



# AutoRedact<sup>™</sup> ✓

Advanced PDF Redacting Software for Adobe® Acrobat®

## AutoRedact<sup>™</sup> Plug-in for Adobe Acrobat® User's Guide

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### AutoRedact™ User Guide for Windows®

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# Introduction to AutoRedact™ Software

## What is Redacting?

**The definition of redaction** is to remove certain types of information from documents. In the context of United States government agency documents, *redaction* generally refers more specifically to the process of removing sensitive information from a document prior to its publication, during declassification. For attorneys, redacting is a very important process of protecting confidential information. During case discovery, a document must be distributed containing sensitive information and it is important to redact all non-discoverable confidential material in that document before it's release. The Freedom of Information Act (FOIA) and Privacy Act of 1974 grant people the rights to access government records, however, each laws defines a list of exemptions that allow agencies to exclude certain type of information from the public documents. Most of the federal and state agencies (many states also have their own freedom of information laws) have to redact documents before releasing them to public. There are cases when failing to properly redact electronic documents will result in serious consequences such as legal charges. As numerous people have learned to their chagrin, merely covering up the text and images in PDF documents is not enough – information has to be completely removed from the document. The US Congress and many government agencies including the Department of Homeland Security have recognized the importance of proper redacting techniques and have taken measures to make sure that critical information is not accidentally disclosed. National Security Agency (NSA) has published a special report devoted entirely to safe methods for redacting of electronic documents. The use of proper redacting software is becoming increasingly important as more government agencies release information in the electronic form. This calls for automated software that can increase productivity while providing safe methods for information redaction.

## What is AutoRedact™ Plug-in?

AutoRedact™ plug-in is an add-on to Adobe Acrobat® and Adobe Acrobat® Professional® software that provide a complete set of tools for safely redacting various type of information from PDF documents. AutoRedact™ deletes sensitive text and image information from PDF documents making them completely safe for distribution. The software contains many powerful operations and tools that increase productivity and provide powerful methods for automated document redacting.

## Introduction to Redacting PDF Documents

In the modern age of digital documents and internet, many federal, state and local filings can be made electronically. According to latest statistics approximately 300 government agencies, including courts, have adopted or recommend PDF as a standard electronic document format. This means that documents must be submitted in PDF or required to be distributed in PDF format. Redacting PDF documents becomes an important and critical step in document processing and distribution workflow. Adobe Portable Document

(PDF) is complex, sophisticated computer data format. It supports many kinds of information such as text, graphics, tables, images and meta-data integrated into a single document. This complexity makes it easy to expose information unintentionally. Covering text, charts, tables, or diagrams with black rectangles, or highlighting text in black, is a common and effective means of redaction for hardcopy printed materials. It is not effective, in general, for computer documents distributed across computer networks. The most common mistake is covering text with black rectangles. The important issue to understand is that the information *hidden* or *covered* in a PDF document can almost always be recovered. The way to avoid exposure is to ensure that sensitive information is not just visually *hidden* but is actually *removed* from the original document. PDF documents are complex files that can contain variety of information composed in many different ways. Many mistakes can occur inadvertently in document composition or during file format conversions. For example, sensitive information in an embedded image can be overlaid with another image during format or text elements can be located behind images as a result of optical character recognition process. Such hidden data can be difficult to be spot during manual review. Specialized redacting tools can greatly simplify document redacting process and provide a much higher degree of safety and reliability.

PDF documents may contain several different kinds of information that call for various techniques for removal of confidential data from the document. The most common type of information stored in PDF documents is *text*. This is the most convenient type of information for redacting purposes, because text can be quickly searched and easily removed from PDF documents. However, there are vast amount of PDF documents that are created by document scanning and originally do not contain any searchable text. These documents are merely collections of scanned images and can't be efficiently searched for occurrence of specific text or pattern. It's possible to run a "paper capture" or optical character recognition (OCR) processing on such documents to find all occurrences of text and add searchable text elements to the document. Text is added behind the images preserving the original look of the scanned document. Adobe Acrobat® comes with built-in tools for this type of processing. Depending on the Acrobat version it's either called "Paper Capture" or OCR. PDF documents can often contain drawings, charts or graphics that are neither images nor text elements. This type of information is much more difficult to redact. It is necessary to convert pages that contain such drawings to images first. AutoRedact™ plug-in provides a special conversion operation ("**Plug-ins > Redacting > Advanced > Convert Page Content To Image**") that converts the content of the page(s) (including drawings, images and text) to a single image and deletes all other types of information. This allows to safely redact such pages as images and completely remove information from the PDF document.

## Functionality Overview

AutoRedact™ plug-in offers a complete set of tools and operations for preparing documents for redaction, redacting documents and maintaining document processing logs. Software features the following capabilities:

- Find and mark text for redacting from user-defined redacting dictionaries. Redacting dictionary is a collection of words and phrases that need to be removed from documents. Software provides a built-in editor for creating, editing, searching and importing redacting dictionaries.
- Find and mark up for redacting various *text patterns* such as social security and employer identification numbers, phone and fax numbers, email addresses, postal addresses, dates, text between brackets and etc.
- Find and mark up for redacting custom *text patterns* (using powerful regular expressions or just by simply typing the text you are looking for).
- Manually mark up text and images for redacting using easy-to-use redacting tool. Just draw a rectangle around the area on the page that need to be redacted. Desired exemption codes are automatically assigned to redacting areas.
- Mark up page content located at specific positions on the page (templates). Save and re-use multi-page templates for quick document processing.
- Automatically find and markup all text and/or images in the document for redacting.
- Use Acrobat's standard commenting and markup tools to select page content for redacting. AutoRedact™ works directly with many standard annotations types allowing other members of your team without AutoRedact™ software can also efficiently prepare documents for redacting by using standard Acrobat® annotations types such as *highlight*, *strikeout*, *underline* or *rectangle* to indicate areas on the page for redacting. No special conversion is required.
- Assign exemption codes to redacting areas. Exemption codes can be optionally printed on the page to indicate why this particular information was removed.
- AutoRedact™ comes with several common exemption code groups such as Freedom of Information Act (FOIA), Privacy Act and case discovery.
- Employ easy-to-use built-in editor to create and maintain unlimited custom exemption codes.
- Easily navigate, search, edit, review and print redacting annotations using standard Acrobat tools for annotations. AutoRedact™ works with standard annotations types to utilize powerful features already available in Adobe Acrobat® software.
- Safely redact text and images from documents. Redacted text is replaced with optional “redacting” character or with a blank space. Many different options available to control the appearance of the redacted document.
- Add exemption codes and color bars to redacted areas. Software provides fine control over font style, size, text, line and filling colors.
- Print documents with redacting annotations.



- Automatically convert page content to image.
- Remove all types of annotations from documents.
- Remove all embedded file attachments from documents.
- Export document's text to external text file for verification and record keeping.
- AutoRedact™ maintains a complete log file for each processed document to record all information about all stages of the redacting process. Log files are maintained as hyperlinked HTML files for easy navigation.
- AutoRedact™ provides complete support for Acrobat batch processing framework. Most redacting operations are implemented as Acrobat's batch commands allowing creation of powerful batch sequence for automatic document processing.
- Software provides fine level of control over most types of processing. Any operation can be performed on the whole document or just on a range of pages.
- Redacting can be performed either on the documents itself or on automatically created copies.

## System Requirements and Compatibility

AutoRedact™ plug-in requires Adobe® Acrobat® or Adobe® Acrobat Professional® software installed on your system. Plug-in works with full versions 5.0, 6.0 and 7.0.

Batch processing commands are only available in Adobe® Acrobat Professional® (versions 6.0 and 7.0) or Adobe® Acrobat® version 5.0.

Operating system requirements: Microsoft Windows XP/NT/2000/2003

**IMPORTANT:** This plug-in will not work with the free Adobe® Acrobat® Reader.

# Getting Started

## Installing AutoRedact™ Plug-in

Download and start product installation software from <http://www.evermap.com> or insert the AutoRedact CD in your CD drive. Follow on-screen instructions to finish installing AutoRedact™ plug-in. Software requires presence of the Adobe Acrobat® on your computer.

The installation program automatically determines the path to the latest version of Adobe® Acrobat® software that is installed on your computer. The plug-in will be installed to the "plug-ins" folder of the Adobe® Acrobat® application (standard location for all Acrobat plug-ins). If there are multiple versions of Adobe® Acrobat® on your computer, the plug-in would be installed in the most recent version of the Adobe® Acrobat® software.

The full path to the plug-in is: < *Adobe Acrobat Installation Path* > \ *plug\_ins* \ *AutoRedact* \

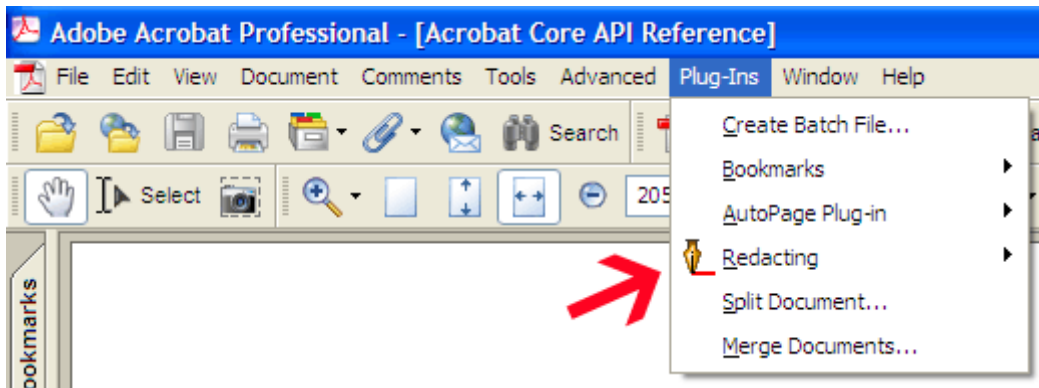
Typically, Adobe® Acrobat® is installed to the following location (assuming version 7.0): *c:\Program Files\Adobe\Acrobat 7.0\Acrobat\*

**IMPORTANT:** Make sure that Adobe® Acrobat® is not running during the installation.

Once the plug-in is installed it should add the following menu item to Adobe® Acrobat® menu: "***Plug-ins > Redacting > ...***".

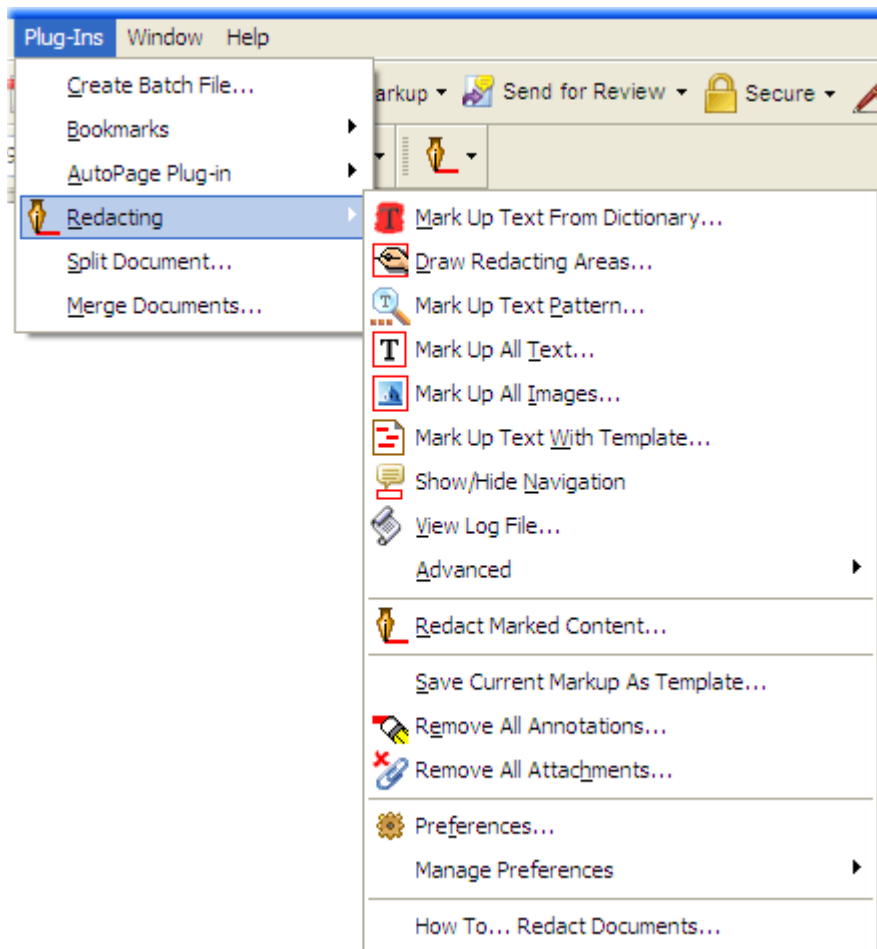
## Starting AutoRedact™

To start working with AutoRedact™, launch Adobe Acrobat® and open a PDF document you want to work on by selecting "***File > Open...***" from the main Acrobat menu. All functionality of the AutoRedact™ plug-in is available from the "***Plug-ins > Redacting > ...***" menu. Batch processing functionality is available through Acrobat's batch processing framework dialog that is accessible through "***Advanced > Batch Processing...***" menu. Note that batch processing framework is part of Adobe Acrobat® Professional® software and is not available in Adobe Acrobat® standard package.



## Application Menu and Toolbars

AutoRedact™ plug-in adds several user interface elements to the standard Adobe Acrobat® or Adobe Acrobat® Professional® software: “Redacting” menu, toolbar, and a redacting tool. “Redacting” menu is available as “*Plug-ins > Redacting...*” from the main Acrobat application menu:

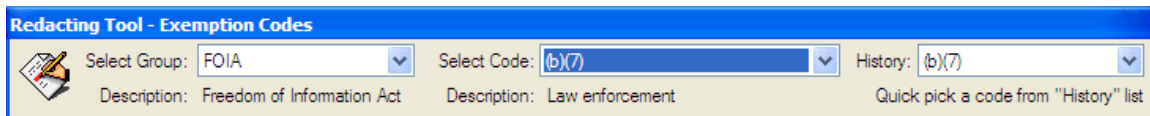


Redacting toolbar is automatically added to Acrobat’s toolbar panel and initially appears as a dropdown menu. It can be expanded and moved to any location on the screen for convenient access. Toolbar is docked by default to main Acrobat toolbar panel. Redacting toolbar provides quick access to several most often used redacting functions.



