How to Split PDF files with AutoSplit™

An introduction to PDF document splitting and page extraction

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What software do I need?

The AutoSplit software requires a full version of Adobe Acrobat Standard or Professional for Microsoft Windows. It will not work with a free Acrobat Reader software that does not allow document editing and modification. The plug-in supports all versions of Adobe Acrobat starting from version 5. You can download a free 30 days trial version of AutoSplit from http://www.evermap.com/autosplit.asp. If you do not currently own a copy of Adobe Acrobat then you can download a trial version from http://www.adobe.com/downloads. The AutoSplit software, once installed, adds several menus to the "Plug-ins" menu in Adobe Acrobat. The AutoSplit is available in two versions: Standard and Professional. It is recommended to download and evaluate Professional version in order to get a complete overview of the product capabilities.

What splitting methods are available?

The AutoSplit software supports the following splitting methods:

- Splitting into equal size documents (N pages per file)
- Splitting by bookmarks
- Extracting pages using manually entered page ranges or text search criteria
- Splitting at blank pages (available in Professional version)
- Splitting at pages with user-specified text or pattern (available in Professional version)
- Splitting at pages where text or pattern changes (available in Professional version)
- Splitting at pages where text at specific location changes (available in Professional version)

What documents can be split?

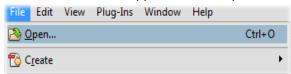
The AutoSplit software can split the following common types of PDF documents:

- Documents that contain fixed-length sub-documents such as invoices, letters, pay stubs
- Documents that contain variable-length invoices, account statements, letters
- Document that contain bookmarked sub-documents (the first page of each sub-document is bookmarked)
- Scanned paper documents where each sub-document is separated by a blank page
- Documents that contain pages or ranges of pages with a specific text or pattern

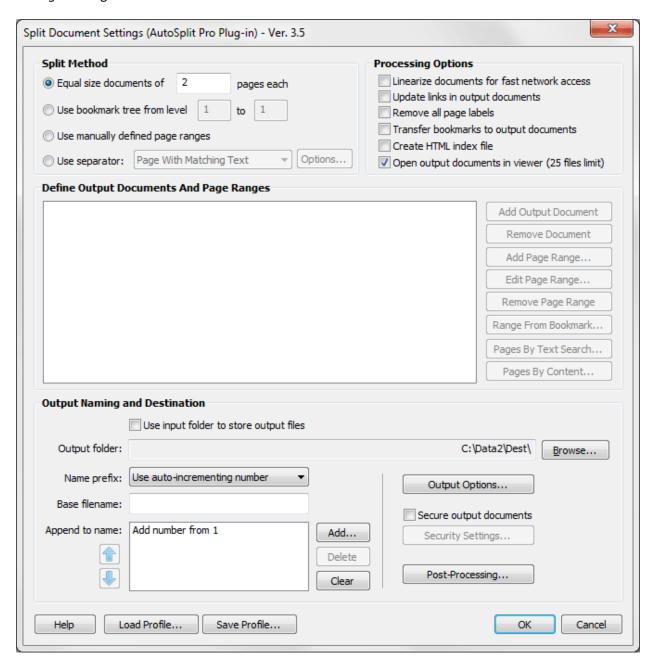
The AutoSplit software can process any kind of PDF document that is at least 2 pages long and does not have any security access restrictions. If you are planning to split a document by using a text search, then verify that it actually contains searchable text. You can check that by searching for a known word or by selecting a text fragment and using *Copy/Paste* operation to copy it into another text editor.

Where do I start?

Start Adobe Acrobat application and open a PDF file using "File > Open..." menu.



Next, select "Plug-ins > Split Document..." from the main Acrobat menu to open "Split Document Settings" dialog:



What splitting method to choose?

The selection of splitting method depends on the document content and on desired results. This document is going to focus on most common cases of splitting various business documents.

Use Case 1: Automatic Splitting into Multiple Documents

The input PDF document contains multiple sub-documents (for example invoices, account statements and etc.). The goal is to split a document into multiple documents that contain each statement/invoice as a separate file and name it using a text from the first page of each document (for example: an account number, a customer ID or person's name).

HOW TO SELECT A SPLITTING METHOD:

- 1. Does a first page of each variable length sub-document contain "Page 1 of X" text?
- 2. <u>Does a first page of each variable length sub-document contain a unique "account number"</u> (or similar identifier or text pattern)?
- 3. <u>Does each page of the document contain an "account number" " (or similar identifier or text</u> pattern) that is different for each sub-document?
- 4. Does each page of the document contain an "account number" " (or similar identifier or text pattern) that is different for each sub-document AND is always located in the approximately the same area of the page?
- 5. <u>Does a first page of each variable length sub-document have a bookmark?</u>
- 6. <u>The document contains sub-documents that all have a fixed length in pages</u> (for example: the document is a collection of 1-page long pay stubs or letters).
- 7. <u>Is there a blank page separator between each sub-document?</u>

IMPORTANT: All "Use Separator" splitting methods require AutoSplit Professional version.

