halFILE Barcode Print Utility

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Overview

The halFILE Barcode Print Utility, BARPRINT32.EXE, provides the ability to print barcodes labels or sheets. The source data to use for the barcodes is obtained in a variety of ways as described below. This utility includes set up screens for defining barcode print sets as well as command line options for processing a particular set. It is designed to be used in conjunction with the **halFILE Barcode Recognition Server** where halFILE automatically indexes using barcodes that are found on a designated page of the document.

Requirements

Since the data to print on the barcode pages is filtered through a Crystal Report, BARPRINT32.EXE requires the Crystal Reports Designer to define how the barcode labels or sheets appear. The Crystal Reports Runtime to required to actually print the barcode pages.
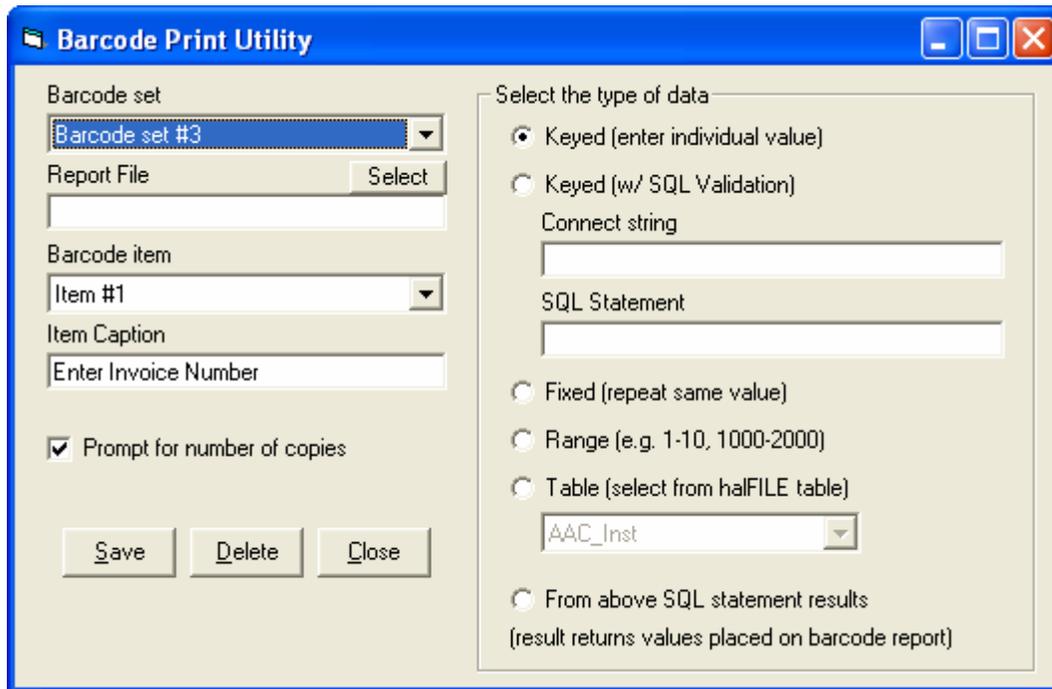
Also required is a barcode font defined in Windows Fonts. The 3 of 9 font is recommended and most often used although other barcode fonts are supported.

Program Set up

BARPRINT32.EXE is installed by placing it into the halFILE program directory. If desired, it can be placed on the halFILE Manager or Administrator Menus using the Menus tab found by selecting the Tools-Option menu of the halFILE Administrator.

Program Operation

When you run the BARPRINT32.EXE, the screen below is displayed. This is used to define sets for printing barcodes. The options are described below.

Barcode set

The Barcode set box is used to select which set to configure. Up to 10 sets can be defined.

Report File

The report file box is used to define the Crystal Reports file to use as the print filter. The best way to design this report file is to set up your Barcode set and process it. Then go into Crystal Reports Designer and design a barcode page using the data results from the process.

