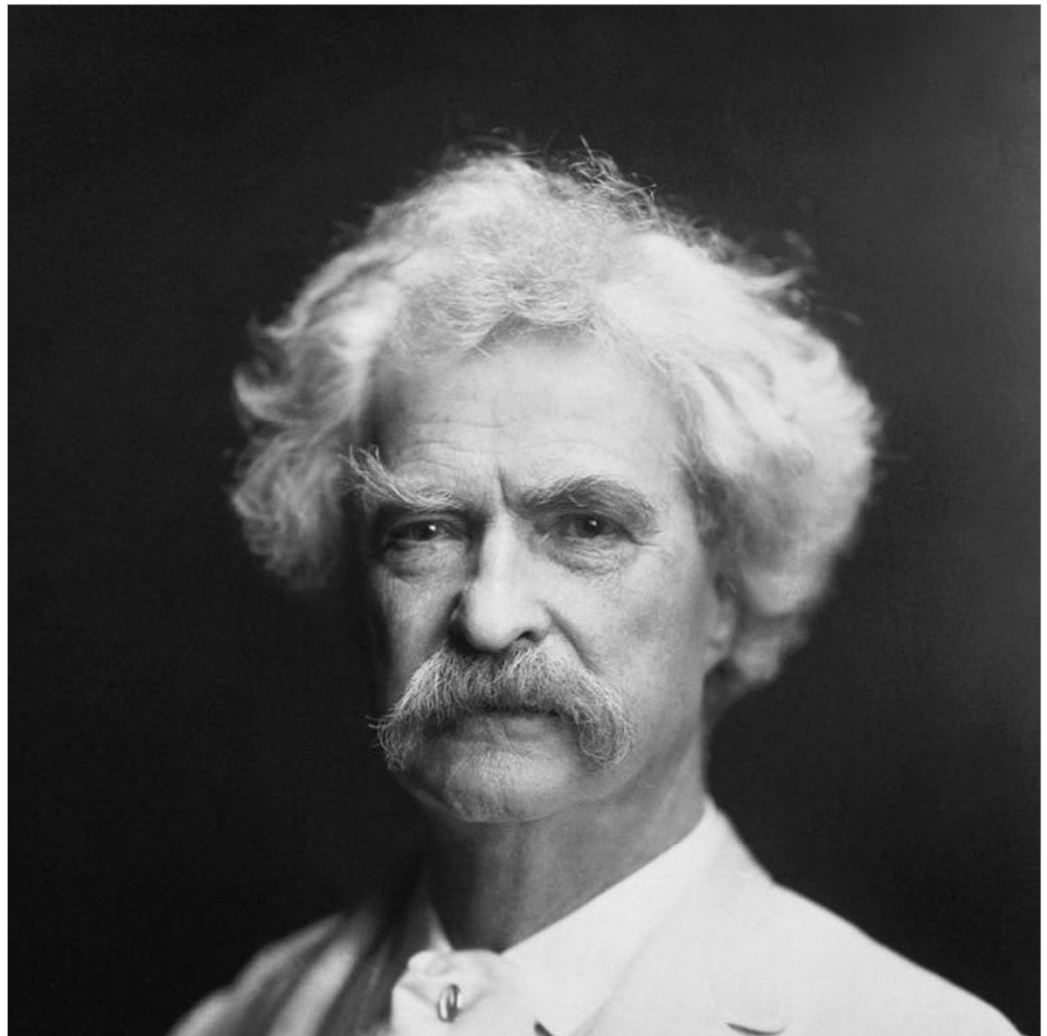# Spool-a-Matic

Enhancement Summary
Licensed Program 2A55SAM V2R6M0

Spooled File Conversion

Edition

Fifteenth Edition (June 2013)

This edition applies to the licensed program Spool-a-Matic (Program 2A55SAM), Version 2 Release 6 Modification 0.

This summary is available as option 1 from the SPLAMATIC menu, in PDF format in directory /Gumbo/Proddata/2A55SAM/doc on your system, and on the web.

Cover image: A portrait of the American writer Mark Twain (Samuel Clemens) taken by A. F. Bradley in New York, 1907.

Contents

Installation Instructions

Follow these instructions to install Spool-a-Matic V2R6M0 on IBM i using physical media or a virtual image:

Prepare

If you are upgrading a previous release (if Spool-a-Matic is currently installed), perform these steps before installing the software:

1. Read the Enhancement Summary to determine if any changes affect your installation.
2. Insure that the product is not in use, as the installation process must clear the product's library. This will fail if objects such as menus are in use. If the installation fails, the previous release will be restored.