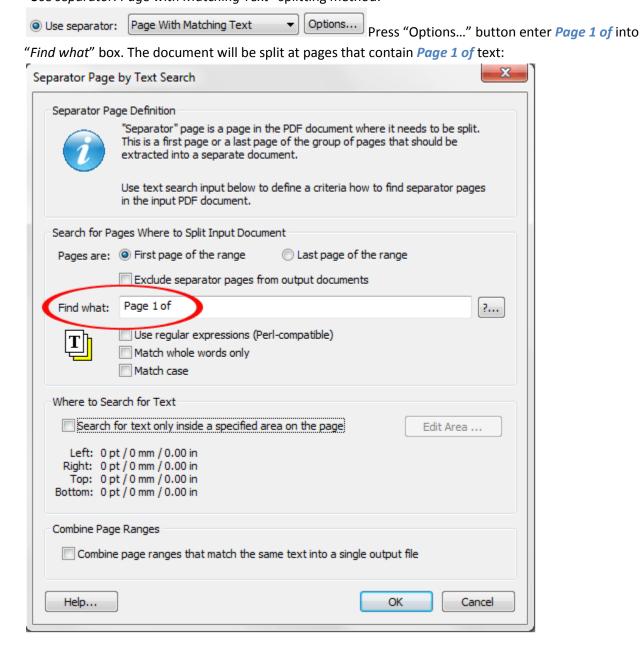
Use Case 2: Extract pages that contain specific page ranges or text pattern

The input PDF document contains pages of *interest* at specific page numbers (or ranges) or pages with a certain text or pattern somewhere on the page. The goal is to find and extract all these pages into one or more documents. The number of output documents is fixed at design time. The user is responsible for specifying the *criteria* for pages that need to be extracted into every document.

Select <u>"Use manually defined page ranges"</u> method for all projects that fall under this scenario. This splitting method is available in both AutoSplit Standard and AutoSplit Professional versions of the software.

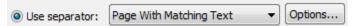
Automatic Splitting into Multiple Documents

Case 1.1 "Use separator: Page with Matching Text": Does a first page of each sub-document contain *Page 1 of X* text? Each sub-document may have a different number of pages. If yes, then use "Use separator: Page with Matching Text" splitting method:

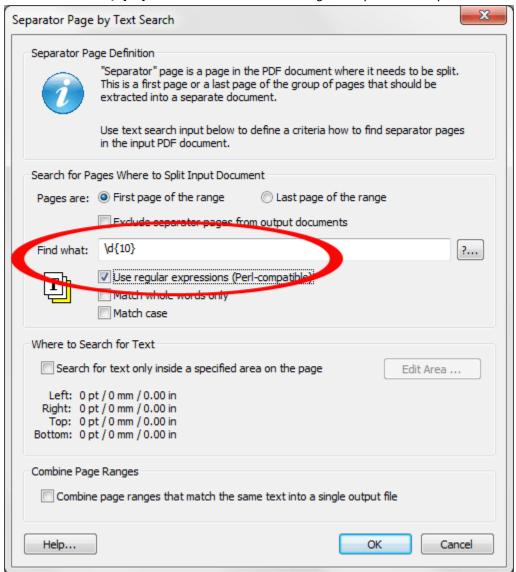


Using "Page 1 of" is the very common method for splitting documents. However, if your document does not have this kind of page label, then look for text that is only present on the first page of each subdocument (1 of, Page 1, INVOICE, ACCOUNT STATEMENT and etc). If there is no such unique text present, then evaluate other more advance splitting methods listed in this manual.

Case 1.2 "Use separator: Page with Matching Text": Does a first page of each sub-document contain a unique "account number" (or similar identifier or text pattern)? Each sub-document may have a different number of pages. If yes, then use "Use separator: Page with Matching Text" splitting method:



Press "Options..." button and enter <u>a text pattern</u> to split document at. Here is an example for a 10 digit account number: \d{10}. Make sure to check "Use regular expressions" option:

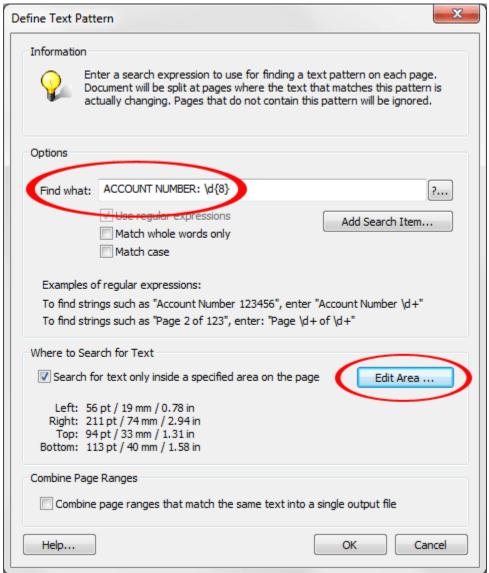


The above <u>text pattern</u> will find every page that has a 10-digit number on it and split documents at those pages. Modify this text pattern to fit your particular requirements or email technical support for assistance (<u>tech@evermap.com</u>) with creating a text pattern that is specific for your document. Turn on "Combine page range that match the same text into a single output file" option to combine subdocuments with the same "account number" into a single output file.

