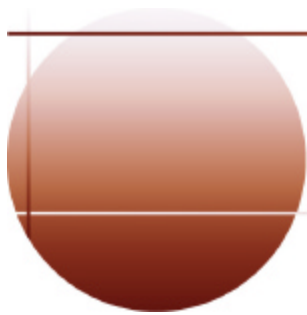


E04

IMS SYSGEN for First Timers

Charles Ryan
ryanchar@us.ibm.com



IMS

technical conference

Las Vegas, NV

September 15 - September 18, 2003

What is in this Presentation

■ The IMS SYSGEN

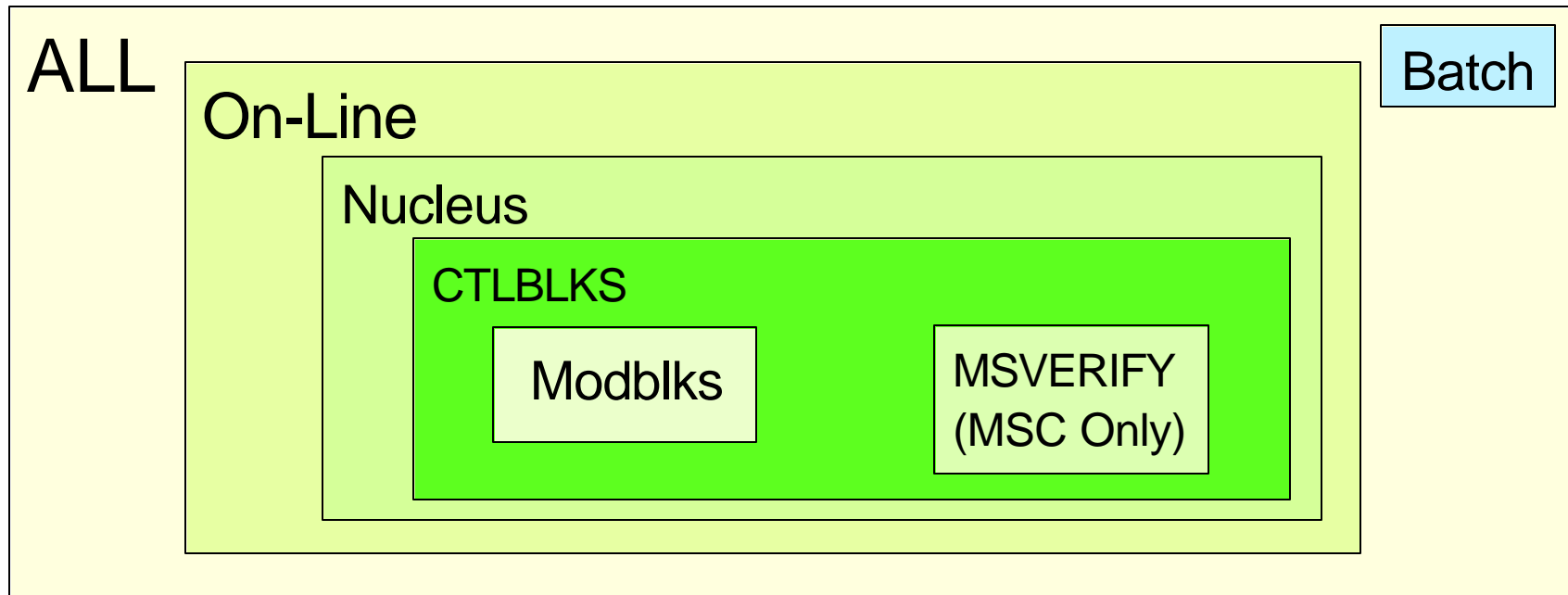
- ▶ Any manuals referenced are for IMS V810
- ▶ All IMSGEN macros are described in the manual - Installation Volume 2
- ▶ Useful tables for reference (BookManager format, see handout)
 - Chapter 2 Figure 9 - Hierarchy of Stage 1 System Definition Macros
 - Chapter 2 Table 13 - Selecting the Appropriate IMS System Definition
 - Chapter 3 Table 15 - Use of System Definition Macros
 - Chapter 3 Table 16 - 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
- Further information on this topic is available Session E56 - IMS Version 8 Installation Considerations

