***********************************************************************
000328 *    IVP VTAM DEFINITIONS
000329 ***********************************************************************
000330          SPACE 2
000331 ***********************************************************************
000332 *    IVP 3270 LOCAL - VTAM
000333 ***********************************************************************
000334          SPACE 2
```

SYSGEN Macros

- Sample STAGE 1 source

```
000335          TYPE _UNITYPE=(3270,LOCAL),TYPE=3270-A02,SIZE=(24,80)
000336            TERMINAL   NAME=PMASTER1
000337              NAME    (PMASTER,MASTER)
000338          SPACE 2
000339            TERMINAL   NAME=USER1,OPTIONS=(TRANRESP,NOCOPY)
000340              NAME    USER1
000341              NAME    HOWARD              USED BY THE IMS SAMPLE APPLICATION
000342          SPACE 2
000343            TERMINAL   NAME=USER2,OPTIONS=(TRANRESP,NOCOPY)
000344              NAME    USER2
000345          SPACE 2
```

SYSGEN Macros

- Sample STAGE 1 source

```
000346 *
000347 * IMSGEN MACRO --
000348 *
000349         IMSGEN ASM=(HLASM,SYSLIN),ASMPRT=OFF,           X
000350              LKPRT=(XREF,LIST),LKSIZE=(880K,63K),LKRGN=900K,  X
000351              SUFFIX=I,                                   X
000352              SURVEY=YES,                                 X
000353              NODE=(IVPEXE71,                             X
000354              J93.I71A27.DBDC,                            X
000355              J93.I71A27.DBDC),                           X
000356              OBJDSET=J93.I71A27.DBDC.OBJDSET,            X
000357              PROCLIB=YES,                                X
000358              USERLIB=J93.I71A27.DBDC.ADFSLOAD,           X
000359              UMAC0=,                                     X
000360              MACSYS=SYS1.MACLIB,                         X
000361              MODGEN=SYS1.MODGEN,                         X
000362              UMAC1=,                                     X
000363              UMAC2=,                                     X
```

SYSGEN Macros

■ Sample STAGE 1 source

```
000364                    UMAC3=,                                                    X
000365                    ONEJOB=(YES,YES),                                          X
000366                    JCL=(IMSGEN,                                               X
000367                    ACTINFO1,                                                  X
000368                    'PGMRNAME',H,                                              X
000369                    (CLASS=A,MSGLEVEL=(1,1),REGION=32M,NOTIFY=JBUTTER),        X
000370                    (USER=JBUTTER)),                                           X
000371                    SCL=(,,(TIME=600)),                                        X
000372                    UJCL1=,                                                    X
000373                    UJCL2=,                                                    X
000374                    UJCL3=,                                                    X
000375                    UJCL4=,                                                    X
000376                    UJCL5=
000377            END ,
****** ***************************** Bottom of Data *****************************
```

Further Information

- IMS Manuals   Installation Volume 2 (GC26-9430)
-                   Administration Guide TM (SC26-9431)
-                   Command Reference (SC26-9436)
- Redbook   IMS Primer (SG24-5352 - Chapter 23)
- Installation Class   John Butterweck (Session S43)

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