Redacting toolbar can be turned ON or OFF by using “**View > Toolbars > Redacting**” menu option. Use this menu to turn toolbar back on if you accidentally closed this free-floating toolbar.

AutoRedact™ plug-in also displays “**Redacting Tool – Exemption Codes**” toolbar when “**Plug-ins > Redacting > Draw Redacting Areas...**” operation is selected from the menu.



This toolbar is only visible when working with the “**Draw Redacting Areas**” tool. It automatically disappears when other Acrobat tools (such as “**Hand**” or “**Select**” tools) are activated. The exemption code selection that is available from this toolbar determines the exemption code that is assigned to all new redacting annotations created with this tool.

AutoRedact™ plug-in ads “**Help > Plug-in Help > AutoRedact...**” menu that displays AutoRedact™ user’s guide. This menu performs the same action as “**Plug-ins > Redacting > How To... Redact Documents**” menu item.

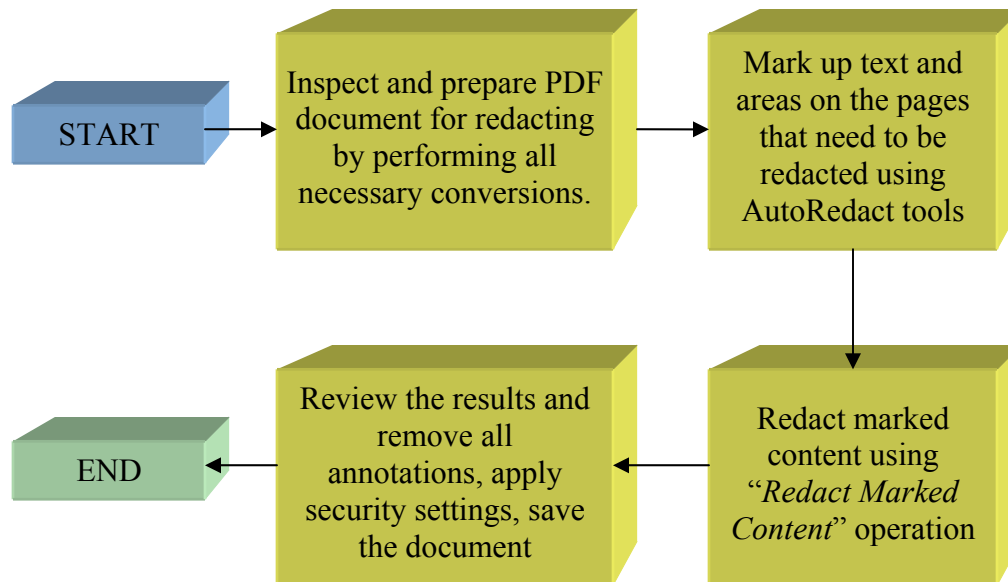
AutoRedact™ plug-in ads “**Help > About Third-Party Plug-ins > AutoRedact...**” menu that displays application’s “**About**” dialog.

AutoRedact™ plug-ins installs a list of batch processing commands to the Adobe Acrobat® Professional® batch processing frameworks. See “**Batch Processing**” section for more details about using redacting commands.

# Redacting Workflow Overview

## Introduction

Document redacting is typically performed in several stages. Every organization might have their own redacting workflow; however there is a common sequence of operations that most of them will share.



## Step-by-Step Overview

1. Receive and inspect original PDF document that is going to be redacted.
2. Make a backup copy of the document for archival purposes.
3. Open a document in Adobe Acrobat and determine what kind of elements it contains. Does it contain searchable text only or were some pages produced by a document scanning process and contain just images? Does your document contain any drawings that are not images? Identify types of information you want to redact: is it text, images and/or drawings?
4. Based on your evaluation of the document, perform all necessary preprocessing that might include: running optical character recognition (OCR / "Paper Capture"), flattening forms, and converting pages with drawings to images.
5. Specify desired preferences for text markup and redacting.

6. Use redacting tools and operations to mark up text and areas in the document that need to be redacted. The selection of methods depends on the type of information you need to redact. For example, if all dates need to be removed then use “**Mark Up Text Patterns**” operation. If you know a list of specific words or sentences that need to be redacted then the logical choice is to use “**Mark Up Words from Dictionary**”, etc. Use “**Draw Redacting Areas**” tool to manually define areas in the document that need to be redacted. Use “**Mark Up Text With Template**” to add redacting areas to the documents using a redacting template.
7. Review the resulting document and verify that all occurrences of confidential information are properly marked and have correct exemption codes assigned.
8. Run redacting operation by selecting “**Redact Marked Content**” from the redacting menu. This operation will actually remove text and alter content of the images. Depending on the preferences, redacting will be performed on the copy of the original document or on the document itself.
9. Inspect the redacted version of the document and make sure that all confidential information has been removed. Export document content to a text file to verify that no confidential text is present in the document.
10. Remove all annotations from the document (optional). AutoRedact™ plug-in can automatically remove annotations after they have been successfully used for redacting.
11. Optionally password protect document from modifications, digitally sign and save to a desired filename.

## Appearance of the Redacted Documents

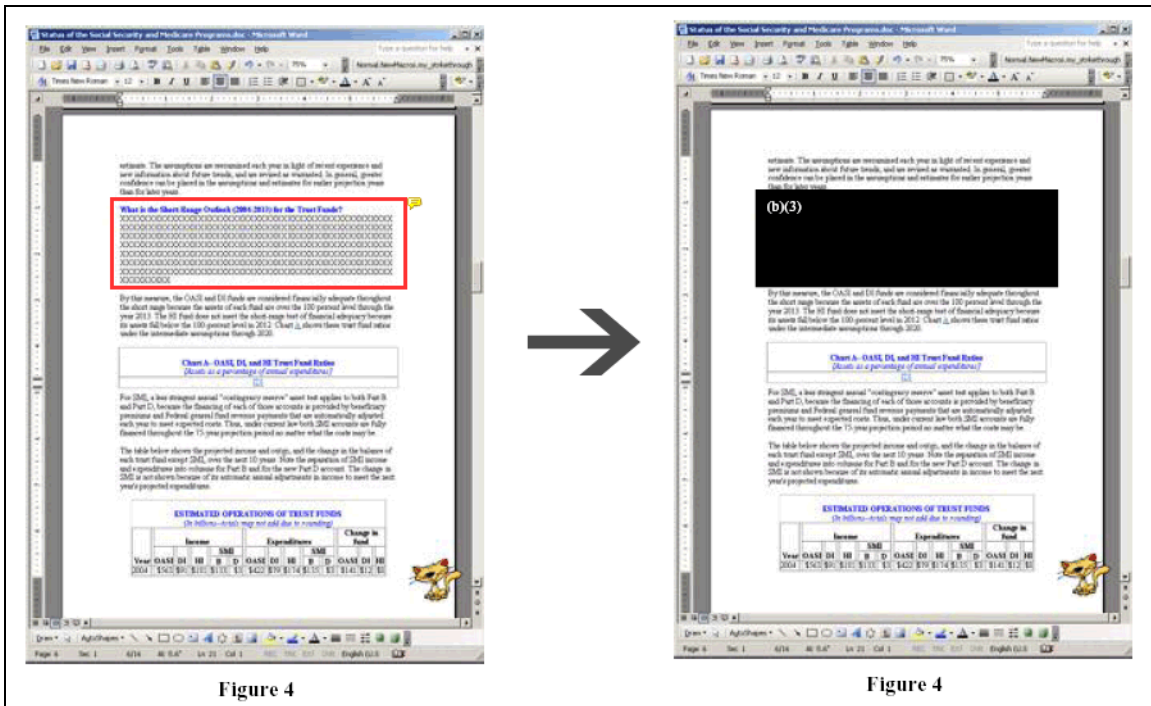
The final appearance of the redacted document depends on combination of AutoRedact™ preferences that control visual aspects of the redacting process. AutoRedact™ software provides an option for specifying a redacting character used to replace all redacted characters in the document. This can be any printable character or a blank space (default). Exemption codes can be optionally printed in the upper left corner (adjustable) of each redacted area. Font style, size and color as well as offsets can be customized to provide users a way to customize the final product according to their needs. AutoRedact™ plug-in can optionally mark redacting areas in the document as color bars or transparent rectangles. This option provides a powerful ability to visually indicated areas on the page where redacting has been applied. User can choose fill and line colors of the redacting boxes to create a desired look and feel of the redacted documents. This functionality provides a way to make redacting areas stand out from the rest of the page content and create appearance of the professionally redacted document. The snapshot below illustrates few combinations of these parameters and resulting appearance of the redacted document:

**Better Insertion Orders**

In what (k)(4) insert the (k)(4) into a tree? No matter the nodes, you end up with the same digital search trie -- the (k)(4) to insertion order. .... (k)(4) trees are at the top.

If you insert the nodes in a (k)(4) (middle element first), tree. If you (k)(4) the nodes in sorted order, the result is a long tree. If you (k)(4) the nodes in sorted order, the result is a long tree. It is costly to build and search. Fortunately, if you insert the nodes in a search tree is usually close to balanced.

Note that color bars that can be optionally added by AutoRedact™ software serve only a cosmetic purpose; they do not cover text elements because text elements have already been removed from the document by the redacting process. Color bars become a part of the document's content and will always be printed and displayed with the rest of the document's content. The snapshot below shows "before and after" appearances of the redacted image in the document. The "before" picture on the left shows a redacting annotation around a portion of the image. The "after" picture shows a black rectangle embedded into the image by AutoRedact™ that removes all image pixels in the redacted area.



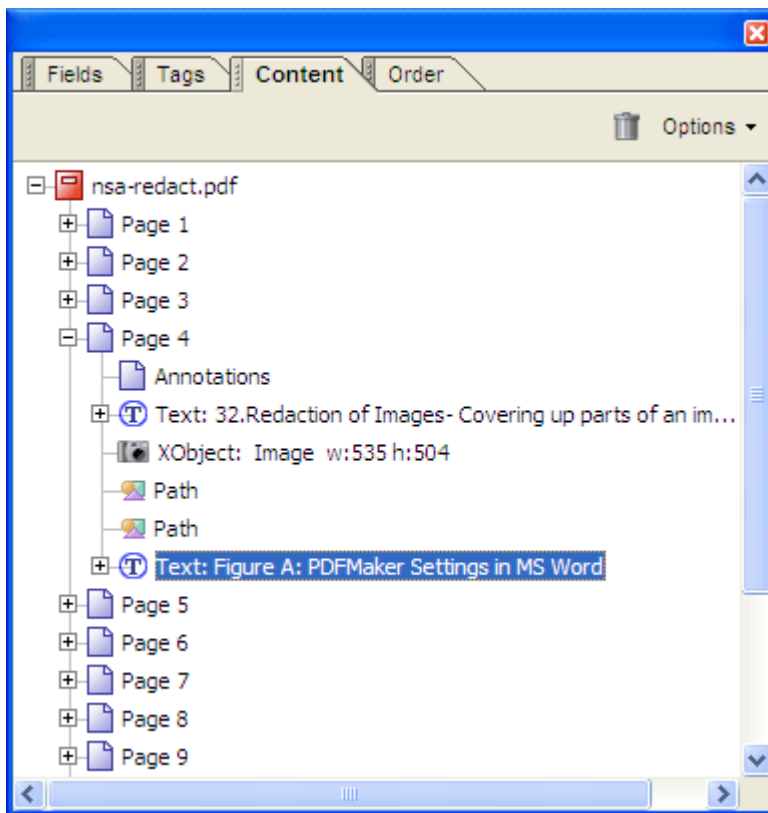
# Preparing Documents for Redacting

## Introduction

It is often necessary to inspect PDF document before starting the redacting process and to determine if any additional pre-processing is necessary. This may include running various conversion operations on the document's content to prepare it for the redacting markup. Once all necessary conversions are completed it is recommended to set the preferences for markup and redacting. They determine the way the document is processed and define visual appearance and content of the redacting markup.

## Examining Document Content

Examine the content of the document you are working on and determine the type of information that needs to be redacted. Is it text, images or drawings? Text is the easiest type of information for redacting, because it can be quickly searched for occurrences of a specific string or pattern. There are multiple methods that can be used to determine the type of visual elements in the PDF documents. The most reliable method for inspecting page content is to use the “*Content*” navigation tab:



1. Open a document (“*File > Open...*”) and navigate to page you want to inspect.



2. Select “**View > Navigation Tabs > Content**” from the menu. “**Content**” dialog will be displayed on the screen.
3. Select desired page number in the page tree view and expand it.
4. Page tree view displays a hierarchical view of the page. Right click on any entry and select “**Highlight Content**” option from the popup menu.
5. Click on any entry in the page tree and corresponding page object will be automatically highlighted with a blue rectangle in the document view.
6. Using this dual view of the page you can inspect what object types are present on the pages. Searchable text appears as “**Text**” entries, raster images typically appear as “**XObject: Image**” entries. Graphic (Postscript) elements appear as “**Path**” elements.

Depending on the page element content you may need to perform a preprocessing step that might include running an optical character recognition (OCR or “Paper Capture”) on the document to convert text in the scanned images to searchable text elements. Many documents are created by scanning paper documents with an optical scanner. This process produces PDF documents that consist of image elements only. What visually may appear as a legitimate text is actually just an image.. The obvious downside of this is that you can not search such document for occurrence of a specific text. If you are working with such documents and need a capability to search and mark for redacting a specific word or phrase then you need to convert images to text first. However, you may not need to perform such conversion if information that you want to redact can be easily removed as a part of the image.