Barcode item

This defines a field that will be included on the barcode page. For each item selected, you can define the field settings in the "select the type of data" frame on the right side of the screen. Keep in mind the following when defining Barcode items:

1.   Defining multiple Barcode items is typically used for:
   a. Keyed value (enter individual value)
   b. Keyed (w/ SQL Validation) options
   c. Fixed (repeat same value)
   d. Range
   e. Table (select from halFILE table)
2.   Up to 10 Barcode items can be defined.
3.   You can use the Keyed value and Range options together. For example, you could ask the user to enter an Invoice Number behind Barcode item #1 and a Status code range behind Barcode item #2. Then if the user entered Invoice Number 44322 and Status Code range of 1 through 4, then the resulting output file of barcode values would have the Invoice Number repeated 4 times with the Status Code incremented from 1 to 4.
4.   You can use the Keyed value and Fixed (repeat same value) options together. In this case, the utility will ask for the number of times to repeat the value.
5.   You can use the Keyed value and Table (select from halFILE table) options together. The utility will pop up the table for you to select which value to use.
6.   The "From above SQL statement results" option would need only the first Barcode item defined but can return up to 10 fields that can be placed on the barcode page.

Item Caption

This is the caption that appears on the screen to prompt the user to enter a value. For example, if the caption for Barcode Item #1 was "Enter Invoice Number" then when the set was processed, the following screen would appear.
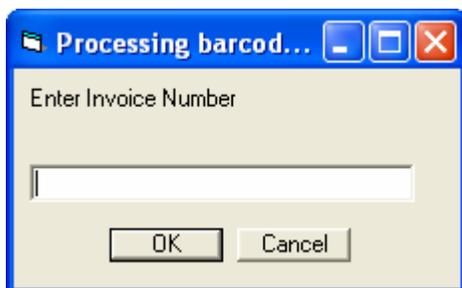
Prompt for number of copies

When this option is checked the utility will ask the user how many copies of the barcode should be printed as follows.
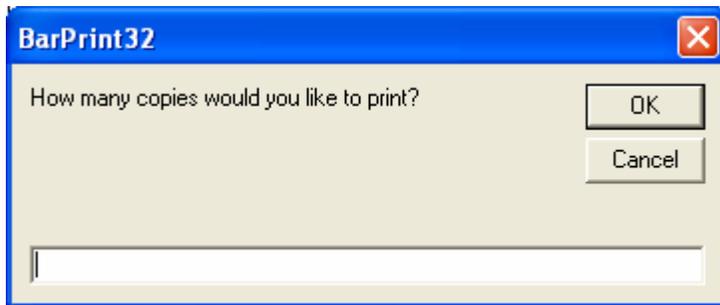
Type of Data Options

The following describes the different options for specifying the type of data to appear on barcode sheets.

Keyed (enter individual value)

This option prompts the user to enter the value for the barcode.

Keyed (w/ SQL Validation)

This option works like the individual value above except the value is validated using the Connect String and SQL Statement boxes provided. The following describes how these boxes are filled out.

Connect String

The SQL Connect String follows the following form:

FILEDSN=c:\halfile\dsn\test.dsn;UID=sa;PWD=hal;

Where:
FILEDSN is the path and file name of the ODBC Data Source File to use to open the database.
UID is the user id used to connect to the database.
PWD is the password used to connect to the database.

SQL Statement

The SQL Statement box includes the statement that is used to validate the keyed data. Within this statement, the **%value%** form is used to define where in the SQL statement the keyed value would be placed. For example, if the Invoice_Number field in the Invoices table is to be validated, then the SQL statement would read:

Select * from Invoices where Invoice_Number = '%value%'

Then, when the user keyed Invoice Number 4433, the system would open the designated database and perform the SQL statement:

Select * from Invoices where Invoice_Number = '4433'

If the statement returned one or more rows, then the barcode would be printed. If not, then "Invalid entry" would be displayed.

Fixed (repeat same value)

This option would prompt the user for the value and ask how many times it should be repeated.

Range (e.g. 1-10, 1000-2000)

This option prompts the user for a range of values to print as shown below.
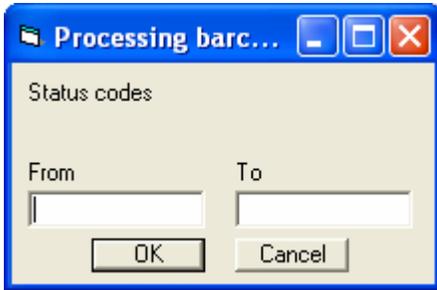
Table (select from halFILE table)

To use this option, select the table to use from the list of tables provided. Then, when processing, a screen will be shown listing all the valid entries in the selected table. The user can select from the list by double clicking the desired entry or highlighting the desired entry and pressing ENTER or clicking the SELECT button.