Case 1.3 "Use separator: Page where Pattern Changes": Does **each** page of the document contain an "account number" " (or similar identifier or text pattern) that is different for each sub-document? Each sub-document has the same "account number" on all of the pages. If yes, then use "Use separator: Page where Pattern Changes" splitting method:



Press "Options..." button and enter <u>a text pattern</u> to split document at. The example below checks for *ACCOUNT NUMBER: XXXXXXXXX* text pattern (for example: *ACCOUNT NUMBER: 92310023*). The \d{8} part of the pattern indicates that it should contain exactly 8 digits.



Some financial documents may contain similar <u>text patterns</u> such as account numbers, customer IDs, invoice numbers and etc. Turn on "Search for text only inside a specified area on the page" to limit text search to a specific area. Press "Edit Area..." button to define a working area. Turn on "Combine page range that match the same text into a single output file" option if it is necessary to combine subdocuments with the same "account number" into a single output file.

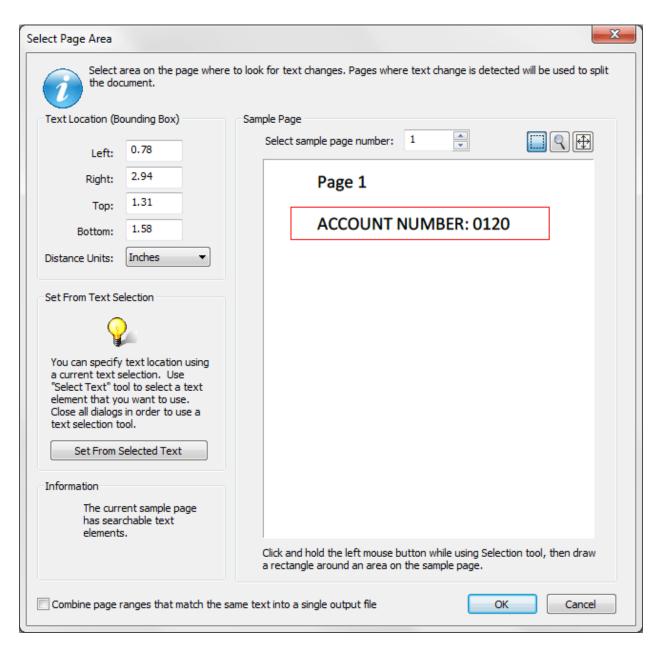
[HOW TO SPLIT PDF FILES WITH AUTOSPLIT]

Case 1.4 "Use separator: Page Where Text Changes": Does **each** page of the document contain an "account number" (or similar identifier or text pattern) that is different for each sub-document AND is always located in the approximately the same area of the page? If yes, then use "Use separator: Page

Where Text Changes" method.

© Use separator: Page Where Text Changes ▼ Options...

"Press "Options..." button and draw a box around the "signature" text. The document will be split at pages where text in this box is changed. Use "Zoom" tool in the "Select Page Area" dialog to zoom in on the text you want to watch for a change and draw a box around it with "Select Area" tool. Try to select an area that does not include any other text. If you find that this text pattern is not always occurring within the same area, then use Case 1.3 method described above.



[HOW TO SPLIT PDF FILES WITH AUTOSPLIT]

Use bookmark tree from level
 1

to 1

Case 1.5 "Split By Bookmarks": Does a first page of each variable length sub-document have a bookmark? Use "View > Navigational Panels > Bookmarks" menu to open "Bookmarks" panel if it is not

visible. If yes, then use "Split by Bookmarks" method:

If you only want to split a document at top level bookmarks, then enter "1" to "1" level. If you want to split a document at every bookmark level, then enter "1" to "N" level (where N is a maximum bookmark level in the document).

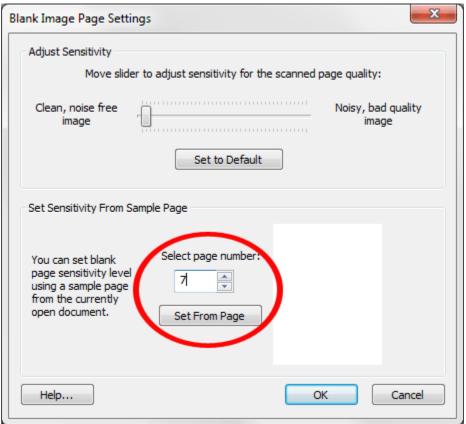
Case 1.6 "Split into Equal Size Documents": The document contains sub-documents that all have a fixed length in pages (for example: the document is a collection of 1-page long pay stubs or letters). Use "Equal size documents" splitting method:



Case 1.7 "Split by Blank Image Page": Is there a blank page separator between each sub-document? If yes, the use "*Use separator: Blank Image Page*".

	r	$\overline{}$	
Use separator:	Blank Image Page	▼	Options

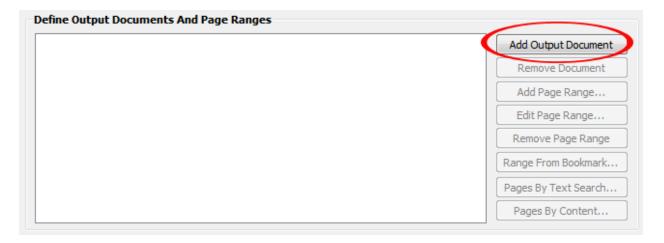
This method is designed for separating PDF files created by scanning paper documents. Press "Options..." button to specify a sample blank page for fine tuning. Select a sample blank page in the document use "Select page number" entry and press "Set From Page". This function will set a blank image threshold based on the amount of noise contained in the selected page.



