



White Paper

# Using BarTender's Application Identifier Wizard

Adding Application Identifiers to  
Bar Codes, Quickly and Reliably

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## What are Application Identifiers?

An *Application Identifier* is a number at the beginning of a string of data that identifies the intended interpretation of the data that follows. It also identifies the size of the data. The GS1-128 (UCC/EAN Code 128) specifications define numerous Application Identifiers, such as *serial number* or *expiration date*. BarTender's Application Identifier Wizard guides you through the process of constructing a bar code that uses Application Identifiers. (The wizard is not available in the Basic or UltraLite Editions.)

Some Application Identifiers specify data fields containing a fixed number of characters while others specify data fields containing a variable number of characters. For example, the shipping container code as shown here is a fixed-length field that contains exactly 14 characters. The Application Identifier for a container code is "01". (The "2" on the end is a check digit automatically generated by BarTender.)



The serial number is a variable-length field that may contain *up* to 20 characters. It's Application Identifier is "21" and no check digit is required.



Multiple Application Identifiers and their data fields can be combined into a single bar code.



When a variable-length data field is combined with other fields in a bar code, it must be immediately followed by a field separator character (unless it is the last field in the bar code symbol — see note below). The FNC1, "^1", character acts as this field separator. It signals that the variable length data field has ended and that another data field is beginning. (This character is suppressed in the human readable part of the bar code.)

**Note:** When you are concatenating multiple Application Identifiers and their fields but only one of them is of variable length, we recommend locating the variable-length field at the end of the symbol because then no separator character is required.

BarTender's Application Identifier Wizard makes it easy to construct bar codes with the Application Identifiers and field separator characters inserted perfectly. The rest of this paper shows examples of the wizard in use.

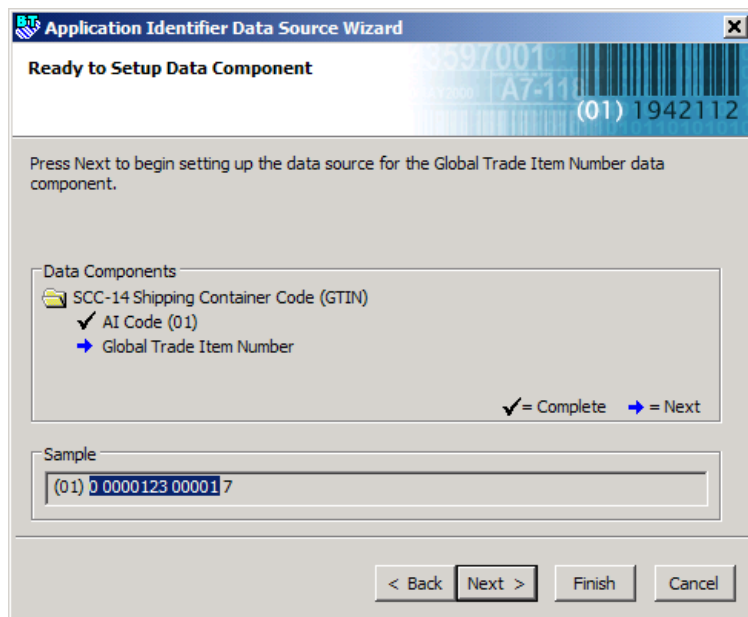
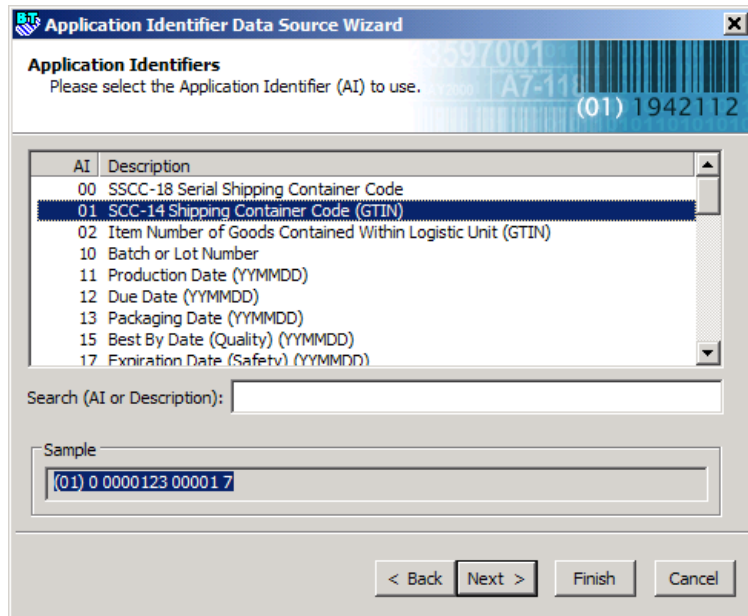
## Example 1: Single Application Identifier

