ImageRamp Batch 8.15

DocuFi
www.DocuFi.com

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Contents

Introduction

General Information

ImageRamp Batch Software is a family of data capture products from DocuFi. It is available in three distinct products. ***Standard, Professional (Pro, and Enterprise) are the topic of this manual***. These products are referred to as ImageRamp Batch collectively in this information. Every attempt has been made to clarify the differences between the editions or products as to features and functions when appropriate. "ImageRamp" is used in this manual often and represents the full product name of ImageRamp Batch

Designed with ease of use and flexibility in mind, ImageRamp can address simple scan-to-file applications out of the box. More complicated database indexing needs can be set up with IT staff in minutes.

Illustration: ImageRamp Batch product licensing.

	Standard	Pro	Enterprise
Watched Folders (Profile)	1	10	10
Separation Based on Barcode or Zone OCR Extraction	√	√	√
1D linear/2D barcode support	√	√	√
Support OCR Zones		3	5
Zone OCR Extraction, Naming Using Regular Expressions	X	√	√
QA Processing on Confidence Scoring of OCR/Barcode/Regex	X	√	√
Process Automation Auditing	X	√	√
Runs as a Windows Background Service	X	√	√
Email Notifications on Service Disruptions/Memory Usage	X	√	√
Advanced Regular Expression Support	X	X	√
Dual OCR Zone Voting	X	X	√
Dual or Quad Processor Multi-threading	X	X	√
Privacy Auditing	X	X	√
Cloud Drive Integrations with AWS, Dropbox, FTP, SFTP	X	X	√

Indexing

The index environment is fully customizable to meet your specific indexing requirements. Use the intuitive interface to create specific index fields, default values and target database to capture your vital documents.

Easily integrate documents into back-end databases or utilize the DocuFi family of online or offline archiving solutions. With ImageRamp, capture simple index data and store it within the file name itself. This can include date and time stamps, indexed data, as well as information extracted from barcodes. Advanced indexing is available with ImageRamp Batch Pro.

Image Enhancement

Go beyond basic image enhancement with ImageRamp's grid line form removal, inverting block text backgrounds, auto crop, sophisticated color dropout, dirty image clean-enhance (clarify), smooth characters, thicken/thin image, straighten pages, despeckle, and half tone removal.

Splitting Files with Mined OCR and Barcode Data

ImageRamp can split a single scan or document into multiple files. Elect to split files based on blank page detection, split every "nth" page, split at detected barcodes, or split the files based on extracted text content. Along with the split options, use barcode information to name the files and create folders. Text Mining is available in the Pro edition.

Barcodes are found in virtually any application. With ImageRamp, use barcodes to separate and name (file name) documents. Documents don't contain barcodes? Use our tools to create barcoded separation sheets. Common barcodes include linear Code 128, Code 3 of 9, UPC and 2D barcodes including QR Code, PDF417 and other forms.

ImageRamp administrators need only specify the type of barcode to detect, how to search for barcodes and how to handle barcode separator pages.

 ***NOTE:*** A trial version of ImageRamp Batch is valid for 30 days.

Supported File Formats

- **Input:** Monochrome (black and white), color or greyscale TIF files; most Adobe® Acrobat files (black and white, color, or greyscale PDF and text, image, and OCR PDF files); color or greyscale JPG and PNG files; and MS-Word .docx files are supported as input files.
- **Output:** The processed or output files are created PDF files.

 ***CAUTION:*** Please test all file types in your environment.

System Requirements

The ImageRamp Batch family supports viewing and manipulation with:

- Windows 10/8/7, and Windows 2008 Server and newer platforms
- Microsoft .NET Framework 4.6
- 150 MB of free disk space

Conventions Used in this Documentation

These are the conventions and type-styles used in this manual:

- Items presented in ***Italics***:
  Screen, field, checkbox, menu and tile names.
  Terms and concepts when first introduced in the text.
  Variables, file names and numeric values.
  Special notes and important messages.
- **[RETURN]** indicates the action of pressing the 'Enter' or 'Return' key.
- Keyboard entries to be typed and buttons/icons to be clicked are printed in lower case **Arial bold font**.
- Clicking refers to a left mouse click unless otherwise noted as a "right-mouse click"

Trial Version Limitations

A full version of ImageRamp Batch is valid for 30 days.

Getting Help

Need help with ImageRamp? There are number of ways to get the help you need.

Help and Documentation - This help documentation includes details on commands, features and functions of the software.

DocuFi Website – The DocuFi website has ordering information and more. Visit http://www.docufi.com.

Getting Help by E-Mail - Send your questions or comments to us: support@docufi.com. A Customer Service Representative can provide technical support or answer your inquiry by e-mail.

Included Software

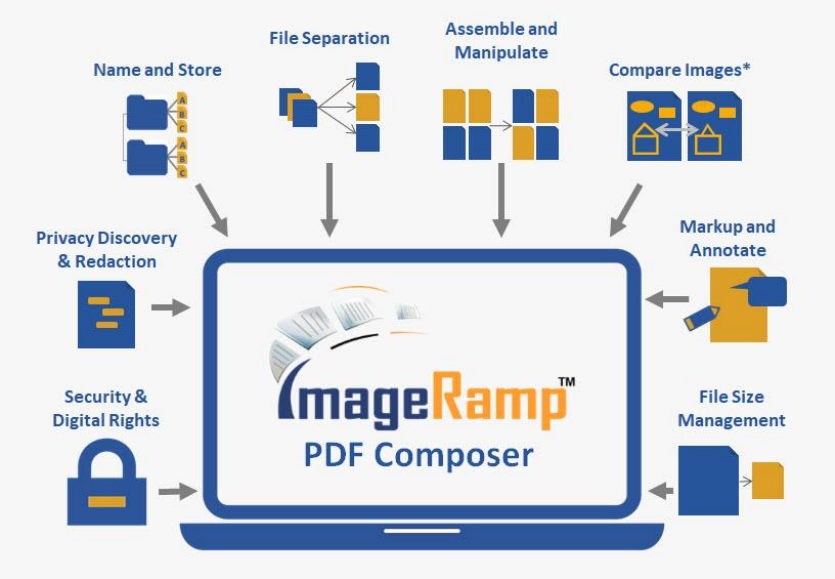
ImageRamp Batch Licensing

ImageRamp Batch is available in two versions: ***ImageRamp Batch Standard, ImageRamp Batch Professional (Pro)*** and ***ImageRamp Batch Enterprise***. The products are all generally referred to as ImageRamp Batch in this information and specific versions are only referred to when necessary to address unique functionality. See General Information for a detailed breakdown of each version's features.

ImageRamp Composer (with Pro and Enterprise Editions)

ImageRamp Composer is a PDF assembly, encryption and privacy redaction tool intended to modify and produce a single PDF file from various inputs including MS Word. It supports many of the features in ImageRamp Batch but not as a folder processing tool. It includes important redaction, markup/annotate and file size manage tools.

Illustration: ImageRamp Composer functions.



ImageRamp Scan Separator

ImageRamp Separator is a tool to create barcode separation sheets that can be used during batch processing to route, index, split and name your documents.

Installation, Opening/Closing the Application and Help

Installing ImageRamp Batch

Install the application:

1. Launch the ImageRamp installer file. This program will install ImageRamp Batch and support components into the "Program files (x86)\ImageRamp8" folder. It will also install the ImageRamp Scan Separator which creates barcode separation pages and ImageRamp Composer. These may be launched from the desktop icons.
2. Follow the standard prompts and instructions.

This will install the ImageRamp Batch product family which will function in trial mode until it is licensed. To fully activate the program it must be authorized with a license key.

Opening and Closing the Application

Start the application with the icon placed on the desktop or by selecting the program through Windows program menu. To exit the application, select the **Exit** icon in the upper right corner of the application screen.

Authorizing ImageRamp Batch

To activate the product once it has been installed, the license must be authorized with a license key. Email or call DocuFi if you have not automatically received your key in an email after purchase. To access the application in trial mode, simply click on the **Request a License Key** button. You will receive an email with a trial key that can be entered and activated with the **Activate Trial/License** button.

Illustration: ImageRamp Registration Screen displayed on installation.

NOTE: The trial version of ImageRamp Batch is valid for 30 days. Contact DocuFi for a full product online demonstration.

Accessing Application Help

To access the application help, select the ***Help Manual*** tile from the ***Learning Center*** panel of the ***Home Tile*** screen.

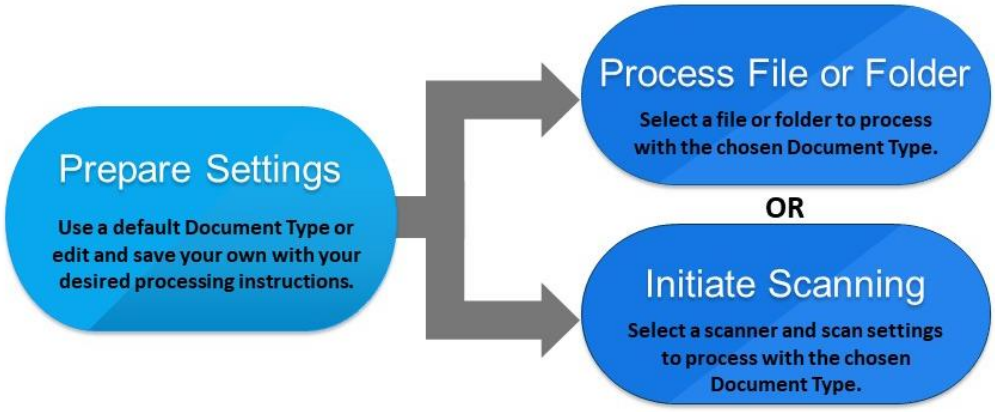
Overview of the ImageRamp Batch Process

Overview of Working with ImageRamp

ImageRamp Batch offers multiple options for processing your documents. It can capture from a TWAIN data source, process a file or folder, or be launched as a command line tool by third-party tools like Fujitsu ScanSnap Manager.

With ImageRamp Batch, users select the cleanup, file naming/splitting and various other functions they desire and set any associated parameters. Then they simply initiate the processing of a folder or file or initiate scanning through a scanner.

Illustration: ImageRamp Overview of the Process



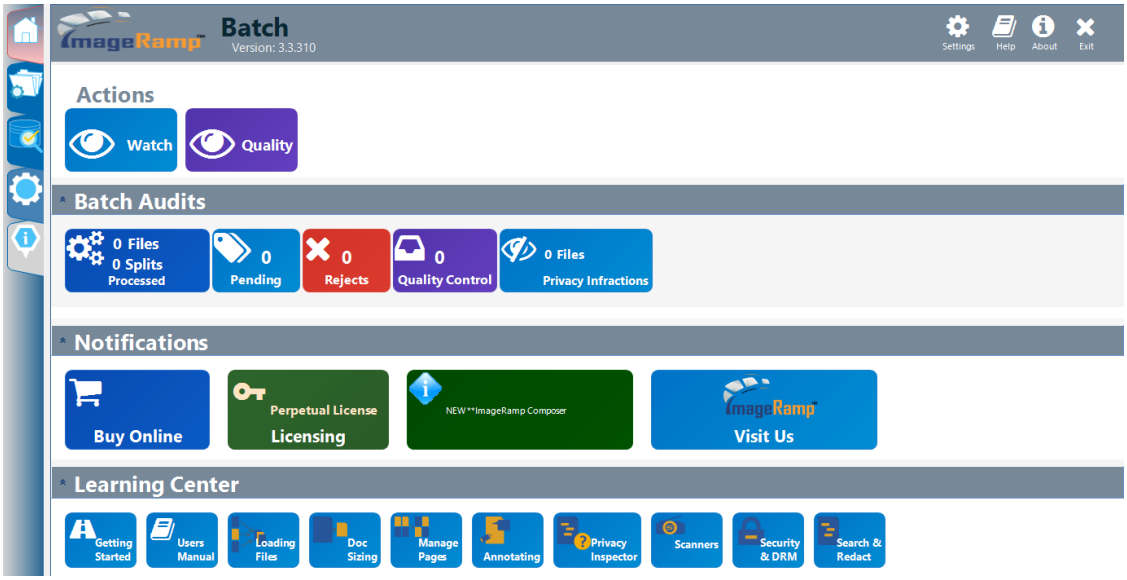
Some of the key uses for ImageRamp include

- File splitting and naming
- Indexing to databases
- Converting file formats
- Encrypting PDF files

The ImageRamp Batch Interface and Settings

The ImageRamp interface has been completely redesigned and incorporates look and feel characteristics from our data analytics and visualization experiences. It's designed to provide a simpler user experience and shortened learning curve and allow for more immediate use and benefits.

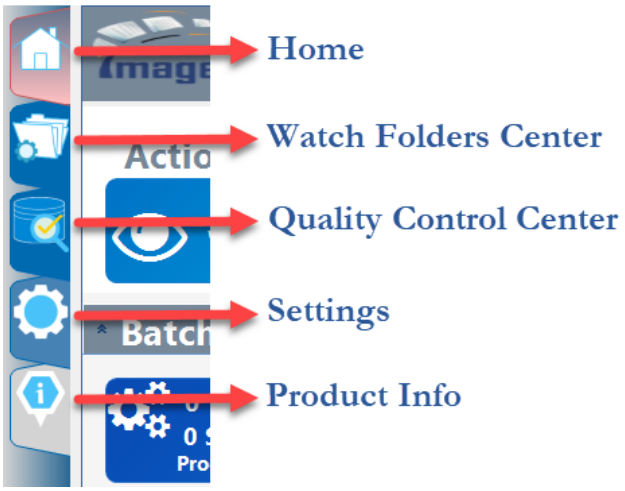
Illustration: ImageRamp Batch Interface Home Tile Screen.



The interface provides tile selections from the ***Home*** screen that allow for initiating the watching of folders and managing quality control. Built-in ***Learning Center*** and ***Notifications*** panels keep you informed and provide simple one click access to information.

The intstuctions on how to watch folders and handle documents are controlled in the tabs on the left of interface.

Illustration: ImageRamp Batch Actions available from the Home Dashboard



Once the settings and controls in the right tabs have been defined, folder watching can begin.

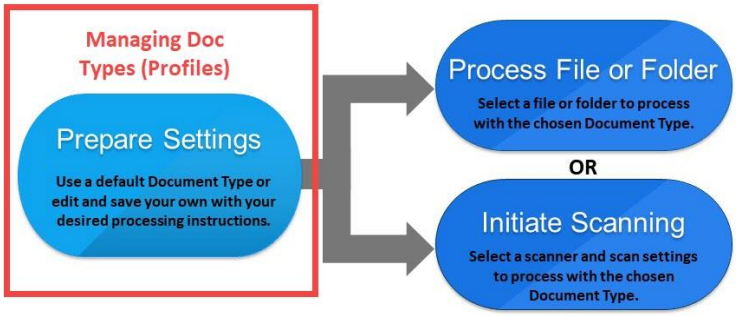
ImageRamp Batch settings are saved as ***Document Types*** which are reusable templates or profiles of documents that can be edited, saved, deleted and renamed. We refer to these as document types (doc types) or profiles throughout the documentation. Each document type defines the file input, processing, and output tasks.

Doc types let the user select reusable preferences for specific document processing functions such as clean/enhance, indexing to databases, file split/rename functions, barcode interpretation, OCR extraction, and more.

See Managing Document Types (Profiles) for in-depth information on creating the settings for processing files.

