QS-Barcode Recognition

Overview

QS QualitySoft GmbH offers an effective software for recognizing barcodes from digital images. The images are scanned or faxed forms.

"QS-Barcode" is based on algorithms used in the form reading software "QS-Beleg", which has been used successfully for years.

Various barcode types can be recognized. The most common use for barcode reading is fast and reliable identification and indexing of documents for data capture (OCR, ICR, etc.) and archiving.

Linear barcodes with QualitySoft:
- all common types are possible
- unlimited numbers of barcodes can be recognized on one image
- all angles (even 45°) are possible
- checks on suspected barcodes increases reliability

Even **2-dimensional** bar codes can be recognized. These barcodes can contain much more information, as much as 3000 digits per barcode. You can code both alpha-numeric characters and binary data. In addition, due to integrated error correction,
2-Dimensional barcodes are more tolerant towards data errors that occur while printing or scanning.
The common industry standards "PDF 417" and "Data Matrix" (ECC200 and ECC000, ECC050, ECC080, ECC100, ECC140) are supported.

The PDF417 barcode consists of several lines. You can encode the whole character set, up to 1850 characters. It is variable in width and height.

Data Matrix was designed for small parts marking and is currently used for small electrical parts, by the pharmaceutical industry for unit dose packaging, by the automotive industry and by NASA.

Table of Linear Barcodes

Code	Character set	Length
Code 39	0-9 A-Z - $ % + /	Variable
Code 39 extended	complete ASCII-character set	Variable
Code 2/5 (interleaved, industry, Datalogic, Matrix,IATA)	0-9	variable (even number)
Code 93	0-9 A-Z - $ % + / 4 special characters	Variable
Codabar	0-9 - $: + / .	Variable
Code 128 / Codablock F	complete ASCII-character set	Variable
EAN 128 / UCC 128	complete ASCII-character set	Variable
EAN 8 / EAN 13	0-9	8 / 13
UPC A / UPC E	0-9	12

Table of 2-D Barcodes

	Character set	Length
PDF417	complete ASCII-character set	depending on the error level and compression up to 1850 characters
Data Matrix	complete ASCII-character set, binary data	up to 3116 digits, up to 2335 alphanum.characters, up to 1556 byte binary data

Technique

Scanning in this area is usually done with a resolution of 200 or 300 dpi. For correct barcode reading at such low resolutions, barcodes must be printed clearly; in particular, the bars must not be too narrow. Recommended is a maximum of 2 characters/cm at 200 dpi and 3 characters/cm at 300 dpi. E.g. an 8-digit bar code should have a width of 4 cm to be read properly at 200 dpi.

For scanning 2-D barcodes you may need to use a resolution of 400 dpi if the bar code is smally printed. One module ("data rectangle") should be at least 4 pixels after scanning.

In addition to scanner resolution and barcode width, reliable recognition also depends on other factors such as:
• quality of printer and paper, scanner preferences
• barcode type, height and width of barcode, number of characters in the barcode
• skew angle (particularly with labels)
• with 2-D barcodes: error correction algorithm used.

Recognition Quality

"QS-Barcode" offers several parameters to make recognition quality more reliable in terms of basic requirements.
Before "QS-Barcode" is used in daily routine, it is strongly recommended to perform a larger test using the suggested bar code under real production conditions.
Mail your questions and test images to: support@qualitysoft.de.
We are always happy to help you!

Availability and Prices

Get the latest information on prices and what's available by visiting:
http://www.qualitysoft.de/en/download/bcprices.pdf

Tests

Download our free demo program and discover whether your barcodes can be read with "QS-Barcode"!

http://www.qualitysoft.de/en/download.htm

Barcode Recognition - No Programming Required!

Introducing **„QS-DocumentAssembler"!** This Windows application by QualitySoft recognizes barcodes from scanned documents and processes documents automatically based on barcode data. Document sorting, indexing and grouping is performed based on start parameters. .

A Selection of Our Valued Customers

Boss AG Bremen, Bürotex GmbH Nürtingen, BZA GmbH Salem-Beuren, Capital Bank Graz, Cendris UK, DataChem Chemnitz, Demag Cranes & Components GmbH, Dicom Italy, elsag Solutions Villingen, Finanzverwaltung NRW, Freudenberg KG, Gerling Versicherungs-AG, GWI MaVis GmbH, Hessen Forst, Kyocera Mita, Merck Schuchard OHG Hohenbrunn, OBI Baumärkte, Océ Germany, OneReason Switzerland, Quelle AG, SEAL Systems, Siemens AG, Softline Austria, Thyssen-Krupp, SubCon USA, German Government Tax Offices