

ABBYY Mobile Data Capture Solution

An exciting new channel for data exchange



What is the ABBYY Mobile Data Capture Solution?

ABBYY Mobile Data Capture Solution (MDCS) is a unique set of developer toolkits designed to extract information from environmental images. Embedded image processing on mobile devices, working in concert with traditional server- or cloud-based intelligent recognition and data capture systems, allows developers to extract and integrate important data from bills, driver licenses, receipts, checks, invoices, barcodes, tax forms, utility meters, registration forms, license plates and many other sources – as easily as taking a picture. MDCS turns connected smartphones and tablets into powerful scanners for data input, bringing organizations closer to customers, partners and employees alike. By enabling users to capture data for use in backend systems directly from their personal devices, developers can create mobile applications that make the mobile workforce more efficient with features that are unique in the marketplace.

Benefits for corporations

ABBYY's MDCS is designed for development teams in large organizations to:

- Provide customers with easy access to services and products
- Streamline data communication and exchange with customers, partners and employees
- Gain a market edge through mobile applications that significantly reduce manual entry of data

How the ABBYY Mobile Data Capture Solution works

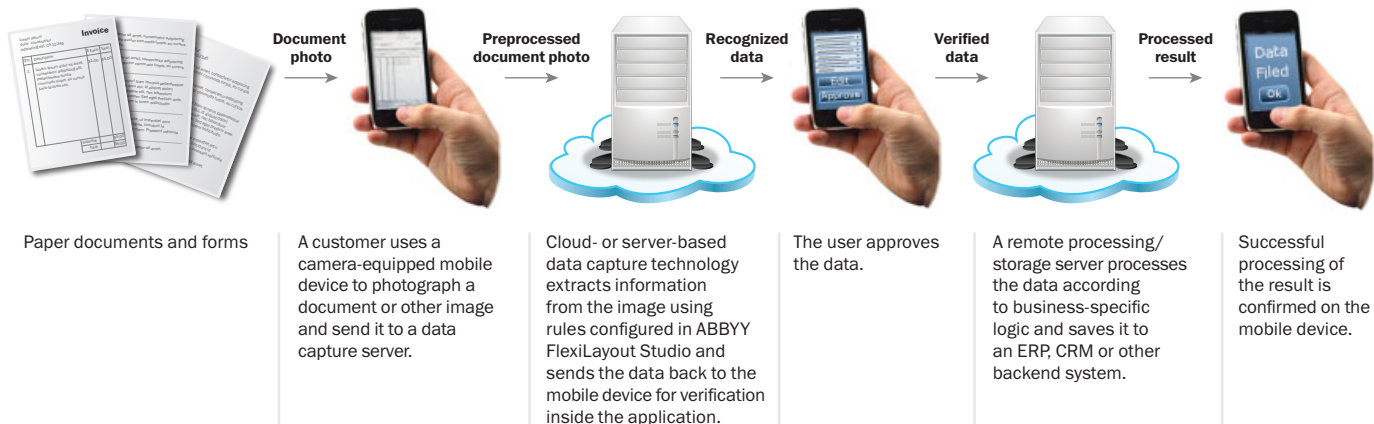
MDCS is based on client-server architecture. The client application is located on a mobile device, and the server is used for resource-intensive character recognition and data capture operations.

ABBYY's MDCS can extract data intelligently and automatically, delivering the information needed to calculate the price of goods from a label, initiate a lead from a business card, file an expense report from a receipt and many other services where information from environmental images need to integrate with back end business systems.

Product Overview

- Provides a highly functional, enterprise-class capture development tool to create solutions for even the most complex document processing
- Highly accurate OCR, ICR, barcode and checkmark recognition technologies, combined with ABBYY FlexiCapture data capture technology
- Unrivaled ABBYY Camera OCR™ technology allows data capture from low quality photos
- Outstanding support for 198 machine-printed (OCR) and 110 hand-printed (ICR) languages

Document Processing Workflow



Processing and Features Overview

Mobile Image Processing Technologies

ABBYY Mobile Imaging SDK includes powerful image enhancement and quality evaluation tools

- Despeckle/Noise Removal
- Sharpen
- Deskew, Perspective Corrections
- Crop
- Contrast Correction
- Black-and-White Conversion/Binarization