Managing Document Types (Profiles)

Working with ImageRamp Document Types (Doc Type)



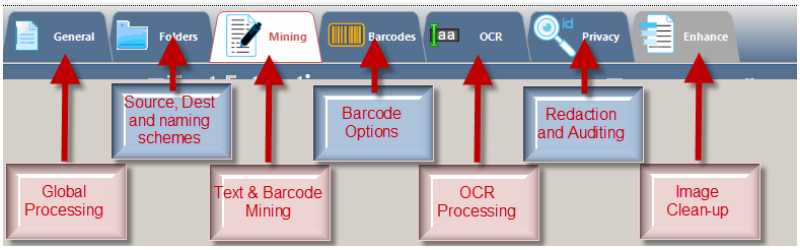
ImageRamp Batch lets you apply a group of settings, called an ***ImageRamp Document Type or Processing Profile***, to a file, folder, or scans. These are templates and can be powerful tools that save time and promote consistency. Profiles are particularly useful when you want to frequently apply the exact same functions to a folder of files or scans. Users can use the included Doc Types, create new ones or modify one of the preconfigured Doc Types in the product.

NOTE: When this manual uses the generic term "profile" it is referring to an ***ImageRamp Processing Profile*** or ***Document Type (Doc Type)***. The indexing function of ***ImageRamp Indexer*** lets you create reusable ***Index Field Profiles***. An Index Field Profile is essentially a profile within the Processing Profile that names specific indexing settings. If you need indexing into a database, please contact us about ImageRamp Indexer product.

What Settings are in a Document Type?

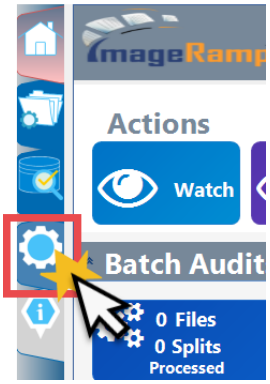
The ImageRamp Batch Settings interface presents the screens used to define a Doc Type. These screens allow the user to access specific settings for ***Input Output***, ***Privacy***, ***Barcode Extraction***, and ***File Naming***. Each of these screens is addressed individually in detail later in this manual. In this section we will only address how to create and edit Doc Types.

Illustration: ImageRamp Batch Settings Interface



Access this screen by clicking on the **Settings** icon from the **Home** dashboard.

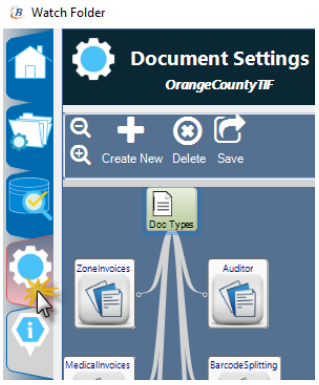
Illustration: Access the ImageRamp Batch Settings Interface with the Settings icon.



Managing Document Types

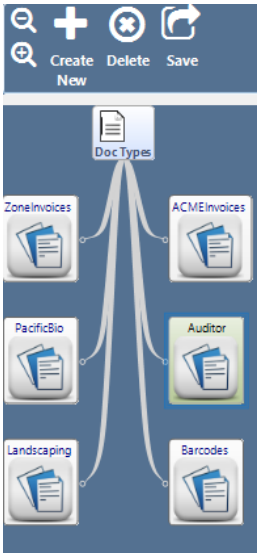
You can select any preconfigured profile or saved profile to edit, rename, delete or save as a new Doc Type with the ***Settings*** tab of the left menu tabs.

Illustration: Accessing the Settings interface to create and manage Doc Types.



The available Doc Types are displayed in the left pane. Use the **Create New**, **Delete** and **Save** icons to manipulate Doc Types. To edit an existing one, select it from the tree with a left click, make your changes and select the **Save** icon. The **Create** icon allows you to name a new Doc Type, select your desired settings and then click the **Save** icon. To delete Doc Types, simply select the item in the tree and click on the **Delete** icon.

Illustration: The Doc Type tree with the Create, Delete, and Save menu above.



ImageRamp Settings – General

The ***General*** settings are global settings primarily used to configure rejection handling, existing file handling, scanning, tracing and other miscellaneous global settings.

Illustration: ImageRamp General Settings

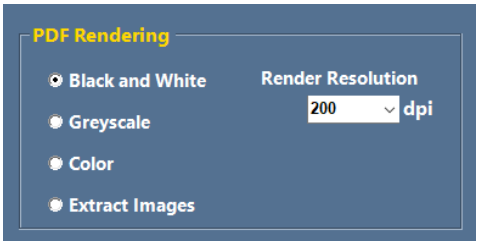
The Inbox Folder section of this tab is used for a generic Scanner Inbox found in the Home dashboard panel.

This function is used to easily point to the folder where your scanned or working files are located.

PDF Options Overview

ImageRamp supports several options for how the incoming scanned files are compressed and rendered for processing. The ***Rendering Resolution*** of the files is used during barcode and OCR extraction.

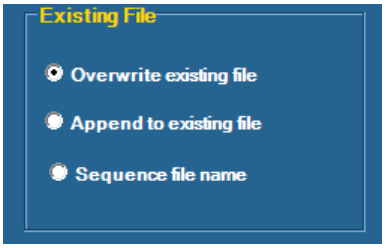
Illustration: The PDF Option screen's PDF Rendering settings.



Existing File Handling

If existing files with the same name are found, you can instruct ImageRamp to append, sequence, or overwrite the files.

Illustration: Setting up conditions for handling existing files when processing files.

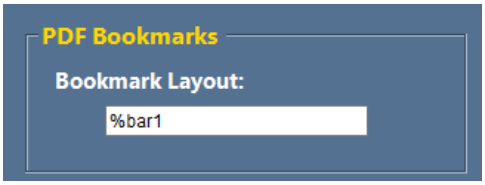


Setting PDF BookMarks

ImageRamp Batch allows you set PDF bookmarks based on barcodes or text extraction via Zone OCR.

The ***Bookmark Layout*** field allows users to define how bookmarks should be created. Enter keyword codes to identify bookmarks. See Using Keywords in Settings for more on keywords.

Illustration: The PDF Bookmarking setting.



TWAIN Scanning-Connecting to a Scanner for File Input

If you elect to capture files directly from a TWAIN scanner for input into ImageRamp Batch select the appropriate options in the ***Input/Output*** setting's ***TWAIN Scanning*** settings. All properly registered TWAIN drivers are visible for selection and usage.

Illustration: The PDF Bookmarking setting.

Tracing Batch processing

You can set ImageRamp to store daily output of processing operations. Daily log files are stored in the users temp folder C:\Users\<username>\AppData\Local\Temp\ImageRamp 2022LogFiles folder. The following trace levels are supported

0- No tracing

1- Major routine entry

2- Memory management

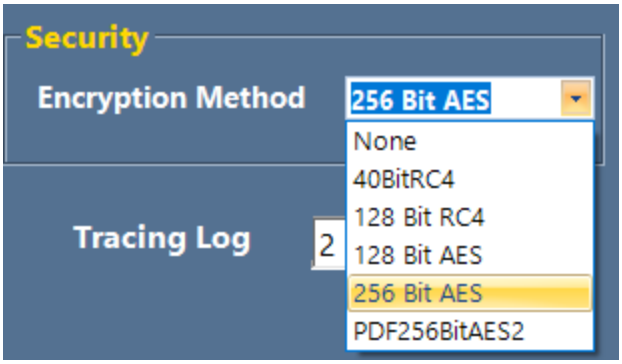
3- Detailed tracing

Illustration: The Trace logging setting.

Security with Encryption and Logging

PDF files can be saved with password encryption including RC4 and AES encryption. These settings are contained in the document settings.

- 40-bit RC4 algorithm. RC4 is a copyrighted, proprietary algorithm of RSA Security, Inc.
- 128-bit AES algorithm. The AES (Advanced Encryption Standard) algorithm (beginning with PDF 1.6).
- 128-bit RC4 algorithm. RC4 is a copyrighted, proprietary algorithm of RSA Security, Inc.
- 256-bit AES algorithm. The AES (Advanced Encryption Standard) algorithm (beginning with PDF 1.6).
- 256-bit AES algorithm. The AES (Advanced Encryption Standard) algorithm with improved password handling (beginning with PDF 1.7 Adobe Extension Level 8 and PDF 2.0 (ISO 32000-2)).



ImageRamp Settings – Folders

The Folder Settings Interface

To identify how to name files and folders and file locations click on the **Settings** tab and then the **Folders** tab. This presents the available Doc Types (profiles) in a tree structure in the left pane. See Working with ImageRamp Document Types for more information.

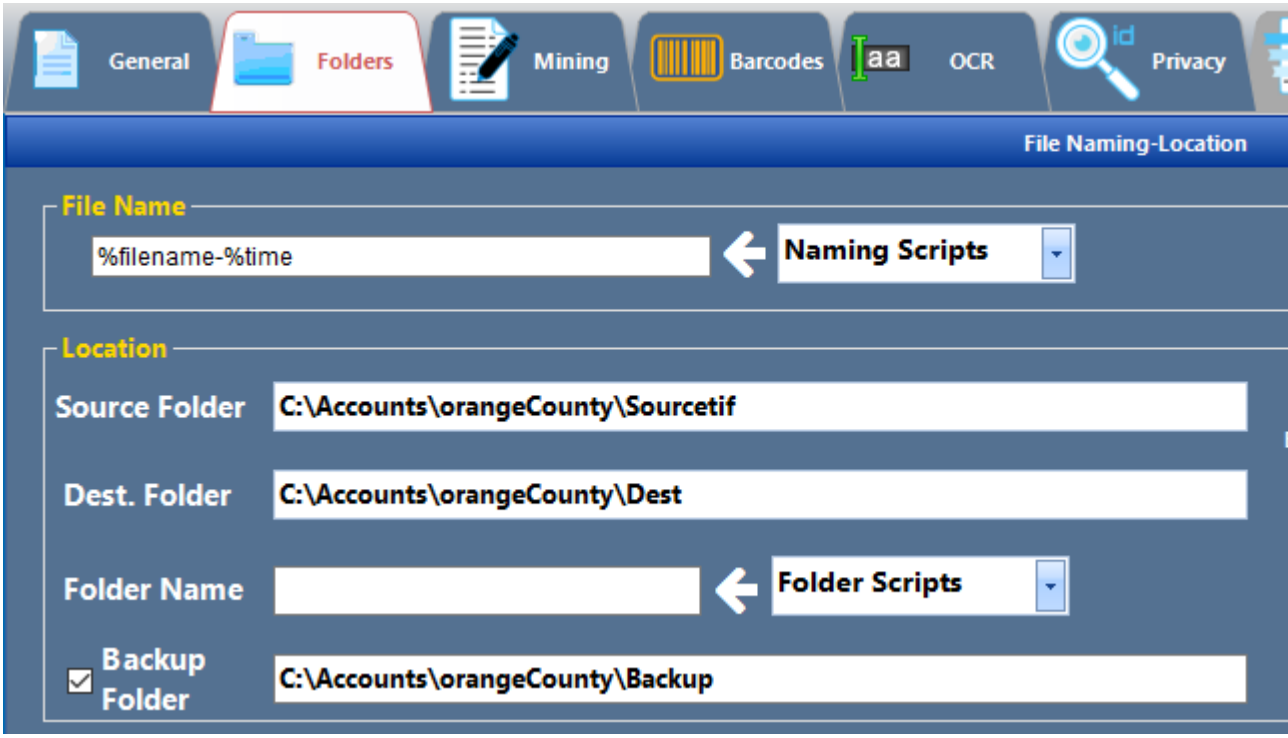


Illustration: Setting up Folder Processing

Simply select or create the desired Doc Type and enter the desired information in the center panel to identify the information to extract and the file locations.

File Name

After selecting or creating the desired Doc Type, how the files are to be named must be set up. The File Name interface supports a scripting language allowing users access to mined data (zone OCR regions or OCR data) along with system data (date, time, month, etc), in order to create a customized file name. See Naming Using Keyword Codes,

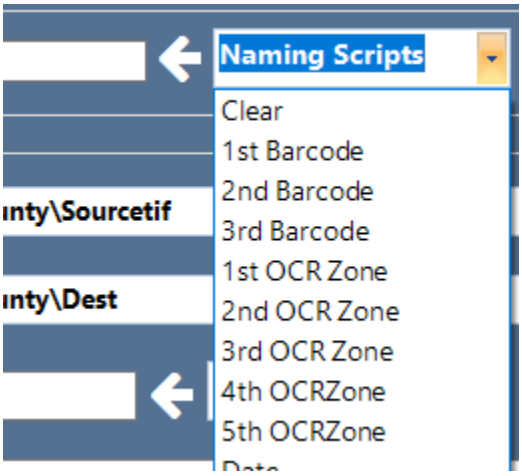
File Location

Each profile should have a unique ***Source folder*** identifying where the files originate for processing. Similarly, each profile has a The ***Dest. (Destination) Folder*** where the resulting files will be delivered once processed and named. . The ***Dest. (Destination) Folder*** names where the processed files are to be located. The Dest folder can have sub directories automatically created using the same scripting system using extracted text from barcodes or OCR Zones or other information using keyword codes. See Naming Using Keyword Codes, You can also browse to a folder to place a backup copy of the original files by checking the ***Backup Folder*** checkbox and naming the folder.

Naming Files and Creating Folders with extracte text (Barcodes or zone OCR

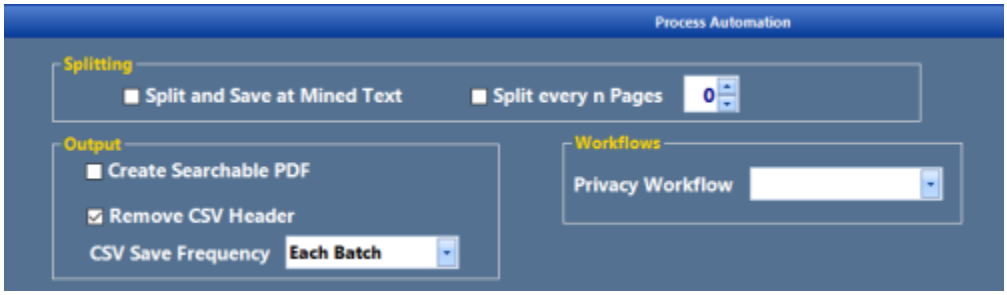
Data extracted by the watch process can be used as part of the file name or sub directories created. string and “keycode” strings including date, time and more. Detected barcode text (complete barcode or partial) can also be used to name these. A combination of barcodes and extracted text from Zone OCR can be used for file and folder naming as well. For instance, if you want to use the 2nd barcode and zone1 to name the file use “%bar2%zone1” in the naming script. These can be combined with static text so “Output-%bar1” would produce file names starting with “Output-“ and dynamically changing as each barcode is encountered.

Illustration: Selecting how to name output.



Process Automation options (Splitting)

If you intend to have ImageRamp create a new file on a valid barcode, select the ***Split and Save at Mined Text*** setting. This will have the software create new files whenever it encounters newly mined text or barcodes. You can also force splitting every “n” pages by selecting ***Split every n Pages***.