BASICS

- Types of SYSGEN
 - ▶ MODBLKS - may be implemented by commands...
 - MODIFY PREPARE - Prepare for online changes
 - MODIFY COMMIT - Implement the changes
 - MODIFY ABORT - Reset MODIFY PREPARE



BASICS

- Selecting the correct type of SYSGEN to run
 - ▶ Chapter 2, Table 12 - Types of System Definition
 - ▶ Chapter 2, Table 13 - 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)
 - Reapply unaccepted maintenance - Any USERMODs or other maintenance in APPLY status must be reapplied
 - 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  
* -----  
*      ????          SEPTEMBER 5, 2001      ADD FOLLOWING DATABASE MACROS FOR  
*                                           DEPOSIT SYSTEM  
*                                           ACCTPRIM, ACCTINDX  
*  
*****
```

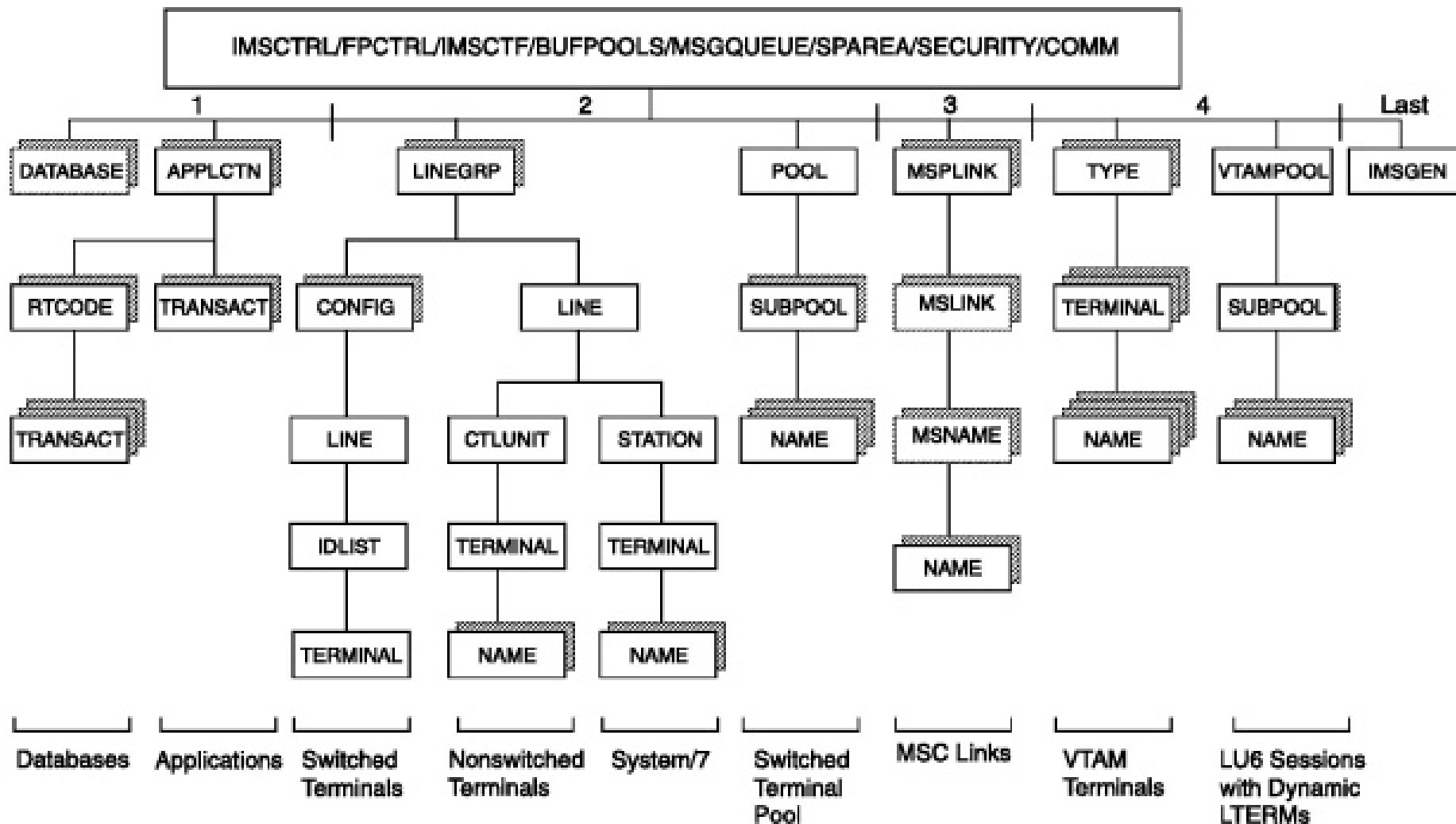
GENERAL SUGGESTIONS

- Keep the STAGE 1 member organized
 - ▶ Macros may be placed in different orders - stay with 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
```