Install

Note: If you are installing from a save file downloaded as a self extracting zip (.exe), use the save file specific "readme.htm" instructions included in the download.

1. Sign on to the system as the security officer (QSECOFR).
2. Verify that your machine is at IBM i V7R1M0 or later by running:

   ```
   DSPDTAARA DTAARA(QGPL/QSS1MRI)
   ```

   Note: If you are running a version of IBM i earlier than V7R1M0 you cannot install Spool-a-Matic V2R6M0 on your machine. You must install an earlier version of Spool-a-Matic or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries SPLAMATIC and QSRV, by running:

   ```
   WRKSYSVAL  SYSVAL(QALWUSRDMN)
   ```

   Take option 5 to display the value. If the value is not *ALL, use option 2 to add libraries SPLAMATIC and QSRV to the list of libraries where user domain objects are allowed.

   Note: QSRV is required to correctly process PTFs when they are loaded and applied.

4. Insure that IBM i will be able to verify the signatures that we apply to our product's objects by installing our Signing Certificate and Root CA Certificate using Digital Certificate Manager. Alternately, insure that signature verification will not prevent the restore operation by running:

   ```
   WRKSYSVAL SYSVAL(QVFYOBJRST)
   ```

   Take option 5 to display the value. If the value is 3 or higher, use option 2 to temporarily change the value to 1.

5. Mount the physical media or virtual image on the appropriate device.
6. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

```
RSTLICPGM  LICPGM(2A55SAM) DEV(device-name) LNG(2924)
```

Note: Where "device-name" is the device where the media or image was mounted and is usually OPT01.

Note: During the restore operation, the system operator message queue may receive inquiry message CPA3DE4 "Directory not registered. (C G)". Unless you are using a directory naming convention similar to ours (that is the directory specified in the CPA3DE4's second level text is unrelated to our software), you can safely respond with a "G" to reestablish the relationship between the directory and the product. Typically the message will occur three or four times.

Finish

When the RSTLICPGM command completes, library SPLAMATIC and directory '/Gumbo/ProdData/2A55SAM' contain the new software. To complete the installation:

1. If you have an Authorization letter with your permanent authorization code, enter it now.

   Note: Spool-a-Matic automatically grants 30 days usage for new installs or 90 days usage for release upgrades.

2. Retrieve the current cumulative Spool-a-Matic PTF package by running the following command:

   ```
   SPLAMATIC/RTVGSIPTF
   ```

   Note: *GUMBO* recommends downloading the current cumulative PTF package after installing the software.

3. Visit our PTF page at www.gumbo.com and check the **Additional IBM i PTF Information** section for IBM PTFs you may need to install.
4. You can access the Spool-a-Matic menu by running the following command:

   ```
   GO  MENU(SPLAMATIC/SPLAMATIC)
   ```

Enhancements For Spool-a-Matic V2R6M0

What's In This Section

This section provides information on Spool-a-Matic enhancements for release V2R6M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

PDF Font Imbedding

Two new special values have been added to the PDF font imbedding (PDFFNTIMB) parameter.

*AUTO   Fonts are included when the Adobe built-in encoding does not contain all characters used by the spooled file. Imbedding is determined on a per font basis similar to *ALL.

*ALL   All Fonts are included in the file. Unused characters are removed from the font before inclusion.

> **Note:** The current implementation does not remove unused characters from type 1 fonts.

Previously the product was shipped with a default of *NONE. Now the product is shipped with a default value of *AUTO. For most systems, and all USB systems, the change will have no apparent affect. For some systems previously erroneous pdf will be generated correctly.

Note: Installation of a new release over an old release preserves the settings of the old release.

Spooled File Option Example Added

An additional example program has been added to SASOURCE. The example program, SPLSAMOPT, can be registered as an exit program to implement a custom option for IBM's WRKSPLF, WRKOUTQ and WRKJOB OPTION(*SPLF) commands. Any and all SPLCONVERT parameters can be tailored to suit. See the source member for details.

Font Processor Changes

- New internal version of font processor released. The release reorganizes internal structure to provide on demand or as needed processing of font resources. As a result, some errors such as "font not found" occur later than in earlier releases.
- GCSGID superset - subset data updated for Japanese character sets.
- DBCS fonts identified by FGIDs 53248, 53249 (Japanese), 54563, 54568 (Traditional Chinese), 54565, 54566, 54567, 54568 (Simplified Chinese), and 54560, 53816 (Korean) were incorrectly treated as not scalable, resulting in improper font sizing.
- For fonts identified by an FGID which has an implied height, height overrides were ignored. Overrides are now applied.

FreeType Changes

- Added functions to process type1 fonts.