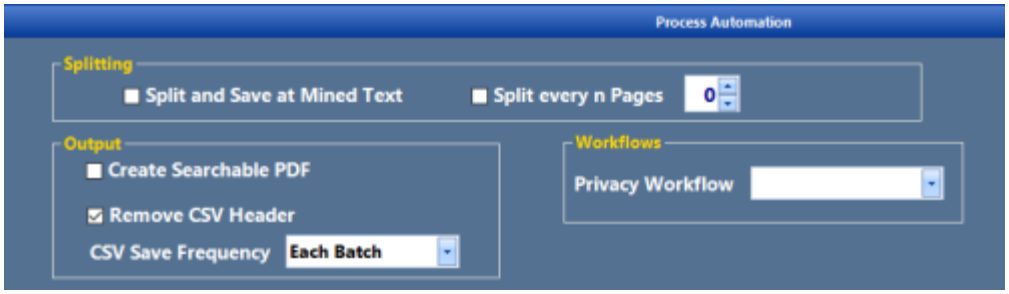
Process Automation Output

Several options are available for the output created. If you want to create searchable PDF files and perform full page OCR processing, select the Create Searchable PDF option.

You can also force splitting every “n” pages by selecting ***Split every n Pages***.

You can also save CSV data for each file processed with several frequency options. The ***Remove CSV Header*** option will not display a header. The available frequencies are Per File, Each

Batch, and Daily. Using the latter options will append all files processed during the batch or day into a single file.



CAUTION: If ***Split at Barcodes*** is selected and ImageRamp Batch does not find any valid barcodes in a file, the file is sent to the Quality Control handler.

NOTE: You may rename files without splitting them by simply not selecting any splitting options in the ***Barcode Mining*** and ***Text Mining*** screens and then selecting the desired options in the ***Output*** area.

ImageRamp Settings – Mining

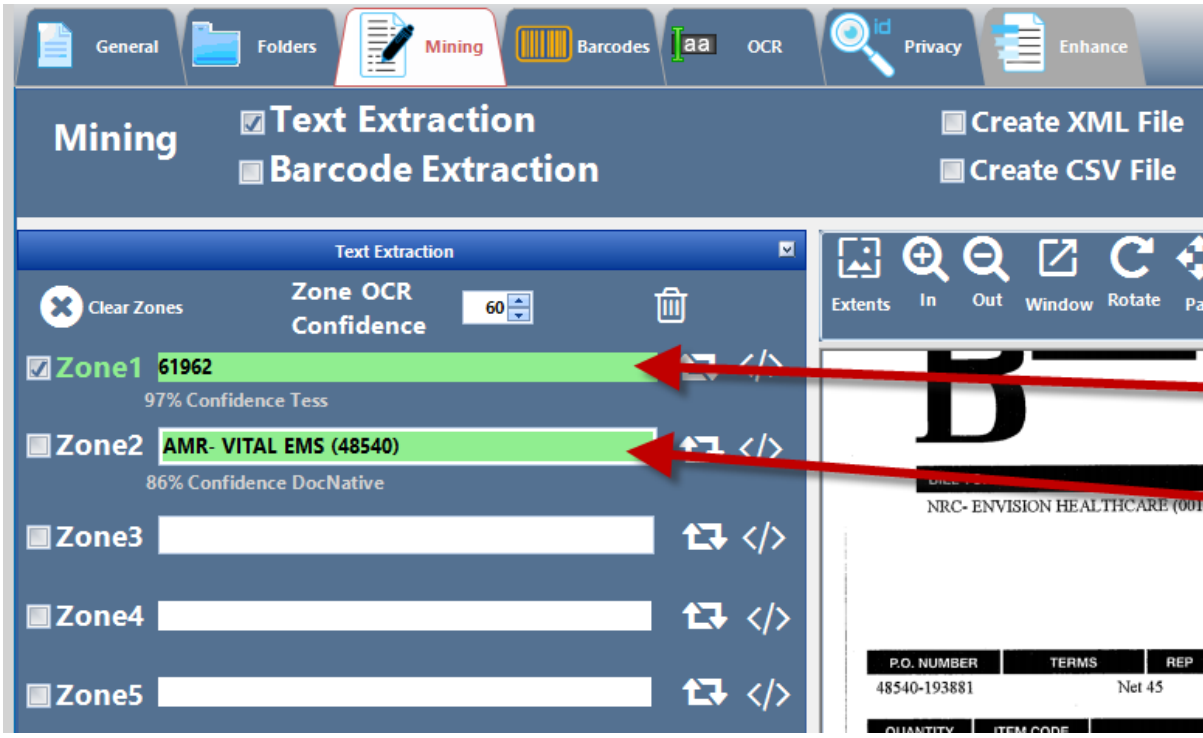
Naming Files and Creating Folders with Extracted Text (Zone OCR)

The Mining interface is used to identify which data and where to extract from a document. Both Barcode extraction and Zone OCR extraction are supporte. Select the ***Text Extraction*** checkbox to enable the Zone OCR mining.

Defining Zones

Text extraction uses zones on the document to identify a general region of interest. The left panel shows up to 5 zones (enterprise edition) and the resulting text. Each zone is identified by a region of interest, and zone ocr rules used to pinpoint the desired text.

Illustration: The OCR options interface.



Setting the Zone OCR Confidence

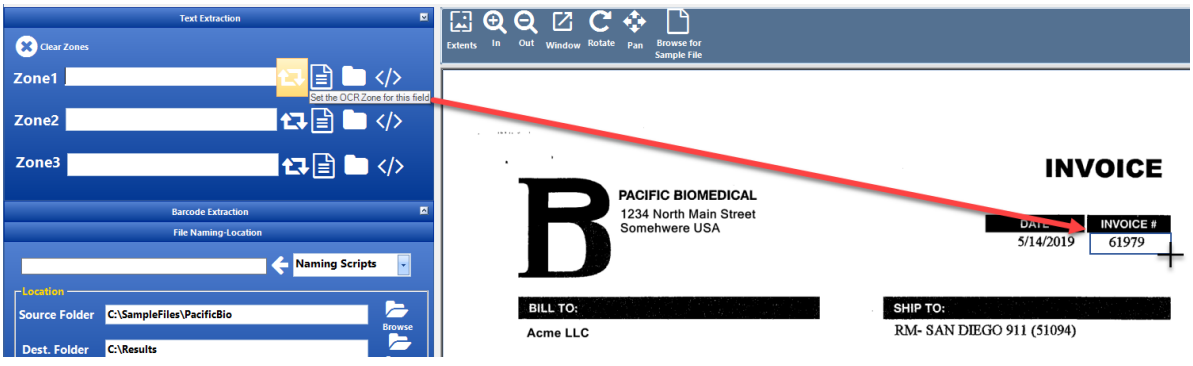
When Zones are extracted, ImageRamp will use the ***Confidence*** setting the user has set. If the recognized value is equal to or higher than the set confidence, it will be stored. Otherwise it will be ignored.

Identifying Zones

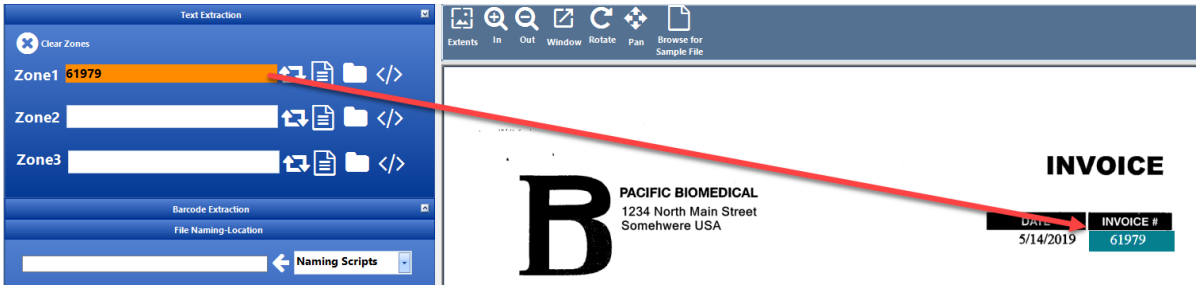
To create your zones using the Sample File, click on the **Zone Capture** icon and draw a rectangle around the zone on your document in the desired area.

Illustration: Identify the area on your document with the desired information to create an extraction zone.

Before:



After:



The extracted text is now displayed in the Zone field and the area on the sample document is identified with a colored rectangle. The zone icon functions are as follows:

Illustration: The Zone OCR icon functions.

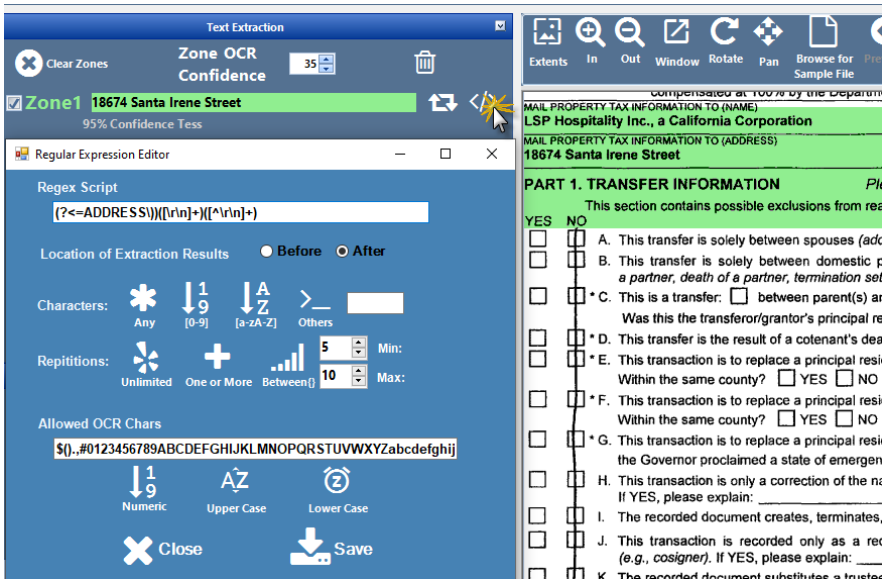
	Set the OCR zone. This icon presents a selection cursor allowing you to draw a rectangle around the area on the sample file to identify the extraction zone.
	Define the Regex pattern to apply against this zone. This presents a pop-up dialog to create a regex condition for the zone.

Applying Regular Expression Conditions to Extracted Text for Validation

ImageRamp can extract zone data and take advantage of regular expression scripts to validate the data is correct or to fine tune your selection. You can define any character pattern that is to be allowed in the input string but this requires a knowledge of Regular Expressions (regex). If the entry does not match the script, a second OCR engine is fired to attempt finding the exact pattern match. If neither has matching results, the document is placed in the quality control list for review when the file is processed.

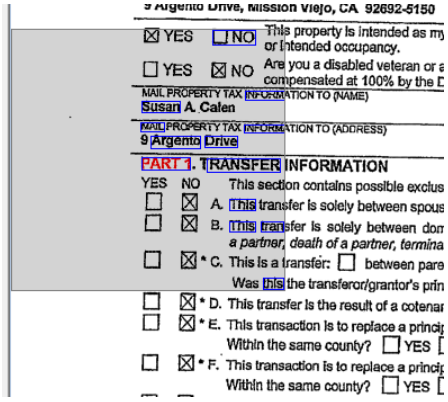
To create a regex validation script, click the **Define the Regex Pattern for this Zone** icon for the desired zone to bring up a regex editor. Use this screen to create the conditions to apply to the zone. This can be used to stipulate that the extracted text must be a number or date or another identified pattern.

Illustration: The Regex Editor can create regex scripts to identify your desired patterns for the extracted zone text. This example shows a sophisticated extraction of the street address from a large region. It has a restricted list of supported characters, to help with OCR accuracy and the script looks for the next line of text after finding the word "ADDRESS)". See the OCR section for more details



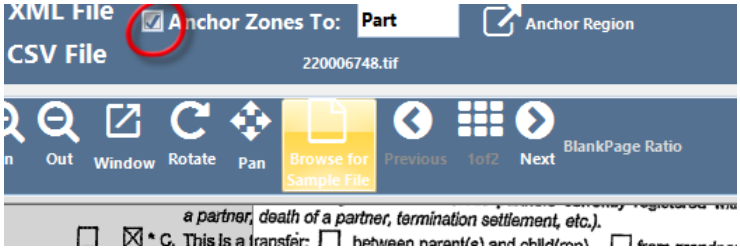
Anchor Words

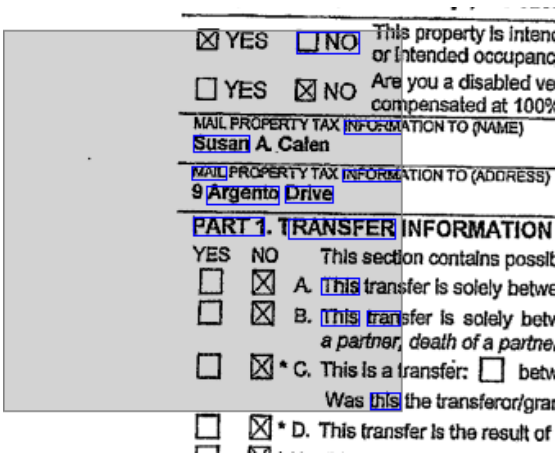
Working with Anchor Words



Within this zone, ImageRamp will display all high confidence words it found and any word selected as the Anchor Word is displayed in red while the overall area is shown as a grey box. All high confidence words are displayed within a blue bounding box.

To set up Anchor words, set the Anchor Zones check box before configuring zone locations within your document. If zones already exist, you will need to select each one to refresh it's internal location relative to the Anchor Word.

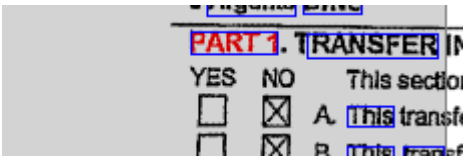




This will display all high confidence words in a blue bounding box. Words that are not high confidence should not be used as the Anchor Word. We also ignore short 1-3 character words and words with special characters (#'/% etc.).

Look for bold words possibly of a larger font to use. In our example, we will use the word "Part". Enter this in the text box and toggle the Anchor Zone Check Box

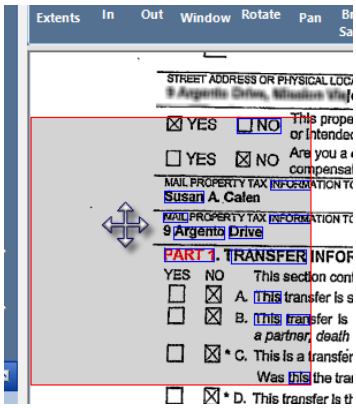
Once you enter the word, select the checkbox off then on to refresh the region and your anchor word should be visible as red. You can now start adding new zone locations, or refresh by selecting each one.



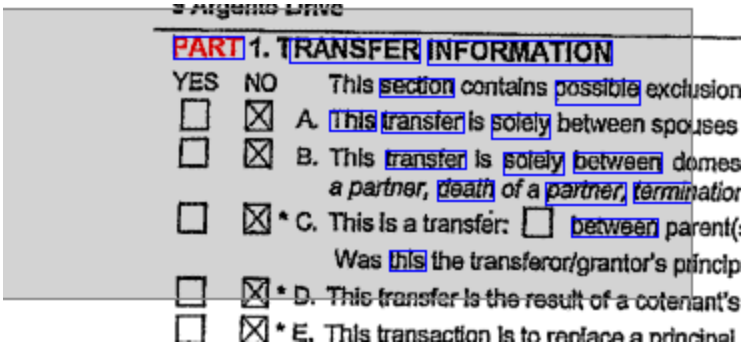
Moving and resizing your Anchor Word Region of Interest (ROI)

The Anchor Word Region of Interest, (ROI) is the area within the documents to search for the identified word. This area should allow for variations in border widths and any form adjustments. The smaller the region, the faster the Anchor Word OCR processing to find the base point for zones.

By default, the upper left corner of the document is selected. You can move or resize this zone by first selecting the "Anchor Region" button. Once selected you can now pick the Anchor Region and move/resize it.

