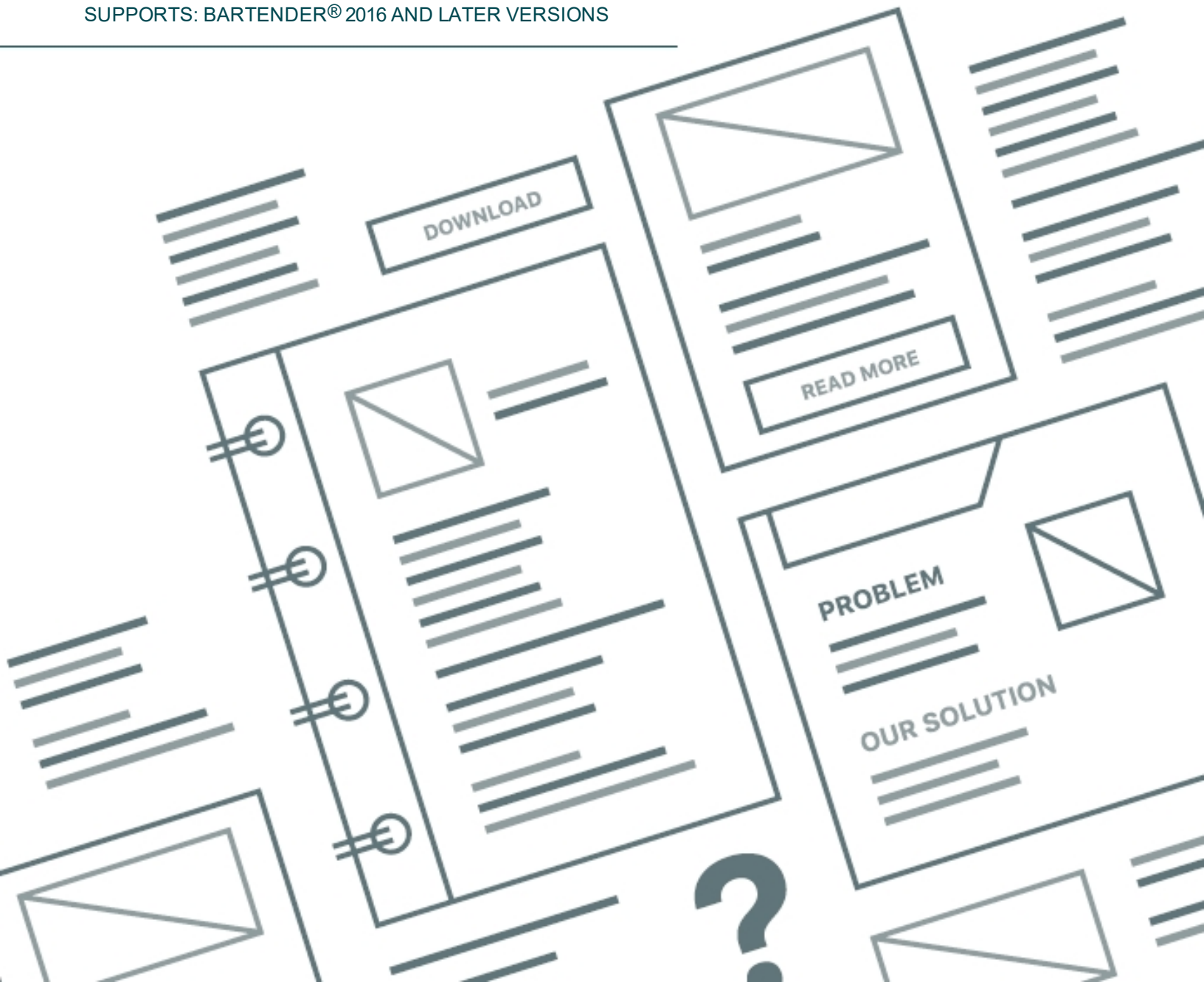![BarTender® BY SEAGULL SCIENTIFIC]

Using GS1 Application Identifiers

ADDING APPLICATION IDENTIFIERS BY USING THE BARTENDER® APPLICATION IDENTIFIER WIZARD

SUPPORTS: BARTENDER® 2016 AND LATER VERSIONS

Contents

Overview

An *Application Identifier* (AI) is a number at the beginning of a data field that identifies how the data that follows should be interpreted. In some cases, it also identifies the length of the data. The *GS1 General Specifications* standard defines numerous AIs, such as serial number or expiration date.