OCR functionality can be accessed via the following menu entries:

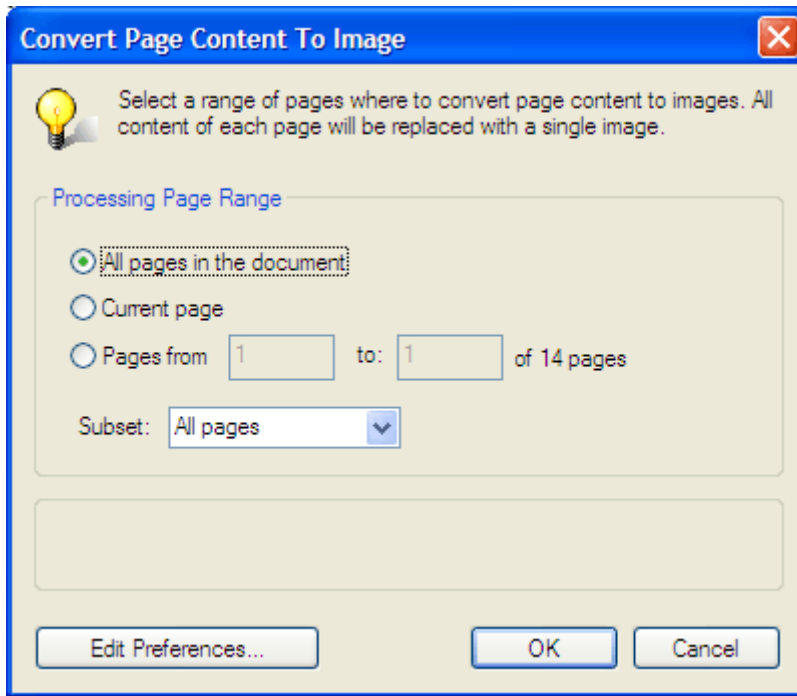
In version 7.0: “**Document > Recognize Text Using OCR > Start...**”

In version 6.0: “**Document > Paper Capture > Start Capture...**”

Image to text conversion quality is getting better every year, however it’s always strongly recommended to inspect the results of OCR to ensure accuracy of the conversion. You can run processing on the entire document or just on the selected range of pages. Save a copy of the document once you completed OCR processing. You will not notice any difference in visual appearance of the document before and after running OCR processing, however it will make the document searchable. Try to search your document for appearance of some test words or phrases to make sure the document is processed correctly.

Documents may contain drawings or graphics that are not raster images, but rather are vector (Postscript) graphics. This type of elements appears as “**Path**” entries in the page tree view of “**Content**” navigation tab. AutoRedact™ can’t directly redact these PDF elements. You have to convert “**Path**” elements into an image before performing the actual redacting. AutoRedact™ provides a special operation that converts all content of one or more pages to a single image.

Select “**Plug-ins > Redacting > Advanced > Convert Page Content To Image...**” from the menu to convert pages that contain drawings that need to be redacted to images.



Select a range of pages that need to be converted to images. Content of each page will be replaced with a single image and all other kinds of elements will be deleted. The output image resolution greatly affects the quality and appearance of the resulting image. Image resolution can be adjusted from 150 dpi (low-quality) to 600 dpi (high-quality). Note that the quality and resolution of the image comes with significantly increased file size that is needed to represent more information. This conversion operation creates black and white image and will change appearance of the color graphics and color and grayscale images.

To adjust image resolution for the conversion process click on “**Edit Preferences...**” button. Adjust “Graphics to image conversion resolution” to a desired value and close the document. You have to do it once only, since AutoRedact™ will remember this preference for the next time.

## Selecting Redacting Preferences

It is recommended that you select AutoRedact™ preferences before you start marking up document content for redacting. These settings affect various aspects of the redacting process: from text search to visual appearance of redacting annotations.

Select “**Plug-ins > Redacting > Preferences...**” from the menu to open “Redacting Preferences” dialog. This dialog consists of 5 different tabs:

“**General**” tab contains settings that affect general behavior of the AutoRedact™.

“**Markup**” tab provides controls over visual appearance of the redacting markup.

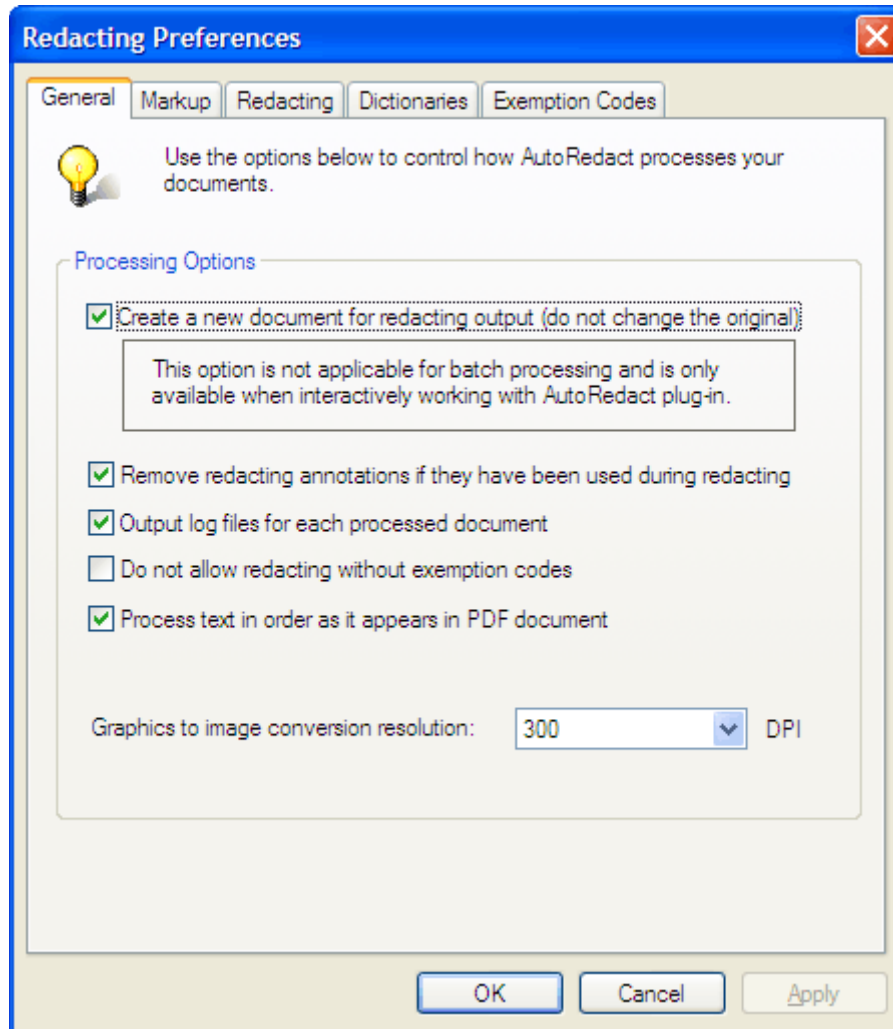
“**Redacting**” tab controls visual appearance of the final redacted document.

“**Dictionaries**” tab provides tools for managing redacting dictionaries.

“**Exemption Codes**” tab provides access to exemption codes editor.

## General Preferences

“**General**” tab offers the following options:



1. “**Create a new document for redacting output (do not change the original)**” option controls redacting target. If this option is “on” then AutoRedact™ will automatically create a temporary copy of the current document and perform redacting on it instead of the original document. If this option is “off” then redacting will be performing directly on the currently opened document. This option is ignored in the batch processing framework because of the way batch processing works. Batch processing always performs redacting directly on the input document. You can one of the batch processing commands to

- create a copy of the input file and apply redacting to it without changing an original.
2. “**Remove redacting annotations if they have been used during redacting**” option automatically deletes a redacting annotation if it has been used while redacting. This is a convenient function that provides immediate feedback on the results of the redacting process.
  3. “**Output log files for each processed document**” option enables automatic redacting log maintenance for each processed document. Log files keep records of all redacting and markup operations (except manual markup) performed on the document. See “*Redacting Logs*” section for more details about working with redacting log files.
  4. “**Do not allow redacting without exemption codes**” option prevents redacting for the redacting annotation that has no exemption code assigned. This option is helpful when it’s necessary to ensure that each redacting occurrence is accompanied by a corresponding exemption code.
  5. “**Process text in order it appears in PDF document**” affects the order in which the text is processed in the document. This option has no effect on many documents, but it affects few special cases when text on the page is not stored in the top-to-bottom order. This especially applies to multicolumn pages that may have complex text layout.

## Markup Preferences

“**Markup**” tab contains options that control visual appearance of the redacting annotations as well as text processing options.

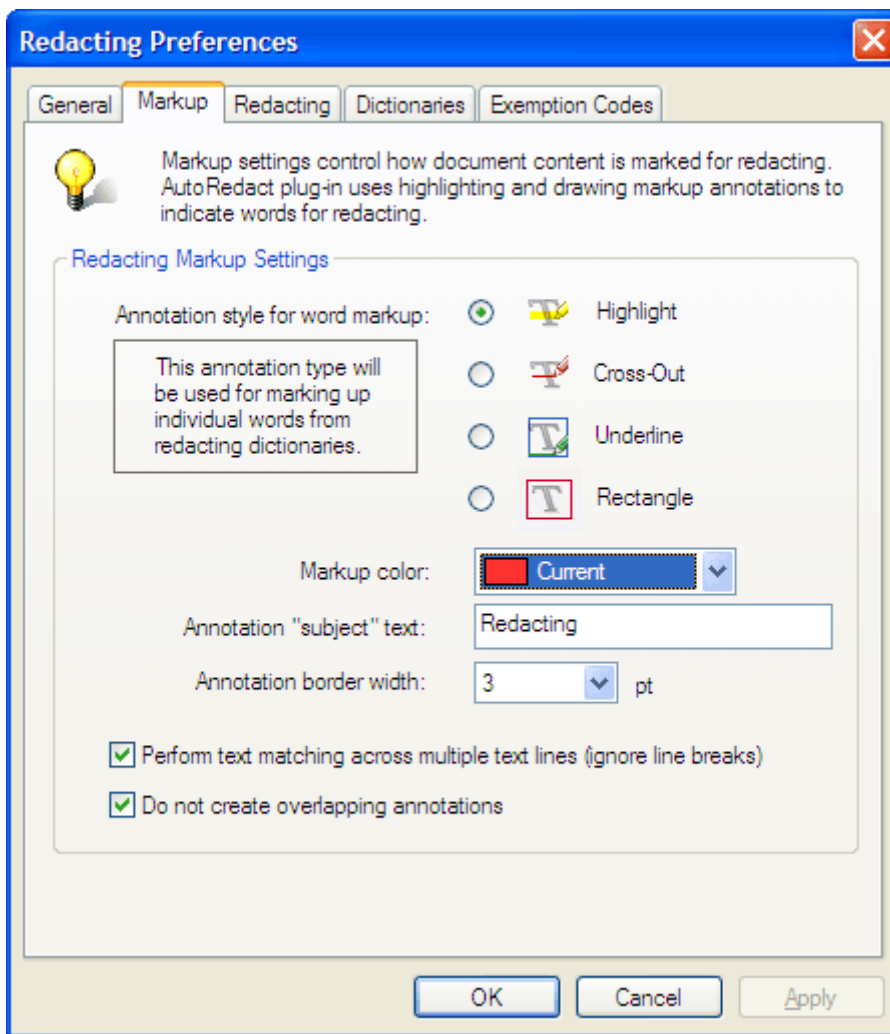
1. “**Annotation style for word markup**” option defines annotation style used to mark up text during the following operations:
  - “**Mark Up Text From Dictionary**”,
  - “**Mark Up Text Pattern**”,

Select one from the four available annotations styles: “**Highlight**”, “**Cross-Out**”, “**Underline**”, and “**Rectangle**”. This option only affects visual appearance of the text markup and has no other effect. Select annotation style that better suits your project. “**Highlight**” annotation is selected by default. Typically, it provides a good visibility for marked content while “**Rectangle**” annotation can provide the minimal appearance. It’s suggested to select “**Rectangle**” annotation when you expect that a large portion of the page will be selected for redacting.

The following operations are not affected by this selection and always use “**Rectangle**” style to create annotations:

- “**Draw Redacting Areas**”
- “**Mark Up All Text**”
- “**Mark Up All Images**”

“**Mark Up With Template**” operation uses annotation styles that have been saved to a template. It provides an ability to mix different annotation types within a single page or template and is not affected by this option. See “Marking Up Content with Templates” section for more details about creating and using redacting templates.



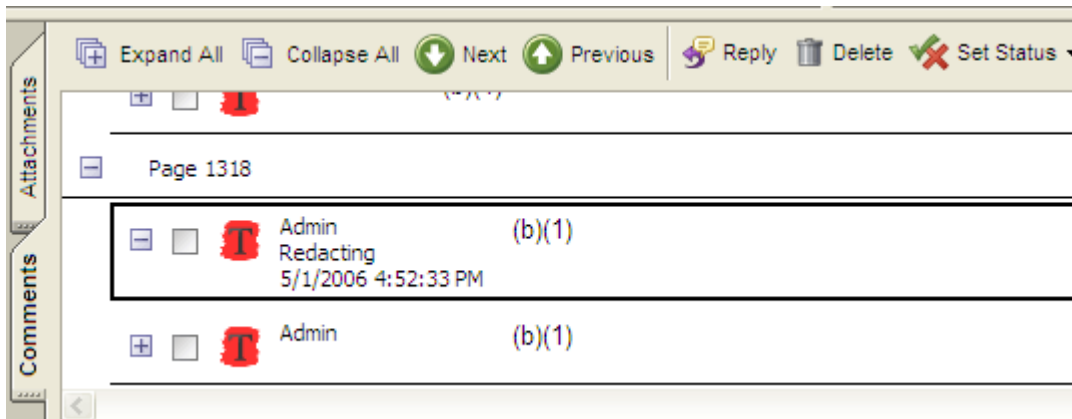
2. “**Markup color**” combo box controls the drawing color of all redacting annotations created by the following operations:

- “**Mark Up Text From Dictionary**”
- “**Mark Up Text Pattern**”

- “**Draw Redacting Areas**”
- “**Mark Up All Text**”
- “**Mark Up All Images**”

3. “**Annotation border width**” affects appearance of border thickness for “**Rectangle**” annotations. Thicker border makes annotation more visible on the page and improves readability of the document for review and further markup. Border thickness is specified in points (1 point equals to 1/72 inch).