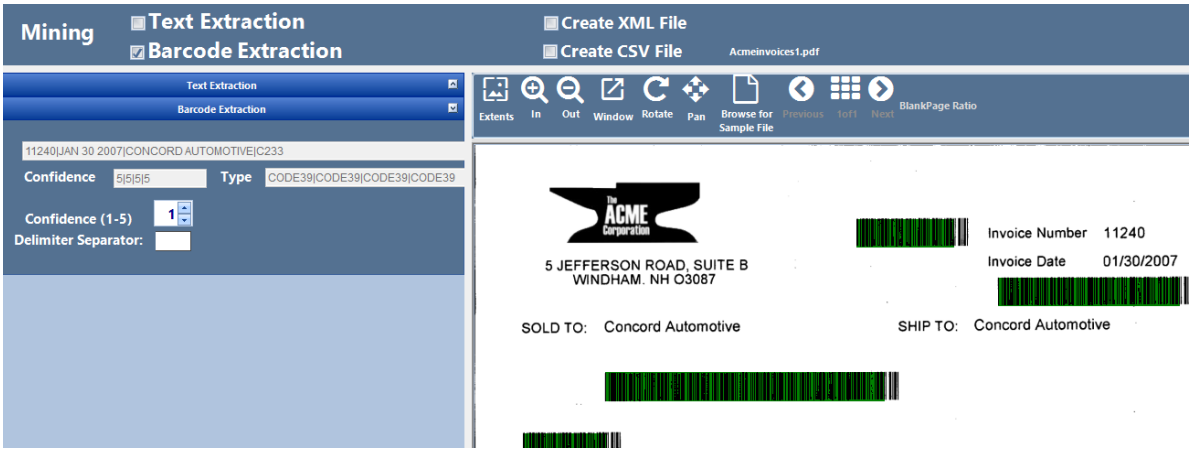


The region will display with a red marker and allow you to move or resize the edges to anywhere in the document. The region will auto refresh the region to the newly resized or relocated position. The larger the ROI, the longer the OCR will take to process.



Naming Files and Creating Folders with Extracted Barcode Data

Select the ***Barcode Extraction*** check box. This will display all barcodes recognized in the Extraction left panel. The text extracted is displayed in a pipe "|" delimited string representing the recognized zones. ***Confidence*** shows a ranking of 1 to 5 for each zone (5 is the highest) and the ***type*** is the recognized barcode type found in the document. You can use the barcode settings tab to fine tune the barcode extractions in more detail.



Setting the barcode Confidence

When barcodes are extracted, ImageRamp will use the ***Confidence*** setting the user has set. If the recognized value is equal to or higher than the set confidence, it will be stored. Otherwise, it will be ignored.

Naming Using Keyword Codes

Keyword codes are used in the ***File Name*** or ***Folder Name*** fields to create names based on the barcode data, extracted text, original file name, date, time, and page number and more. The brackets surrounding the keyword name is required and keyword codes are not case sensitive.

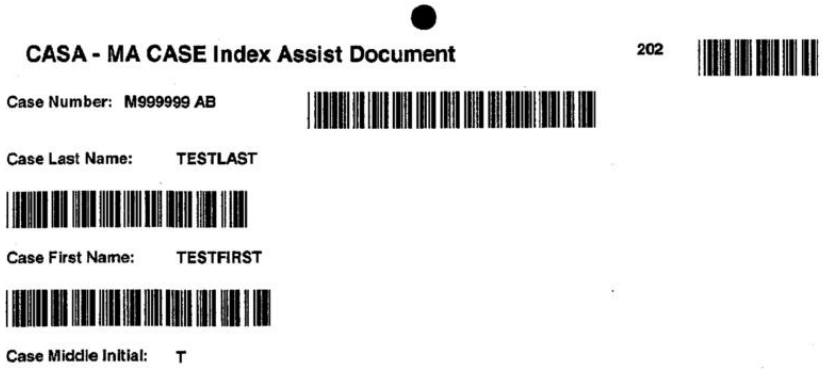
Keywords:

%date	Produces today's date using the format: MMDDYYYY. For example, if today's date is July 14, 2010, the resulting value would be 07142010 *%Date = 07142010*
%page	Produces the page number
%hour	Returns the current hour of day

%minute	Returns the current Minutes of day
%field{n}	Use the text value from the input field {n}
%time	Produces Military formatted time using hours, minutes, seconds and milliseconds. If the time is 2:12 p.m. with 10 seconds and 432 1000's of a second is %Time =**141210432**
%bar*n* *or* %barcode*n*	Produces the barcode designated in the name. Barcode1 through Barcode10 can be used. *See Samples below*
%zone*n* *or* %field*n*	Produces the text extracted via zone OCR in the name. zone1 through zone3 can be used.

When there are multiple barcodes on a page, you may create the name based on any combination of the barcodes by using the Barcode***n*** keyword. Remember that you must select the barcode search direction in the Barcode Settings screen. ImageRamp Batch can use up to ten barcodes for file naming.

Illustration: Sample barcode used in chart below



Samples: Keyword codes with examples using the scanned page with barcodes above in top to bottom order:

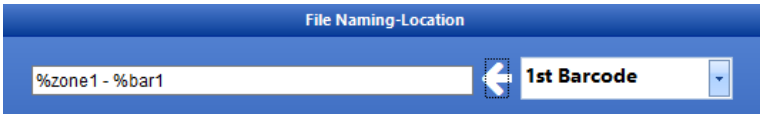
%bar*n* *or* %barcode*n*	Produces the barcode designated in the name. Barcode1 through Barcode10 can be used. *%bar1* = **202** *%bar1-%bar2* = **202-M999999 AB** *%date-%bar4* = **07142010-TESTFIRST** *with a date of July 14, 2010*

In some applications, barcodes have multiple discrete data elements in the same barcode which are divided by a separator or delimiter such as a dash "-"or underscore "_". With ImageRamp, the delimited multiple data elements can be recognized as individual barcodes. For more on using delimiters, see Using Barcodes Containing a Delimiter.

Combining Keywords

Users often find it convenient to combine multiple keywords when naming files. For example you may want to rename to the first detected barcode and add the date and time. Keywords maybe combined in any order. To use multiple keywords simply enter the codes in the same entry field (either ***File Name***, or ***Folder Name***)

Illustration: File named to the first OCR zone and the first barcode.

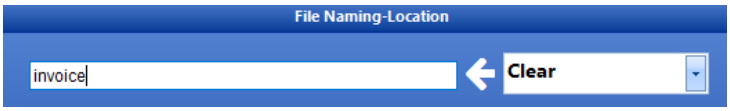


CAUTION: If ***Split at Barcodes*** is selected and ImageRamp Batch does not find any valid barcodes in a file, the file is not split but processed with any other ***Clean-Enhance*** settings and placed in the Quality Control folder.

Naming with Free Form Text

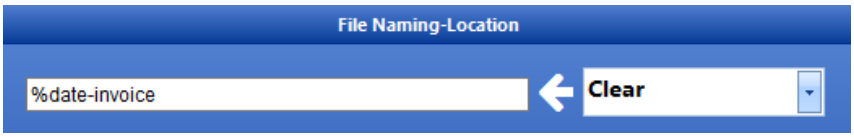
To name files or folders with your own free form text, simply enter the text string in the ***File Name*** or ***Folder Name*** fields. For example, if the word "invoice" is entered for the file name, all documents will be named as "invoice" followed by sequential numbers.

Illustration: Name File with text "invoice". Resulting in files named invoice_1.tif, invoice_2.tif, invoice_3.tif etc.



Free form text entries can also be used in combination with keyword codes. See Renaming Using Keyword Codes and Combining Keywords.

Illustration: File name with Date keyword and text "invoice". Resulting in files named 08272015 - invoice_1.tif, 08272015 – invoice_2.tif, 08272015 - invoice_3.tif etc.



Saving Document Types in the File Naming Settings

Once file naming information has been entered for the desired ***Doc Type***, save the entries by clicking on the **Save** icon.

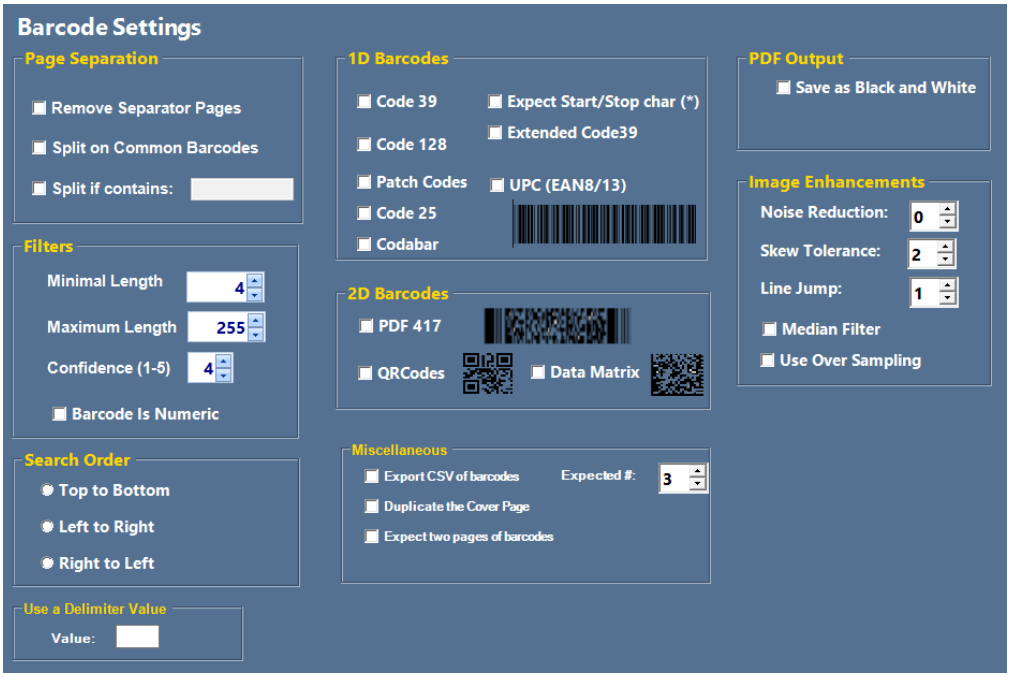
ImageRamp Settings – Barcodes

Barcode Use in ImageRamp Batch Overview

ImageRamp can split a multi-page file or document into multiple files and extract important content from the file or scan based on barcodes or mined text. This extracted information can be used for file splitting, indexing, and file naming and routing. How ImageRamp applies these functions is based on the settings of the ***Barcode Extraction*** settings of the active Doc Type.

The ***Barcode Extraction Settings*** screen contains the instructions needed to identify the expected barcodes, how documents should be searched for them, and how they should be used to split documents. Settings are also available to enhance the barcode recognition and other various settings.

Illustration: The Barcode Extraction Settings Screen.



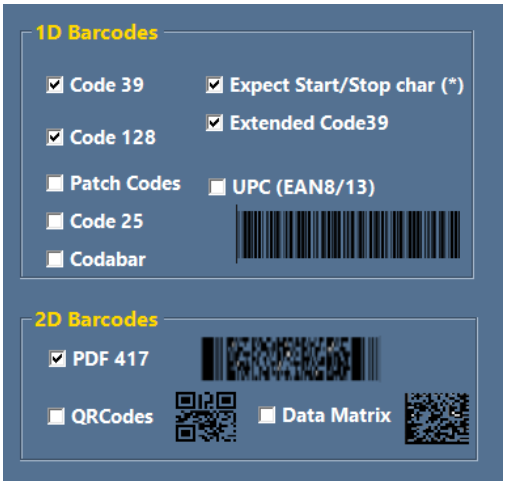
Selecting Options to Identify Barcodes

Choose the **Barcode Extraction Settings** tab from **Settings** Tab to set:

- Which barcode standards to detect
- Which barcode enhancement should be applied
- Whether to parse barcodes based on a delimiter

Selecting Barcode Types

Illustration: The Barcode Type settings

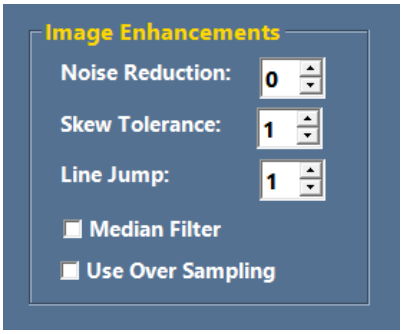


ImageRamp Batch recognizes many different barcode standards, including Barcode 39 and 128 linear barcodes and PDF-417, QRCodes and Data Matrix 2D barcodes. To select which barcode types ImageRamp should detect, simply check the box next to the barcode type. Multiple selections can be made. To avoid false reads of data, only select the desired barcode types found in your documents.

Selecting Barcode Enhancements

Several image enhancement functions are available. They are provided here for advanced users' reference.

Illustration: The Barcode Enhancements to improve barcode recognition.



Noise Reduction runs an image through a noise reduction filter before scanning for barcodes. The filter removes marks from an image that are unlikely to be part of a barcode. A larger value will remove larger marks from the image. This increases the chances of finding a barcode in a poor-quality image but also increases the time taken to process an image. A typical value for this option is 10.

Skew Tolerance controls the maximum angle from the horizontal or vertical at which a barcode will be recognized. The table below shows the possible values for this property along with the approximate maximum angles:

0 = up to 5 degrees

1 = 13 degrees

2 = 21 degrees

3 = 29 degrees

4 = 37 degrees

5 = 45 degrees

When ImageRamp scans an image for a barcode string it does not scan every line of the image. The ***Line Jump*** setting controls how many scan lines are missed between checks for a barcode. A ***Line Jump*** value of 1 means that every scan line in the image will be checked. A lower value for Line Jump will impact the performance of the application but may be useful for poor quality images.

When the ***Median Filter*** box is selected, ImageRamp Batch will apply a median filter to the image before checking for barcodes. This is a useful option for high resolution images that contain speckles of black and white. It is not recommended for images where the black bars or white spaces are less than 2 pixels wide.

When the ***Use Over Sampling*** box is enabled, the barcode reader samples 3 lines at a time (skipping 2 lines between each sample) and takes the average pixel value. This is useful for images containing both black and white speckles.

Barcode Search Order

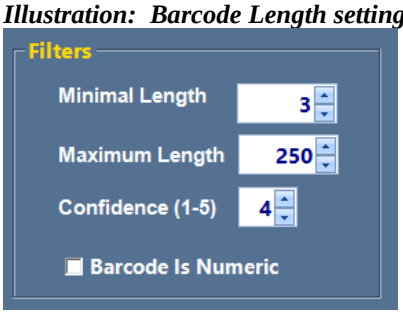
When opting to extract barcode information, users must indicate what order the application should use to search for barcodes on a scanned page: ***Top to Bottom***, ***Left to Right*** and ***Right to Left***.

Illustration: Barcode Search Order options.

Barcode Minimum and Maximum Length and Confidence Rating

You can also control the barcode results by setting a minimum and maximum character length. Any barcodes found that are within this range are kept as valid barcodes. Others are ignored.

Illustration: Barcode Length settings.

