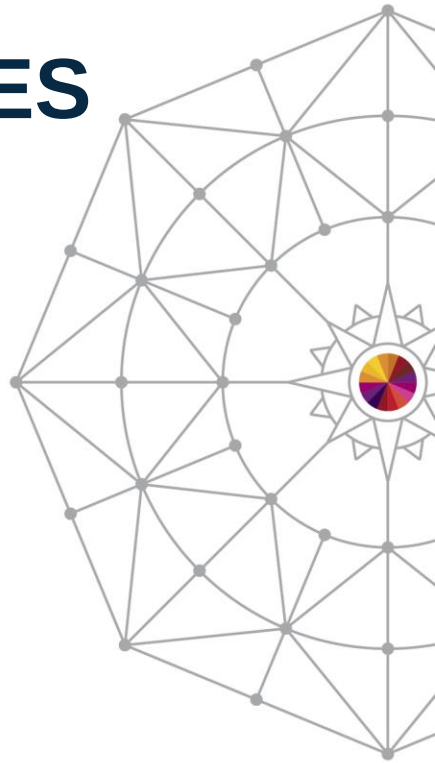
Getting the SAPIness out of JES

Glenn Hanna
CA Technologies

August 7, 2014
Session Number 16165

www.SHARE.org



Insert Custom Session QR if Desired.

#SHAREorg

SHARE in Pittsburgh 2014

Agenda

- What the SSI is and how it's used
- Extended status SSI Request
- SAPI SSI Requests
- Spool Browse
- Other SSIs
  - Who AM I SSI
  - Notify SSI
  - *JES Properties*
  - *JES Device Information*
  - *Modify Job Function Call*
- SAPI Code Examples / Demo

What is the SSI?

- The SSI is an MVS interface to “Subsystems”
- Used as a hook to request information from subsystems
  - WTO, CMDs, EOT, EOM, etc.
- Used as a function interface
  - SAPI, PSO, Extended Status
- Each SSI has a number and a SSOB extension
- The Subsystem defines what is supports
- Caller specifies the SSOB parameters used to process requests

JES Specific SSIs

Number	Symbol	Macro	Description
1	SSOBSOUT	IEFSSSO	Process SYSOUT Data Sets Call
2	SSOBCANC	IEFSSCS	Job Cancel
3	SSOBSTAT	IEFSSCS	Job Status
11	SSOBUSER	IEFSSUS	User Destination Validation / Conversion
20	SSOBRQST	IEFSSRR	Request Job ID Call
21	SSOBRTRN	IEFSSRR	Return Job ID Call
54	SSOBSSVI	IEFSSVI	Request Subsystem Version Information Call
70	SSOBSFS	IAZSSSF	Scheduler Facilities Call
71	SSOBSSJI	IAZSSJI	JES Job Information Services
75	SSOBSSNU	IAZSSNU	Notify User Message Service Call
79	SSOBSOU2	IAZSSS2	SYSOUT Application Program Interface (SAPI)

