APPENDIX B: MONITOR SETUP EXAMPLE

The following example shows the steps needed to set up SpoolOrganizer on an AS/400. The example shows a typical system, the product Objectives (what the user wants SpoolOrganizer to do), a summary of tasks to perform, and a screen by screen example. Please note that certain functions, such as the Microfiche function or Archiving an outq to Tape/Optical, do not require a Monitor and can be done without performing this setup. Refer to the appropriate chapter for examples of these functions.

The Example System

The example system has five printers, BPRT01 thru BPRT05 attached to outqs BPRT01 thru BPRT05. The system also has an outq BJOBLOGS which is not attached to a printer. The system has 4 user profiles, QSECOFR, QSYSOPR, QPGMR, and QUSER.

Certain spool entries which arrive in BPRT01, BPRT02, and BJOBLOGS will be processed by SpoolOrganizer. There is no output in BPRT03, BPRT04, and BPRT05 which needs to be processed by SpoolOrganizer. The spool entries to be processed are:

Outq BPRT01
1) Inventory Report: Form ID-INV0201, Splfile name-INVLST

Outq BPRT02
2) Purchase Orders: Form ID-PO7055, Splfile name-PO

Outq BJOBLOGS
3) Job logs: Splfile name-QPJOBLOG
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Objectives

The following tasks are to be performed by SpoolOrganizer:

1) Move all joblogs into the Online Database for 15 days. All users are allowed to look at them. Purge each joblog from the Online Database after 15 days.

2) Produce 3 copies of the Inventory report. Move a copy to BPRT03, BPRT04, and BPRT05 (the original will print on printer BPRT01). Also, place the Inventory Report in the Online Database for 30 days, then archive to Optical Disk. Track the archived spool entries for 2 years. All users can display the Inventory report in the Online Database.

3) Place a copy of the Purchase Orders into the Online Database for 30 days, then archive to tape. Track the archived spool entries for 2 years. Allow QSECOFR, QPGMR, and QUSER to display the spool entries.

Note: All other spool entries which arrive in outqs BPRT01 and PRT02 are to be printed on printers BPRT01 and BPRT02.

4) Create stored search specifications for QPGMR to allow him to display purchase orders directly from a menu option. Sort them by date and show the most recent first. Change the list display so that the USRDTA (User Data) attribute appears on the list screen for QPGMR.

5) Allow QSECOFR to display or change (attributes) any spool entry in the system.

6) Allow only QSECOFR to perform setup activities. Allow QSECOFR and QSYSOPR to perform operational activities. Allow QPGMR and QUSER to perform user activities.

Task Summary

The following tasks must be done to achieve the objectives above:

1) Develop a security table and user IDs.

2) Create a new outq for printers BPRT01 and BPRT02.

3) Define users.

4) Define monitors for outqs BPRT01, BPRT02, and BJOBLOGS.

5) Create Outq Distribution List entries to distribute the Inventory report.

6) Define Selection Specs to tell the Monitors to process the Inventory report and Purchase Orders.
7) Create Archive/Purge specs to archive the Purchase Orders to tape, to archive the Inventory Report to Optical, to purge joblogs from the Online Database, and to purge the Archive and Optical Catalog.

8) Create the Stored Search Specs for QPGMR. Place the DSPOLE command in the desired menu program.

9) Start the monitors BPRT01, BPRT02, and BJOBLOGS.

10) On a daily, weekly or monthly basis execute the Archive and Purge procedures. You may wish to place the commands in a CL program or include them in an automatic job scheduler.

**Detailed Steps**

1) Create a security table and user IDs.

Example User IDs:

<table>
<thead>
<tr>
<th>User</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSECOFR</td>
<td>Security Officer</td>
</tr>
<tr>
<td>QSYSOPR</td>
<td>Operator</td>
</tr>
<tr>
<td>QPGMR</td>
<td>User</td>
</tr>
<tr>
<td>QUSER</td>
<td>User</td>
</tr>
<tr>
<td>*PUBLIC</td>
<td>User</td>
</tr>
</tbody>
</table>

Security Codes and their meanings follow. **Please note** the codes below are arbitrary and can be tailored to each installation's needs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Users</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>all users</td>
<td>Job logs</td>
</tr>
<tr>
<td>I</td>
<td>all users</td>
<td>Inventory Report</td>
</tr>
<tr>
<td>P</td>
<td>QPGMR, QSYSOPR</td>
<td>Purchase Orders</td>
</tr>
</tbody>
</table>

Note: The QSECOFR User ID will be defined with a special code which will allow it to change all spool entries.

