Overview

Barcodes

A **barcode** is a pattern of elements (such as bars, spaces, and two-dimensional modules) that represent numeric or alphanumeric information in a machine-readable form.

The way the elements of a barcode are arranged is called the **barcode type**, or **symbology**. The AFP Enhancer mode of RICOH Visual Workbench lets you create these types of barcodes:

- **Code 39 (3-of-9 Code):** A low-density barcode that can encode uppercase letters, numbers, and some special characters.
- **Data Matrix:** A two-dimensional (2D) barcode that consists of black and white square modules arranged in either a square or rectangular pattern. This barcode uses the Reed-Solomon error correction algorithm (ECC 200) to ensure data reliability.
- **Intelligent Mail:** A 4-state barcode that the United States Postal Service (USPS) defines to track and direct mail. Intelligent Mail barcodes (IMBs) combine the capabilities of POSTNET and PLANET barcodes in one barcode.
- **Interleaved 2-of-5:** A high-density barcode that can encode numbers.
- **POSTal Numeric Encoding Technique (POSTNET):** A barcode that the USPS defines to direct mail.
- **Quick Response Code (QR Code):** A two-dimensional (2D) matrix barcode that consists of black and white square modules arranged in a square pattern. The contents of this barcode can be decoded at high speed. This barcode uses the Reed-Solomon error correction algorithm (ECC 200) to ensure data reliability.

The AFP Editor feature lets you create all the types of barcodes listed above and an additional type of barcode:

- **Portable Data File 417 (PDF417):** A two-dimensional (2D) barcode that consists of several rows, each of which is like a small linear barcode. The barcode uses Reed-Solomon error correction.

In this section:

Barcode placement and orientation

When you use the RICOH Visual Workbench user interface to create a barcode in a sample AFP file, you define a **barcode area**. You specify the origin of the area, the size (height and width) of the area, and the location of the area in each document. The area can be a horizontal rectangle (for a “picket-fence” barcode), a vertical rectangle (for a “ladder” barcode), or a square.

Data for most types of barcodes

AFP Enhancer and AFP Editor let you create Code 39, Data Matrix, Interleaved 2-of-5, PDF417 (AFP Editor only), POSTNET, and QR Code barcode objects that follow the AFP Bar Code Content Object Architecture (BCOCA). AFP Enhancer and AFP Editor use the default values for all BCOCA properties and display the default properties you can change.

Intelligent Mail barcode data

Intelligent Mail barcodes (IMBs) have several representations and two basic formats. A serial number that identifies each mailpiece is required when IMBs are used with the United States Postal Service (USPS) Intelligent Mail Full-Service option.

POSTNET to IMB replacement

Intelligent Mail barcodes (IMBs) can replace both POSTNET and PLANET barcodes, as well as the alphanumeric characters that contain the participant code and keyline information for the USPS Address Change Service (ACS). AFP Editor provides a replace function that deletes POSTNET barcodes and creates IMBs that contain the same routing code as in the replaced POSTNET barcodes (minus the check digit). POSTNET barcodes and IMBs can be text barcodes or BCOCA objects.

Parent topic: AFP Editor