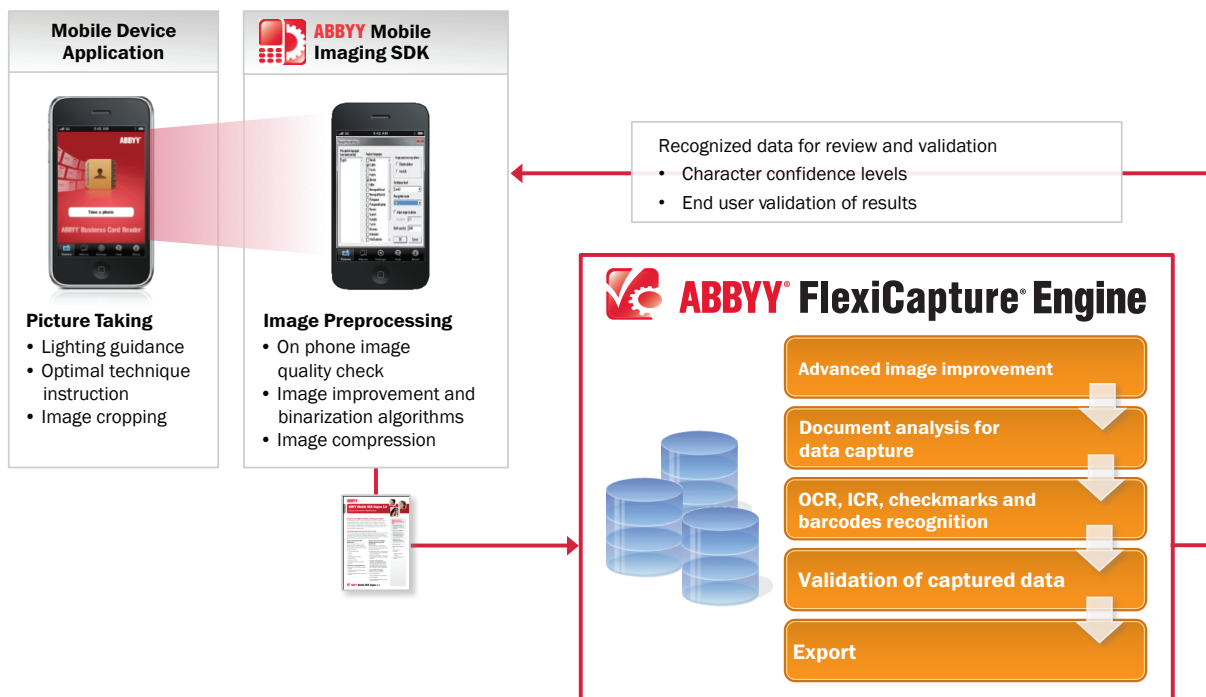
Image quality evaluation

- Analytical tools determine if images are suitable for further recognition:
 - Blurred Image Detection
 - Character Confidence Levels
 - Poor Lighting Detection
 - Uneven Lighting/Glare Detection
- To save time and enhance the user experience, unrecognizable images can be identified before going to the server for further processing

Data Capture Technologies

- ABBYY FlexiCapture Engine combines leading-edge technologies for intelligent document classification and processing of fixed, semi-structured and unstructured documents with complex layouts.
- Advanced image improvement for best recognition results. Includes background color, stamps and marks removal features and Camera OCR technology for correction specific distortions on photograph as well as blur and ISO noise.
- Document analysis and classification for fixed forms, semi-structured and unstructured documents. Supports virtually any complexity of layouts.
- Recognition of printed text (OCR) for 198 languages, hand-printed text (ICR) for 110 languages, checkmarks (OMR) and barcodes (OBR).
- Validation of captured data by automatic applying rules and database verification as well as ability for users to check data manually on mobile device.
- Exports relevant data to backend applications and converts analyzed documents into searchable PDF or PDF/A formats.

Mobile Data Capture Components and Processes





Processing and Features Overview

Powerful Usage Scenarios

Enhance customer service

With ABBYY MDCS, enterprise-level development tools make it possible for government agencies, banks, insurance agencies, payment processors, transportation companies, medical offices and many other organizations to deploy mobile applications that make time-consuming tasks – such as paying bills, banking, reserving tickets and completing forms – fast and simple to accomplish.