System Definition-Macro Hierarchy

Hierarchy of Stage 1 System Definition Macros



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

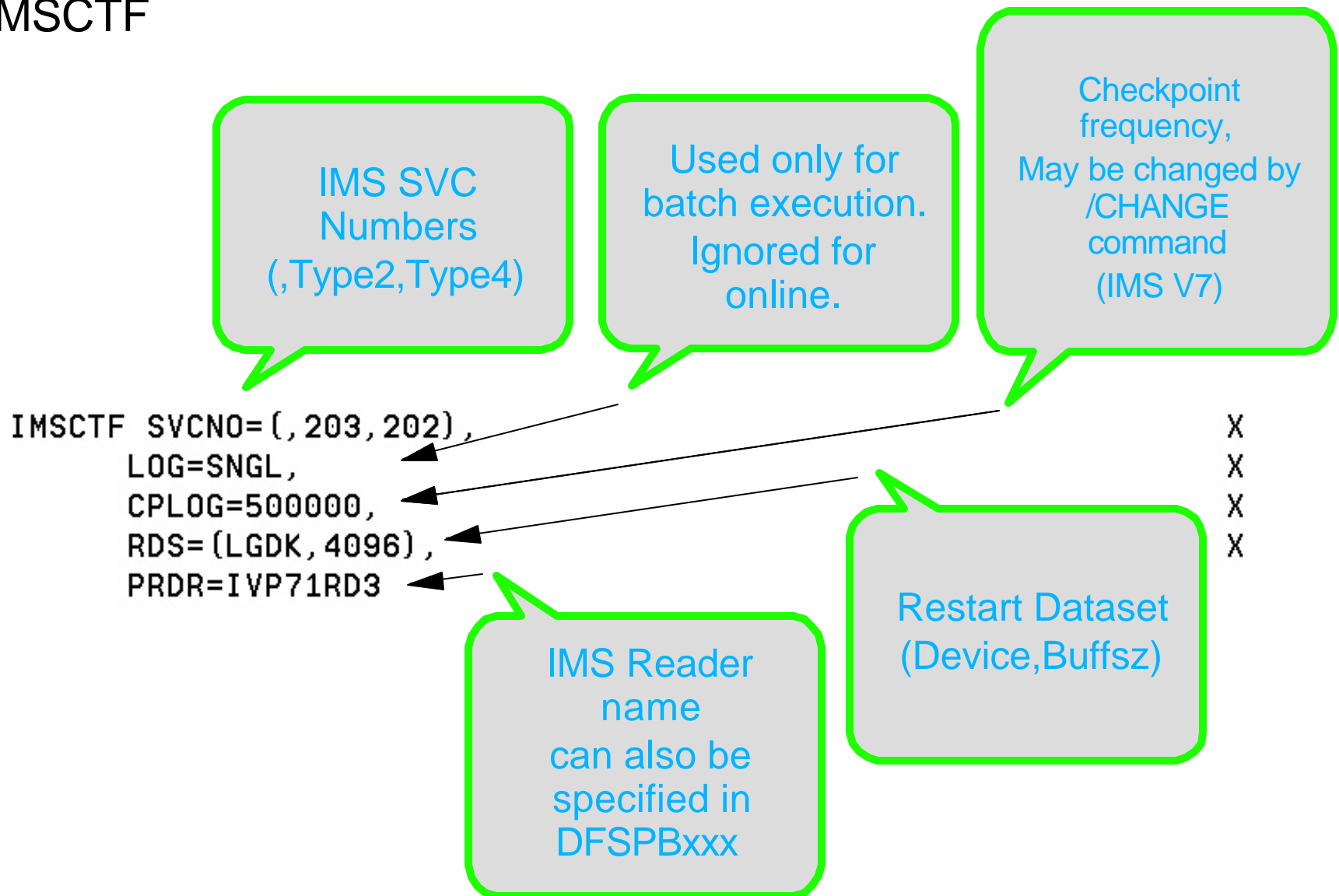
```

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



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