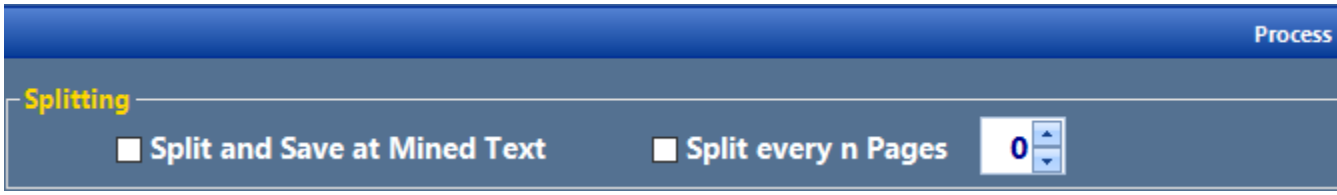


New in ImageRamp is the recognition of a confidence ranking (1-5) for each unique barcode found. The higher the confidence setting, the more confident the software must be to capture a barcode value.

Additionally, to identify barcodes, you may check the ***Barcode is Numeric*** checkbox if that is appropriate to eliminate any barcodes that are located with text.

Splitting Files with Barcodes

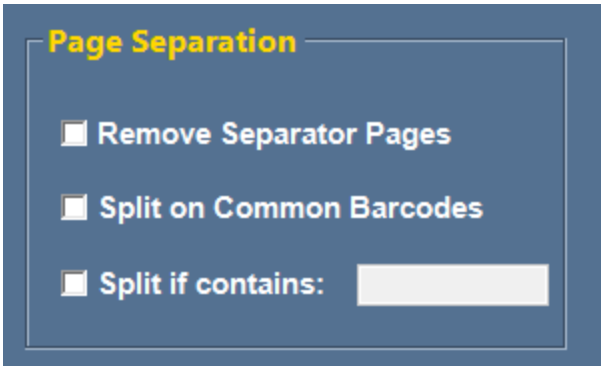
The setting to define that splitting is to occur is in the Folders tab under Processing. To enable splitting the Process Automation Split and Save must be selected.



Split at Barcodes

Scans that contain valid barcodes or have barcodes printed on separator pages can be split into multiple files based on those barcodes and named to the barcode data.

Illustration: Page Separation Options.



NOTE: Be sure to identify the barcodes properly in the other areas of this screen. Learn more at Selecting Options to Identify Barcodes.

Split on Common Barcodes allows users to save files using the same separation page barcode. This works best when the resulting file name includes a time stamp %time.

If the ***Remove Separator Pages*** option is selected, separator pages are used for splitting and renaming but are not included in the output files. If a keyword like "invoices" is entered as the ***Split if Contains*** field and you use separator pages with the word "invoices" in the barcode, ImageRamp Batch will split the scanned stack into separate files every time it detects a barcode with "invoices." For more information see Working with Separator Pages, Selecting Options to Identify Barcodes, and Renaming Files and Creating Folders.

Working with Barcodes That Aren't Recognized

Barcodes can be a bit finicky to work with. The quality of the original print as well as the settings of the scanner can have a significant impact on the ability to read barcode data.

The first step in diagnosing barcode problems is to visually inspect the barcodes in the original document. Look for bars that may be touching or full of dots. Below are examples of good and bad images from the same barcode. The good one is the original document before printing it out or scanning. The bad one is the result of a poor-quality printout or scan. It is always a good idea to zoom in or magnify a barcode to see what the bars actually look like.

Illustration: Barcode quality examples.

Good Image:

Bad Image:

Hints for Creating High Quality Barcode Scans

1. Print barcode page with a laser printer set to at least 600 dpi.
2. Increase the DPI of your scan device. Try going 300 dpi or higher.
3. Try scanning in color or greyscale. This will automatically improve the resolution of the image. If you want to convert the output files back to black and white as color images

can be quite large, then check the ***Save as Black and White*** box in the ***PDF Output Options*** screen.

4. Use the ***Image Enhancement*** options to optimize the settings for your files.
5. Use ***the Minimal and Maximum Barcode Length*** setting to help eliminate unwanted barcodes from the output stream.

See Selecting Barcode Enhancements for settings which affect the readability of barcodes.

Working with Separator Pages and Using Specific Barcode Values

The ***Remove Separator Pages*** option of the ***Barcode Extraction Settings*** screen applies to situations where scans are made with barcode separator pages. These pages usually only contain barcodes which identify the following data pages in a stack of multiple documents for scanning. The barcode information can be used to name the files and then the separator pages can be removed. To activate this option, simply select ***Split and save*** and the ***Remove Barcode Separator Pages*** checkboxes on the ***Barcode Extraction Settings*** screen and every page with a barcode will be removed. The files will be named as directed on the ***File Naming Settings*** screen and in the ***Input Output*** screen. See Naming Using Keyword Codes to understand how to name the files based on the barcodes if desired.

Selecting ***Split if Barcode Contains*** field allows you to enter your own barcode text string to prompt a file split. If you enter a string here, splits will only occur on barcodes that contain that string. A practical application of this option would be entering "invoice" as the split string. If your scanning stack contains many multipage invoices which are barcoded with the invoice number such as "invoice xxx" on the first page of every invoice, ImageRamp Batch would easily split the stack into multiple files at the first page of every invoice.

CAUTION: As checking the ***Remove Barcode Separator Pages*** checkbox removes **all** pages on which it detects a barcode, it should only be used in situations where there are no barcodes on the data pages.

CAUTION: The image quality of barcodes can significantly impact their readability. We recommend a minimum of 300 dpi scanning and using Image Enhance options.

Illustration: Using the Remove Separator Pages option and renaming the file based on Barcode1

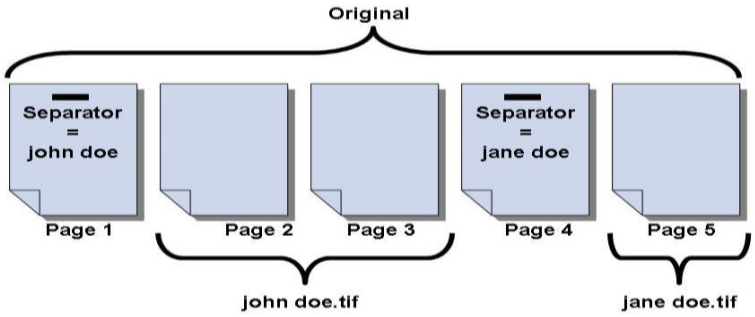
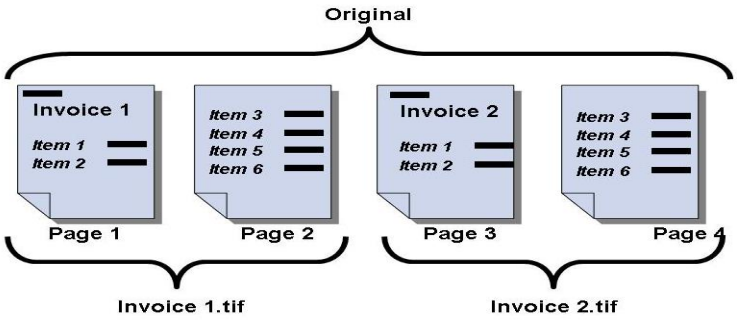


Illustration: Using the Split if Contains option with a value of "invoice" and renaming the file based on Barcode 1, barcode search order top to bottom.



CAUTION: If ***Split at Barcodes*** is selected and ImageRamp Batch does not find any valid barcodes in a file, the file is sent to the Quality Control process.

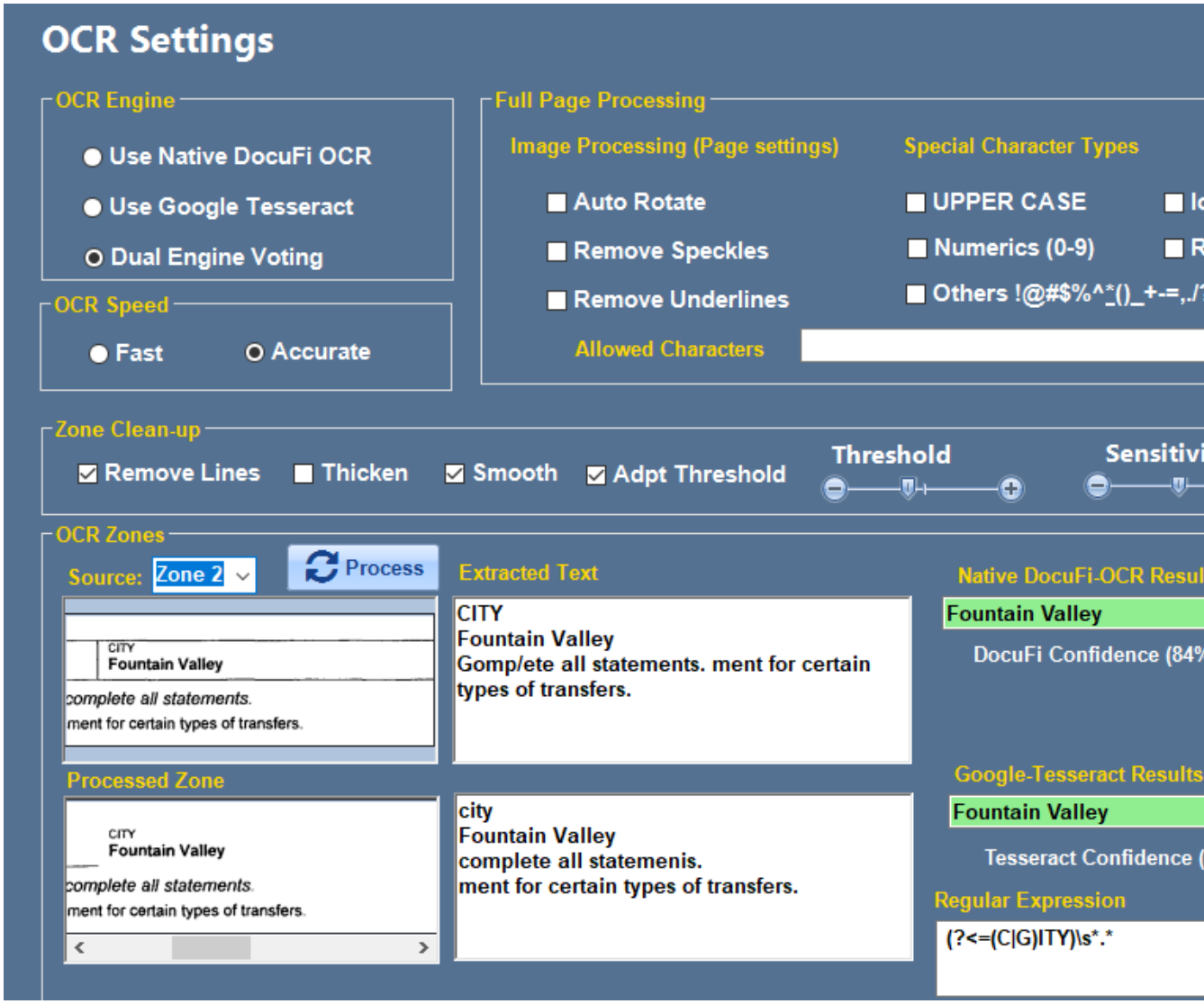
CAUTION: If a file contains multiple occurrences of the same barcode and it is used to set to the file name, the file will overwrite itself. To prevent this, use the barcode name with a time stamp for the file name.

ImageRamp Settings – OCR

OCR Settings Overview

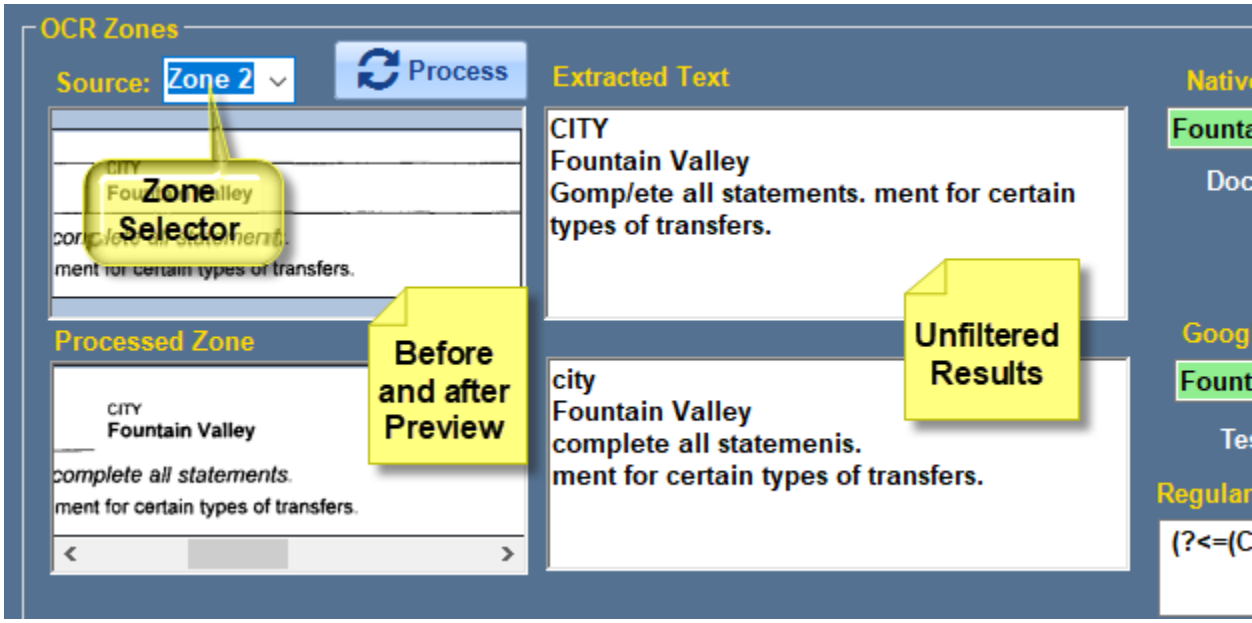
The OCR settings are to define settings for Page and Zone OCR Processing. for Page Image Processing when saving as Searchable PDF files, and for Zone OCR processing. Using the Zone Selector, you can pick a desired region. This will display in the Source image and processed zone image previews.

If you modify any of the image processing options (Adpt Threshold, Expand Pixels, or Smooth) it will auto generate the interface to the desired setting.



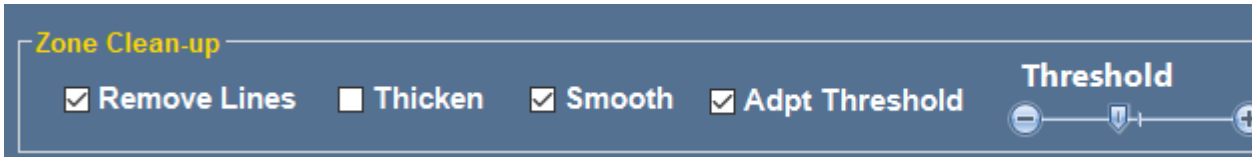
Fine Tuning your OCR Zones

You can fine tune your regular expressions to use within each zone, by modifying it in the ***Regular Expression*** text box. When you select ***Process***, it will show the resulting text and confidence rankings for each of the OCR engines available. The raw extracted text for the identified region is shown before having regular expressions and other filters applied to it.



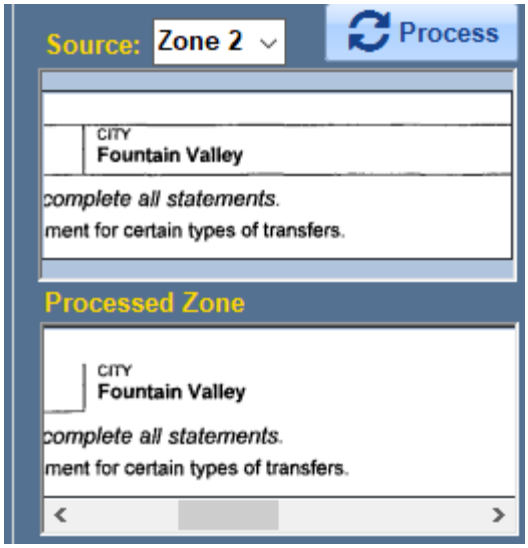
Optimizing image quality

Each extracted zone can have additional image processing tools applied to it. These options can be used to help improve the OCR results for the identified regions. These settings effect the processing in each zonal region. Selecting any of these options will refresh the resulting image, extraction, and results.



