Making Requests to the Loftware Print Server from an OptioDCS Script

About Loftware, Inc.

Loftware has been providing world class barcode labeling systems to virtually every industry since 1986. From the Printer Work Station (PWS) product that dominated the industry in our early years to our modern "Server-Centric" products, Loftware continues to prove that it is the industry leader in barcode label printing products and technology. We specialize in driving thermal transfer barcode printers in their native languages to produce virtually any compliance label format. Our core philosophy is to provide labeling solutions that complement our customers existing business and warehouse systems without burdening them with complicated interfaces and large amounts of programming. We believe that labeling systems should be "transparent" to existing systems, while still providing comprehensive functionality. Loftware is a "shop floor" orientated company. Our employees have experience in what works and what does not work in real world situations. This philosophy will become very apparent as you learn more about our products and speak to our analysts and technicians.

What is the Loftware Print Server?

The Loftware Print Server (LPS) forms the basis of Loftware's "Server-Centric" approach to barcode labeling systems. Server-Centric means that all barcode label printing in the enterprise is controlled from one PC on the network. The LPS is a 32-bit, multi-threaded application designed to accept label requests from external Host or PC applications on your LAN or WAN. These requests can be off loaded from your application to the LPS where they are then dispatched to the appropriate printer. This is an extremely useful tool for printing labels from your ERP/MRP II and/or WMS systems regardless of what platform they reside on. Host computers, such as an IBM AS/400, HP 9000, DEC VAX and RISC/6000 can also request labels through the LPS. All that is needed to print labels from one of these non-PC platforms is a shared network drive (like "I:") that both the PC and the host computer can access. The LPS is also a great solution if you have a client/server PC application running on multiple clients that need to request labels from a centralized location. Please note that the platform and application from which the requests are being made is transparent to the LPS. This is why it is referred to as a "Bolt On" solution.

*About Optio Software, Inc.

Optio software develops, implements and supports a suite of integrated document formatting and delivery solutions, allowing users to customize the information produced by enterprise applications systems. It facilitates the integration, individualization and delivery of information throughout the enterprise and beyond.

*What is OptioDCS?

OptioDCS (Document Customization Server) enables efficient management of all your business documents and reports. The server intercepts and interprets data streams from ERP and other leading applications, formats the data the way you want it and distributes it where you need it to go. Built-in, rules-based intelligence allows you to produce and deliver customized order forms, shipping forms, production schedules, bills of materials, invoices, W-2s and checks. OptioDCS breaks the tyranny of pre-printed multi-part forms, giving you control over every section of every individual document. For example, the sales, accounting, warehouse, shipping and customer copies of a customer order may each be customized to the needs of the individual user. Information can be routed electronically to specific laser and thermal printers, fax servers or e-mail systems. This increases enterprise efficiency and improves business processes by gaining control over the appearance and delivery of application output. A scaleable, flexible solution, OptioDCS is platform-independent, supporting a variety of operating environments, including AS/400, Windows NT, UNIX, Novel and mainframe.

Why use OptioDCS and the Loftware Print Server Together?

OptioDCS and the Loftware Print Server complement each other very well. OptioDCS has the ability to intercept any data stream directed to a printer, make enhancements to the format of the intercepted data, and let it pass through to the destination device or re-route it to another system. The Loftware Print Server (LPS) exercises full control over your thermal transfer barcode printers, allowing you to design and print barcode labels of any complexity. By configuring an Optio script to examine a data stream "on the fly" and reroute it to the LPS, you have added powerful barcode labeling support to your applications without involving product vendors or programming staff. Your applications now use the same process for both printing forms and barcode label printing.

About This Example

Assume ABC Corporation is using Optio to customize forms and reports being printed from various systems throughout the company. They have just purchased 15 late models thermal transfer barcode printers. This company uses Excel to print monthly balance sheets. They require that whenever a balance sheet is printed to a laser jet, asset tag labels are also printed to one of the Sato printers. The script below shows how data "scraped" from a print job can be re-routed to an ASCII file for subsequent use by the LPS. This example assumes that ABC Corporation is using the WatchDog-NT interface to the LPS. Please take the time to read the code and the comments in the example script.

Note: The OptioDCS - Loftware combination can take printed output from any application and modify it for use in labels or other reports. Although no programming is required to change your existing reports, you will have to have a staff member learn the Optio Scripting Language, which is a form of programming.