This example will show how to use the Application Identifier Wizard to construct a single bar code with a single Application Identifier and associated data string.

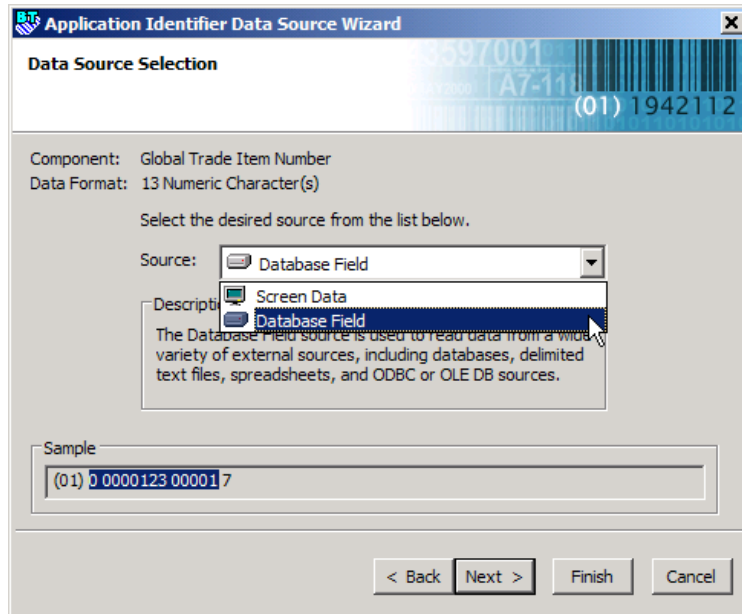
Scenario: A box must have a simple bar code label containing the shipping container code number.

Here is how to construct this bar code:

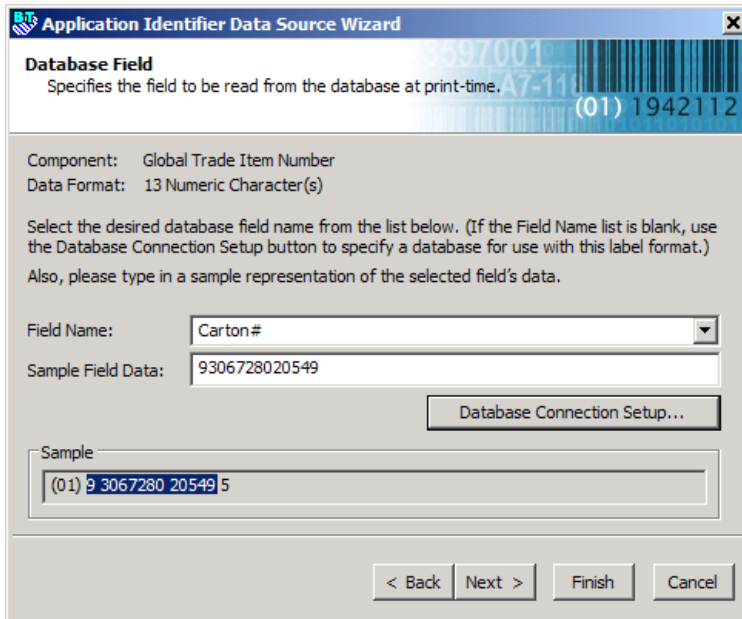
1. Start a new label format in BarTender and when the label stock has been chosen and configured, add a bar code to the label. (See BarTender's help for details.)
2. Double-click the bar code to open the **Modify Selected Bar Code** dialog. Open the **Bar Code** tab.
3. Select GS1-128 (UCC/EAN Code 128) in the **Symbology** drop down list.
4. Click the **Application Identifier Data Source Wizard** button.
5. Click **Next** on the wizard's welcome screen and a complete list of GS1-128 Application Identifiers appears on the next wizard page.
6. Using either the **Search** field or the scroll bars, select the desired Application Identifier (in this example, **01 SSC-14 Shipping Container Code (GTIN)**) and click **Next**. The wizard's progress report screen will open showing that you have chosen the Application Identifier and the next step will be to configure the data source itself.