4. “**Annotation “Subject” text**” is used to *label* markup annotations. It is used to display annotation “**Subject**” text. The subject text is by default set to “*Redacting*”. Annotation “subject” is displayed in Acrobat’s “**Comments**” navigation tab (when individual annotation entry is expanded). It has no particular meaning and can be used at user’s discretion to indicate various types of information. The snapshot below shows the “**Comments**” tab with redacting annotation (Use “**View > Navigation Tabs > Comments**” or “**Plug-ins > Redacting > Show / Hide Navigation**” to show or hide this tab). The “**Comments**” navigation tab provides many useful tools for reviewing, editing and navigation annotations in the document.



6. “**Perform text matching across multiple text lines (ignore line breaks)**” option affects how AutoRedact™ performs text search. If this option is selected then software can match text that starts on one line and ends on another. For example, suppose the page contains the following text:

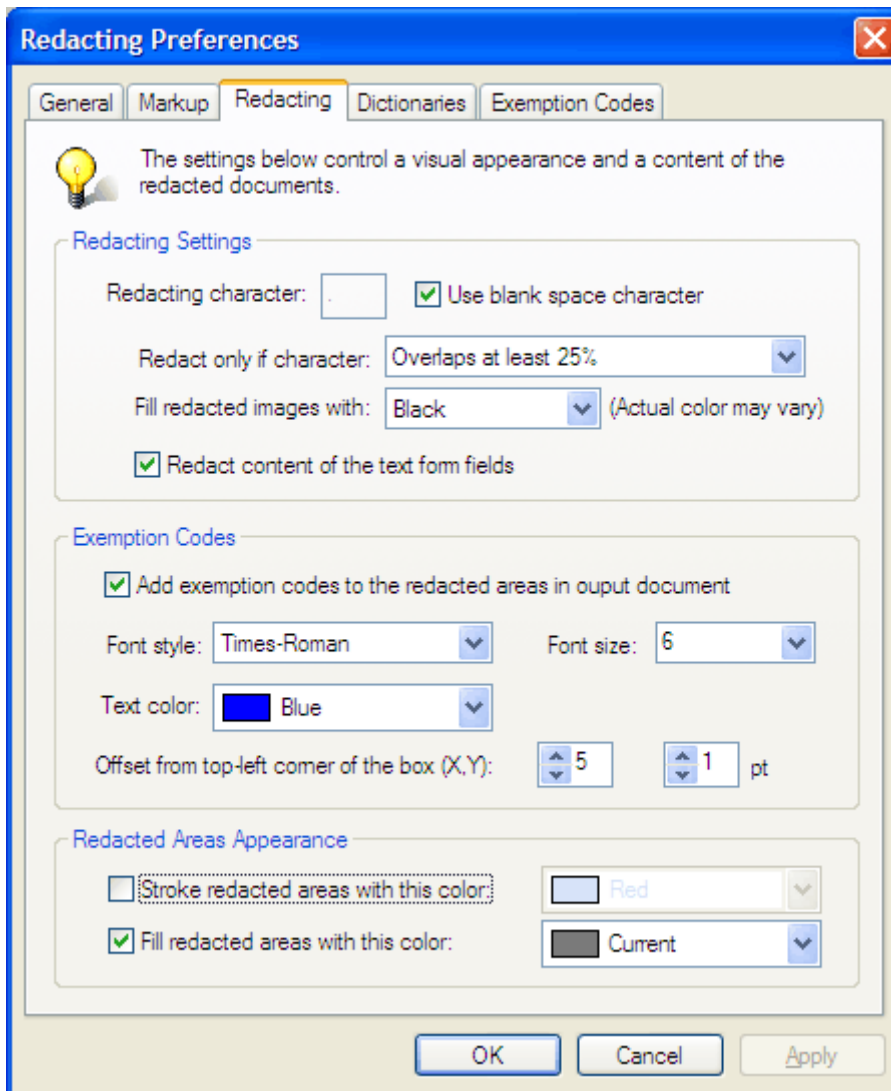
The quick brown  
fox jumps over the lazy dog.

When searching for a “brown fox” string, software will successfully find and mark this text on the page. If this option is turned off then each text line on the page is searched separately and software will not detect this particular occurrence of the “brown fox” string. Turning this option off is useful when searching text pages that contain lists of items that occupy just a single text line, to prevent matching across several logically separate text units.

7. “***Do not create overlapping annotations***” option prevents creation of duplicate or overlapping annotations. Sometimes it’s necessary to run several different operations to search and markup the text. This can produce duplicate annotations that are useless for the redacting process.

## Redacting Preferences

“***Redacting***” tab contains options and settings that control visual appearance of the final redacted document and processing logic of the redacting operation.



“***Redacting Settings***”:

1. “***Redacting character***” is used to replace characters in the redacted text when removing information. Enter any single, printable character, which could be blank

space. Check “*Use blank space character*” option to automatically use “blank space” character.

2. “*Redact only if character:*” menu provides fine control over redacting logic. AutoRedact™ software evaluates bounding box of each character that overlaps a redacting annotation and makes a decision to redact it only if the overlap condition satisfies the selected option. There are three possible options available:

- “*Overlaps at least 25%*” (default)
- “*Completely inside redacting box*”
- “*Touches a redacting box*”

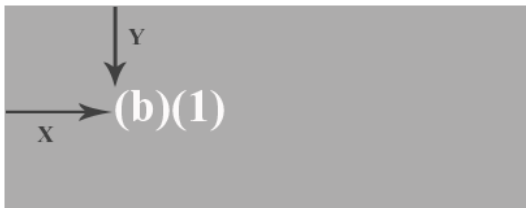
Bounding box of any character is slightly larger than the visual appearance of it. This is why “*Completely inside redacting box*” or “*Touches a redacting box*” options may not produce expected results when manually drawing a redacting annotation. It is relatively easy to draw a slightly larger or smaller box. This is why “*Overlaps at least 25%*” option is the most reliable and safest one. It corresponds very well with human visual perception and always produces expected results. However, depending on particular situation it might be necessary to use two other options.

3. “*Fill redacted images with:*” menu option allows selecting a color used for redacting an image. The area on the image covered by a redacting annotation will be filled with the selected color to remove information. There are only two options available – “white” or “black”. However, actual color depends on the image type and bit-depth. Certain images may not have the selected color available in their color palette. In this case redacting area may appear differently depending on available colors.
4. “*Redact content of the text form fields*” option enables redacting of text fields in Acrobat forms. A PDF form can contain static or interactive form fields; interactive form fields let the user fill in the form using his or her computer. Text fields can be set up to accept user input, to display text strings, and to allow multiple lines of text. Text fields are dynamic and interactive fields different from the regular text elements. AutoRedact™ always redacts all characters in the text field. It is not possible to redact only portion of text field’s content. The appearance of the redacted text field may vary depending on your version of Adobe Acrobat. Another way to redact all form fields from the document is to use “*Remove All Annotations*” operation that will completely remove form fields from the document.

Check “*Add exemption codes to the redacting areas in output document*” option to automatically add exemption codes associated with redacting annotations to the redacted document. You have control over font style, size and color.



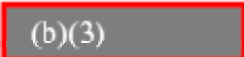
“**Offset from top-left corner of the box (X, Y)**” determines where to place exemption code text (relatively to the redacting annotation). Text offset is specified in points (1 point equals to 1/72 inch).



### “**Redacted Areas Appearance**” Settings

1. Check “**Stroke redacted areas with this color:**” option to select a draw a border around each redacting area. Select a desired color from a pull-down menu.
2. Check “**Fill redacted areas with this color:**” option to fill redacted areas with a specific color. This will create an appearance of the redacting color or “black” bar. Use this option to create a traditional appearance of the censored text.

The snapshot below illustrates appearance of the redacted document where the redacted area is stroked with red and filled with dark gray. Exemption code is added (in white) on the top of the redacting bar.

covering a section  
 the color

**IMPORTANT:** Please note that redacting bars are used for visualization purpose only, there is no text hidden behind it. Text has been already redacted from the document before adding the bars. You can not use AutoRedact™ bars to cover the information – this practice is considered unsafe and is not supported by the software. This feature is used to improve visibility of the redacted areas in the output documents and give it a traditional appearance of a censored text that is easily recognized by most people.

It’s not necessary to select a redacting character if you are planning to add color bars to the redacted document. Redacting bar will cover the redacting characters and make it invisible anyway. Select light gray color for redacting bars in order to use less toner or ink when printing documents with many redacted areas.

## Marking Up Text Using Dictionaries

### Introduction

AutoRedact™ plug-in supports a powerful ability to simultaneously search text in PDF document for all occurrences of user-specified words and phrases. This process is very fast when compared to individually searching and highlighting of individual text strings. It provides a tremendous power while redacting documents using user-defined collections of text strings. AutoRedact™ calls such collection a “**Redacting Dictionary**”. Software can quickly scan the document and mark all occurrences of the redacting text with an annotation. AutoRedact™ utilizes four commenting and markup annotations standard in Acrobat: *highlight*, *strikeout*, *underline* and *rectangle*. User can select annotation type and visual appearance that will be used for markup. Different styles and colors can be used by different members of the team or to indicate particular exemption code or any other type of information. Once text has been marked it can be effectively redacted from document by applying “Redacting” operation. The actual operation of redacting is very fast and simple, so obviously the hardest part is to prepare the document for redacting by creating annotations indicating which information to remove.

### What Is a Redacting Dictionary?

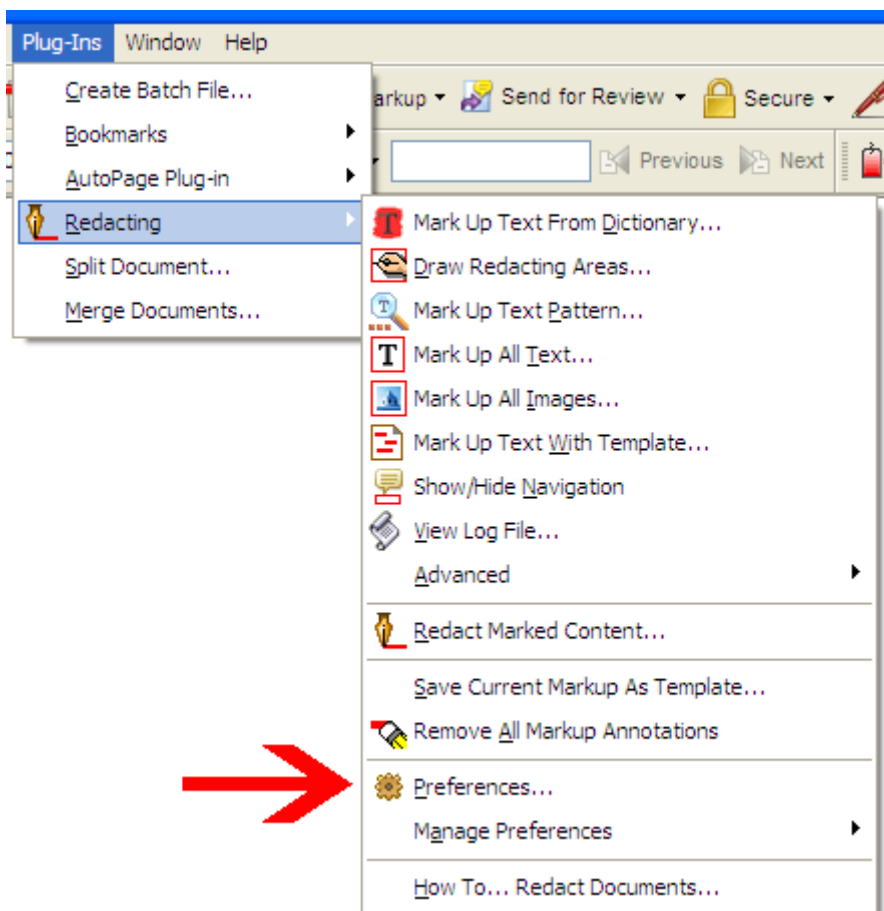
The redacting dictionary is a collection of individual redacting entries. Each entry consists of **redacting text** and an optional **exemption code**. Redacting text represents any sequence of characters to be found in the document and marked for redacting. Each redacting text entry is unique within the dictionary. All duplicate entries are automatically discarded. Exemption code is a special sequence that is placed on the page at the location of the redacted information to indicate the reason why that particular piece of information had been withheld. Exemption code can be optionally put on the page in place of the redacted text during the redacting operation. It's not necessary to assign an exemption code to the redacting text; this field can be left blank or assigned at any time. However, it is not possible to create entries without a redacting text. All such entries will be discarded. AutoRedact™ uses redacting text to search the document and mark up all of its occurrences for redacting. Software automatically creates a redacting (commenting) annotation for located text and adds an exemption code as a note or a comment with the annotation. Visual appearance and type of annotations used depend on the user preferences selected in the “**Markup**” tab page in the “**Redacting Preferences**” dialog box.

AutoRedact™ maintains a local repository of redacting dictionaries on the user's computer. It's possible to have about 16,000 different dictionaries on a single computer installation. However, it is rarely necessary to have more than a few. All redacting dictionaries are stored in the AutoRedact™ installation folder in a file called **AutoRedactDictLocal.CFS**. You can copy this file between computers to transfer redacting dictionaries between different users.