Some AIs specify data fields that contain a fixed number of characters, while others specify data fields that contain a variable number of characters. For example, following symbol includes an AI of "01," which specifies that the data that follows is a Global Trade Item Number (GTIN). Depending on the GTIN type, the data field includes exactly 8, 12, 13, or 14 characters and a check digit.

(01) 0 0614141 99999 6

The following symbol represents a serial number, which is a variable-length data field that can contain up to 20 characters. Its AI is "21," and no check digit is required.

(21) 65381468

Multiple AIs and their data fields can be combined into a single barcode, as shown in the following symbol.

(01) 0 0614141 99999 6 (21) 65381468

When a variable-length data field is combined with other fields in a barcode, it must be immediately followed by a field separator character (unless it is the last field in the barcode symbol — see the following note). The FNC1 character, "^1", 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 barcode.)

> When you concatenate multiple AIs and their data fields but only one of them is of variable length, we recommend that you place the variable-length field at the end of the symbol, so that you won't have to use a separator character.

The BarTender Application Identifier wizard makes it easy to construct barcodes that have the AIs and field separator characters inserted correctly. The wizard is available in the Professional, Automation, and Enterprise editions of BarTender. This technical document provides examples of how to use the wizard.

For more information, refer to the GS1 Application Identifier Data Source Wizard topic in the BarTender help system.

Example 1: Single Application Identifier

This example shows how to use the Application Identifier wizard to construct a barcode that has a single AI and its associated data field. The data in the data field is drawn from a database that you connect to. For this example, suppose that a shipping carton requires a barcode label that contains a serial shipping container code (SSCC) number.

To construct this barcode, follow these steps:

1. In BarTender, create a new document, and then select and configure the printer stock by using the New Document wizard.

2. On the **object toolbar**, click the ▊ icon to open the **Select Barcode** dialog.

3. In the search bar, enter `GS1-128`. Click the first barcode that appears, and then click **Select**.

4. Click the location on your template where you want to place the barcode.

5. Double-click the barcode object. The **Barcode Properties** dialog opens.

6. In the navigation pane, click **Symbology and Size**.

7. Click **GS1 Application Identifier Data Source Wizard** to start the Application Identifier wizard.

8. On the **Welcome** page, click **Next**.

9. On the **Application Identifiers** page, use the **Search** field or the scroll bar to locate and select the AI that you want. For this example, use **00 SSCC-18 Serial Shipping Container Code**. Then, click **Next**.
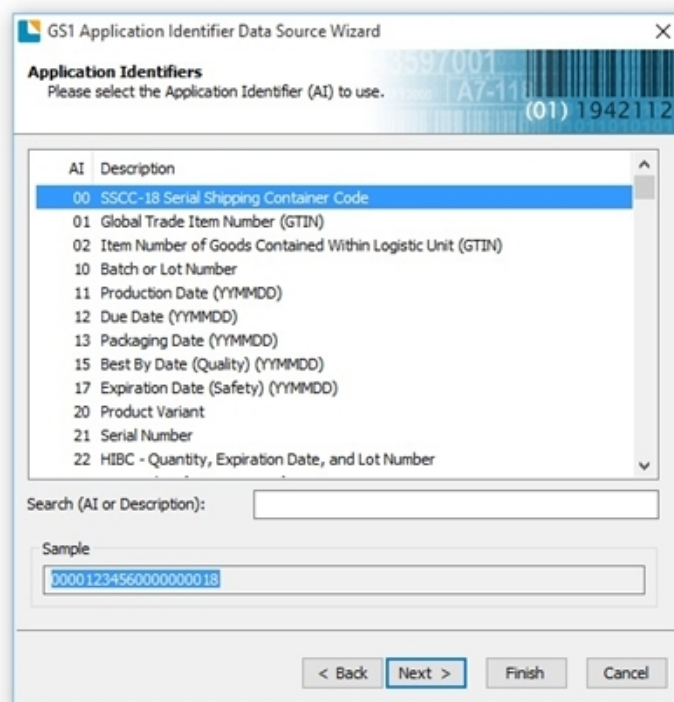
10. On the **Data Source Linking** page, click to select **One data source for all components**, and then click **Next**.