```
X  
X  
X
```

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,  
      BFALLOC=(10, 50, 2048)
```

X

SYSGEN Macros

- Basic Configuration

- ▶ MSGQUEUE

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

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



X
X
X

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)
- New parameters with IMS V8 for JBP and JMP type regions
 - CSSLIB - OS/390 Callable Services library
 - SCEERUN - C Runtime library

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=IYPDB2,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=
 - Used with GPSB= option
 - Specifies language interface used by the application program
 - If LANG=JAVA is specified, FPATH=NO must also be 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
 - SCHEDTYP 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
MODE=MULT is
default.
MODE=SNGL is
forced for WFI
transactions.

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
 - Required if LANG=JAVA is specified
- 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 may be 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

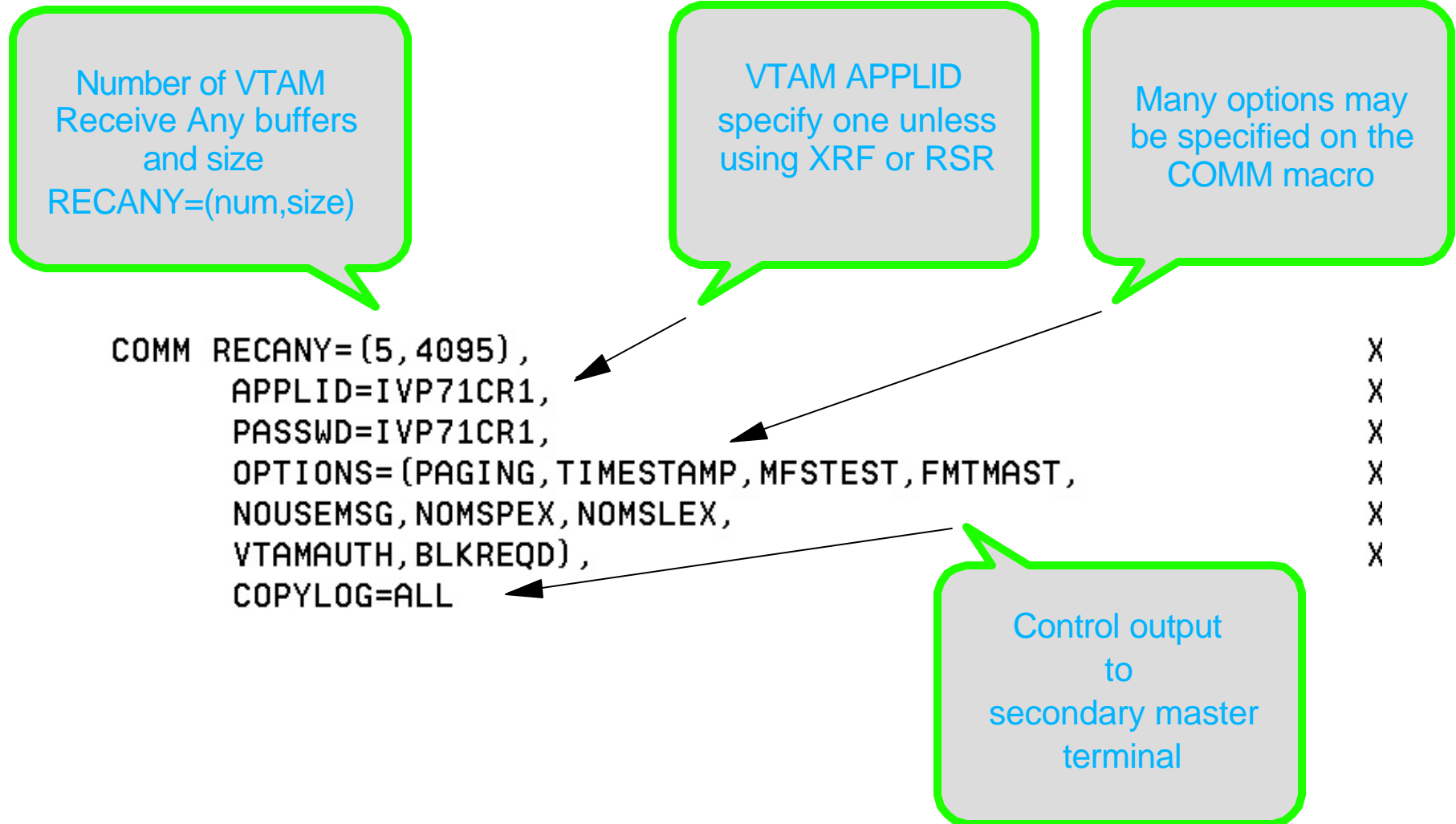
- Communications Macros

- ▶ 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 other communication macros in STAGE 1

SYSGEN Macros

- Communications Macros
 - ▶ COMM (Example)



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, DFSPIXTO)
          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=(DFSCCT00, 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 *****@SCPVRT**