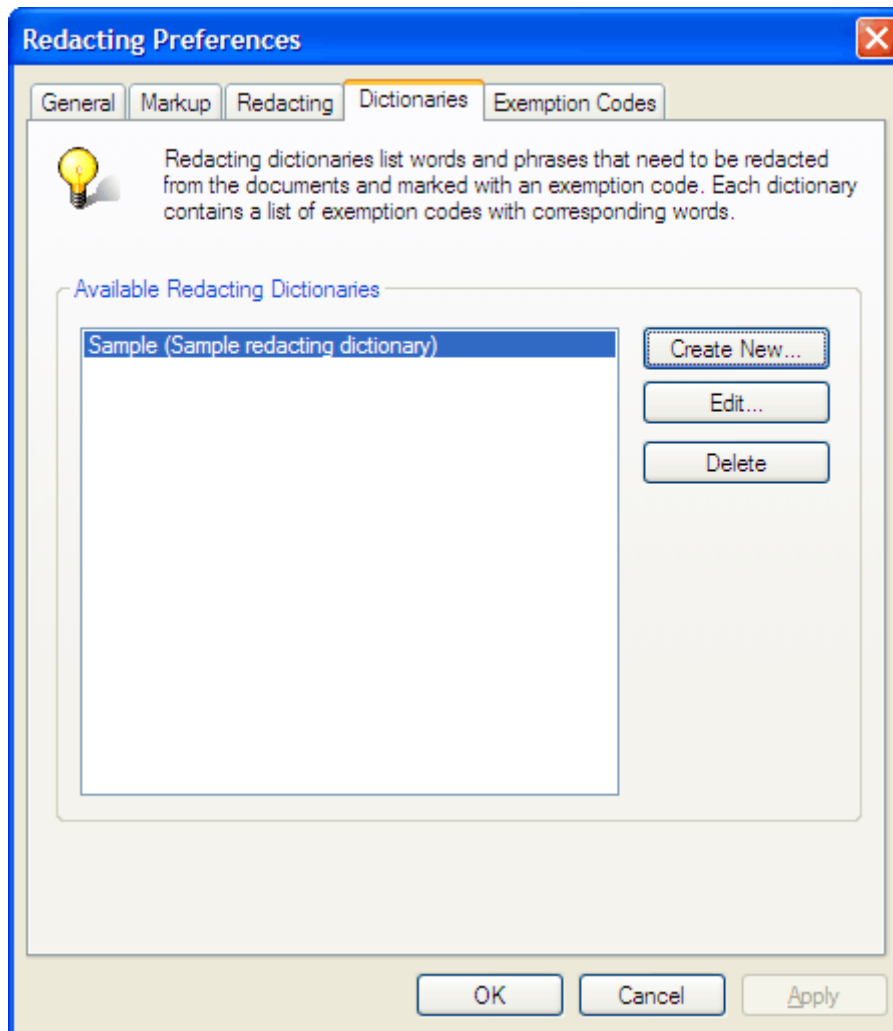
## Managing Redacting Dictionaries

Redacting dictionaries are collections of words and phrases that need to be redacted from documents. The content of the redacting dictionary is typically user-specific and is often used on the regular basis to redact many similar documents. AutoRedact™ software provides a set of tools for creating, editing and managing redacting dictionaries. First you need to create a redacting dictionary before you can start searching your documents for occurrences of a particular string. Redacting dictionaries can be accessed from “Redacting Preferences” dialog:

1. Select “**Plug-ins > Redacting > Preferences...**” from the main menu or click on the “**Preferences**” button on “**Redacting**” toolbar.



2. Select “**Dictionaries**” tab in the “**Redacting Preferences**” dialog. All available dictionaries will be displayed in the “**Available Redacting Dictionaries**” list. Each entry in the list displays a dictionary name and a description. There is only one “**Sample**” dictionary in this list after initial installation of the AutoRedact™ plug-in. This dictionary is provided for learning purposes only and provides an example of the possible redacting dictionary content.



3. Click “**Create New...**” button to create a new redacting dictionary. “**Edit Redacting Dictionary**” will appear on the screen. This is the main dialog box for creating and editing redacting dictionaries. It allows you to specify dictionary name with description and add, edit, delete, import, export or print entries.
4. Select an existing redacting dictionary in the list and Click “**Edit...**” button to edit the dictionary. “**Edit Redacting Dictionary**” will appear on the screen allowing you to edit all the information in the dictionary. You can also double-click on the name of the redacting dictionary from the list to edit the dictionary. It has the same effect as selecting the dictionary and clicking the “**Edit...**” button.
5. Select an existing redacting dictionary in the list and Click “**Delete...**” button to permanently remove this dictionary from the repository. You will be asked for confirmation when deleting a dictionary.

**Warning:** A redacting dictionary can not be recovered once it has been deleted. All of its contents will be lost.

## Creating and Editing Redacting Dictionary

“*Editing Redacting Dictionary*” dialog box provides tools for adding, editing, importing, exporting and printing of redacting text entries.

**Edit Redacting Dictionary**

Redacting dictionary contains a set of words that need to be redacted with corresponding exemption codes. Each redacting text entry needs to be unique. Use the spreadsheet below to enter redacting text and corresponding exemption codes.

Redacting Dictionary

Dictionary name:

Description:

Find text:     Match whole entry

	Exemption Code	Redacting Text
1	(b)(1)	Jan Peterson
2	(b)(1)	John Alan Doe
3	(b)(2)	John Smith
4	(b)(1)	Johnson
5	(b)(3)	Smith-Wesson
6		
7		
8		
9		
10		
11		
12		
13		
14		

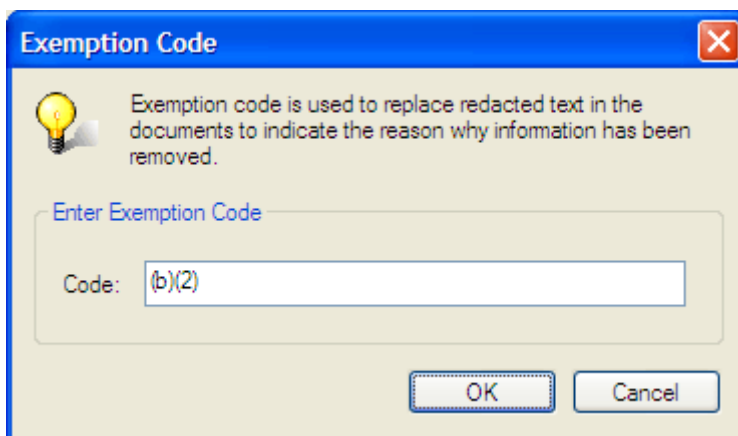
Enter dictionary name and description once you’ve created a new dictionary. It’s a good idea to provide a short unique name and a longer description. This will help you to identify this dictionary later. You can change dictionary name and description at any time. There is no need to use unique names, although it helps to better organize your collection.

Click in the “**Redacting Text**” column to enter new or edit existing text. The redacting entries table works very similar to a spreadsheet. Use “Tab” button to quickly move between entries.

Click “**Add More Rows**” button to add more blank records to the redacting dictionary. You can remove all entries in the dictionary by clicking on the “**Remove All**” button.

### Assigning Exemption Codes To Dictionary Entries

There are typically very few different exemption codes used compared to the number of redacting entries. In such case it is convenient to assign the same exemption code to multiple entries simultaneously. In order to do that, select multiple rows by first clicking on the first entry and then on the last entry while holding a “**Shift**” key on the keyboard. This will select all entries starting from first and last entries clicked. You can add or remove entries from selection by clicking on the entry (click inside “**Exemption code**” or “**Redacting Text**” columns) while holding down the “**Ctrl**” key on the keyboard. Click on the “**Assign Exemption Code To Selected Rows...**” button once you are satisfied with your selection. This will open an “**Exemption Code**” dialog box that will let you assign a single code to all selected entries.



Enter desired code into the “**Code**” entry box and click “**OK**” button to confirm the change. The specified exemption code will be assigned to all selected entries.

### Importing and Exporting Redacting Dictionaries

If redacting text is available in the electronic form, it may be convenient to import it into AutoRedact™ dictionary directly. Format the input ASCII text file to contain one line per redacting word or sentence. Click “**Import From Text**” button and select this file for import. AutoRedact™ will automatically add each line from this file as a separate redacting entry. Each line in the ASCII file will be treated as a redacting entry, and corresponding exemption codes will be left blank. You can assign exemption codes to imported entries using the method described in the “**Assigning Exemption Codes**” section.

Redacting text can be exported to ASCII text file by clicking on “**Save As Text...**” button. Output text file will contain one redacting entry (redacting text only, no exemption code) per line.

## Finding Entries in a Redacting Dictionary

Sometimes it’s necessary to edit or remove a specific redacting text. Finding a particular entry in a large dictionary can be a difficult task. AutoRedact™ provides a way to quickly search redacting dictionary and find all occurrences of the specified text. Enter text you want to search for into “**Find what:**” entry box. Click “**Find Next**” or “**Find Prev**” button to start searching. If the search is successful, a corresponding entry will be highlighted and made visible on the screen. Otherwise, you’ll see a “**Can’t find string**” message pop up. Software performs case-insensitive search: it will find all occurrences of the specified text regardless of the case. Check “**Match whole entry**” option to find all entries that completely match a search string. This option will skip all partial matches and find only those redacting text entries that contain exactly the same text. For example, when searching for a word “Wesson”, it will skip all partial matches such as “Wesson Jr.” or “Smith-Wesson”.

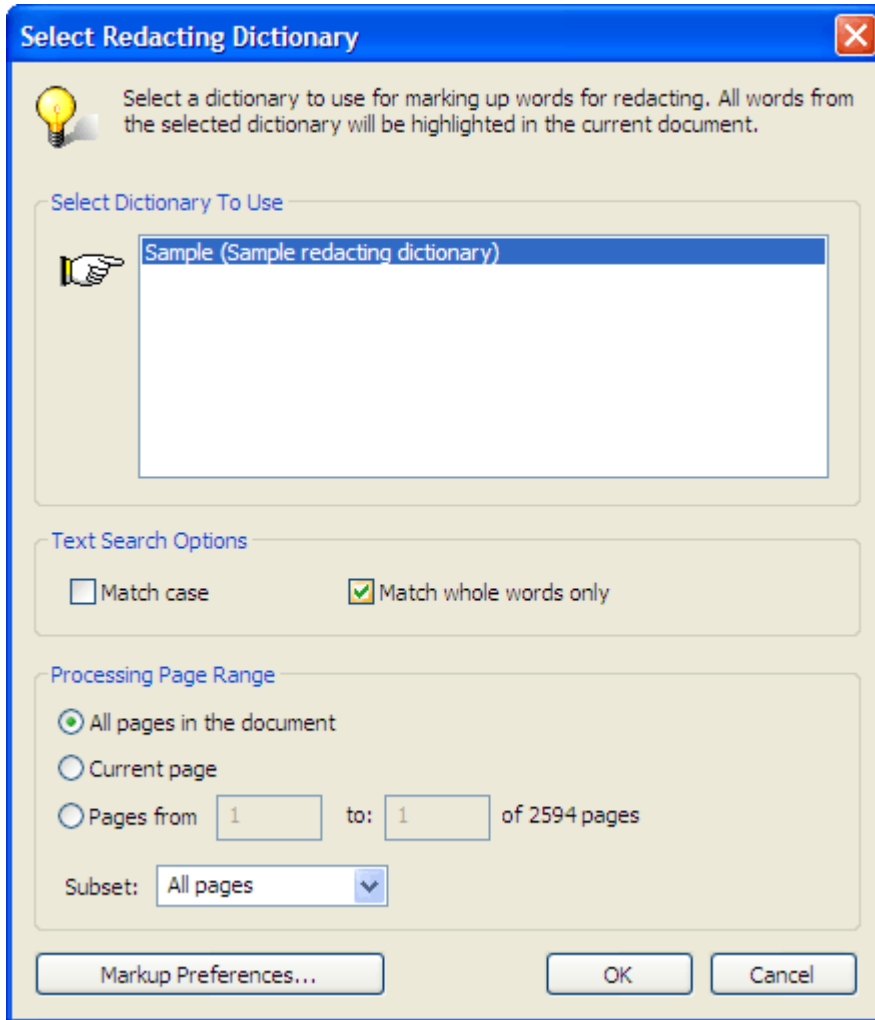
## Printing a Redacting Dictionary

Redacting dictionary can be printed to any installed printer. Click “**Print...**” button to select a printer and print redacting dictionary content. Both exemption codes and redacting text will be printed. Another way to print a redacting dictionary is to export it to the ASCII text file and use any existing text editor to format and print the text.

## Marking Up Text with a Redacting Dictionary

1. Open a PDF document you want to prepare for redacting by clicking on the “**File > Open...**” menu item from the main Acrobat menu. Make sure this document is not located on write-protected media (such as CD-ROM) and has security settings that permit document modification. Otherwise, copy this document to a different location or change document’s security settings. Refer to Acrobat User’s Guide for details (actual steps may depend on Acrobat release version).
2. Select “**Plug-ins > Redacting > Mark Up Text From Dictionary**” from the main menu to open a “**Select Redacting Dictionary**” dialog.
3. Select a redacting dictionary to use for search and markup by selecting one from the “**Select dictionary to use**” list.
4. Select text matching options to use while searching for text from the redacting dictionary. Check “**Match case**” option to perform case-sensitive matching. When selected, the search operation looks only for occurrences that match the uppercase and lowercase characters you enter in the redacting dictionary. Check “**Match whole words**”

*only*” to search only for whole words, rather than matching the text occurring within words. Results of the search operation are also affected by search settings specified in the “**Markup**” section of AutoRedact™ preferences. Make sure that “**Perform matching across multiple text lines**” option is selected if you want the matcher to ignore line breaks.

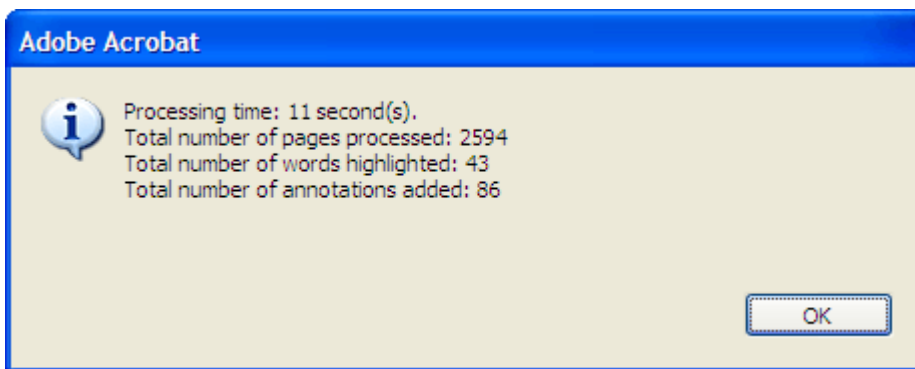


6. Specify processing page range for the current operation.
 

Select “**All pages in the document**” option to automatically process all pages in the currently open document. Choose “**Current page**” option to process currently visible page only, or specify a page range in the “**Pages from – to**” entry boxes. Select page subset from the following list: “**All pages**”, “**Odd only**” and “**Even only**”. The “**Current Page**” option is not available for selection when this dialog is accessed via batch processing framework dialog. This is due because there might be no currently active document open while creating or editing a batch processing sequence.