Integrated File System Changes

- Integrated file system service program recast with storage model *INHERIT to increase product construction flexibility.

- Added dash ("-") as a recognized separator character which distinguishes the end of a special value for substitution. For example '*SPLCYY-*SPLCMM-*SPLCDD' is recognized and a date is formed.

National Language Support Changes

- Previously an unknown keyboard type code was treated as an error. Now the job default ccsid is used.
- Several QKBDTYPE values don't have an implied ccsid, for example CAB and JEB. Now when resolving these, the job default ccsid is used instead of returning an error.
- Special value *JOBDFT incorrectly resolved to job ccsid, not job default ccsid.

PDF Generator Changes

- Added mapping for new control sequence x6A Unicode Complex Text (UCT) to Adobe's built in fonts when the code points used are found in the available character set and font imbedding is not specified.
- Added processing for new control sequence x6A Unicode Complex Text (UCT). Previously message ID PDF0016 was issued and the conversion failed.
- Imbedding *TRUETYPE fonts with text relative positioning *EXACT or *EXACTMOD produced erroneous results.
- New PDF media overlay (PDFOVL) parameter special values added:

  *GREENBARP Similar to *GREENBAR but with bars oriented for portrait.
  *BLUEBARP Similar to *BLUEBAR but with bars oriented for portrait.

- Unicode character maps were omitted when the spooled file contained both type 1 and type 3 fonts and only type 3 were imbedded. The missing cmap rendered the resulting pdf unsearchable.
- Objects in overlays were incorrectly clipped to the overlay's extent. This caused missing data on the page in the case where an object extended off the edge of the overlay.
- Added processing for Korean Myengojo font FGID 53560.
- Addition of AES256 encryption introduced error when document restrictions specified with no password. The document asks for a password when opened. The error is corrected.

Print Data Stream Changes

- Changed default stream manager to use internal job and spooled file IDs to open spooled file. This allows correct processing in the presence of spooled files with duplicate file/job/user/jobnbr/splnbr combinations.

Program Distribution Changes

- Previously, a missing product directory didn't cause SAVLICPGM or CHKPRDOPT to fail. Now, diagnostic message CPD3D70 is issued for each missing directory and the operation fails.
- /lib has been added to the product's directory structure to facilitate future enhancements.

- Added QSYSLIBL check to trouble shooting instructions.
- RTVGSIPTF fails if no PTFs currently installed.
- The product's prompt message file is now part of the shipped deliverables as a prelude to internationalization.
- Command compilation change to allow *IMOD in all commands that allow *IPGM and to allow *BMOD in all commands that allow *BPGM.
- Incorrectly declared variable prevented RTVGSIPTF command from loading and applying PTFs.

PTOCA Processor Changes

- Added processing for new control sequence x6A Unicode Complex Text (UCT). Previously message ID PTX0005 was issued.

RTF Generator Changes

- RTF transforms enhanced to support additional CCSIDs. The new CCSIDs and associated Microsoft character sets and codepages are:

Figure: Target CCSID to Microsoft CS/CP

Target CCSID	Microsoft Character Set	Microsoft Code Page
874	222 Thai	874 Thai
942	128 Shift Jis	932 Japanese
949	129 Hangul	949 Korean
950	136 Big5	950 Traditional Chinese
1250	238 Eastern European	1250 Eastern European
1251	204 Russian	1251 Cyrillic
1252	0 ANSI	1252 Western European/US
1253	161 Greek	1253 Greek
1254	162 Turkish	1254 Turkish
1255	177 Hebrew	1255 Hebrew
1256	178 Arabic	1256 Arabic
1257	186 Baltic	1257 Baltic
1258	163 Vietnamese	1258 Vietnamese
1381	134 GB2312	936 Simplified Chinese

Conversion Processor Changes

- New transform *TXTTRIMFL was added. Processing is identical to transform *TXTTRIM, with one exception. Each line is padded with blanks to the full width of the spooled file.

Sfntly Changes

- Initial build. Google's Sfntly library has been compiled into a program to subset font files.

Spool Indexing Changes

- Missing page map reset resulted in erroneous page selection when multiple compound filters were applied to a spooled file. The second application resulted in pages from the first being included.

Spool User Interface Changes

- Pressing F5=Refresh for a second time on WRKGSISPLF and WRKGSIOUTQ panels caused the panel to reposition to the top of the list. The error is corrected.
- WRKGSISPLF and WRKGSIOUTQ panels have been enhanced to include Job system name (JOBSYSNAME) and Spooled file created (CRTDATE). on options 15 and 98.

Text Generation Changes

- Added processing to optionally blank pad each line to the width of the spooled file. Previously only blank trimmed processing was supported.