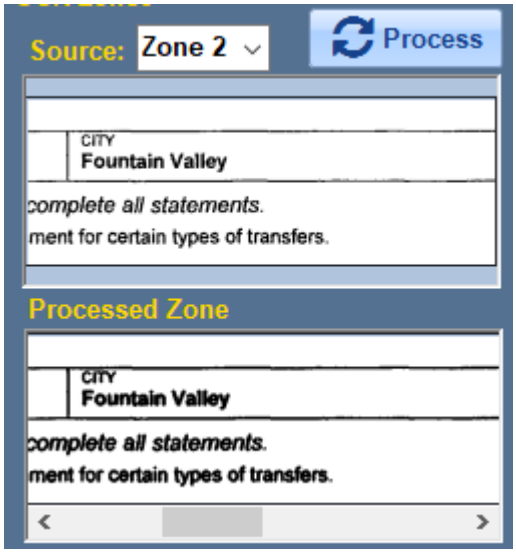
Remove Lines

The remove lines setting will eliminate horizontal and vertical lines from the processed OCR Zone. This will help to improve accuracy when intersecting with characters.



Thicken

The Thicken option will expand all pixels in the OCR Zone. This is helpful when low quality and faded scans are encountered.



Smooth

The smooth option will perform slight edge smoothing on lines and characters to help remove spurs and other non uniform items.

Adpt Threshold

The Adaptive Thresholding option will apply a 2D algorithm to the image (greyscale, color or black and white) to help adjust the image based on nearest neighbor techniques. The threshold and sensitivity (radius) will impact the resulting binarized image. This is typically used for converting greyscale or color images to black and white.

Modifying the regular expression

The regular expression text box is initially filled with the value for the selected zone (as defined in the zone setup). You can adjust the settings and select the Process button. Be sure to use the regex editor to validate the expression is allowed.

ImageRamp Settings – Privacy

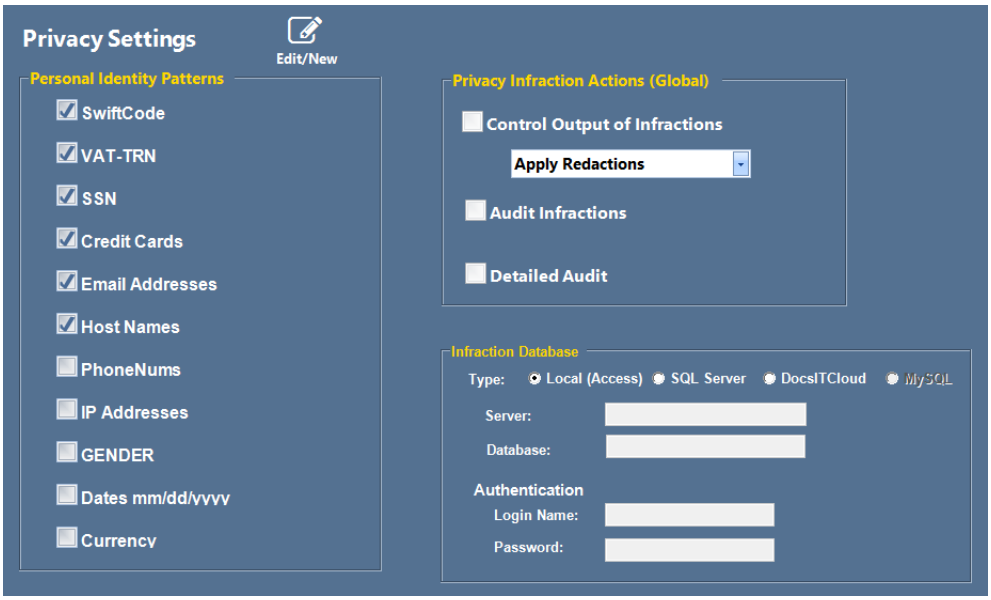
Privacy and Personal Identity Patterns Overview

Identifying the existence of sensitive data and personal identity on your documents has grown increasingly important.

From the **Settings** tab, select the ***Privacy Settings*** tab. This displays the available search patterns and the settings for how this information is to be treated.

Select your desired privacy search patterns. A number of pre-existing scripts using regular expressions (regex) are supported and built in. This provides common word matching patterns for Social Security Numbers, Credit Card Numbers, Email Addresses, IP Addresses, Gender, Cost and others.

Illustration: Batch's Privacy Inspector Settings screen.



Once you have selected the privacy information, select how ImageRamp Batch should treat the identified data in the Privacy Infraction Actions and Infraction Database settings

Creating and Editing Search Patterns

You can create your own search patterns that are automatically added to the ***Personal Identity Patterns*** list. Click the **Edit/New** icon from the ***Privacy Settings*** screen to create your own regex search patterns in the ***Privacy Pattern Editor***. Simply click the **New** icon and enter the appropriate information in the popup screen. When completed, select the **Save** icon or **Cancel** icon to return to the previous screen. To edit an existing pattern from this popup screen, select the pattern from the pulldown, make your changes and click on the **Update** icon.

Illustration: Batch's Privacy Settings Pattern Editor.

See *Text vs. Image-Based File Redactions* to see redaction differences in file types.

Text vs. Image-Based File Redactions

Files that are pure text-based PDFs will behave differently than image-based files in how the data is redacted. Text-based files have text replaced with dots "……" representing the number of characters replaced from the identified search pattern. Image based files will have the underlying and invisible text removed and a white or black rectangular object drawn over the image to disallow visual reading.

Illustration: Text-based files are shown in this example with highlighting and then redaction.

Gender Redactions

SEX<pvt> or sex<pvt> or Sex: <pvt> or sex : <pvt>
GENDER <pvt> or Gender <pvt> or Gender <pvt> or GENDER <pvt>
The person is a <pvt> becoming a <pvt> and <pvt> is a young <pvt> acting like a mature <pvt>.

Gender Redactions

SEX: Male or sex: M or Sex: Female or sex : F
GENDER Male or Gender M or Gender Female or GENDER F
The person is a boy becoming a man and she is a young girl acting like a mature woman.

Images are redacted with a whiteout or blackout area as they are scanned image files that are OCR processed first. This selection is found in the ***Settings' Privacy Inspector*** screen.

Illustration: Text-based files are shown in this example with highlighting and then redaction.

Image-based files need searchable text in order to perform the redaction process. OCR capabilities are built into Composer and are intended to provide accurate text of the underlying image.

Illustration: Composer OCR's image files to capture text for privacy searches.

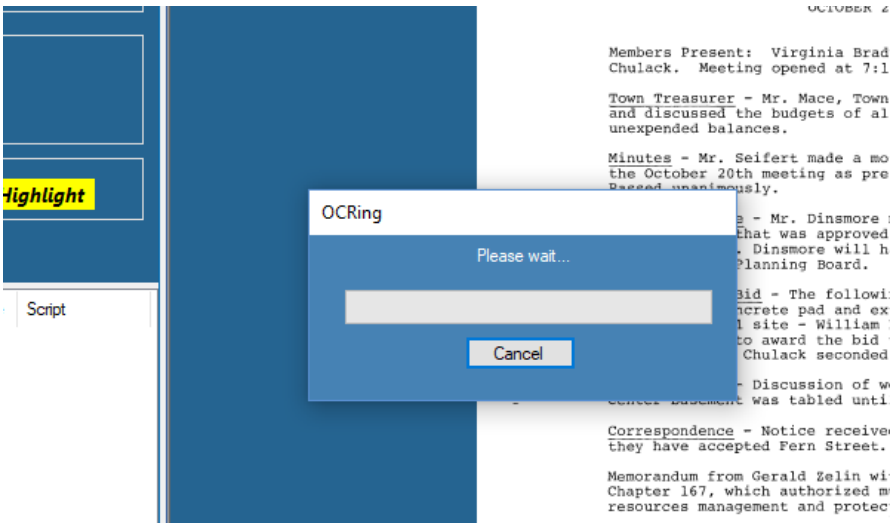


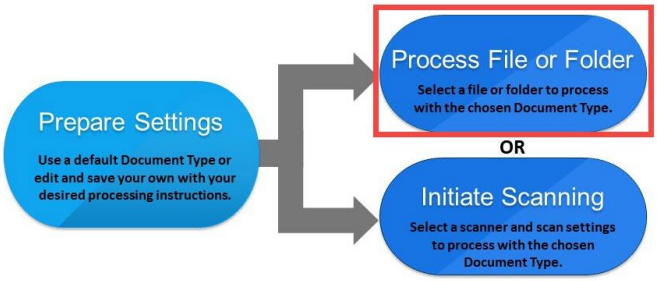
Illustration: Redaction is applied to image-based files as specified in the Setting's Privacy Inspector.

For advanced users, PDF Composer has settings that users can manipulate to improve OCR accuracy. Access the ***Settings*** tab's **OCR** icon to present the ***OCR Settings*** screen. See *OCR Settings* for more on fine-tuning OCR results.

Initiating Batch Processing

Processing Overview

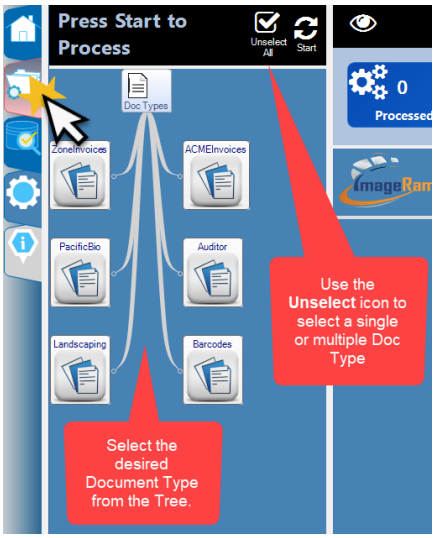
Remember with ImageRamp, users select the functions they desire and set any associated parameters and save these settings in an ImageRamp Document Type. Then they simply select the Doc Type (profile) and initiate the processing of a folder or initiate scanning through a scanner. This section addresses how users initiate processing through selecting a Doc Type and starting and stopping the processing. If users prefer, ImageRamp Batch can ***automatically*** watch and process folders using Windows Services. See Automated Batch Processing through Windows Services for more on Windows Services processing.

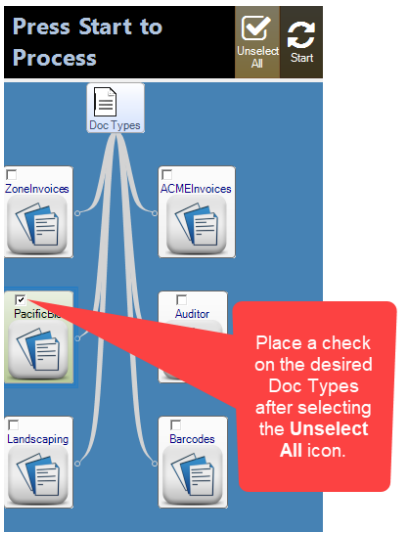


Starting and Stopping Folder Processing

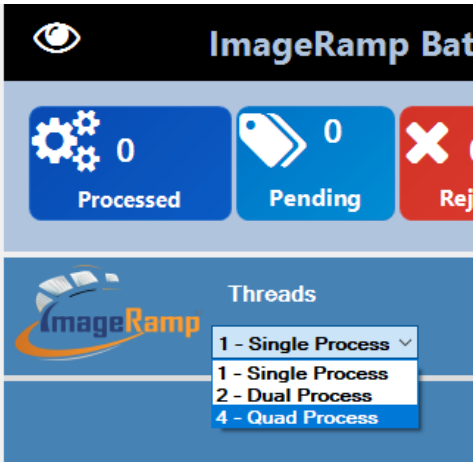
To process folders:

1. First select the **Watch Folders** tab and then select the desired ***Doc Type*** from the ***Document Type*** tree in the left panel. The default is that all Doc Types are selected. Select the **Unselect All** icon to bring up a checkbox in each Doc Type if you wish to select the Doc Types individually by clicking on the checkboxes.



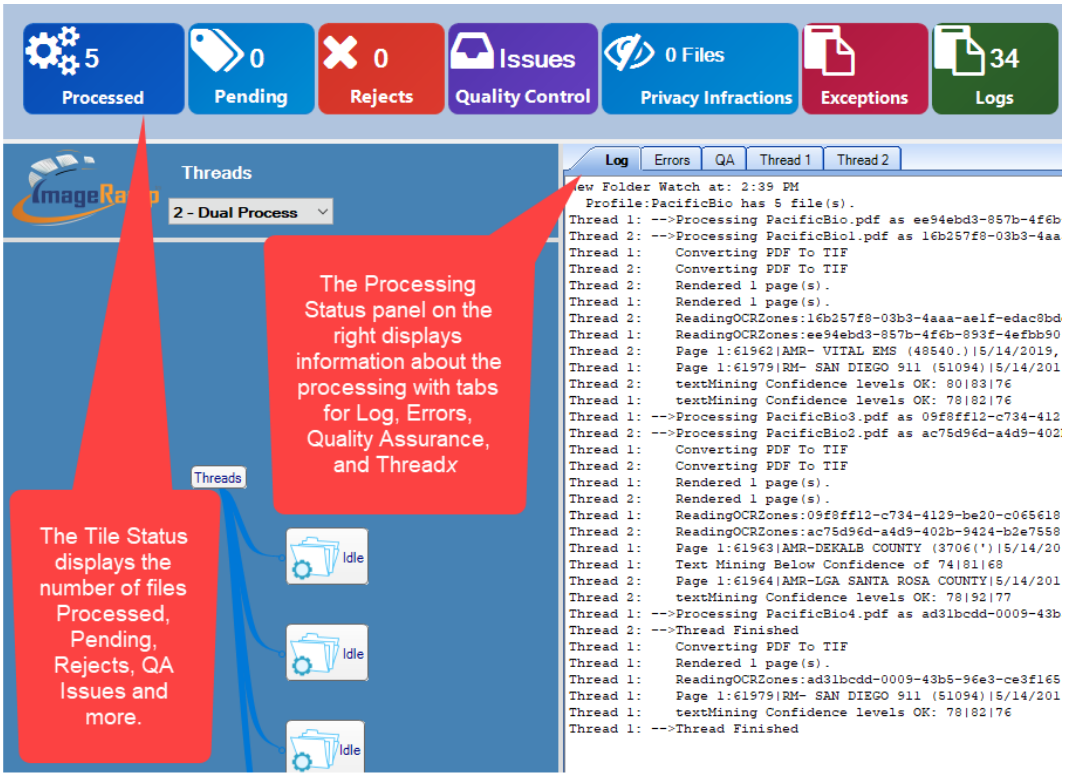


2. Depending on which edition of ImageRamp Batch you have purchased, you may be able to select processing using a ***Single Process***, ***Dual Process***, or ***Quad Process*** to speed up your processing. These pull-down selections are located in the center panel.