Code Sample

```
//This sample Optio script intercepts a print job (in this case a Balance
//Sheet printed from Excel). All assets, liabilities and Equity are "scraped"
//from the intercepted form and re-routed to a .csv file for processing by
//WatchDog. This sample assumes that we are printing a label named "asset" on a
//SATO printer which is named "Ship 2". This example can be extended to support
//any number of labels on any number of thermal transfer printers. Supported printers
//include INTERMEC, MONARCH, ZEBRA, SATO, DATAMAX, ELTRON, UBI as well as any printers
//that use standard windows drivers. The "asset" label used in this example was
//designed with Loftware's "state of the art" WYSIWYG graphic designer.
DOCUMENT "assetTags"
     SET INPUT "standardInput"
     SET OUTPUT "watchDog"
     SET DEVICE "textDevice"
     SET SEQUENCE "assets"
     PROCESS PARTS

     //the following statement calls a .bat file which uses the NT
                //"net use" command to give optio rights to write to a network drive.
                //This statement should be commented out if you are writing to a local
drive.
     //LET myTest = SYSTEM("c:\winnt\shr.bat") //grant network permissions
END DOCUMENT

//place the header containing the Loftware commands and field def's on the first line
//for every valid asset entry in the intercepted balance sheet report, add a line
PART "assets"
     MAP "assetTagMap"
     DRAW "generalHeader"
     FOR line = 1 TO lineCounter
          DRAW "assetTagFormat"
     END FOR
END PART

//standard input
CHANNEL "standardInput"
     LIKE "stdin"
     BUFFER "@"
END CHANNEL

//file output
//notice that FORMFEEDS is turned off. This prevents a FF control
//code from being automatically written to the file.
CHANNEL "watchDog" LIKE "stdout"
     MODE "WRITE"
     FILE  "C:\ASSET.CSV"
     FORMFEEDS "OFF"
     NEWLINES "ON"
     RETURNS "ON"
     SMART "OFF"
END CHANNEL

//optio padds printed lines out to the column with. In this case 125.
//know what the max width of your data is and make sure you record it in the
//PAPER statement below. The .CSV file that results will have extra
//padding on every line. The WatchDog-NT product will ignore the extra
//spaces providing that the data trim option in configuration mode is
//set to "Trim All".
DEVICE "textDevice"
```

```
     LANGUAGE "Text"
     UNITS "Characters"
     FEEDER "Upper", ""
     PAPER "oneLine", "", 1, 125, 0, 0
END DEVICE

//map for pulling label variables from printed spreadsheet
// variable label data coming from printed excel spreadsheet
// some fields like labelName are hard coded
// quotes and commas are also hard coded for Loftware .csv file
DATAMAP "assetTagMap"
     BUFFER @
     LET date = '"' & TRIM(@[9, 20:37]) & '",'
     LET labelName = '"asset",'
     LET numberOfLabels = '"1",'
     LET printerName = '"Ship 2",'

     //only grab lines with valid numbers
     LET curLine = @[#,1:80]
     LET lineCounter = 0
     FOR i = 1 TO 66
          IF ISNUMERIC(@[#,6:9]) THEN
               LET orderNumber[lineCounter + 1] = '"' & @[#,6:9] & '",'
               LET orderValue[lineCounter + 1] = '"' & PRUNE(@[#, 54:64]) & '"'
               LET orderDescription[lineCounter + 1] = '"' & TRIM(@[#, 20:44]) & '",'
               LET lineCounter = lineCounter + 1
          END IF
          ADVANCE LINE
          LET curLine = @[#,1:80]
     END FOR

END DATAMAP

FORMAT "generalHeader"
UNITS "CHARACTERS"
     PAPER "oneLine"
     LET headerText = "*FORMAT,*PRINTERNAME,*QUANTITY,DATE,NUMBER,DESCRIPTION,VALUE"
DRAW TEXT USING headerText AT 1,1
END FORMAT

FORMAT "assetTagFormat"
     UNITS "CHARACTERS"
     PAPER "oneLine"
     DRAW TEXT USING labelName & printerName & numberOfLabels & date & orderNumber[line]
&
                         orderDescription[line] & orderValue[line]   AT line,1
END FORMAT
```

Summary

This section summarizes the input and output structures of the above scenario. For more information regarding the LPS, WatchDog-NT and other Loftware Products, visit our web site at www.loftware.com. For more information on the OptioDCS server and other Optio products, visit their web site at www.optiosoftware.com.