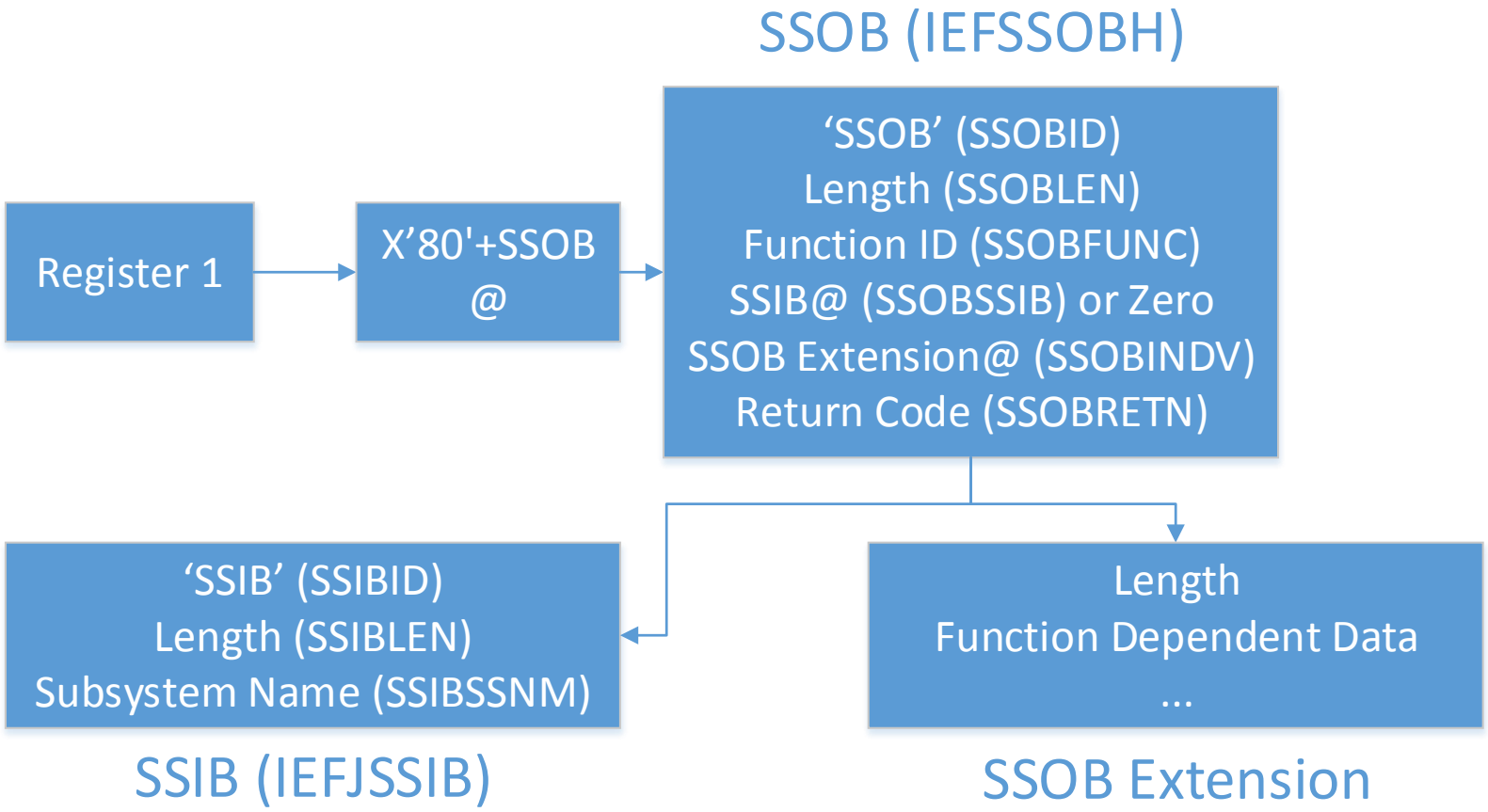
JES Specific SSIs - continued

Number	Symbol	Macro	Description
80	SSOBESTA	IAZSSST	Extended Status Function Call
82	SSOBSSJP	IAZJPNJN, IAZJPSPL, IAZJPITD, IAZJPLEX, IAZJPCLS	JES Properties – NJE Node Spool Volume Initiator Information JESPlex Information Job Class Information
83	SSOBSSJD	IAZSSJD	JES Device Information Services
85	SSOBSSJM	IAZSSJM	Modify Job Function Call

Warnings

- Most SSI calls requires APF Authorization
  - Ensure code is properly tested
- Examples are just that
  - Are for educational purposes only
  - Not intended for production
  - Are a good starting point
  - Add recovery routines
  - Validate input
  - Ensure proper security

Invoking the Subsystem Interface



Extended Status SSI

- Obtain JOB and SYSOUT Information
- Use SSI Function ‘80’ (IAZSSST Macro)
- Information in the JES2 Checkpoint is returned
- 3 call types
  - Get JOB data
  - Get SYSOUT and JOB data
  - Release Memory
- Filters control the returned data
- Supports directed SSIs and Broadcast