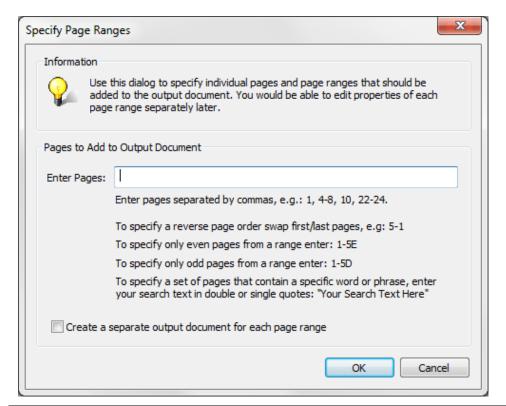
Extract pages that contain specific page ranges or text pattern

The input PDF document contains pages of *interest* at specific page numbers or pages with a certain text or pattern somewhere on the page. The goal is to find and extract all these pages into one or more documents. The number of output documents is fixed at design time. The user is responsible for specifying the criteria for pages that need to be extracted into every document.

Select "Use manually defined page ranges" method for all projects in this use case scenario.



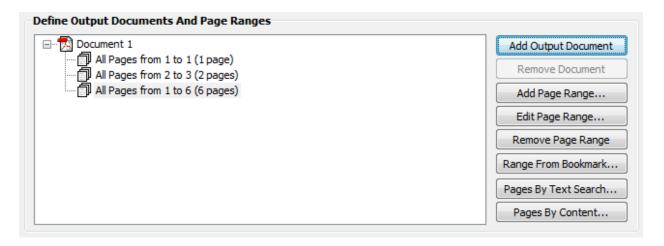
Press "Add Document..." button to create an output document definition. The "Specify Page Ranges" dialog will appear on screen to allow initial selection of pages that need to be extracted into this output document. You can add more page ranges to the same document or to a new document later.



Use "Specify Page Ranges" dialog to edit (or delete) each page range definition and fine tune additional parameters. This dialog provides a shortcut for most common cases.

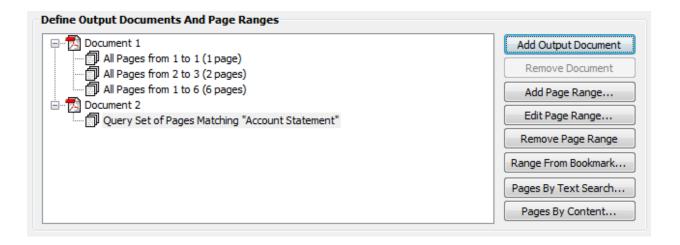
- To specify a page or a page range, enter page numbers separated by commas: 1, 4-8, 22-24.
- To specify a reversed page order swap first/last pages: **5-1, 100-1**.
- To specify even or odd pages from a page range add E or D at the end: 1-5E, 1-5D
- To specify a set of pages that contain a specific word or phrase, enter a search text in quotes,
 e.g.: "Account Statement".
- You can specify the same pages multiple times and in any order to create a desired output.

Press "OK" button to close this dialog. You should see a new document added to the output list. Here is an example of the output document description for **1,2-3,1-6** entry:

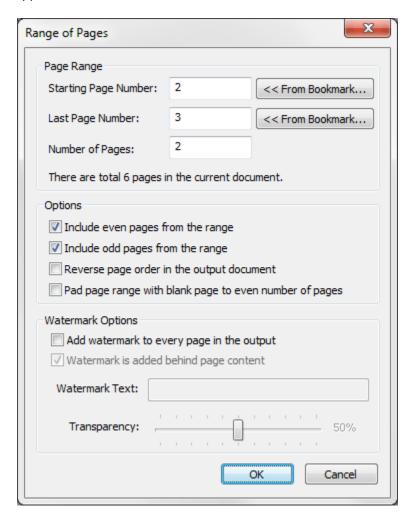


Press "Add Output Documents" button again to add another document or press "Add Page Range" or "Pages By Text Search" buttons to add additional pages to the same document.