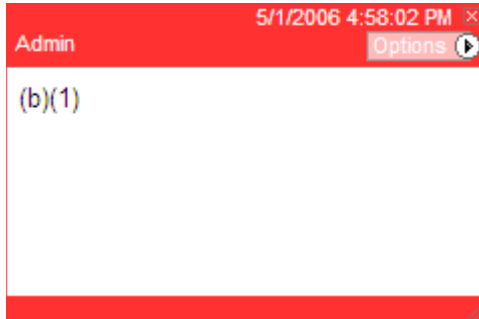
7. Click on the “**Markup Preferences...**” button to set visual appearance of the markup annotations that this operation is going to create. AutoRedact™ Preferences dialog will appear (only “**Markup**” section is accessible via this button) on the screen. Review and select desired processing settings.
8. Click “OK” button to start searching for redacting text. AutoRedact™ plug-in displays a progress bar in the Acrobat’s status bar at the bottom of the screen. Processing speed largely depends on the number of pages being processed and the number of text occurrences marked. Creating annotations is a relatively slow process in the Adobe Acrobat®. AutoRedact™ plug-in optimizes annotation generation by trying to merge multiple annotations into a single one. Processing speed depends very little on the number of entries in the redacting dictionary.
9. Confirmation dialog appears on the screen at the end of the processing displaying processing time, number of pages processed, total number of words marked in the document and a total number of annotations created.



Sample image below illustrates the appearance of different annotation types that can be created by AutoRedact™ software:

**Example:** Redacting a chart, ~~image~~, or other object. Figure 4 shows the page from Figure 1 after redacting some text and deleting the chart. In this case, the chart is an image. Notice that some text and part of a table have shifted onto the page. To preserve the formatting, insert a gray rectangle the same size as the chart

Exemption codes are automatically added to annotations as a popup notes or comments. Assigned exemption code can be changed later by using any of the standard methods for editing annotations available in the Adobe Acrobat®. Select a “**Hand**” tool and double-click on an annotation to open a corresponding comment note. First line of this note is used by AutoRedact™ as an exemption code. All additional lines can contain custom text and will be ignored during the actual redacting process. Use extra lines to add comments, notes or any other information you may find useful while preparing documents for redacting. The following snapshot shows an open note associated with a redacting annotation:



Use this popup note dialog to change the exemption code associated with the redacting annotation. Click in the text area of the note and type new or edit existing text. Each popup note displays the name of the person (author) who created the annotation (Windows logon name is used to identify the author) along with the date and time.

## Manual Markup Using Redacting Tool


Areas on the page can be designated for redacting by drawing redacting areas with a redacting tool or by using Acrobat's standard commenting and markup tools (such as highlight, cross-out, underline and rectangle). AutoRedact™ provides a redacting tool that is specifically designed for this operation. The redacting tool provides support for exemption codes that can be easily selected and automatically added to the redacting annotations. Exemption code is a special text that is placed on the page at the location of the redacted information to indicate the reason why this particular piece of information has been withheld.

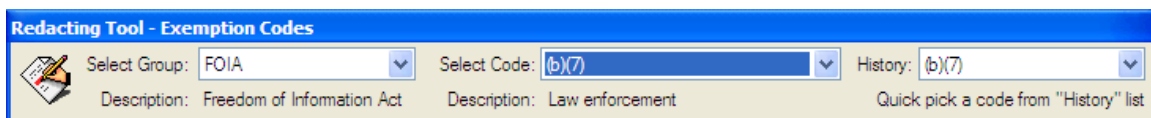
Manually adding annotation is convenient if you have to process just a few pages or if automated methods can't be applied to your document. Use automated methods such as dictionaries, text patterns and templates if you know a specific form of the information that needs to be removed.

### Creating Redacting Annotations

Select “**Plug-ins > Redacting > Draw Redacting Areas...**” from the menu to activate the redacting tool. The alternative method is to click on “**Draw Redacting Areas**” button on AutoRedact™ toolbar:



“Redacting Tool” window will popup to indicate that you are now working with a redacting tool. Application cursor will be changed to indicate a redacting mode: . The snapshot below illustrates the appearance of the “**Redacting Tool**” floating window:



This window provides direct access to exemption code groups available in AutoRedact™. You can design your own custom exemption codes or use the 3 standard exemption code groups supplied with AutoRedact™. These standard code groups include: FOIA (Freedom of Information Act), Privacy Act, and Discovery Case exemption codes. You can switch between different groups by selecting a desired one from a “**Select Group**” pull down menu.

Pick an exemption code that you want to assign to all new redacting annotations from “**Select Code**” pull down menu. “**History**” menu provides an ability to use history of

previously used codes to quickly switch between exemption codes in various exemption code groups. AutoRedact™ software always uses an exemption code currently selected in “**Select Code**” menu to assign to all new redacting annotations.

Draw a rectangular area on the page around the text or image you’d like to redact. This will immediately create an annotation on the page according to current settings. See “Markup preferences” section for details on how to change the appearance of the redacting annotations. The snapshot below shows a manual redacting annotation created around a text paragraph:

Adobe PDF is used very extensively by all parts of the U.S. Government and military services for disseminating and distributing documents of all kinds. PDF provides excellent fidelity and portability, and allows easy distribution of documents over computer networks and the Internet. PDF files are usually produced using commercial conversion software (so-called “distillers”) that accept source formats such as Postscript or MS Word, and output PDF. PDF is often used as the format for downgraded or sanitized documents.


As numerous people have learned to their chagrin, merely converting an MS Word document to PDF does not remove all metadata automatically. In addition, Adobe Distiller and the PDFMaker Add-in to MS Word (the most common way to convert) convert much of the layering complexity from one format to the next. For example, images placed on top of text in MS Word will be copied verbatim to PDF with the same layout.

All text and images inside the redacting annotation are now selected for redacting. Current exemption code will be automatically assigned as a note to each new redacting annotation created with the “Redacting Tool”.

## Editing Exemption Codes

Exemption codes are stored as text notes attached to the redacting annotations. AutoRedact™ only uses the first line of the note as an exemption code. This allows using extra lines as custom notes or comments. Only first line of the note will be added to the final redacted document as an exemption code. You can edit exemption codes assigned to the redacting annotations using two different methods:

1. Use “**Comments**” navigation tab to navigate and edit notes. Select “**View > Navigation Tabs > Comments**” from the menu. Use excellent “**Comments Tab**” controls to navigate, edit or delete exemption codes attached to annotations.
2. Double-click on the redacting annotation with a “**Hand**” or “**Select**” tool to open a popup note window. Edit exemption code in the popup window.

Redacting tool can also be used to assign more than one exemption code to a single redacting annotation. Move application cursor inside the existing annotation and it will change its shape to . Click inside the annotation rectangle to add currently selected exemption code to the annotation. This method can be used to quickly assign multiple exemption codes to an existing redacting annotation.

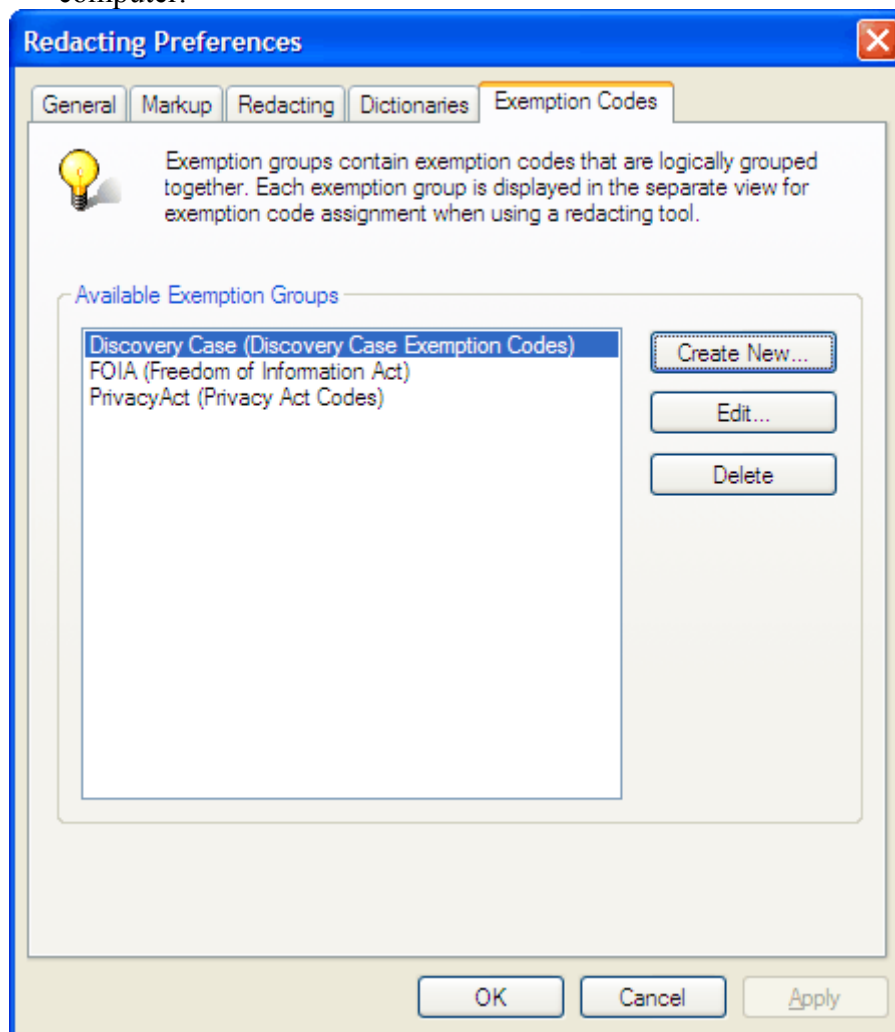
## Editing Redacting Annotations

The size and location of the existing redacting annotations can be easily changed using “*Hand*” or “*Select*” tools. Annotations can be resized and moved to a new location.

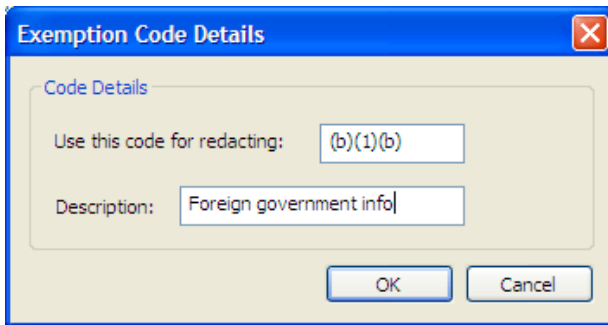
## Creating and Editing Custom Exemption Code Groups

You can create any number of custom exemption code groups and use them while working with the redacting tool. Exemption code group is a logical collection of exemption codes that are typically used together. Follow the following step to create a new exemption code group:

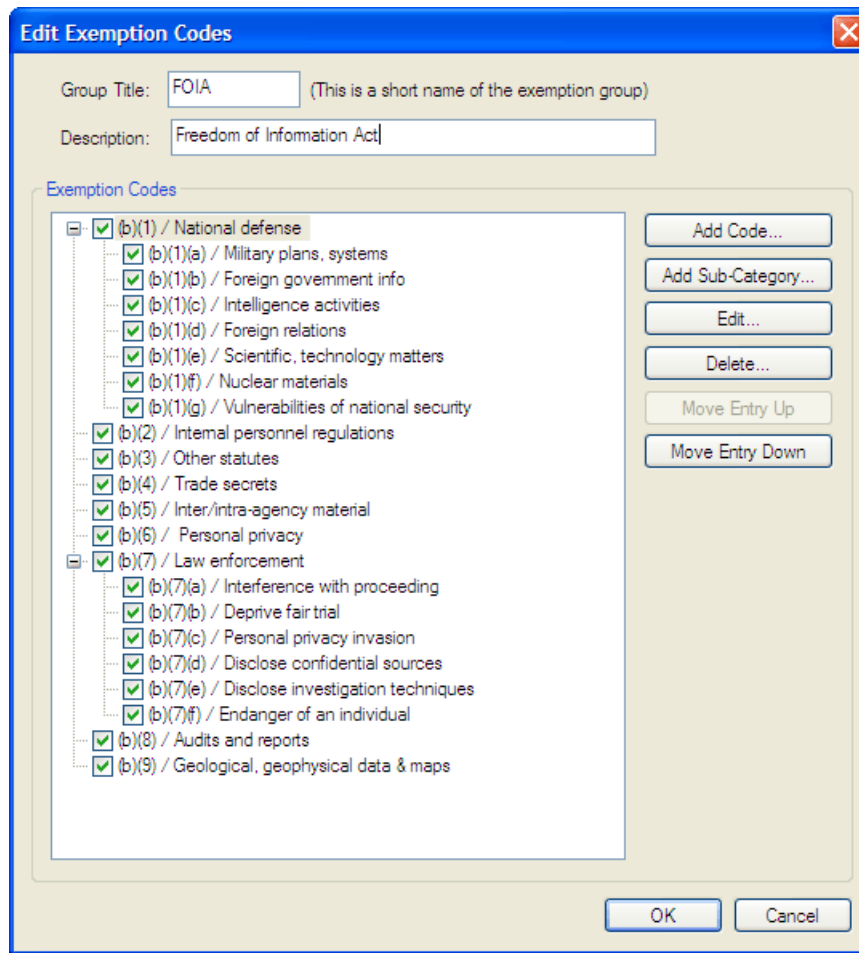
1. Select “*Plug-ins > Redacting > Preferences*” from the main menu.
2. Select “*Exemption Codes*” tab in the “*Redacting Preferences*” dialog.  
“*Exemption Codes*” tab lists all currently existing code groups available on the computer.



3. Click on “**Create New**” button to create a new exemption code group or click “**Edit**” to edit an existing group. You need to select an existing code group first before you can edit it. “**Edit Exemption Codes**” dialog will popup on the screen.
4. Enter “**Group Title**” and “**Description**” text. This text is used to label the exemption code group in the “**Redacting Tool**” window.
5. Click “**Add Code...**” button to add a new exemption code to the group.