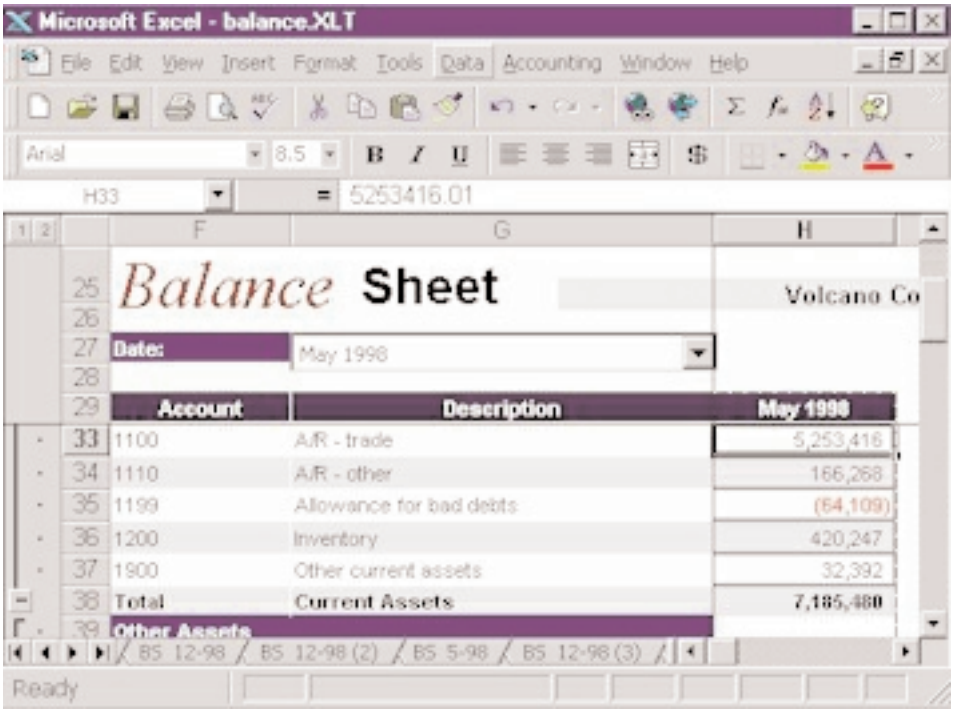

Figure 1: Sample report in Excel just before it is printed (partial page)

The steps that follow show what happens when the person who is in the Excel session shown above decides to print.
1. The Spreadsheet is printed
2. The Optio script intercepts the print and "scrapes" the data needed for the label
3. The Script writes a .csv file with header to the directory that WatchDog-NT is scanning.
4. WatchDog-NT processes the file, converts it to native Sato printer language and...
5. The asset labels are printed.

Below: The .CSV file created with the scrip. This file will be detected by WatchDog-NT and passed along to the LPS.

*FORMAT,*PRINTERNAME,*QUANTITY,DATE,NUMBER,DESCRIPTION,VALUE
"asset","Ship 2","1","May 1998","1000","Cash and equivalents","1,377,265"
"asset","Ship 2","1","May 1998","1100","A/R - trade","5,253,416"
"asset","Ship 2","1","May 1998","1110","A/R - other","166,268"
"asset","Ship 2","1","May 1998","1199","Allowance for bad debts","(64,109)"
"asset","Ship 2","1","May 1998","1200","Inventory","420,247"
"asset","Ship 2","1","May 1998","1900","Other current assets","32,392"
"asset","Ship 2","1","May 1998","2000","Fixed assets","1,008,206"
"asset","Ship 2","1","May 1998","2100","Accumulated depreciation","(338,744)"
"asset","Ship 2","1","May 1998","2900","Other assets","35,413"
"asset","Ship 2","1","May 1998","3000","Accounts payable","998,257"
"asset","Ship 2","1","May 1998","3100","Accrued payroll","8,670"
"asset","Ship 2","1","May 1998","3400","Other current liabilities","239,793"
"asset","Ship 2","1","May 1998","3500","Long-term notes","93,934"
"asset","Ship 2","1","May 1998","3900","Other liabilities","6,105"
"asset","Ship 2","1","May 1998","4000","Capital stock","53,435"
"asset","Ship 2","1","May 1998","4500","Retained earnings","1,137,927"
"asset","Ship 2","1","May 1998","4999","Revenue/expense clearing","3,884,060"

Figure 2: First of 16 printed Asset Tag Labels

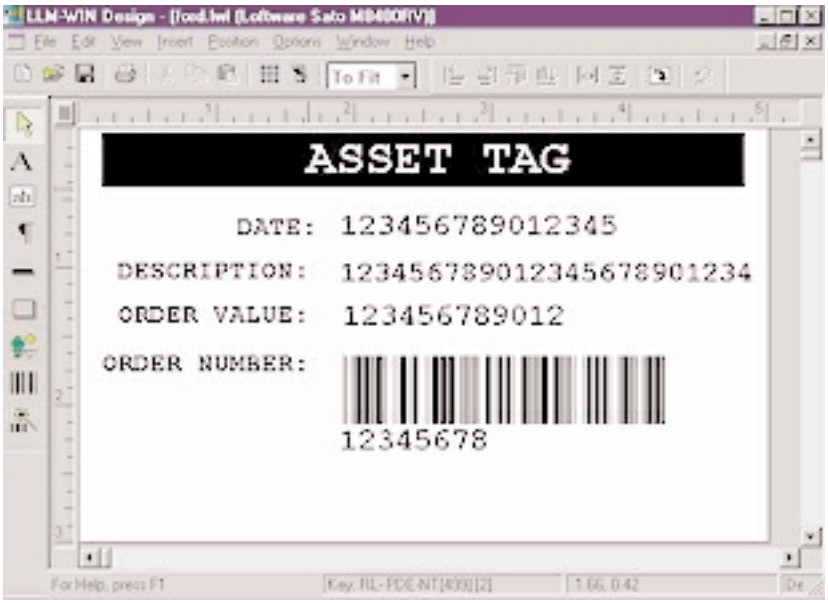

Figure 3: Asset Tag label being designed using the Loftware WYSIWYG

Credits

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