MDCS in action: Intuit TurboTax SnapTax® for iPhone and Android

Intuit's SnapTax mobile application helps customers e-file US tax returns and get their refunds faster. The app's ease of use is inherent in its appeal to users, who love being able to do their taxes anywhere, anytime.

These can be targeted based on GPS location, purchase history and many other factors. Here are two great examples:

Example 1: Contest Registration Made Easy

With a free app powered by MDCS, your customers can photograph entry forms and send them to a data capture server for automatic processing and confirmation.

Example 2: Best Price Guarantee

Beat the competition with an app that extracts UPC code and text information from packaging, sends you the details and gives you the opportunity to offer competitive pricing.

Collaborate more effectively

By tying connected mobile devices directly into backend systems, including Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM), MDCS streamlines remote information processing – eliminating the need for dedicated devices for inventory management, order processing, etc.

Better Business Integration with MDCS System Tie-Ins

- Use business card snapshots to create leads and automate follow-up notifications in your CRM system
- Take a picture of your receipts to generate expense reports in your financial system or SharePoint® backend
- Photograph a barcode to access inventory information
Snap a utility meter and save the data to your tracking system
- Photograph a document and post a fully searchable PDF to your SharePoint library
- Snap a picture of an invoice to start automatic processing for Accounts Payable

Personalize your marketing efforts

Whether as a tool for prospecting or customer retention, companies can use MDCS to connect with customers on a personal level, through free apps distributed through Apple's AppStore or Android's Marketplace.



Now the same smartphones and tablets that support remote workforces can empower customers to read their own utility meters or enable a warehouse manager to do an instant inventory update!

Specifications and Professional Services



Technical Specifications

OCR

Multilingual OCR: 198 languages (including Latin, Greek and Cyrillic alphabets, Chinese, Japanese, Korean, Vietnamese, and Thai); 55 languages with dictionary support.

Text types

Normal, Matrix, Typewriter, OCR-A, OCR-B, CMC7, MICR, Fraktur/Gothic, mixed text type support processing with word-level auto-detection.

ICR

On digits, digits combined with letters of one language and digits combined with letters of several languages – even if fields contain both upper and lower case letters. Separates field content from borders and frames. 110 languages, 22 with morphology, field-special dictionaries. 22 handwritten styles, including English, American, German, French, and Russian.

Barcodes

Includes processing of barcodes that are damaged or printed at any angle. Fast barcode extraction of the most popular 1D industrial types and 2D Barcodes: PDF417, Aztec, and DataMatrix.

Note: ABBYY FlexiCapture Engine 9.0 can read Aztec and Datamatrix barcodes, but it cannot detect them on images.

Checkmarks (OMR)

Simple, grouped and model check marks, as well as marks with “corrections” made by hand.

Export formats

Document images could be exported to variety of image formats: BMP, PCX, DCX, JPEG, JPEG 2000, TIFF, PNG and PDF, PDF/A (both 1b and 1a) formats with MRC (Mixed Raster Content) compression technology.

Professional services

ABBYY Professional Services team is on hand to help you integrate Mobile Data Capture Solution into your specific use case. We have extensive experience tuning the capture aspects of your mobile applications, and are available to address many kinds of issues and assist with how to customize applications to serve your needs.

Customization opportunities include:

- Customized image preprocessing routines for your specific document sets and use cases.
- Assistance with installation and deployment of processing server
- Integration with your back end processes
- Creation of document templates for data capture
- Design and Development of mobile applications

ABBYY® Mobile Data Capture Solution

www.ABBYY.com/mobile_data_capture

System requirements

Mobile application

- iOS or Android platform
- iPhone 3Gs (ARM v7 600 MHz, 256 MB RAM) and higher or similar Android-based phone
- Approximately 3MB for application (depending on scenario)
- 3Mpix or greater camera, with autofocus

Data capture server

- PC with Intel® Pentium®/Celeron®/Xeon™, AMD K6/Athlon™/Duron™/Sempron™ or compatible processor and minimum clock speed of 1 GHz
- **Operating System:** Microsoft® Windows® Server® 2008, Windows 7®, Windows Vista®, Windows Server 2003, Windows XP, Windows 2000, and 64-bit versions of Windows Server 2008, Windows 7, Windows Vista, Windows Server 2003, Windows XP
- **Memory:** 400 or more MB RAM (depending on application)

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