6. Enter exemption code text and description in “**Exemption Code Details**” dialog.



7. If you wish to create a hierarchical menu-like structure of exemption codes then select any existing exemption code in the tree view and click “**Add Sub-Category...**” button. New exemption code will be created as a child of the selected code.
8. Each exemption code has a check-button associated with it that controls visibility of the code in the “**Redacting Tool**” window. Turn this check-button off to temporary remove the code from the “**Redacting Tool**” menu.
9. You can move exemption code up and down in the tree by clicking “**Move Entry Up**” and “**Move Entry Down**” buttons.
10. To delete an exemption code: select it in the tree view and click “**Delete...**” button. Confirmation dialog will popup to verify your selection.
11. Click “**OK**” button to save exemption code group once you have completed the editing.

## Marking Up Text Patterns

### Using Built-in Patterns

AutoRedact™ can search a document for occurrence of a specific text or a text pattern and automatically mark them for redacting. The software offers a selection of common text patterns such as:

- Social Security Numbers
- Employer Identification Numbers
- Phone and fax numbers
- Email addresses
- Dates
- Postal addresses
- Company names (limited subset of patterns recognized)
- Text within square brackets

Custom text or a text pattern can also be used to find and mark all occurrences of a text in the document. AutoRedact™ supports powerful regular expression syntax that allows description of complex text patterns. See “*Regular Expressions for Pattern Matching*” section for more details about regular expression syntax and capabilities. You do not need any knowledge of the regular expressions syntax if you want to use any of the built-in patterns or just want to search for a specific string.

All occurrences of the specified text patterns within a working page range will be automatically marked with redacting annotations. Use “*Markup*” tab of “*Redacting Preferences*” dialog to specify a preferred redacting annotation style and visual appearance.

To mark up text patterns in the document:

1. Select “*Plug-ins > Redacting > Mark Up Text Pattern*” from the main menu.
2. Select desired text patterns to search for in the “*Mark Up Text Patterns*” dialog.
3. Enter exemption code (type into “*Exemption code to use:*” text box) to assign to all new redacting annotations that are going to be created as the result of this operation.
4. Select a processing page range and subset.
5. Click on “*Edit Preferences...*” button to optionally change style and appearance of the redacting annotations.



6. Click “**OK**” button to start processing.
10. Confirmation dialog appears on the screen at the end of the processing displaying a processing time, number of pages processed, total number of words marked in the document and a total number of annotations created.

**Mark Up Text Patterns**

This dialog allows you to automatically find and mark up various common types of text information that might be considered confidential. Use custom text patterns to define text that is specific for your document type.

**Text Patterns to Markup**

WARNING: Automatic detection does not guarantee 100% accuracy, always verify the results.

- Markup Social Security and EIN numbers (for example: 507-12-3456 or 51-1234567)
- Markup phone and fax numbers (for example: (444)-333-2222 or (555) 123 4455 )
- Markup email addresses (for example: johndoe@someplace.com)
- Markup text between square brackets (for example: [Confidential text])
- Markup dates (YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, Nov 23, 2006 etc.)
- Markup postal addresses (US style)
- Markup company names (for example: Advanced Systems, Inc. or General Supplies LLC.)
- Markup using a custom text pattern (regular expression):

Find what:

Match case  Match whole words only

Exemption code to use:

**Processing Page Range**

All pages in the document

Current page

Pages from  to:  of 1 pages

Subset:  ▼

Edit Preferences... OK Cancel

## Defining Custom Patterns with Regular Expressions

1. Check “**Markup using a custom text pattern**” option to enter a custom text or a text pattern.
2. Enter actual text or pattern to search for into the “**Find what**” text box. Refer to “**Regular Expressions for Pattern Matching**” section for more details on how to write and use regular expressions. You don’t have to use regular expressions if you’d like to find an occurrence of a specific string. Just type the text you are looking for in the “Find what” text box. However, there are a few special characters that are interpreted differently by the regular expression syntax: . (period), |, ^, \ (backslash), ^, \$. Add a backslash in front of any special character to ignore its special meaning.
3. Check “**Match case**” option for case-sensitive search.
4. Check “**Match whole words only**” option to search only for whole words, rather than matching the text as it occurs within words.
5. Select a processing page range and subset.
6. Click on “**Edit Preferences...**” button to optionally change style and appearance of the redacting annotations.
7. Click “**OK**” button to start processing.
11. Confirmation dialog box appears on the screen at the end of processing. It displays processing time, number of pages processed, total number of words marked in the document and a total number of annotations created.

Working with custom text patterns is typically an iterative process. Try a regular expression and review the results. The results may be too broad or too narrow. If you need to try a different text pattern then it’s a good idea to delete all unwanted redacting annotations first. Select “**Plug-ins > Redacting > Remove All Annotations**” from the menu or use “**Redacting**” toolbar.

Regular expressions are very powerful for specifying text patterns but require certain skills that are relatively easy to master. If you are unfamiliar with text matching – do not feel discouraged. After a bit of trial and error you will be able to command regular expressions to solve most of your tasks. You can always contact EverMap tech support at [tech@evermap.com](mailto:tech@evermap.com) and ask for help. We will be glad to help you to create the right regular expression for your project.

## Regular Expressions for Pattern Matching

### What is a regular expression?

A regular expression (often abbreviated as regexp, regex, or regxp, with plural forms regexps, or regexes) is a string that describes or matches a set of strings, according to certain syntax rules. Regular expressions are used by many text editors and utilities to search and manipulate bodies of text based on certain patterns. AutoRedact™ software uses regular expressions in the “*Mark Up Text Pattern*” operation to describe the text that needs to be marked for redacting.

A regular expression is a specification of the template that the text must fit. It is a text string which is used to match against other strings. Some characters have special meaning when used in regular expressions whereas other characters stand for themselves. A regular expression is a pattern that is matched against a subject text from left to right. Most characters stand for themselves in a pattern, and match the corresponding characters in the subject. Regular expressions are also described in the Perl documentation and in a number of other books and 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.

### Introduction to Regular Expressions

A regular expression, or regex for short, is a pattern describing a certain amount of text. It has a special syntax which allows you to form a kind of a template against which the other strings can be matched. In this document, regular expressions are highlighted in bold red as regex. Term "string" is used to indicate the text that regular expression is applied to. Text strings will be highlighted as follows: “*Text string*”.

The simplest form of regular expression is literal text. For example, regex **Chapter** matches text strings containing *Chapter* sub-string. The power of regular expressions comes from the ability to include alternatives and repetitions in the pattern. These are encoded using meta-characters, which are interpreted in a special way.

### Character types

Backslash can be used to specify generic character types:

**\d** any decimal digit

**\D** any character that is not a decimal digit

**\s** any white space character

**\S** any character that is not a white space character

**\w** any "word" character (A "word" character is any letter or digit or the underscore character)

**\W** any "non-word" character

For example: `\d{8}` matches exactly 8 digits.

## Matching alternatives

Vertical bar characters are used to separate alternative patterns. For example, the pattern `Configuration|Settings` matches either "*Configuration*" or "*Settings*". Any number of alternatives may appear, and an empty alternative is permitted (matching the empty string). The matching process tries each alternative in turn, from left to right, and the first one that succeeds is used.

## Sub-Patterns

Sub-patterns are delimited by parentheses (round brackets), which can be nested. For example, the pattern `((red|white) (BMW|Volvo))` matches either "*red*" and "*white*" followed by either "*BMW*" or "*Volvo*" (i.e. "*red BMW*" or "*white Volvo*"). Another example: `(sens|response) and \1ibility` matches "*sense and sensibility*" and "*response and responsibility*", but not "*sense and responsibility*". If instead the pattern `(sens|response) and (1)ibility` is used, it will match "sense and responsibility" as well as the other two strings. The meta-character `\1` here serves as a back reference to the first matching sub-pattern. Such references must, however, follow the sub-pattern to which they refer.

## Matching whole words

Simple text patterns such as `Alert` are also going to match words *Alerts*, *Alerted* and etc. If you want your pattern to match only whole words, surround it with `\b` meta-characters. For example, use `\bAlert\b` to match word *Alert* but not match words that might contain it as a sub-string.

## Matching sub-string

If the text that you want to match appears only inside other words, use `\B` meta-character. For example, the pattern `\Bword\B` will match word "*swordfish*", but will ignore words "*word*", "*words*" and "*password*".

## Repetitions

The general repetition quantifier specifies a minimum and maximum number of permitted matches, by giving the two numbers in curly brackets (braces), separated by a comma. The numbers must be less than 65536, and the first must be less than or equal to the second. For example: `z{2,4}` matches "*zz*", "*zzz*", or "*zzzz*". A closing brace on its own is not a special character. If the second number is omitted, but the comma is present, there is no upper limit; if the second number and the comma are both omitted, the quantifier specifies an exact number of required matches.

## Character Classes or Character Sets

A "character class" matches only one out of several characters. To match an "a" or an "e", use `[ae]`. You could use this in `gr[ae]y` to match either *gray* or *grey*. A character class matches only a single character. `gr[ae]y` will not match *graay* or *graey* for instance. The order of characters inside the character class does not matter. You can use a hyphen inside a character class to specify a range of characters. `[0-9]` matches a single digit between 0 and 9. You can use more than one range. `[0-9a-fA-F]` matches a single hexadecimal digit, ignoring case. You can combine ranges and single characters. For instance `[0-9a-fxA-FX]` matches a hexadecimal digit or the letter *X*. Including a caret after the opening square bracket will negate the character class. The result is that the character class will match any character that is not in the character class. `q[^x]` matches *qu* in question. It will match q followed by any character except x. It does not match Iraq since there is no character after the q for the negated character class to match.

## Using Anchors to Match Text Lines

Anchors do not match any characters. They match only a particular text position in the string. Meta-character `^` matches the start of the string, and `$` matches the end of the string. Symbol `\b` matches the word boundary. For instance, `^b` matches only the first b in bob. Word boundary is a position between a character that can be matched by `\w` and a character that cannot be matched by `\w`. Meta-character `\b` also matches at the start and/or end of the string if the first and/or last characters in the string are word characters. `\B` matches at every position which `\b` does not match.

Examples:

`Chapter\d$` - matches *Chapter 1* , but does not match *Chapter 1 Appendix*

`^Chapter\d` - matches *Chapter 1* , but does not match *In the Chapter 1*

`Chapter\b` - matches *Chapter or Chapter 1*, but does not match *Chapters*

## Marking Up Content with Templates

### Templates Overview

Certain types of documents, such as official forms or statements, contain specific text or images that are positioned at fixed locations on the page. For example, a billing statement may always display a customer name or an account number at pre-determined location within a page or a document. AutoRedact™ uses templates to markup information that is located at known locations within a document. Template is a collection of redaction annotations (including visual appearance and associated exemption codes) that has been saved to an external file. It can be used to markup content in other documents. Template file may contain redacting annotations for one or more pages and can be repeatedly applied to any compatible document. For example, you can create and save a one-page template that marks up an account number on the first page of a billing statement. This template can be applied to a document that contains thousands of individual billing statements. You can specify which pages to apply this template to when processing a document. For example, you can choose to apply the template every 3 pages (the length of the single billing statement). When applying the template, all redacting annotations from it will be copied to the corresponding pages in the target document while preserving their positions and visual appearance.

### Creating Templates

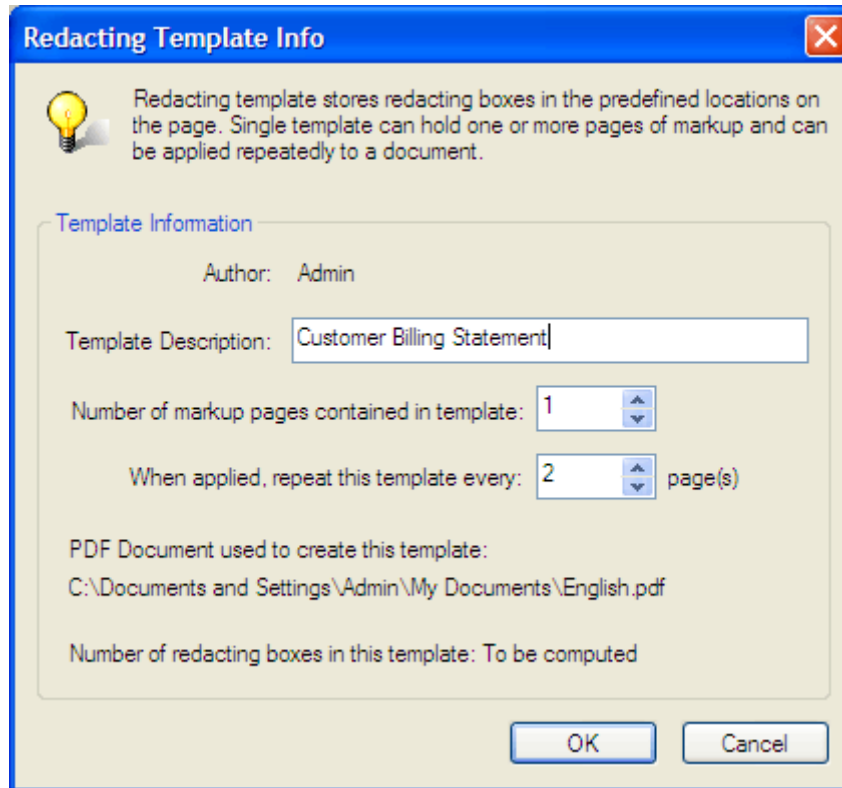
Templates do not require any special tools to create. Open a sample of the document that you plan to use the template on. Use any method available in AutoRedact™ and Adobe Acrobat® to create the desired set of redacting annotations.

Redacting annotations may span one or more pages and include all valid redacting annotation types. Redacting annotations are saved to a template starting from the first page of the document. Make sure that you design redacting annotations assuming that the first page of the current document corresponds to the first page of your template. Once you have created all redacting annotations you can save them to a template file.