- Click **Next**. The **Data Source Selection** page will open. Choose a data source. Your options will depend on the Application Identifier you selected. For example, system date will not be an available option for a container code, but it would be for an expiration date. In this example, select **Database Field** and click **Next**.



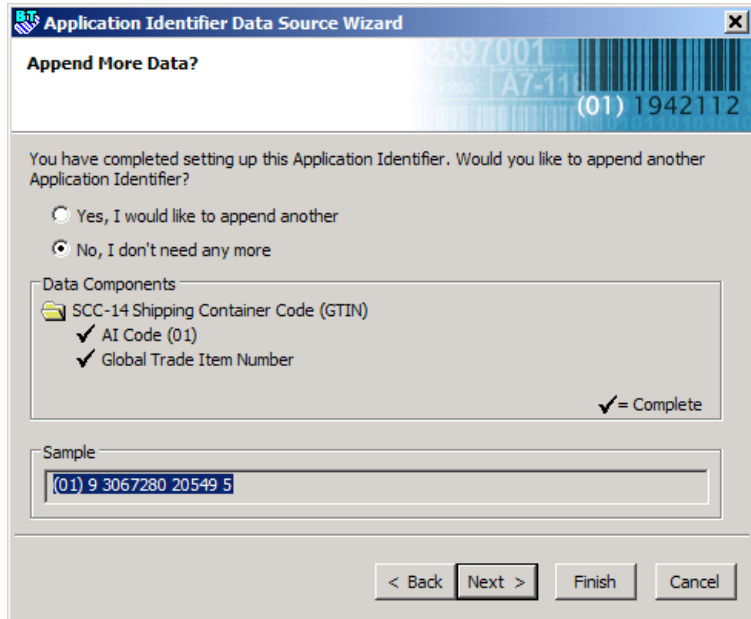
- On the **Database Field** selection page, choose the field that will provide the data for the shipping code. You can also change the default data for the field in the **Sample Field Data** box. Click **Next**.



**Note:** If the database connection has not already been set up, click the **Database Connection Setup** button and let the **Database Connection Wizard** guide you through the process.

- On the **Prompt at Print-Time** page, enable prompting if you need to do last minute editing of the data at print time. In this example, we will not enable prompting. Click **Next**.

10. The next page gives you the option to concatenate another Application Identifier and data field. For this example, select **No, I don't need any more**, and click **Next**.



11. Click **Finish** on the final page and click **OK** on the **Modify Selected Bar Code** dialog. You should now have a bar code that looks like the following:



## Example 2: Two Concatenated Application Identifiers

This example will show how to construct a bar code with two Application Identifiers, each followed by a data field.

Scenario: An outer shipping carton needs a label with a bar code containing shipping container code and the weight of the carton.