2) Create new outqs for BPRT01 and BPRT02.

```
CRTOUTQ BRODERICK/BPRT01P TEXT('System Printer')
CRTOUTQ BRODERICK/BPRT02P TEXT('Accounting Printer')
```
APPENDIX B: MONITOR SETUP EXAMPLE

Note: Command CRTSOEXP (Create Spool Org. Example) is provided to create outqs BPRT01 thru BPRT05 and BJOBLOGS into library BRODERICK. This will allow the example to simulate your production environment without disrupting your operations. The command also creates a sample Inventory report, PO report, and job log. These objects will be needed to complete this example. To execute enter the following:

BRODERICK/CRTSOEXP

To use the CRTSOEXP command, the user must have authority to the following commands:

CRTOUTQ

3) Define Users. (Chapter 4, “Define Users”)

a) Sign on as QSECOFR. You must initially sign as QSECOFR, even if you want another user profile to be a SpoolOrganizer Security Officer. Once another user profile is defined as a security officer, it can perform all of the following tasks.

b) Add library BRODERICK to the library list:

ADDLIBLE BRODERICK

c) Display the SpoolOrganizer Administrator Menu:

SPLADM

d) Select option 1, “Define System” and press ENTER. Then select option 1, “Define Users” and press ENTER. Press ENTER to display all users.

e) Press F6 (Add a user). The Add/Copy User Definition screen will be displayed.

f) With the cursor positioned at the User ID field, press F4 (Prompt). A window will be presented, displaying the Library and Name of all User Profiles created on the AS/400.

g) Scroll through the displayed list until User ID Name QSECOFR appears in the window. Place a 1 (Select) in the Opt field next to User ID Name QSECOFR, and press ENTER. When you are returned to the Add/Copy User Definition display, the selected value (QSECOFR) will be substituted for the User ID field.

Note: The F4=Prompt option is provided on many SpoolOrganizer/400 maintenance displays to allow the selection of previously defined key values, expedite maintenance functions, and assist in the elimination of errors which can cause unexpected results.

h) Press ENTER. The “Define Users” maintenance screen will be displayed.

Note: For the purpose of this tutorial, if a field is not specified, accept the default value provided as data for the field.
i) Enter the following data for the specified fields:

<table>
<thead>
<tr>
<th>Change Security Table:</th>
<th>* (all spool entries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Class:</td>
<td>S (Security Officer)</td>
</tr>
</tbody>
</table>

Press ENTER

j) Repeat the above described steps (f thru h), substituting the following data for the specified fields on the appropriate screens:

```
“Add/Copy User Definition” Display       “Define Users” Display

User ID: QSYSOPR      Read Security Table: P
         User Class: O (Operator)

Press ENTER after entering the data on each screen.

User ID: QPGMR        Read Security Table: P
         User Class: U (User)

Press ENTER after entering the data on each screen.

User ID: QUSER        User Class: U (User)

Press ENTER after entering the data on each screen.

User ID: *PUBLIC     Read Security Table: J  I
         User Class: U (User)

Press ENTER after entering the data on each screen.

Note: The *PUBLIC User ID above will:

+ Allow users not explicitly enrolled in SpoolOrganizer to access the system as type user.
+ Allow all users read access to spool entries with codes J (Joblogs) and I (Inventory report)
```

k) After creating the User Definitions, press F12 to exit Add mode. Press ENTER to return to the “Define System Menu”.

4) Define Monitors for outqs BPRT01, BPRT02, and BJOBLOGS. (Chapter 5, “Define Monitors”)

a) Select option 2 “Define Monitors” and press ENTER. Press enter to display all defined Monitors.

b) A list of all Monitors will appear. Press F6 (Add a monitor)
APPENDIX B: MONITOR SETUP EXAMPLE

c) Monitor: BPRT01
Press ENTER

d) From Outq: BPRT01 BRODERICK
Descr. Text: System Printer
To Outq: BPRT01P BRODERICK
Press ENTER

e) The Add Monitors screen appears. Monitor: BPRT02
Press ENTER

f) From Outq: BPRT02 BRODERICK
Descr. Text: Accounting Printer
To Outq: BPRT02P BRODERICK
Press ENTER

g) The Add Monitors screen appears. Monitor: BJOBLOGS
Press ENTER

h) From Outq: BJOBLOGS BRODERICK
Descr. Text: System Printer
To Outq: *DLT
Online DB Per: ND 15
Arc Cat Per: DT 19900101
Read Sec Table: J
Chg Sec Table: J
Press ENTER


j) A list of your Monitors appears. Press ENTER to return to the “Define System Menu”.