11. On the **Select Data Source Type** page, select a data source from the **Type** list. The options that are available depend on the AI that you selected. (For example, the **Clock** data source type is not an available option for an SSCC, but it is available for an expiration date.) For this example, select **Database Field**, and then click **Next**.

12. On the **Database Field** page, select the field in the **Field Name** list that will provide the data for the SSCC. You can also change the default data for the field in the **Sample Field Data** box. Click **Next**.
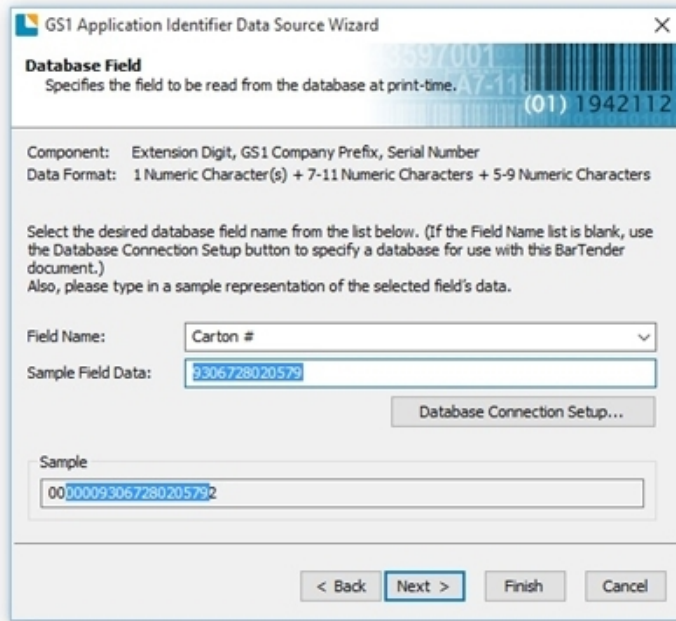
> If the database connection has not already been set up, the **Field Name** list is empty. To create a database connection, click **Database Connection Setup** and then follow the steps in the Database Connection wizard.

13. On the **Append More Data** page, you have the option to concatenate another AI and data field. For this example, click to select **No, I don't need any more**, and then click **Next**.

14. On the **Finished** page, click **Finish** to close the wizard.

15. In the **Barcode Properties** dialog, click **Close**. You should now have a barcode that resembles the following.


(00) 0 0009306 728020549 5

# Example 2: Two Concatenated Application Identifiers

This example shows how to construct a barcode that has two AIs, each one followed by a data field. For this example, suppose that an outer shipping carton needs a barcode label that contains a serial shipping container code (SSCC) and the weight of the carton.

The first 12 steps are exactly the same as described in the Example 1 chapter of this technical document. Complete those steps, and then continue as follows:

1. On the **Append More Data** page, click to select **Yes, I would like to append another**, and then click **Next**.
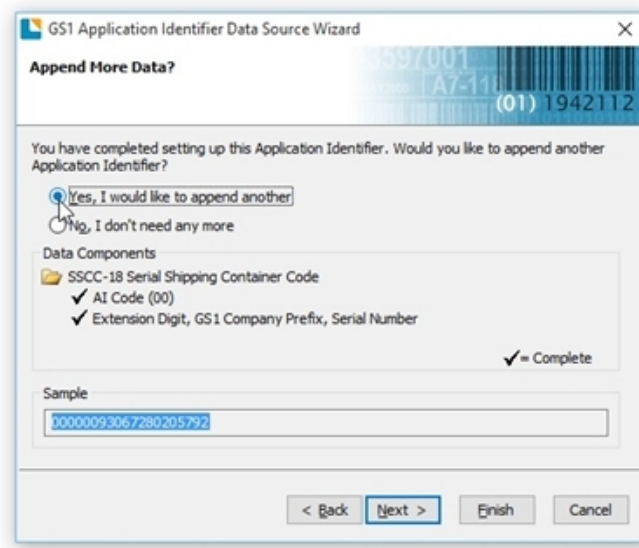
2. On the **Application Identifiers** page, enter "weight" in the **Search** box to filter the available AIs, and then select **330n Gross Weight (Kilograms)**. Click **Next**.
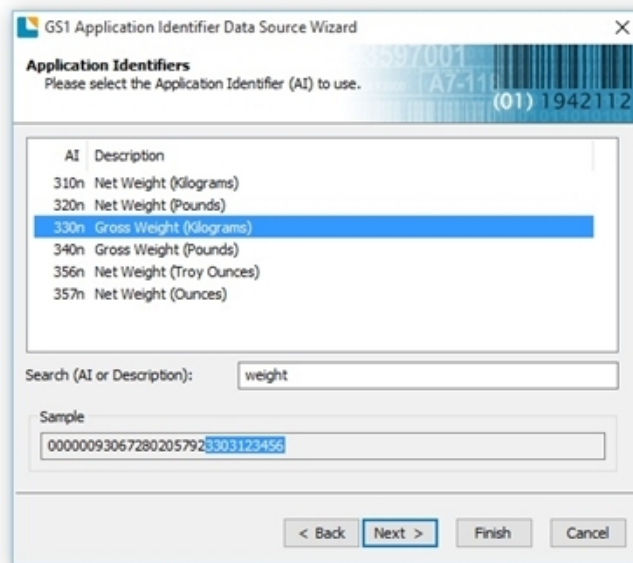
3. On the **Ready to Setup Data Component** page, the arrow shows that the next step is to specify where the decimal point will be. Click **Next**.