Here is an example of the output view after adding "Account Statement" text via "Specify Pages" dialog as a new document:



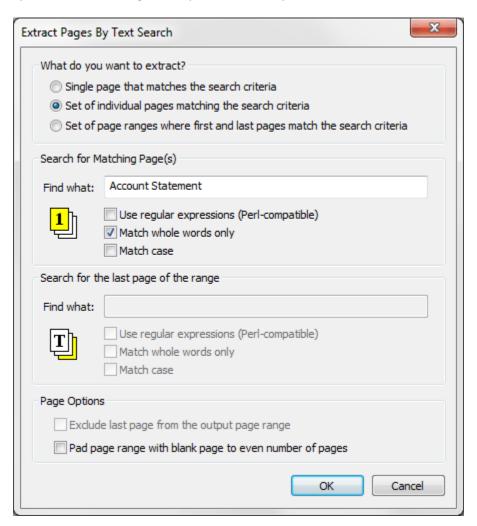
Double-click on any entry in the list to edit its parameters or select entry and press "Edit Page Range..." button. For example, double-click on All pages 2 to 3 (2 Pages) entry. The "Edit Page Range" dialog will appear on screen:



Use this dialog to edit starting and ending page numbers, select even/odd pages, reverse page order and pad this range with a blank page. A custom watermark can be added to every page of this particular page range. Press "From Bookmark" buttons to get a page number from an existing bookmark.

Double-click on *Document 1* entry to edit output document properties. You can either enter a fixed, custom document name or let the plug-in to assign a document name automatically (based on output document settings covered later in this manual). You can also specify document properties such as "Title", "Author", "Subject" and "Keywords".

Double-clicking on Query Set of Pages Matching "Account Statement" entry will bring up "Extract Pages by Text Search" dialog where you can edit its parameters:



This dialog allows configuring 3 different page extraction modes:

- Extract a single page that matches the search criteria (the first found page is used)
- Extract set of individual pages matching the search criteria (all found pages are used)
- Extract all page ranges where first and last pages match the search criteria

You can either enter text to search for (for example, Account Statement) or use powerful regular expression syntax to match a text pattern (for example, a 10 digit account number). A regular expression, often called a pattern, is an expression that specifies a set of strings and is widely used in text processing. Refer to AutoSplit manual or to any widely available online resource for syntax details. Here we are going to provide a short list of commonly used regular expressions as an example:

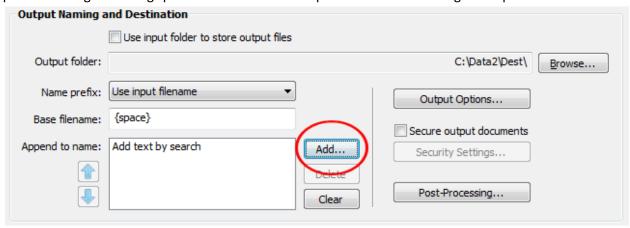
\d{10} – match a sequence of 10 digits.

\w{5} – match a sequence of 5 digits, letters or underscore.

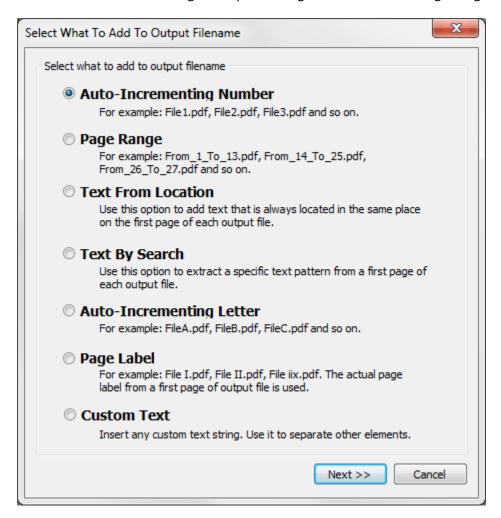
\d{3}-\d{2}-\d{4} - match a Social Security Number (3 digits, dash, 2 digits, dash, 4 digits).

Output Document Naming

The AutoSplit plug-in allows constructing output file names by any combination of the different name parts including extracting specific text from each output document and using it as a part of the filename.



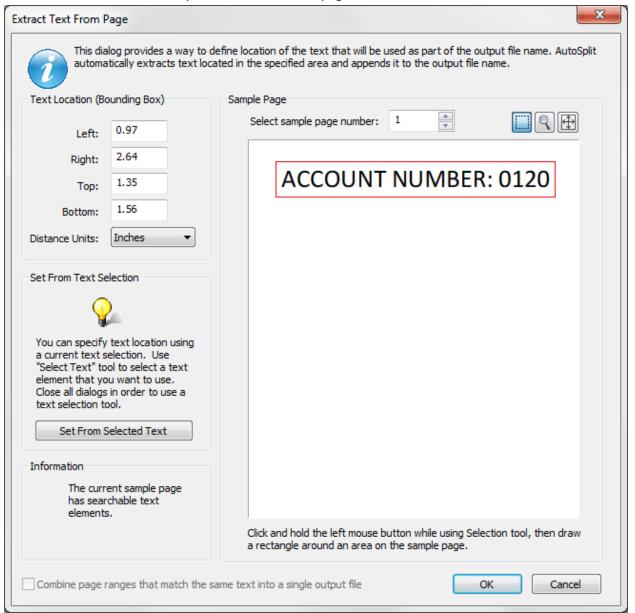
Press "Add..." to start defining an output naming scheme. The following dialog will appear on screen:



You can select any of the following "name parts":

