



White Paper

Dynamically Changing Objects at Print-Time using VB Script

Using BarTender's Document-Level
Scripts to Change Text, Bar Code, and
other Objects at Print-Time

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Overview

By combining two features, Object Automation and Document-Level VB Script Support (both introduced in version 9.3 and described below), you can create labels that dynamically change the appearance of objects during a print job depending on the data being printed.

Object Automation

When we talk about “automating” BarTender, we refer to the general process of controlling BarTender from within other software. When we talk about *object* automation, we are referring more specifically to the process of manipulating individual objects on the label, such as bar codes and text. This is in contrast to *application* automation functions, such as loading a label format or printing it.

Programmatically Modifying Label Object Properties

BarTender’s automation commands to support changing an object’s position, size, color, and visibility under programmatic control. These commands can be issued from inside BarTender using VB Script or issued from outside of BarTender using our ActiveX Automation interface. This interface lets you change properties like:

- Position
- Color
- Size
- Visibility
- Font

For full documentation on all object properties, see the “Automating BarTender” section in the BarTender online help system.

Document-Level VB Script Support

BarTender supports the execution of VB Script in response to a variety of document-level events, including open, close, save and a variety of print-time events. You can call the Object Automation functions from within this VB Script to programmatically modify BarTender label objects before and even *during* print jobs. To access the document-level VB Script, select **Label Format Options** from the **File** menu, and view the **VB Scripting** tab.

List of New Document-Level Events

The VB Scripting tab provides access to the VB Script assistant where you can define scripts for the following document-level events:

- **OnOpen**
Executed when the document is opened.
- **OnClose**
Executed when the document is closed.
- **OnSave**
Executed when the document is saved.
- **OnPrintJobStart**
Executed when the document begins printing.
- **OnNewRecord**
Executed during printing, each time a new record is read from the database. This is the event that will most often be used to change objects during the middle of a print job.
- **OnSerialize**
Executed during printing, each time there is an opportunity for a serial number to change.
- **OnIdenticalCopy**
Executed during printing, each before every label that is printed, even identical copies.
- **OnPrintJobEnd**
Executed when the printing of the document ends normally.
- **OnPrintJobCancel**
Executed when the printing of the document is canceled.

On-the-fly Modification of Object Properties

A common use case for this feature would be to change object's in response to the data coming from a database. In this case you would write a script for the OnNewRecord event. You could change the color of a text object, depending on whether or not a warning condition was indicated. For example, you could write the following script for the OnNewRecordEvent.

```
Set Notice = Objects("Notice Text")
If (Field("Condition") = "Warning") Then
    Notice.TextColor = btColor.Red
Else
```

```
Notice.TextColor = btColor.Green  
End If
```

If you wanted to have a field in your database contain the name of a color like “red” or “yellow,” you could use the code below to set the color of an object.

```
Objects(“Box 1”).FillColor = BtColor.FromName(Field(“Color”))
```

You can hide or show objects based the data that is printed. You can either use an object’s Visible property, or you can simply move it on or off of the design area, using its X and Y properties. For example:

```
Set RedBar = Objects(“Red Bar”)  
If (Field(“Weight”) >= 50) Then  
    RedBar.PrintVisibility = True  
Else  
    RedBar.PrintVisibility = False  
End If
```

Support for Data-Sourced VB Script

You can even feed VB Script into BarTender from external sources, such as a database or a program that is controlling BarTender. For example, you could have a field in a database contain VB Script code. Then, when BarTender reads the data record that contains that field, VB Script code in BarTender can use the VB “Execute” statement or the “Eval” function to execute the imported VB Script code. This could be done to let a field in a database source the color for an object on the label. For example, if you had a field in your database that was supposed to contain the color for a line object, you could use the following code to treat that field as VB Script code.

```
Objects(“Condition Bar”).LineColor = Eval(Field(“Condition Color”))
```

Then the “Condition Color” field in your database could contain values like “BtColor.FromRGB(255,0,0)” or “BtColor.Red”.

Sample Document

The GHS_Demo.btw file that is installed with BarTender is a good example of a VB Script that changes object’s size, color, and moves them on and off of the design area to control visibility.

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