5) Create Outq Distribution List entries to distribute the Inventory Report.
(Chapter 7, “Define Outq Distribution Table”)

a) Select option 5, “Define Outq Distribution Table” and press ENTER. Press ENTER to display all entries.

b) A list of outq distribution entries will appear. Press F6 (Add an outq distribution entry).

c) List Name: INV
Seq: 100
Press ENTER

To Outq: BPRT03 BRODERICK
Descr. Text: To Sales Printer
Press ENTER
d) List Name: INV
   Seq: 200
   Press ENTER

   To Outq: BPRT04 BRODERICK
   Descr. Text: To Engineering Printer
   Press ENTER

  e) List Name: INV
      Seq: 300
      Press ENTER

      To Outq: BPRT05 BRODERICK
      Descr. Text: To Administration Printer
      Press ENTER

  f) Press F12 to exit Add mode. Press ENTER to return to the “Define System Menu”.

6) Define Selection Specs to tell the monitor to process the Inventory Report and Purchase Orders. (Chapter 6, “Define Selection Criteria”)

   a) Select option 3 “Define Monitors Selection Criteria” and press ENTER. Press ENTER to display all Selection Specs.

   b) Press F6 (Add a Monitor Selection Criteria)

   c) Note: For this example we will not need the ID field and will leave it blank. Enter Monitor/ID/Seq. Number:
      BPRT01 (Blank) 100
      Press ENTER

   d) Spool File Name: INVLST
      Form ID: INV0201
      Descriptive Text: Inventory Report Selection Spec
      To Outq: BPRT01P
      Library: BRODERICK
      Outq Dist. List: INV
      Online DB Per: ND 30
      Arc Cat Per: NY 2
      Read Sec Table: I
      Chg Sec Table: I
      Press ENTER

  Note: When defining the selection criteria, specify only enough fields to uniquely identify the spool entry(s). For example if the Inventory listing is the only spool entry in the system with a spool file name
APPENDIX B: MONITOR SETUP EXAMPLE

of INVLST, the Jobname parameter would not be needed.

e) The Add screen appears. Enter Monitor/ID/Seq. Number:
   BFRT02 (blank) 100
   Press ENTER

f) Spool File Name: PO
   Form ID: PO7055
   Descriptive Text: Purchase Order Report Selection Spec
   To Outq: BPRT02P
   Library: BRODERICK
   Online DB Per: ND 30
   Arc Cat Per: NY 2
   Read Sec Table: P
   Chg Sec Table: P
   Press ENTER

  The add screen appears. Press F12.

h) The List screen appears. Press ENTER to return to the “Define System Menu”.

7) Create Archive/Purge specs to archive the Purchase Orders to tape, To Archive the Inventory Report to Optical Disk, to purge joblogs from the Online Database, and to purge the Archive Catalog. (Chapter 8, “Defining Archive or Purge Specifications”)

a) Select option 6, “Define Archive/Purge Criteria”

Fill out the screen as follows:

<table>
<thead>
<tr>
<th>A/O</th>
<th>Field</th>
<th>Rel</th>
<th>Value</th>
<th>UC</th>
<th>Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>EQ</td>
<td>INVLST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>EQ</td>
<td>INV020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name to Save or Restore: INV
   Text: Inventory Reports
   Press F9 (Save)

Fill out the screen as follows:

<table>
<thead>
<tr>
<th>A/O</th>
<th>Field</th>
<th>Rel</th>
<th>Value</th>
<th>UC</th>
<th>Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>EQ</td>
<td>PO7055</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>EQ</td>
<td>PO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name to Save or Restore: PO
   Text: Purchase Orders
Fill out the screen as follows:

<table>
<thead>
<tr>
<th>A/O</th>
<th>Field Rel Value</th>
<th>UC</th>
<th>Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>EQ</td>
<td>QPJOBLOG</td>
<td></td>
</tr>
</tbody>
</table>

---Space out the second line---

Name to Save or Restore: QPJOBLOG
Text: QPJOBLOG (Joblogs)

Press F9 (Save)
Press F3 to exit

8) Create a Heading Spec and Stored Search Specs for QPGMR. Place the DSPOLE command in the desired menu program. (Chapter 23, “Search for Spool Entries”)

a) Select option 11, “Define Heading Specs” and press ENTER. Press enter to display all specs.

b) A list of heading specs will appear. Place a 3 (copy) by *DFT and press ENTER.
   Name: PGMRHDG
   Press ENTER.