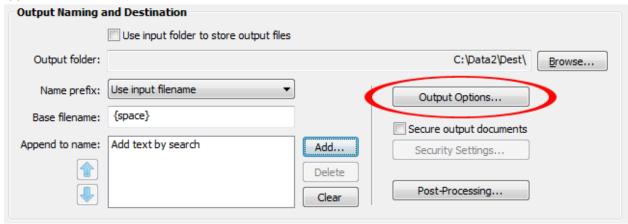
- Auto-incrementing number, for naming files sequentially.
- Page range
- Text from location (extracts text from a specific location on the page and uses it in the file name)
- Text by search (extract text pattern by search and uses it in the file name)
- Auto-incrementing letter
- Page label (uses an actual page label for a first page of each output document)
- Any custom, user-specified text

Use "Add..." button repeatedly to add multiple components to the file name. One of the most common methods is to use text from a specific location on the page:

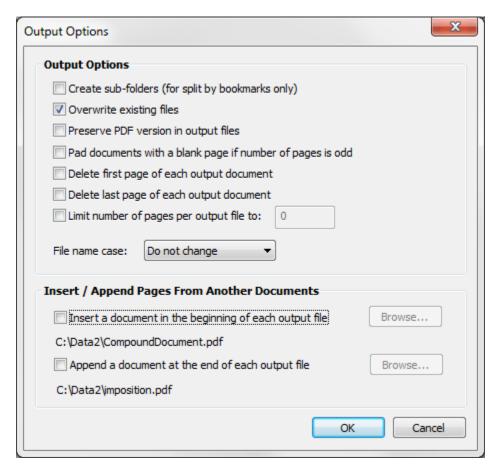


Specifying Output Options

Press "Output Options..." button to specify additional processing options that come handy in many applications:

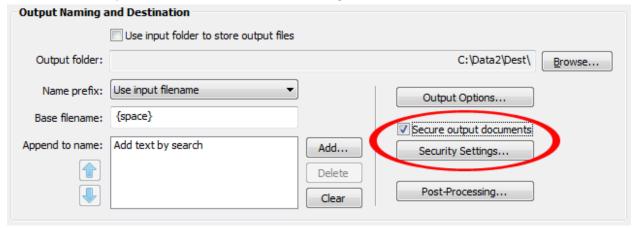


The "Output Options" dialog will appear on the screen offering a number of useful processing options such as inserting cover pages or overwriting existing files.

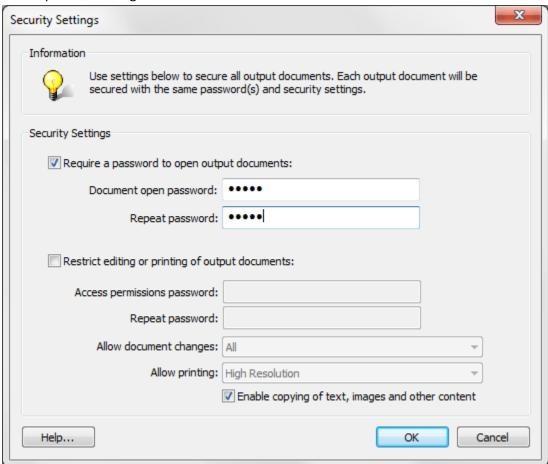


Securing Output Documents with Password

Check "Secure output documents" option and press "Security Settings" if you want to secure output documents with a password or restrict document editing.

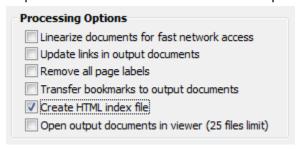


Select desired security options and enter passwords. Every output document will be secured according to the specified settings.



Creating Index Files

It is often desired to automatically generate a separate text or HTML file that lists every output document. This can serve as a processing log or as a handy navigation document to quickly open any output file. Check "Create HTML index file" option to create a number of supplemental index files:

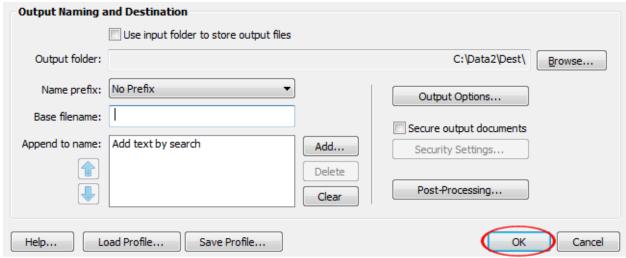


The software will generate the following index files (*InputFilename* stands for a name of the current input file):

- InputFilename_filelist.txt listing all output document names (without a full path)
- InputFilename fileindex.htm a hyperlinked HTML document with links to all output files.