For example, if you selected the County table to use when you processed the set the following screen would be displayed. If you double clicked Cabarrus County, then the code for Cabarrus County (Cab) would print on the barcode page.
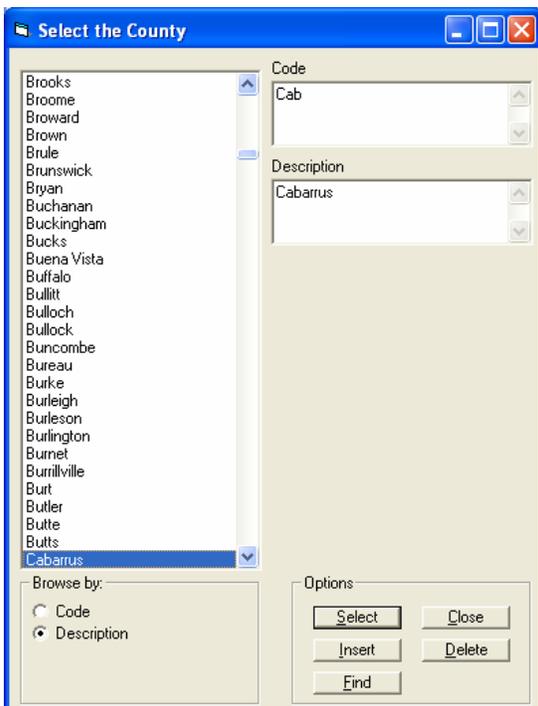
From above SQL statement results

This option can extract values from a database table to be placed on the barcode page or pages. With this feature you can generate a series of barcodes. For example, if you had an Invoice table that included a status flag for "Approved", you could print labels for all Approved invoices using this feature. Use the Connect String and SQL Statement boxes to define how the data is to be extracted.

Connect String

The SQL Connect String follows the following form:

FILEDSN=c:\halfile\dsn\test.dsn;UID=sa;PWD=hal;

Where:
FILEDSN is the path and file name of the ODBC Data Source File to use to open the database.
UID is the user id used to connect to the database.
PWD is the password used to connect to the database.

SQL Statement

The SQL Statement box includes the statement that is used to extract data that will become barcode information. For example, to print barcodes for all approved invoices, the SQL statement may read:

Select Invoice_Number from Invoices where Status = 'approved'

You can include data for multiple barcodes. For example:

Select Invoice_Number, Invoice_Date, Vendor from Invoices where Status = 'approved'

This would pull the Invoice Number, Invoice Date and Vendor for all approved invoices into the data file from which Crystal Reports would print the barcodes.

Using Crystal Reports to Print Barcodes

The output file created when BARPRINT32.EXE is processed is named barprint32.txt and is saved to the temporary folder. You can find this file quickly by select Start-Run and entering %temp%.

In Crystal Reports Designer, you would use %temp%\halreports.dsn ODBC Text File DSN to connect to this file. Once connected, you should see the fields Item1, Item2,… Item10 as fields that can be placed onto the report. Normally, you can place the field on the report twice and change one to use the barcode font. Then you would see the Barcode plus the actual value on the printed page.

hal Systems Technical Support personnel can help you design your barcode reports.

Processing Barcodes

The command line to process barcodes and actually print them is:

C:\halfile\barprint32.exe 3

Where "C:\halfile" is the path to the halFILE program folder and "3" is the Barcode Set to process.

For repetitive tasks, you can place this on the halFILE menus using the Tools-Options menu of the halFILE Administrator (Menus tab).

Another method for conveniently printing one-up barcodes is to tie it into the halFILE Index process by setting the above command line as an "Index Execute" process. This is set up behind the Tools-Options menu of the Index module (Index Execute tab). An example of using this is a situation where, when a new order comes in, a barcode sheet needs to be generated for each anticipated document type that will be later filed for that order. So, after entering the initial order information into halFILE, the Barprint Utility is run. The user is prompted for the Order number and the appropriate barcode sheets are printed – one for each document type needed. When one of these documents is received in the mail for the order, the appropriate barcode sheet is pulled from the file and placed at the end of the document. The document is then scanned and the halFILE Barcode Recognition Server automatically files it away under that order.