c) Place a 2 (change) next to the first and third Opt fields and press ENTER.

d) A screen describing the first heading line appears. Change the field with a 6 (Form ID) to a 14 (user data) and press ENTER. Notice that the heading at the top of the screen changes to show the changed format.

e) Press F6 to save and exit. Then a screen describing the third heading line appears.

f) Change the field with a 14 (User Data) to a 6 (Form ID) and press ENTER. Notice that the heading at the top of the screen changes to show the changed format.

g) Press F6 to save and exit.

h) The list screen appears. Change the Text field to:
   QPGMR Headings
   Press F6 to save and exit.

i) Press F12 to exit Copy mode. A list of Heading Descriptions appears Press ENTER to return to the Define Systems Menu.

j) Press F3 to exit Define Systems Menu. At the Administrative Main Menu, Select Option 3 (End User Functions), and press ENTER.

k) At the User Menu, Select Option 1, and press ENTER. Press ENTER on the parameters screen.
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Fill out the search screen as follows:

Ordered by: 7           Asc/Dsc: D

<table>
<thead>
<tr>
<th>A/O</th>
<th>Field</th>
<th>Rel</th>
<th>Value</th>
<th>UC</th>
<th>Wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>EQ</td>
<td>PO</td>
<td>PO7055</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>EQ</td>
<td>PO</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name to Save or Restore: PO
User ID: QPGMR
Text: Purchase Orders

Press F9 (Save)
Press F3 to exit.

1) Place the following command in a CL program or Menu which is convenient to the end user:

BRODERICK/DSPOLE SRCHSPEC(PO) HDGSPEC(PGMRHDG)

9) Change the IBM printers to use the new outqs, then start the monitors BPRT01, BPRT02, and BJOBLOGS. (Chapter 15, “Monitor Selections”)

a) Change the IBM Print Writers. Consider (do not enter) the following commands:

   CHGWTR BPRT01 OUTQ(BPRT01P)
   CHGWTR BPRT02 OUTQ(BPRT02P)

Note: In this example, Print Writers BPRT01 and BPRT02 were not created. The above commands are presented for illustrative purposes.

b) Start the SpoolOrganizer Monitors. Enter the following commands:

   STRSOMON BPRT01
   STRSOMON BPRT02
   STRSOMON BJOBLOGS

Note: The STRSOMON commands may be placed in a CL program or Menu.

c) Observe the Monitors. Enter the following command:

   WRKACTJOB

You will see Subsystem BDS. Your Monitor tasks and some BDS internal tasks will be executing within subsystem BDS. Periodically press F5 to refresh until all 3 Monitors enter a status of DEQW (Dequeue Wait). The Monitors have initialized and are waiting for spool entries to process. When you are finished, press ENTER.
Enter the following command and press ENTER.

DSPSOMSTS

You will see all Monitors and their statuses.

Note: This command/display is provided as a feature to allow the control of all Monitors from one display. Option 1 starts the selected Monitor(s) via the STRSMON command, and option 4 ends the selected Monitor(s) via the ENDSOMON command using the default command parameters.

When you are finished, press ENTER.

d) Give the Monitors work to do. Enter the following command:

WRKOUTQ BPRT01

You will notice a spool entry in the outq in a held status. This spool entry was created by the CRTSOEXP command entered earlier and will be used to simulate a production Inventory List report. You may wish to place a ‘5’ (Display) by the spool entry to display it.

e) Place an ‘8’ by the spool entry to display its attributes. Notice that the “File” and “Form Type” values match the values specified when creating the Selection Specification (see step 6 above).

Note: It is very important that the spool entry's attributes match the attributes specified on the Selection Specs. You may wish to review your Monitor Descriptions and Selection Specs to verify. If a change is made to a Monitor or one of its Selection Specs, you must end then restart the Monitor for the change to take effect.

f) Place a ‘6’ by the spool entry and press ENTER to release it. Press F5 to refresh. Within a few Moments the spool entry will disappear. This indicates the Monitor has processed the spool entry.

g) Observe the results of Monitor BPRT01’s actions. Remember what the Monitor was set up to do:

+ Move the original copy to BPRT01P (to print on the system printer).
+ Distribute copies to outqs BPRT03, BPRT04, and BPRT05.
+ Place the entry into the Online Database.