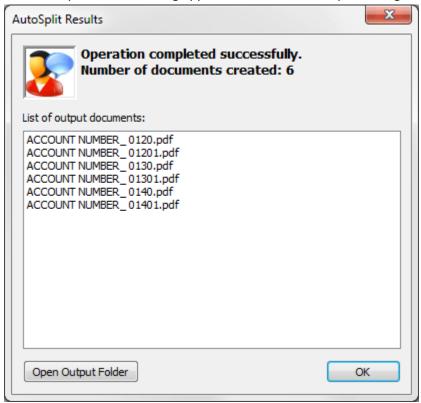
Splitting and Reviewing Results

Once you have specified a desired splitting method and selected output folder and document naming convention, you are ready to actually run a splitting process. Press "OK" button in the "Split Document Settings" dialog to start processing:

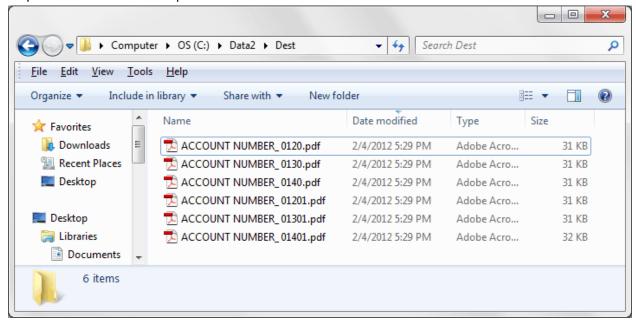


The actual processing time may vary greatly depending on the size and complexity of the input document. You should see a progress status in the lower right corner of the current document.

The "AutoSplit Results" dialog appears on screen once a processing is completed:



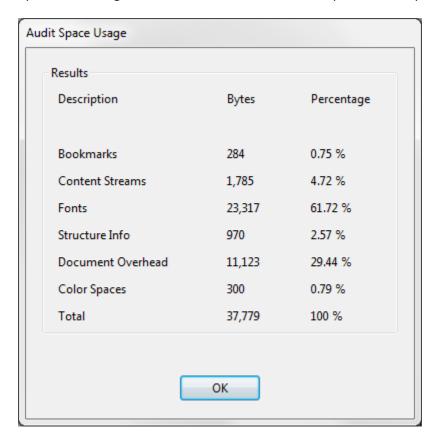
The "Results" dialog will list all output file names that were created during the processing. If errors were encountered, then this dialog shows a "View Errors..." button for displaying a list of problems. If processing was successful, then press "Output Output Folder" button to close this dialog and open an output folder in Windows Explorer:



The size of each output document is not directly proportional to the size of the input file divided by number of pages it actually contains. Most PDF files contain a lot of "shared" resources such as embedded fonts, background images, navigational elements such as links and bookmarks. This additional content sometimes may contribute up to 95% of the document size. For example, an input document has 10 pages with a modest amount of text on each page that use several embedded fonts and has a size of 1MB. The fonts in this file may contribute up to 900KB of the file size. If this document is split into 10 separate files, then the size of each output file is going to be roughly the same as the size of the input document. This is because embedded fonts need to be copied into every output file and therefore greatly contribute to the output file size. Since each PDF file is unique, the actual results will vary accordingly.

It is recommended to use "File > Save As..." menu to save a copy of the input document before splitting to purge all accumulate changes. Adobe Acrobat always appends modifications to the end of the file (if "File > Save" menu is used to save changes) causing the file to grow over time. Sometimes, this accumulated change may unnecessary increase the sizes of output files.

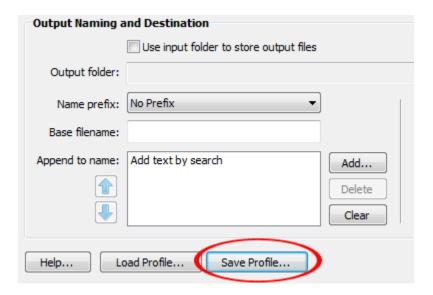
If you are puzzled why output files are so large, and then use "Audit Space Usage" function. Open a "PDF Optimizer" dialog in Adobe Acrobat Professional and press "Audit Space Usage" button:



The "Audit Space Usage" dialog shows how the file size is distributed among various PDF components. In this particular example, only 4.72% of the file size is actually occupied by visible document content (text). The biggest contributors are fonts and document overhead.

Saving and Loading Processing Settings

Press "Save Profile..." button to save a current document splitting parameters into a settings file (with APR file extension). You can later restore this exact splitting configuration by using "Load Profile..." button and selecting a previous saved file. It is possible to transfer settings from one computer to another using APR files to share a particular processing setup between co-workers.



Introduction to Text Patterns

The most powerful functionality of AutoSplit comes from ability to utilize *regular expressions* to define text patterns. A *regular expression* is a special text string for describing a search pattern. You can think of regular expressions as wildcards on steroids. Regular expressions are also described in many online resources, some of which have copious examples. There are many web sites that serve as online repository of useful regular expressions. The description here is intended as introductory documentation only. Please consult software help manual for details.

Most characters stand for themselves in a pattern, and match the corresponding characters in the subject. There are 11 characters that have a special meaning ($^\$$. * + ? = | \ / () [] { }). As a general rule, if you want to include any of these punctuation characters literally in a regular expression, you must precede them with a \. The most common mistake is using a period without a backslash to literally match a period character. Period without a backslash matches any possible symbol except a newline.