The first nine steps are exactly the same as in the preceding example. Continue as follows:

1. On the **Append More Data?** page, select **Yes, I would like to append another** and press **Next**.

The screenshot shows the 'Append More Data?' dialog box. At the top, there is a header with the BT logo and the title 'Application Identifier Data Source Wizard'. Below the header, there is a sample barcode with the number '(01) 1942112'. The main text asks: 'You have completed setting up this Application Identifier. Would you like to append another Application Identifier?'. There are two radio buttons: 'Yes, I would like to append another' (selected) and 'No, I don't need any more'. Below this is a section titled 'Data Components' with a folder icon and the text 'SCC-14 Shipping Container Code (GTIN)'. Underneath, there are three checked items: 'AI Code (01)' and 'Global Trade Item Number'. A checkmark icon with the text '= Complete' is at the bottom right of this section. At the bottom, there is a 'Sample' text box containing '(01) 9 3067280 20549 5'. At the very bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

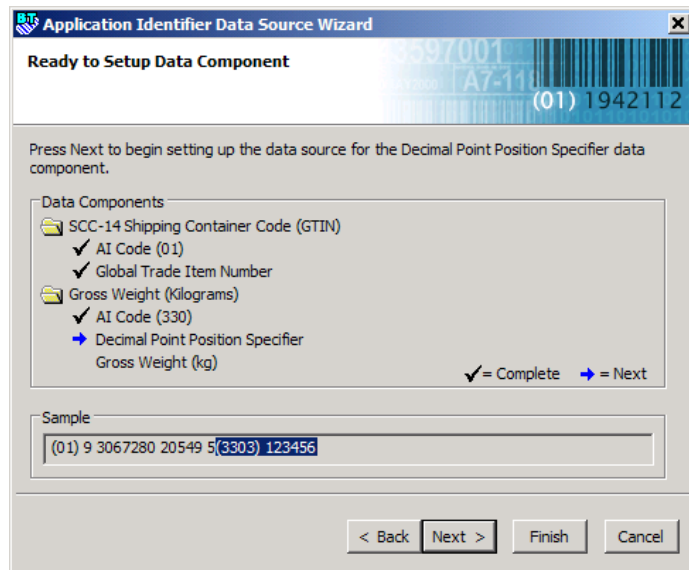
2. The **Application Identifiers** page reopens. Select **330 Gross Weight (Kilograms)**. (Entering "weight" in the **Search** box will immediately exclude from the list the Application Identifiers that have nothing to do with weight.)

The screenshot shows the 'Application Identifiers' dialog box. At the top, there is a header with the BT logo and the title 'Application Identifier Data Source Wizard'. Below the header, there is a sample barcode with the number '(01) 1942112'. The main text asks: 'Please select the Application Identifier (AI) to use.'. Below this is a list box with two columns: 'AI' and 'Description'. The list contains the following items:

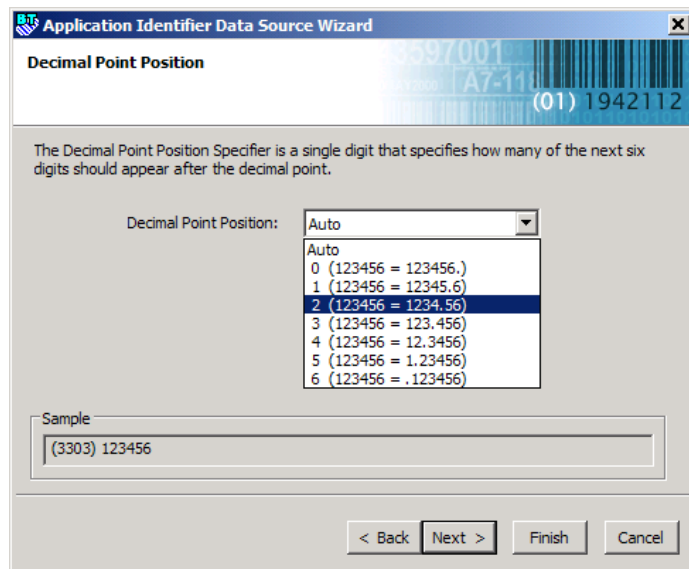
| AI  | Description              |
|-----|--------------------------|
| 310 | Net Weight (Kilograms)   |
| 320 | Net Weight (Pounds)      |
| 330 | Gross Weight (Kilograms) |
| 340 | Gross Weight (Pounds)    |
| 356 | Net Weight (Troy Ounces) |
| 357 | Net Weight (Ounces)      |