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 *           IRLNM=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          SHUTDOWN=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) ,
000075     SECLVL=(NOTRAN,NOSIGN) ,
000076     TERMNL=YES,
000077     SECCNT=2,
000078     PASSWD=YES,
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 *****
```

X
X
X
X
X

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,
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 RECANV=(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      IVPVRT1
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    IVPSP1
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 _UNTYPE=(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,
000350             LKPRT=(XREF, LIST), LKSIZE=(880K, 63K), LKRGN=900K,
000351             SUFFIX=I,
000352             SURVEY=YES,
000353             NODE=(IVPEXE71,
000354             J93.I71A27.DBDC,
000355             J93.I71A27.DBDC),
000356             OBJDSET=J93.I71A27.DBDC.OBJDSET,
000357             PROCLIB=YES,
000358             USERLIB=J93.I71A27.DBDC.ADFSLOAD,
000359             UMAC0=,
000360             MACSYS=SYS1.MACLIB,
000361             MODGEN=SYS1.MODGEN,
000362             UMAC1=,
000363             UMAC2=,
```

SYSGEN Macros

■ Sample STAGE 1 source

```
000364      UMAC3=, X
000365      ONEJOB= (YES, YES) , X
000366      JCL= (IMSGEN, X
000367      ACTINF01, 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
 - Administration Guide TM
 - Command Reference
- Redbook
 - IMS Primer (SG24-5352 - Chapter 23)
- Installation Class
 - Session E56 - IMS V8 Installation Considerations with John Butterweck