Character types

The regular expression syntax provides a special way to define a character that belongs to a "class" of characters and use it in the pattern description. Backslash can be used to specify generic character types:

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Character Class	Meaning	Examples
\d	Matches any decimal digit: 0-9	\d - matches 1 digit \d{8} - matches exactly 8 digits \d{2,4} - matches from 2 to 4 digits
\D	Matches any character that is not a decimal digit	\D – matches any letter or space
\s	Matches any whitespace character (space, tab, newline)	\s+ - matches one or more whitespace characters
\w	Matches any "word" character (A "word" character is any letter or digit or the underscore character)	\w+ - matches one or more word characters. For example: <i>PO23476</i> or <i>INVOICE</i> .
\ W	Matches any "non-word" character	
[]	Matches any one character between the brackets	[abc] matches one occurrence of a, b or c characters
[^]	Matches any one character not between the brackets	[^XYZ] – matches any character that is not X, Y or Z. [^\n] – matches any character except a newline
\n	A new line character	
۸	Matches the start of the text line	^INVOICE – matches word INVOICE if it appears at the start of the text line.
\$	Matches the end of the text line	^INVOICE \d{8}\$ - matches the word INVOICE followed by a number only if it occupies a whole text line.
\b	Matches the word "boundary". Word boundary is not a character, but rather a position in the string. It can be beginning or ending of the text line, or a space that is adjustment to a "word" character.	\binvoice\b - matches word INVOICE only if it appears as a separate word (not inside any other text string).

Defining Repetitions

Expression	Meaning	Examples
{n,m}	Matches the previous item at least n times, but no more than m times.	\d{2,4} – matches from 2 to 4 digits
{n,}	Matches the previous item n or more times.	\d{3,} – matches 3 or more digits
{n}	Matches exactly n occurrences of the previous item.	\d{5} – matches exactly 5 digits
?	Matches zero or one occurrences of the previous item. That is, the previous item is optional.	X? – indicates an optional letter X.
+	Matches one or more occurrences of the previous item.	\d+ - matches one or more digits
*	Matches zero or more occurrences of the previous item.	\d* -matches zero or more digits

Matching Alternatives

Vertical bar characters are used to separate alternative patterns. For example, the pattern Invoice | Claim matches either "Invoice" or "Claim". Any number of alternatives may appear, and an empty alternative is permitted (matching the empty string).

Examples:

(541|503)-\d{3}-\d{4} matches phones numbers that start with either 541 or 503 area codes. (USA|Canada|EU) matches either US or Canada or EU.

Examples of Regular Expressions

Here is a list of common regular expressions that can be used as a starting point for designing your own that matches your document or project requirements.

Expression	Meaning
\d{10}	Matches exactly 10 consecutive digits. For example: 9737739890
ACCOUNT NUMBER: \d+	Matches ACCOUNT NUMBER text that is followed by one or more digits
\d{3}-\d{3}-\d{4}	Matches US-style phone number. For example: (541)-760-9260.
\d{3}-\d{2}-\d{4}	Matches US Social Security Number. For example: 507-44-1111
\d{4} \d{4} \d{4} \d{4}	Matches a 16 digit account number (4 groups of 4 digits separated with
	spaces). For example: 1431 8872 0012 4219
INVOICE \w{5,8}	Matches word INVOICE followed by any combination of letters or digits
	between 5 and 8 characters long. For example: INVOICE XY87221
CUSTOMER ID: [\w\-]{8,}	Matches CUSTOMER ID: followed by any combination of letters, digits or a
	dash symbol that is at least 8 character long.
(OR WA CA)	Matches either OR, WA or CA text strings.
[A-Z0-9%+-]+@[A-Z0-	Matches an email address. For example: John.Doe@mycompany.com
9]+\.[A-Z]{2,4}	

Using Batch Processing

The Adobe Acrobat Professional comes with batch processing functionality (called Action Wizard in Acrobat X and above) that provides a way to combine various document processing steps into multi-step workflows or "actions".

You can find visual step-by-step instructions on how to create batch sequences ("actions") online at:

For Acrobat Pro X: http://evermap.com/ActionWizardX.asp
For Acrobat Pro XI: http://evermap.com/ActionWizardXI.asp

For Acrobat Pro DC: http://www.evermap.com/ActionWizardDC.asp

How to split files using Action Wizard: http://evermap.com/Tutorial_ASP_ActionWizardDC.asp
Check AutoSplit product page for more step-by-step tutorials: http://evermap.com/AutoSplit.asp

AutoSplit Professional™ plug-in installs a number batch processing commands that can be accessed and executed via "Batch Sequences" dialog (Acrobat 9 and before) and via "Action Wizard" in Acrobat X, XI, Acrobat DC:

- "Split Document"
- "Merge Documents"
- "Merge Files From Folders"
- "Merge Files With Similar Names"
- "Merge With Control File"
- "Extract Embedded Files"

These commands may be used alone or inside another batch sequences allowing you to incorporate a splitting and merging operations into your existing workflow. You need Adobe® Acrobat Professional® (versions 6, 7, 8, 9, X, XI, DC) in order to have a batch processing available on your system.

Getting Help

Contact technical support (mailto:tech@evermap.com?subject=Technical Support Request) for help with configuring AutoSplit for your particular document or project. It is always helpful to include a sample PDF document.

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How to Split PDF files with AutoSplit ™

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