Who Am I? - SSI

- Gets subsystem information
- Use SSI Function 54 (IEFSSVI Macro)
- Supports unauthorized callers
- Callers are not required to have a job structure associated with JES
- Two information areas returned
  - Fixed (SSVIPLVL)
  - Variable (SSVIVDATA)

Notify- SSI

- Sends notification message to user
- Use SSI Function 75 (IAZSSNU Macro)
- Callers are not required to have a job structure associated with JES
- Destination can be a user on another node or member within the MAS

JES Properties – SSI --- Update

- Sends notification message to user
- Use SSI Function 75 (IAZSSNU Macro)
- Callers are not required to have a job structure associated with JES
- Destination can be a user on another node or member within the MAS

JES Device Information – SSI --- Update

- Sends notification message to user
- Use SSI Function 75 (IAZSSNU Macro)
- Callers are not required to have a job structure associated with JES
- Destination can be a user on another node or member within the MAS

Modify Job Function – SSI --- Update

- Sends notification message to user
- Use SSI Function 75 (IAZSSNU Macro)
- Callers are not required to have a job structure associated with JES
- Destination can be a user on another node or member within the MAS

SYSOUT Application Program Interface - SSI

- Obtains information related to SYSOUT
- Use SSI Function 79 (IAZSSS2 Macro)
- SYSOUT Selection Criteria for filtering
- Can be used with Spool Browse

SAPI Selection Criteria

```
SSS2SEL1 DC    B'00000000'          IS.Data set selection flags
SSS2SHLD EQU   B'10000000'            Select "HOLD/LEAVE" output (JES2);C
                                        Select "hold for TSO" output    C
                                        (JES3)
SSS2SXWH EQU   B'01000000'            Select "hold for XWTR".  In a     C
                                        JES2 environment, this has the  C
                                        same meaning as SSS2SHLD.
SSS2SHOL EQU   B'11000000'            Select from the hold queue.       C
                                        Specifying this setting guaran- C
                                        tees that held output will be   C
                                        returned regardless of the JES  C
                                        servicing this request.
SSS2SWTR EQU   B'00100000'            Select "WRITE/KEEP" output (JES2);C
                                        Select from the writer queue    C
                                        if JES3.
SSS2SAWT EQU   SSS2SHLD+SSS2SXWH+SSS2SWTR  Select from all the above.  C
                                        If none of the three bits is    C
                                        set, then the request will be   C
                                        handled as if SSS2SWTR were     C
                                        specified.
```

SAPI Selection Criteria – continued…

```
SSS2SCLS EQU   B'00010000'          Use SSS2CLSL as the class          C
                                     selection list
SSS2SDST EQU   B'00001000'         Use SSS2DEST as a filter
SSS2SJBN EQU   B'00000100'         Use SSS2JOBN as a filter
SSS2SDUP EQU   B'00000110'         Use SSS2JOBN as a filter, but      C
                                     give RC of SSS2DUPJ if           C
                                     duplicate jobs.  This setting    C
                                     meaningful only if SSS2JOBN has  C
                                     no wild card characters.         C
                                    This setting is not used for      C
                                     a Bulk Modify (SSS2BULK)         C
                                     or Count (SSS2COUN) request.     C
                                                                  @R101448
SSS2SDU2 EQU   B'00000010'         Give RC of SSS2DUPJ if duplicate   C
                                     job.  This bit meaningful only   C
                                     if SSS2JOBN also set on
SSS2SJBI EQU   B'00000001'         Use SSS2JBIL and SSS2JBIH as       C
                                     filters.  Mutually       @R05LOPIC
                                     exclusive with SSS2SCTK  @R05LOPI
```

SAPI Demo Files

Adobe Acrobat Document

Adobe Acrobat Document

Adobe Acrobat Document

Live Demo

Questions