The row for '330 Gross Weight (Kilograms)' is highlighted. Below the list box is a search box with the text 'Search (AI or Description): weight'. At the bottom, there is a 'Sample' text box containing '(01) 9 3067280 20549 5(3303) 123456'. At the very bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

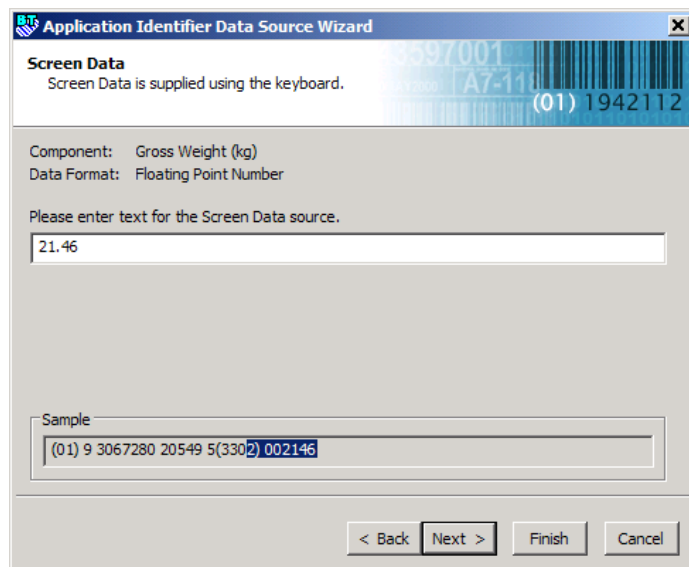
3. Click **Next** and a progress page will open showing that the next step is to specify where the decimal point will be.
4. Click **Next** and select the desired decimal point position from the drop down list. (In this example, we select option **2**.)



5. Click **Next** again and a progress page will indicate that the last step is to configure the data field itself.
6. Click **Next** again and choose **Screen Data** as the data source on the **Data Source Selection** page.

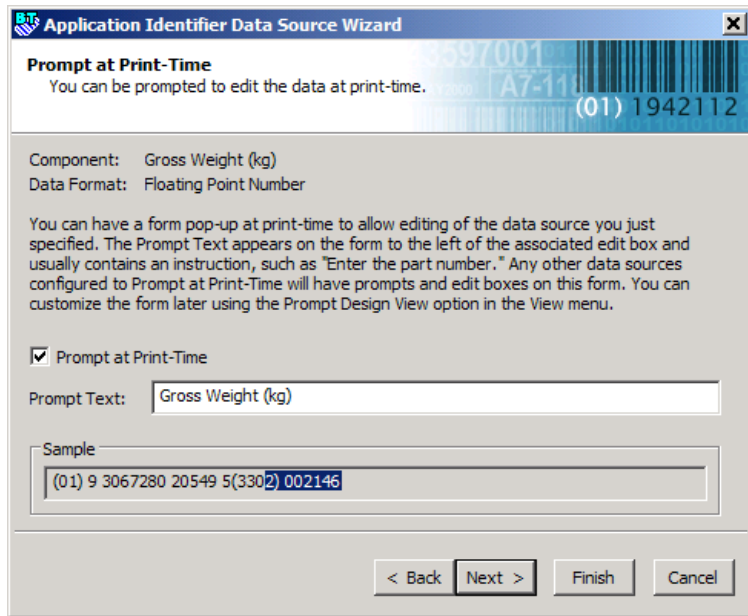


7. Click **Next** again to open the **Screen Data** page and enter the default data for the field. In this example, we will use 21.46 kg.
8. Click **Next** and check the Prompt at **Print-Time** box on the **Prompt at Print-Time** page. Note that appropriate prompt text is already suggested in the **Prompt Text** box. Change it as needed.



9. Click **Next** and select **No, I don't need any more** on the **Append More Data?** page.

10. Click **Next** and then **Finish** to complete the wizard. Click **OK** to close the **Modify Selected Bar Code** dialog. You should now have a bar code that looks like the following:



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