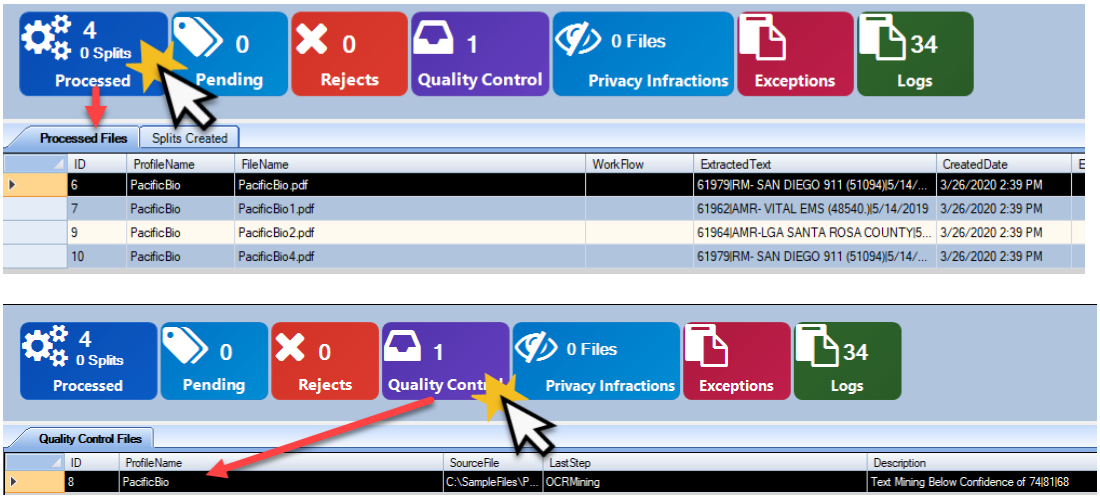


3. To begin processing click on the **Start** icon. This will initiate the processing of the folders with the functions you have identified for the selected Doc Type(s).

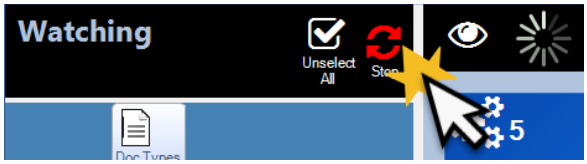
4. During and after processing, a log is displayed to provide information about the processing such as Errors, Quality Assurance and the activity for each log.



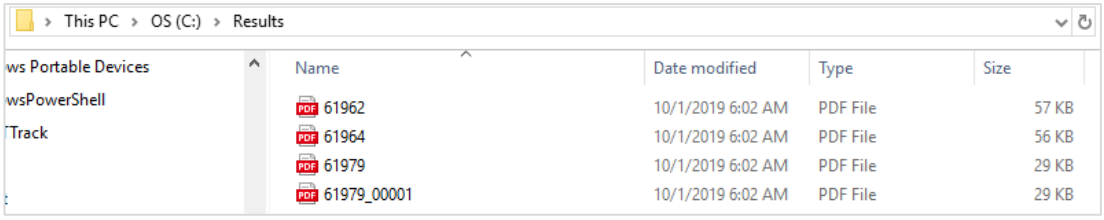
5. The tile display at the top of the screen displays the processing status and provides more information such as the number of files processed and more. Any files which need operator review are noted in the ***Issues (Quality Control)*** tile. Click on these tiles to bring up specific information about the files indicated in the tile such as the extracted barcode or text information. This example shows that 4 files were successfully processed and one has been place in the Quality Control list.



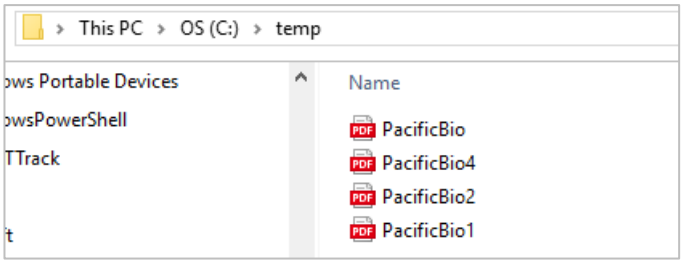
6. ImageRamp Batch will continue "watching the selected folders and processing files as they are placed in the folder until the **Stop** icon is selected or the application is closed.



7. You can verify your results by checking the directory you have specified in the Doc Type.



8. Note that the originals of the files that were successfully processed were placed in the Backup Folder if a folder was designated in the Document Type.



Automated Batch Processing through Windows Services

Batch Processing Overview

ImageRamp Batch users define the enhancement, splitting and renaming functions and then apply them to a folder of scanned files. Users can start and stop the processing with the **Start** and **Stop** icons in the **Watch Folder** tab. See Starting and Stopping Folder Processing. With this processing setup, ImageRamp Batch will automatically poll ("watch") the input folders named in Doc Types and process the files contained there once the process has been started in the **Watch Folder** tab. The process is stopped from within the application (**Stop** icon), when the application is closed, or when the computer is turned off.

If users prefer, ImageRamp Batch can ***automatically*** watch and process folders as implemented as a ***Microsoft Windows Service*** where the process runs automatically when the computer is powered on in the background.

Implementing Watched Folders as a Microsoft Windows Service

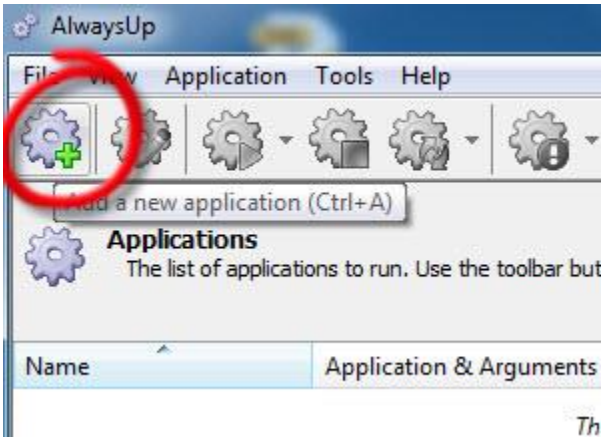
Automated processing with ImageRamp Batch uses Microsoft Windows Services and the AlwaysUp application, provided with the software. In Microsoft Windows operating systems, a Windows Service is a long-running executable that performs specific functions and which is designed not to require user intervention or logins. Windows Services can be configured to start when the operating system is booted and run in the background as long as Windows is running, or they can be started and stopped manually when required. In ImageRamp Batch licenses with this feature (Pro and Enterprise Editions), when the application is installed the ImageRamp Batch Folder Watch Service is automatically started. This means that when you initiate automated batch processing as described above, the service (automatic polling) begins. The service will continue to run as long as the computer is on and it is restarted every time the computer is started. To stop the processing, you must either turn the computer off or manually stop the service.

Configuring the AlwaysUp Windows Services

Run the AlwaysUp application on the desktop of the machine intended to run the Windows service. You can find the application on your desktop or in the program files section.

Create a new Service by selecting the **New** icon in the top panel bar as shown below.

Illustration: Creating a new service with Alwaysup.



Setting up your ImageRamp Service

From the **General** tab, identify the name of your new services such as ImageRamp Service.

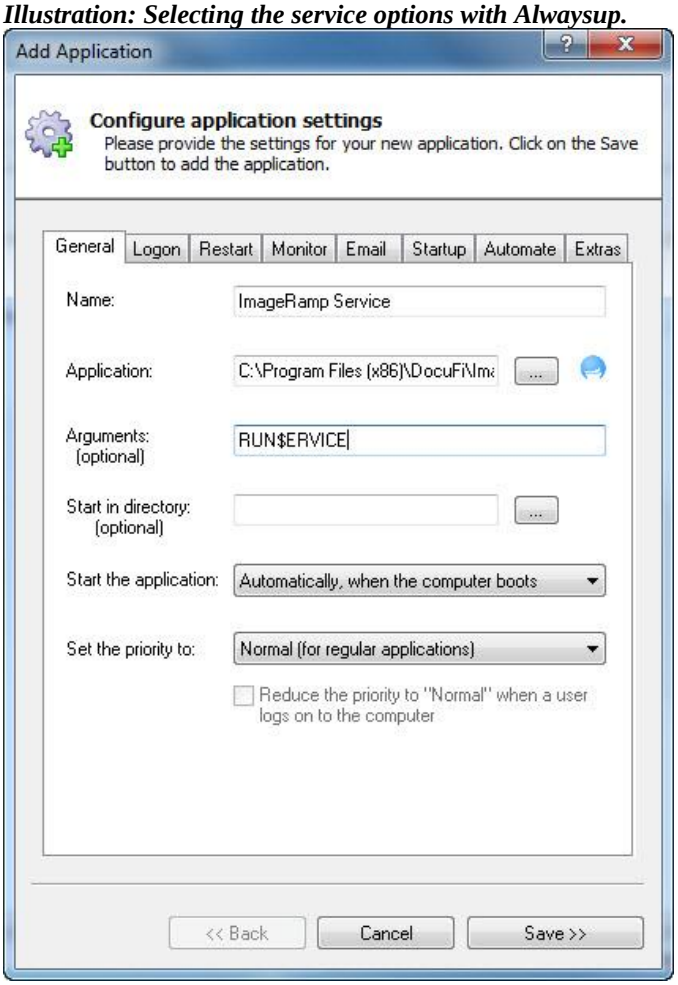
Next select browse to select the ***IRampBatch.exe*** file located in your installation folder.

- For 32bit environments this is found in c:\Program Files\ImageRamp8
- For 64 bit environments this is found in c:\Program Files (x86)\\ImageRamp8

In the Arguments text box, enter the string “RUN$ERVICE” all caps and with the dollar sign replacing the “S”.

Depending on your specific needs, you can have the service start at machine bootup (Default) or manually. Select the startup method that works best for your organization.

Illustration: Selecting the service options with Alwaysup.



Advanced Settings

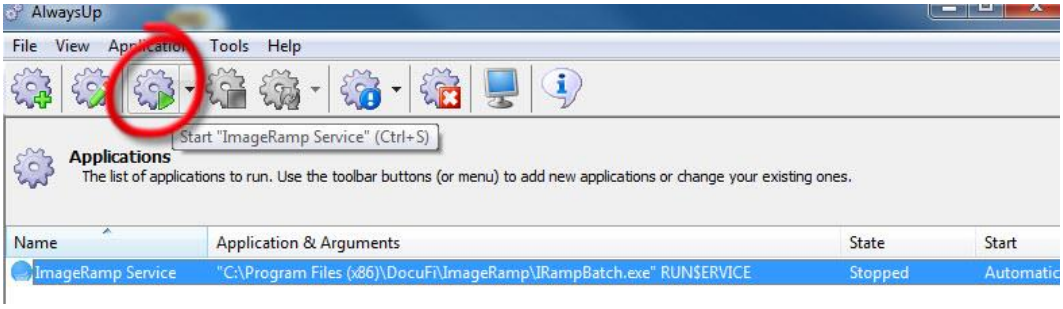
Your environment may require additional authentication, error reporting, etc. AlwaysUp is a powerful tool for configuring your application services needs and configure what is right for your environment.

Illustration: Selecting the service options with Alwaysup.

Saving and Starting your Service

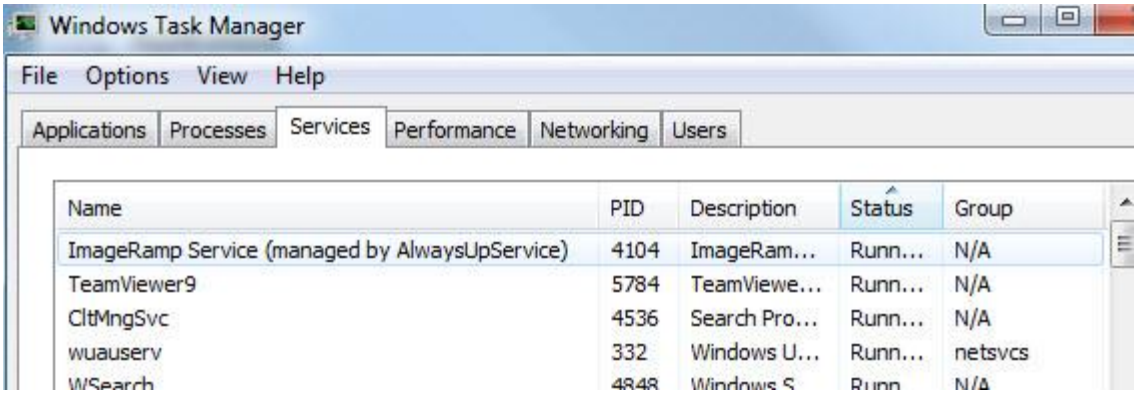
Save your new service and start it by clicking on the **[START]** services icon.

Illustration: Selecting the service options with Alwaysup.



Your services can now be seen in your Windows Task Manager.

Illustration: ImageRamp Service displayed in the Task Manager application.



To Manually Stop or Restart the Service

NOTE: If the ***Folder to Watch*** (input), ***Destination Folder*** (output or route to) and ***Backup Folder*** is a network shared folder, configure the following settings:

1. Use the UNC path in the Watch Folder settings. Example: \\ServerName\ScanFolder.
2. Set a domain user account for Watch Folder Service logon user, and this user account needs to have full access permissions to these folders.
   Access the service by clicking the sequence of Windows **START | CONTROL PANEL | ADMINISTRATIVE TOOLS | SERVICES** and select the DocuFi Folder Service

CAUTION: Batch processing changes cannot be undone

CAUTION: All files in the ***Folder to Watch*** directory are processed. At the end of the operation, this directory will be empty and the original files are placed in the ***Backup Folder***.

CAUTION: If the ***Destination Folder*** contains a file with the same name, the file is overwritten, appended or sequenced according to the setting in the Profile's ***Input Output Existing File*** entry.

CAUTION: If ImageRamp Batch encounters a corrupt file, the file generally is not processed and remains in the Source Directory.

NOTE: Processing PDF files is slower than opening TIFF files. The PDF files are converted to raster images in order for ImageRamp Batch to apply the ***Clean Enhance*** functions.

NOTE: The Pro Edition allows twelve folders for automatic processing and the Standard Edition permits "watching" of one folder.

Initiating Processing Through Scanning

Setting Up a Scanner

ImageRamp allows users to acquire files for processing directly from a networked or attached scanner.

Available scanners are automatically detected and presented in a dropdown box of the **Scanner** pulldown of the **Setting** tab's **Input/Output** tab.