To verify these actions were performed, enter the following commands:

WRKOUTQ BPRT01P
WRKOUTQ BPRT03
WRKOUTQ BPRT04
WRKOUTQ BPRT05

Notes:

1) It may take a minute for the Monitors to complete processing and place out-put into the desired outqs. If unsure, display active jobs, the Monitors are done when their job is in a DEQW status.
APPENDIX B: MONITOR SETUP EXAMPLE

2) If output does not appear in the outqs as expected, carefully review the setup. If changes are made to a Monitor or one of its Selection Specs, the Monitor must be ended and restarted for the changes to take effect.

h) Test Monitors BPRT02 and BJOBLOGS. Display outqs BPRT02 and BJOBLOGS. Release the spool entries created by the command CRTSOEXP.

i) Display the Online Database. Enter the following command (or select option 1 from the End User menu):

```
DSPOLE
```

Press F6 to search. A list of spool entries in the Online Database should appear, including the example Invoice List. You may wish to place a ‘5’ (display) by the sample Invoice list to display it.

Note: In a production environment the Online Database may contain thousands of spool entries. The search screen allows the user to query the Online Database. The searches can be saved. (This example creates a search spec for QPGMR.)

j) Press F11 (view). Notice the change in the display. Keep pressing F11 until the heading shows “Job Name  Job User ...”. Press ENTER to return to the search screen.

k) Press F4 (list saved). A list of Stored Search Specs should appear. Place a 1 (select) by the spec defined for QPGMR and press ENTER. The stored search spec is loaded.

l) On the Search screen enter the following:
   Heading Specifications: PGMRHDG
   Press F6 (search)

m) Press F11 a few times. Notice the headings and the attributes displayed are differently (User data is on the first screen and Form ID is on the third). Press ENTER to return to the Search Screen. Press F3 to exit.

10) Create Archive and Purge Procedures. (Chapter 8, “Define Archive/Purge Criteria”)

On a daily, weekly or monthly basis execute the Archive and Purge procedures. You may wish to place the commands in a CL program or include in an automatic job scheduler.

To Archive Purchase Orders to Tape:

```
ARCOLE ARCID(PO) DEV(QTAPE1) VOL(POARC1) ENDOPT(*UNLOAD)
```

To Inventory Reports to Optical Disk:

```
OPTOLE ARCID(INV) VOL(SPLE) DIRPATH(SPOOL_ENTRIES JUNE INV)
```
To Purge Joblogs from the Online Database:

PUROLE ARCID(*ALL)

To purge Purchase Orders from the archive catalog:

PURARCCAT ARCID(PO)

To purge Inventory Reports from Optical Catalog:

PUROPTCAT ARCID(INV)

Note: You may wish to use ARCID(*ALL) in this example when purging the Online Database, Optical Catalog, or Archive Catalog.

11) End the Monitors.
Enter the following command:

ENDSOMON *ALL

12) Test Selection Specs. Chapter 6, “Define Selection Criteria”
The CHKSELSPEC command will determine which Monitor’s Selection Specification if any will match a specified spool entry.

a) Enter the following command:

WRKOUTQ BPRT01P

Select one of the spool entries and take option 8 (attributes) and press ENTER.

b) Write down the values of following attributes:

Job
User
Number
File
Number

Press ENTER to exit.

Press ENTER to exit the WRKOUTQ screen.

c) Enter the following command and press F4 to prompt:

CHKSELSPEC
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Enter the Following:

Monitor Name: BPRRT01

Enter the File, File number, etc. retrieved from Step b) above.

Press ENTER.

d) If the command ends normally, a message (SPO1157) will be displayed identifying the output queue which received the report (BSOCHKSPEC) generated by the command.

13) Clear and Delete outqs created by this example.
Please note that other examples also use the outqs and spool entries created in this example. It is recommended to only clear the outqs and not delete them. To recreate the example spool entries, execute the CRTSOEXP command again at a later date. Enter the following:

    CLROUTQ BRODERICK/xxxxx
    DL ToutQ BRODERICK/xxxxx

xxxxx: BPRRT01, BPRRT02, BPRRT03, BPRRT04, BPRRT05, BJOBLOGS

14) Delete SpoolOrganizer Objects.
Delete all descriptions created by this example. Other examples may be affected by the setup performed here.

Note: The Indexing example uses the SpoolOrganizer objects created in this example. Do not delete the objects specified below it you plan on performing the Indexing example.

   a) Bring up the Administrator Menu (SPLADM).

   b) Select option 1, “Define System Menu”.

   c) Select each of the following options below. Place a ‘4’ (delete) by each object created and then press enter to delete:

      Users (Leave QSECOFR and your User ID)
      Monitors
      Monitor Selection Criteria
      Outq Distribution Table
      Archive/Purge Criteria
      Heading Specs