4. On the **Decimal Point Position** page, select the decimal point position that you want in the list, and then click **Next**. For this example, select option 2, as shown.
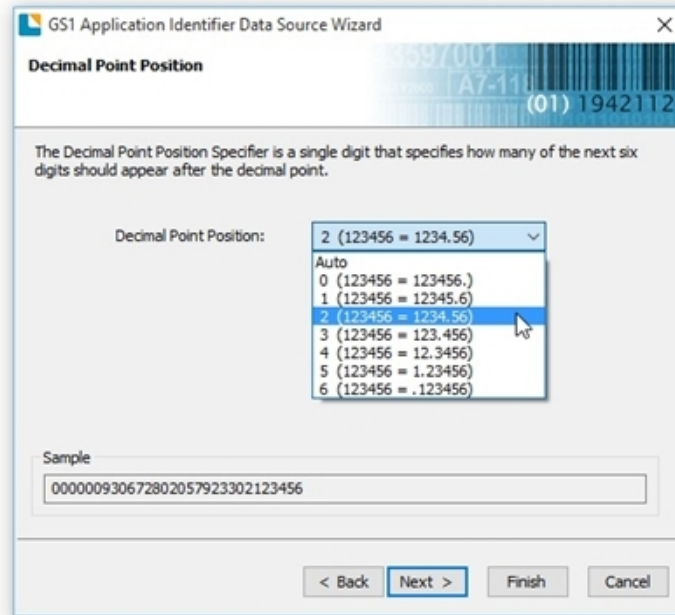
5. On the **Ready to Setup Data Component** page, the arrow shows that the last step is to configure the data field itself. Click **Next**.

6. On the **Select Data Source Type** page, select **Embedded Data** from the **Type** list, and then click **Next**.

7. On the **Embedded Data** page, enter the data for the field. For this example, use 21.46 kg. Click **Next**.

8. On the **Append More Data** page, click to select **No, I don't need any more**, and then click **Next**.

9. On the **Finished** page, click **Finish** to close the wizard.

10. In the **Barcode Properties** dialog, click **Close**. You should now have a barcode that resembles the following.

Related Documentation

Technical Documents

To view and download technical documents, visit:

https://www.seagullscientific.com/resources/white-papers/

User Guides

- *Getting Started with BarTender*
  https://support.seagullscientific.com/hc/categories/200267887

BarTender Help System

- GS1-128 (UCC/EAN-128) and Application Identifier Specification
- GS1 Application Identifier Data Source Wizard
- Barcode Object

Other Resources

Please visit the BarTender website at *https://www.seagullscientific.com*.

Please visit the Seagull Scientific Barcode Guide at
https://barcodeguide.seagullscientific.com/Content/gettingStarted.htm.

- GS1
  https://barcodeguide.seagullscientific.com/Content/GS1.htm

To learn more, please visit the GS1 website at *https://www.gs1.org*.

- *GS1 Application Identifiers* (PDF)
  https://www.gs1.org/sites/default/files/docs/barcodes/GS1 Application Identifiers.pdf
- *GS1 General Specifications* (PDF)
  https://www.gs1.org/docs/barcodes/GS1 _General_Specifications.pdf

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