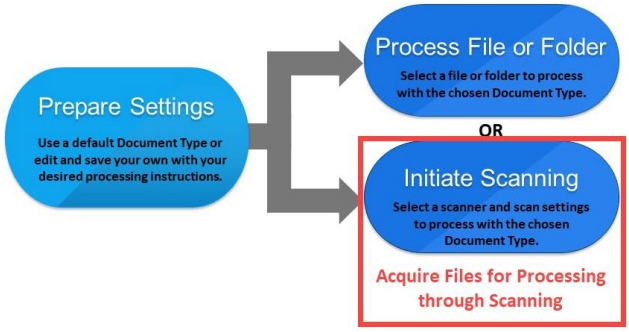
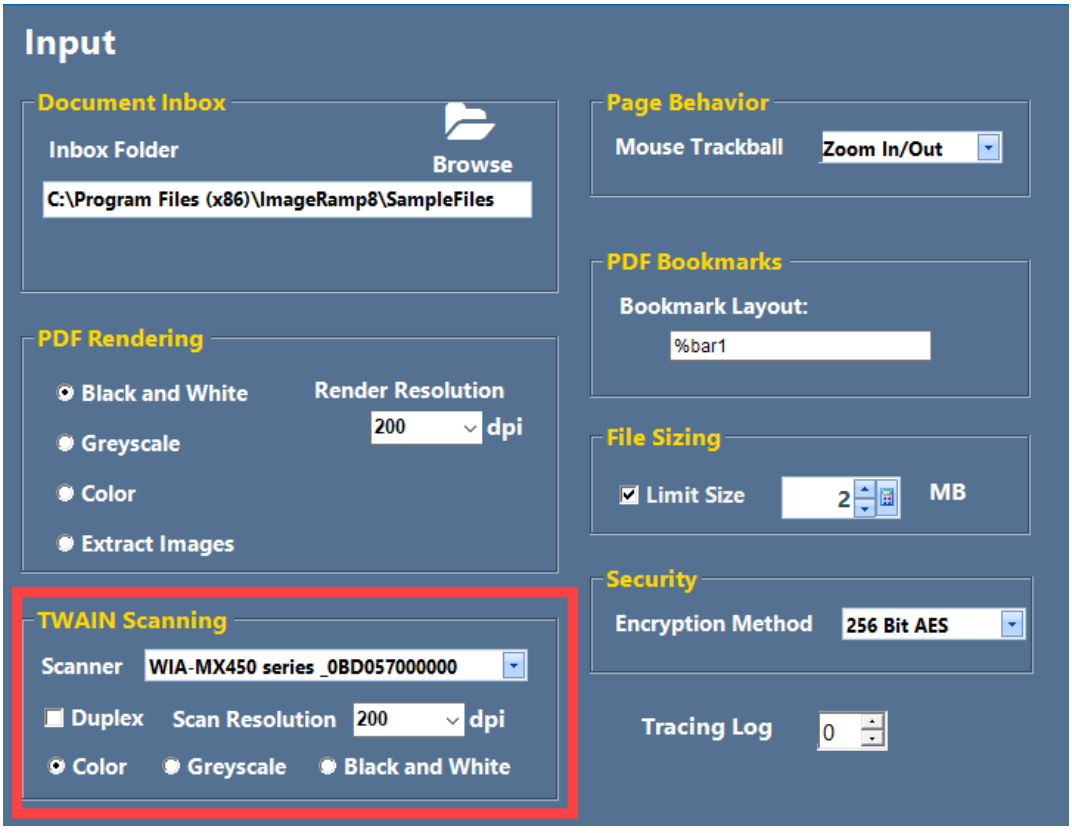


Illustration: The Scanning interface for specifying scanning parameters.



Users select the desired scanner using the pulldown of the ***Scanner*** field. Other specifications include

- Scan Resolution – (200, 300, 400, 600 dpi)
- Simplex/Duplex
- Greyscale/Black and White/Color

These specifications are set by toggling through the choices by clicking on the icons or using the pulldowns.

Initiating File Capture through a Scanner

Once the desired scanner settings have been selected, users can initiate the capture by clicking on the ***Scan Pages*** icon. This scans all the pages in the scanner's hopper and presents them as a single file in the **PageFlow** interface. You can now process the file as you would any other file through the PageFlow interface and **Indexing** tabs. See Processing Files and Folders for more information.

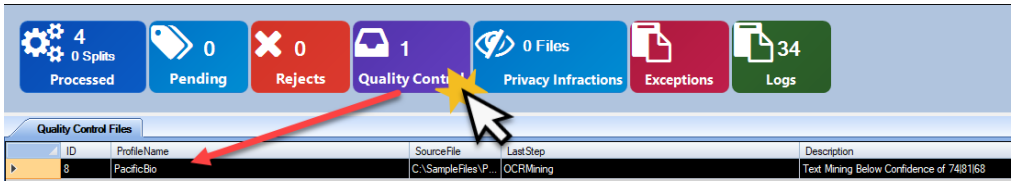
Quality Control Processing

Working with Documents in the Quality Control List

As shown in Initiating Batch Processing, based on the Document Type settings, ImageRamp detects documents with low confidence ratings on the extracted text and places them in a Quality Control list. These documents are placed there for user intervention to visually inspect the documents and accept or correct the detected text.

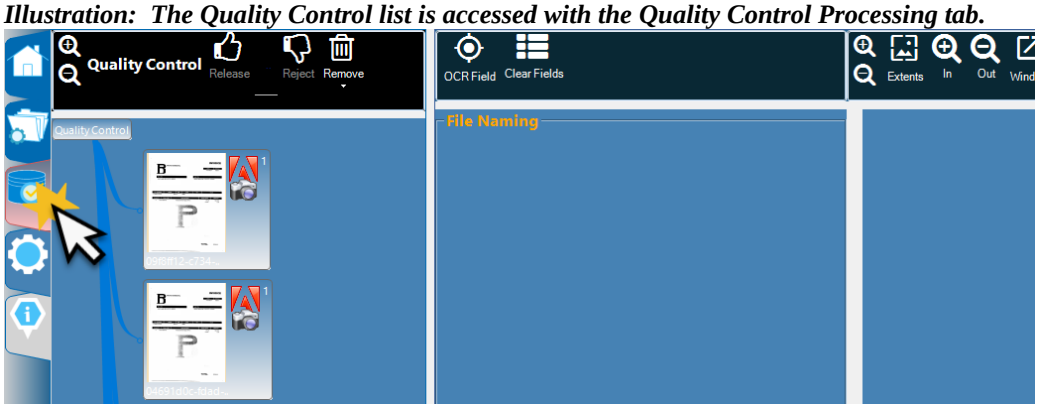
See number five of the steps of Starting and Stopping Folder Processing for the tile indicating that a document has been placed in the Quality Control list.

Illustration: The Quality Control list is produced during processing to indicate files which need user review.



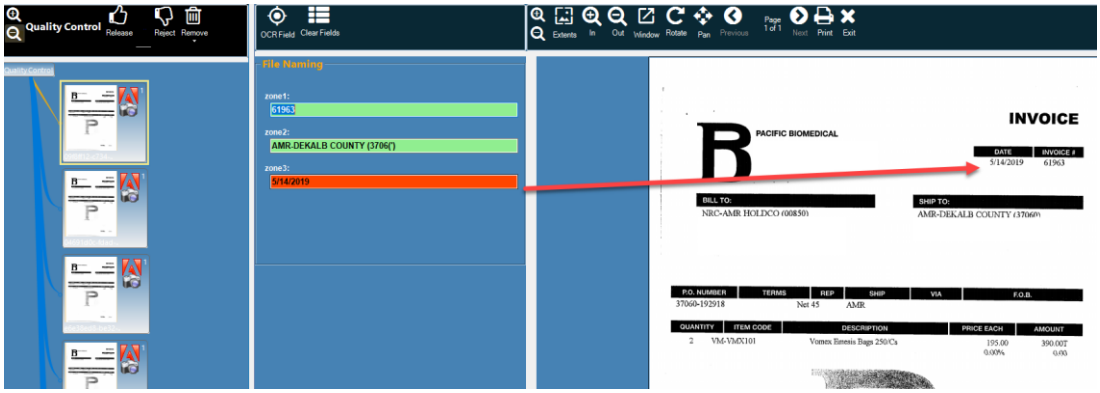
To access the list from the main menu, click on the **Quality Control Processing** tab.

Illustration: The Quality Control list is accessed with the Quality Control Processing tab.



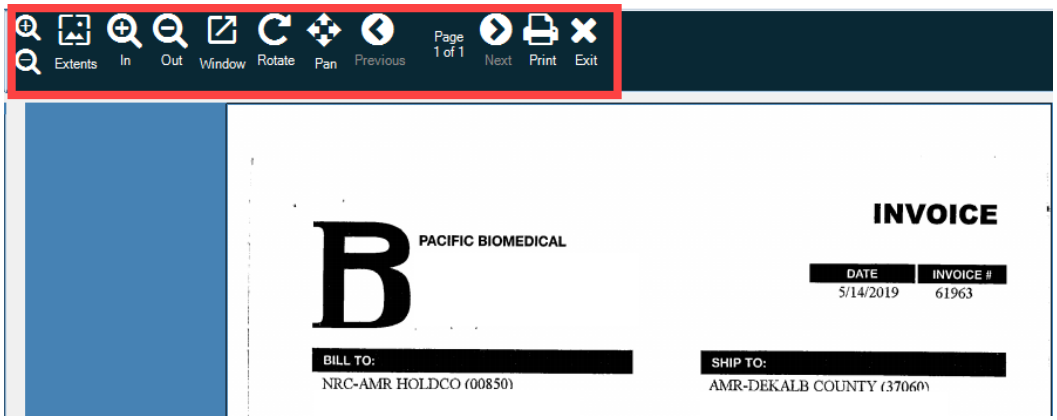
This displays document thumbnail in the left panel. Clicking on a document thumbnail displays the extracted information in the center panel and the document in the right panel. The extracted text fields are color coded to indicate the confidence level that ImageRamp has applied. Green indicates a high confidence, yellow a moderate confidence and red for a low confidence rating.

Illustration: The Quality Control list color-coded to illustrate the confidence level of the extracted text.



Use the page display icons to view the details of the document in the document viewing window on the right.

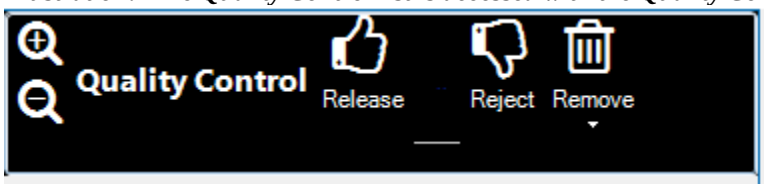
Illustration: Use the page display icons to enhance the viewing of the document in the document wind.



Use the keyboard to correct the text in the captured fields if needed. Optionally, use the **OCR Field** to capture the desired text with the selection tool on the document displayed.

Once the correct information has been entered or verified, click the **Release** icon to process the document.

Illustration: The Quality Control list is accessed with the Quality Control Processing tab.



Clicking the **Reject** icon removes the document from the Quality Control list without processing it and flags the document as rejected. Delete will completely remove a document from the database. A confirmation popup request that you verify the document removal.

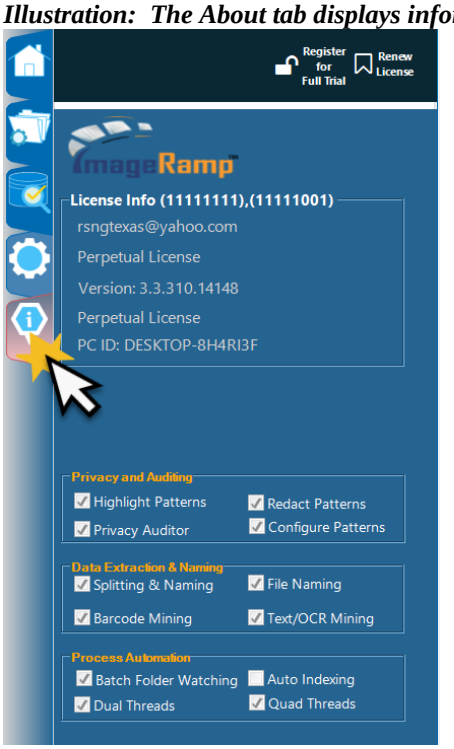
Illustration: The Quality Control list is accessed with the Quality Control Processing tab.

ImageRamp Batch – About/Licensing Info

Viewing Licensing Information

Clicking the **About** tab on from the main menu displays the licensing information and provides for icons to **Register for a Full Trial** and renewing your license with the **Renew License** icon.

Illustration: The About tab displays information about your license.



Using the Scan Separator

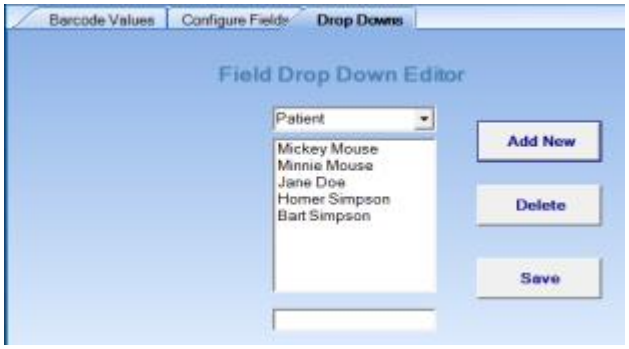
The ImageRamp Scan Separator, is a free tool to create barcode separation sheets that can be used during batch processing to route, index, split and name your documents. Scan Separator is launched from the ***Scan Separator*** icon on your desktop or by accessing the .exe file which is normally placed in the ***C:\Program Files (x86)\ImageRamp8*** directory. Sample cover sheets are also provided in the ***CoverSheets*** subdirectory.

Setting up Scan Separator

To set up the application for the first time, just label the barcode fields and create drop-down values if desired in the **Configure Field** and **Drop Downs** tabs.

Step 1: Create the Barcode Labels

Step 2: Create Drop-Down Values



Creating Separation Sheet PDF Files

Now you can create your own separator sheets using the **Barcode Value** tab by typing the values or clicking on the down arrow to select from the pre-entered values. Click **[CREATE]** and your sheet is available as a PDF file to print and/or save.

Illustration: Entering desired information to create barcodes in the Barcode Value tab.

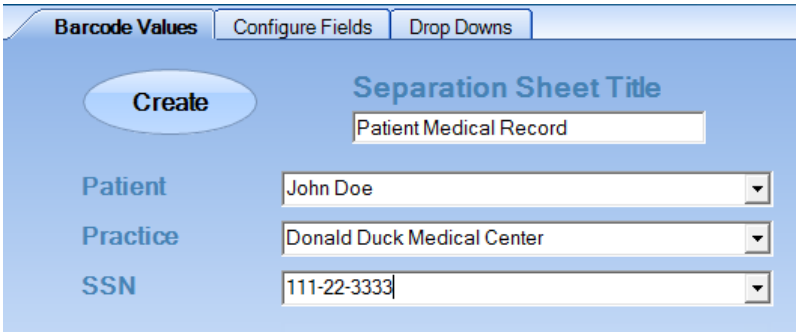
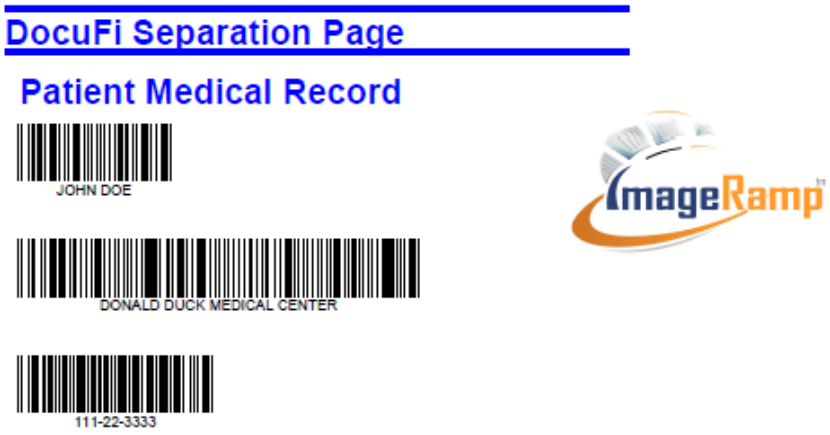


Illustration: The barcode results as entered in the example above



Saving Coversheets for Reuse

All cover sheets created are stored automatically in a sub folder (Cover Sheets) using the values from the first field.

Purchasing ImageRamp Batch

DocuFi provides ordering by phone, fax, or e-mail.

Order by phone: 1-480-616-1190

Order online: DocuFi Store

Order by email: mailto:sales@docufi.com

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