To create a redacting template:

1. Use various “markup” tools provided by AutoRedact™ plug-in to create redacting annotations on one or more pages of the sample document. Verify that all necessary exemption codes are assigned and redacting annotations are positioned as correctly.
2. Select “**Plug-ins > Redacting > Save Current Markup As Template...**” from the main menu. “Redacting Template Info” dialog should appear on the screen.
3. Enter redacting template description text into “**Template Description**” text. This text is optional and is used for informational purpose only. It will help you correctly identify the purpose of this template later.

- Specify how many pages from the current document will be stored in the template. AutoRedact™ counts pages from the beginning of the document. If you select “1” then only the first page of the document will be stored in the template. If “2” is selected then first two pages will be stored and etc.



- Enter the number of pages to repeat this template when it applied to the document. You can change this value later when applying the template. However, it is strongly recommended to enter a correct number of pages that this template has been designed for. You can easily forget all details about the template few weeks later and pre-selecting all values is a good way to preserve your work.
- The name of the user (author) and the location of the document used to design this template will be automatically stored in the template.
- Click “**OK**” to save the template to the external file. “**Save As**” dialog should appear on the screen prompting for the output filename. Navigate to the desired location on your computer and enter a filename. AutoRedact™ stores all templates in the proprietary file format with AMT extension.

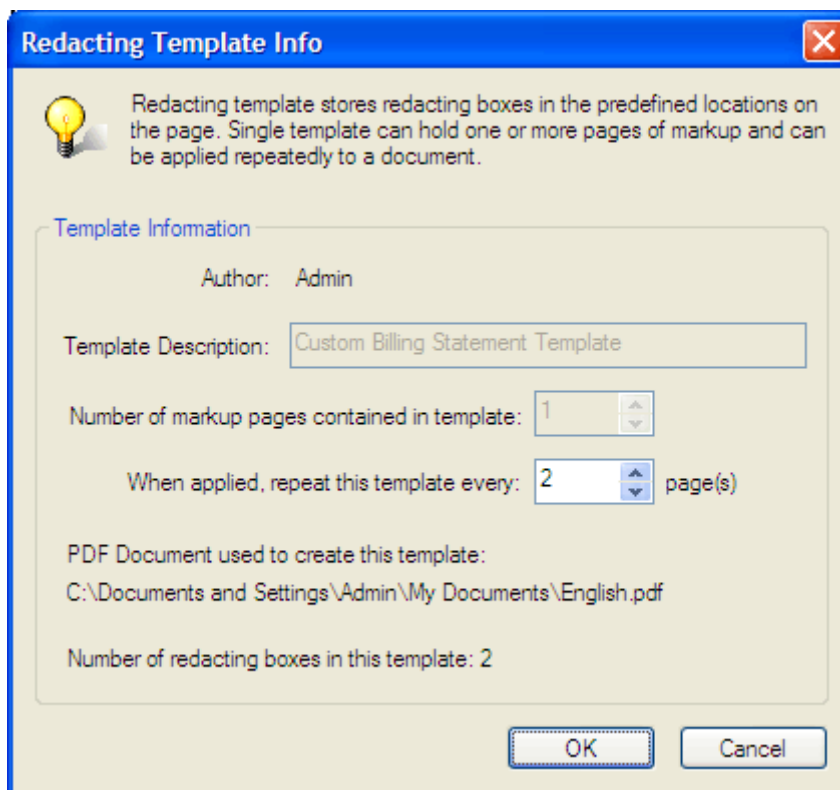
Once you saved a template to a file it can be used to add redacting markup to other compatible documents. In order to preserve a correct placement of annotations, documents should have page sizes identical to the sample document that has been used to design the template. The location of the redacting annotation is stored relative to the

lower-left corner of the page. If a template is applied to a document with a different page size then redacting annotations will be shifted relatively to lower-left corner of the page.

## Applying Templates

To apply a redacting template:

1. Select “**Plug-ins > Redacting > Mark Up Text With Template...**” from the main menu. “**Open**” dialog box should appear on the screen.
2. Select AutoRedact™ markup template file (\*.AMT) and click “**OK**” button.
3. “**Redacting Template Info**” dialog should appear on the screen displaying details about the selected template:



Most fields in this dialog box are read-only. You can only change the number of pages to repeat the template for the current document. No changes made in this dialog box will be saved to the template file.

4. Click “OK” button to apply redacting annotation to the current document. All annotations from the template will be added to the document. Software will repeat the template number of pages specified starting from the first page of the document. For example, suppose you have a template that contains 2 pages and needs to be repeated every 3 pages. When this template is applied, first “page” of



the template will be applied to the first page of the document and second “page” of the template will be applied to the second page of the document. When the end of the template is reached, software will repeat this template after a 3 page interval. The whole process will be repeated starting from the pages 3, 6, 9 and etc. Software will continue to apply a template until the end of the document is reached.

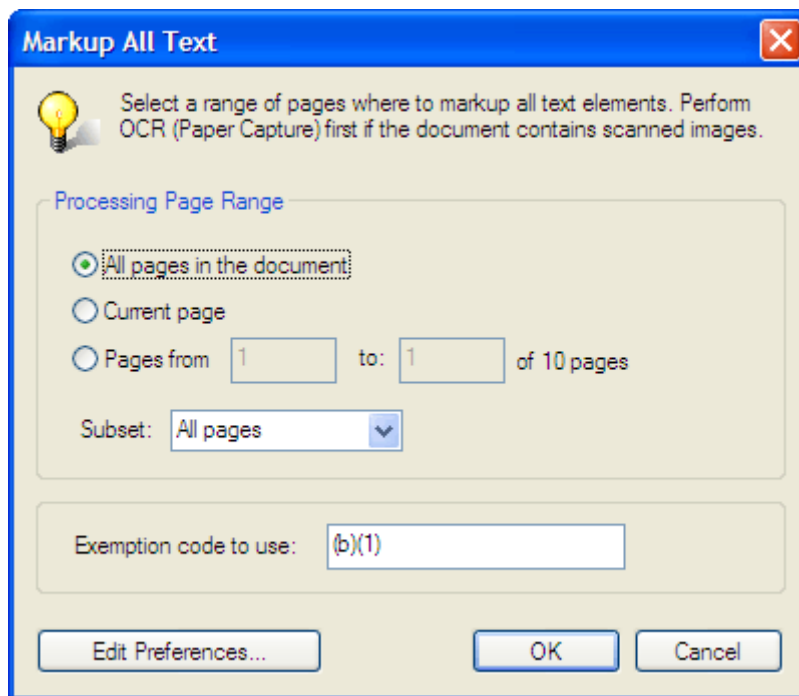
5. At the end of processing, a confirmation dialog box will appear, displaying processing time, number of pages processed, and the total number of annotations created.

## Marking Up All Text

Some documents may require redacting all text in certain pages or in the whole document. For this purpose, AutoRedact™ provides a “*Mark Up All Text*” operation.

To mark up all text elements within a page range:

1. Select “*Plug-ins > Redacting > Mark Up All Text*” from the main menu or use “*Redacting*” toolbar. “*Markup All Text*” dialog should appear on the screen:



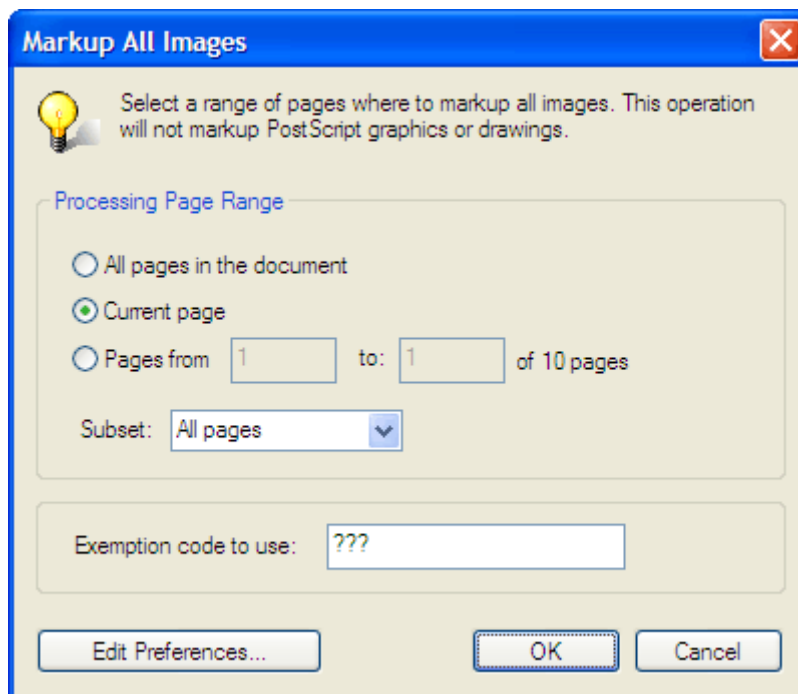
2. Select a processing page range: “*All pages in the document*”, “*Current Page*” or “*Pages from – to*”.
3. Select page subset from “*All pages*”, “*Odd only*” or “*Even only*”.
4. Specify exemption code to assign to all new annotations to be created during this operation. NOTE: This operation uses “*Rectangle*” style to create redacting annotations.
5. Optionally click on “*Edit Preferences...*” button to change “*Markup*” settings that affect visual appearance of redacting annotations.
6. Click “*OK*” button to start processing. All text elements within specified page range will be marked for redacting.

## Marking Up All Images

Some documents may require redacting of all images within certain pages or the whole document. For this purpose, AutoRedact™ provides a “*Mark Up All Images*” operation that automatically marks up all image objects for redacting.

To mark up all text elements within a page range:

1. Select “*Plug-ins > Redacting > Mark Up All Images*” from the main menu. “Markup All Text” dialog should appear on the screen:



2. Select a page range to process: “*All pages in the document*”, “*Current Page*” or “*Pages from – to*”.
3. Select page subset from “*All pages*”, “*Odd only*” or “*Even only*”.
4. Specify exemption code to assign to all new annotations to be created during this operation. NOTE: This operation uses “*Rectangle*” style to create redacting annotations.
5. Optionally click on “*Edit Preferences...*” button to change “*Markup*” settings that affect visual appearance of redacting annotations.

Click “**OK**” button to start processing. All image objects within the specified page range will be marked for redacting.

# Reviewing Redacting Markup

## Overview

Once you have marked the document content for redacting, you need to inspect and verify the resulting annotations. This step is not mandatory and does not involve execution of any special operations, but it's recommended as part of a solid redacting workflow. By reviewing redacting annotations you are making sure that only desired information will be removed from the document. It also helps to ensure that no confidential information has been omitted from redacting.

Redacting review might include visual inspection of the pages or individual redacting annotations, editing redacting areas and exemption codes, exporting document to a text file (to maintain records), printing a document with redacting annotations.

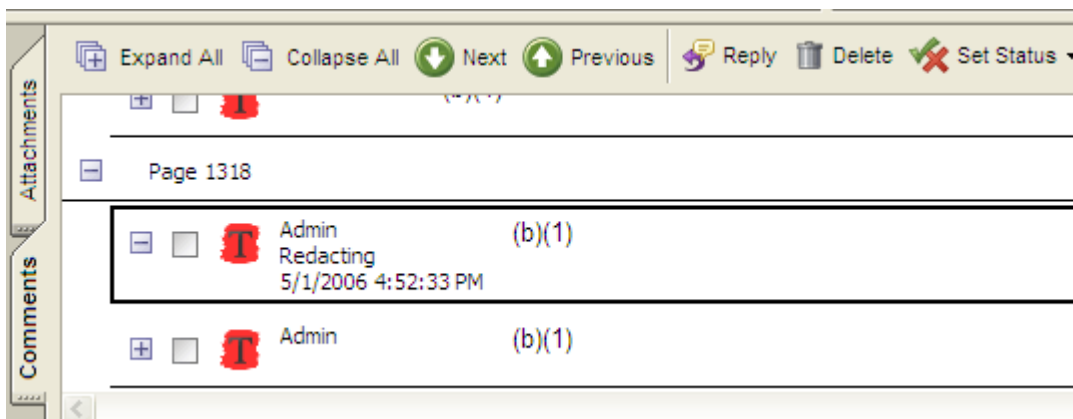
## Navigating and Editing Redacting Annotations

Efficient and convenient navigating between many redacting annotations is very important during the review procedures. Adobe Acrobat® offers excellent tools for working with comments that can be also used for redacting annotations since AutoRedact™ uses standard annotations types for content markup.

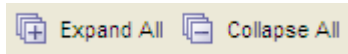
Using comment navigation tab you can quickly jump from one annotation to another, view all information related to annotations such as author, date and subject, search for annotations with specific exemption code or comments, print annotation with exemption codes, edit exemption codes attached to annotations. AutoRedact™ uses annotation notes to store exemption code making it very easy to modify.

To open or close “*Comments*” navigation tab:

1. Select “*Plug-ins > Redacting > Show/Hide Navigation*” or click on “*Show/Hide Navigation*” button in the “*Redacting*” toolbar.
2. Alternatively, you can select “*View > Navigation Tabs > Comments*”.

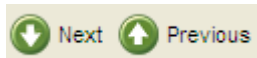


Use navigation buttons located on the top of the “**Comment**” tab to navigate between redacting annotation in the document:

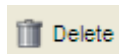


Click “**Expand All**” button to expand all annotations. Expanded annotations will display their author, subject, date, and note fields.

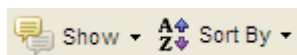
Click “**Collapse All**” button to collapse all annotations. Comments list will be collapsed to show only page nodes.



Click “**Next**” or “**Previous**” buttons to move to the next or previous annotation. Redacting annotation will be highlighted in the page view and document will be automatically scrolled to make that annotation visible.

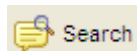


Click “**Delete**” button to delete currently selected annotation. Exercise caution since Adobe Acrobat® will immediately delete the annotation without prompting you to confirm the deletion. Select “**Edit > Undo**” from the main menu to restore accidentally deleted annotation.

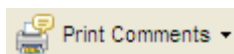


Click “**Show**” button to open a pull-down menu that allows you to customize how and what annotations are displayed in the “**Comments**” tab. For example, you may display only annotations created by a specific author (reviewer) or annotations of the specific type.

Click “**Sort By**” button to open a pull-down menu that allows you sort annotations in the “**Comments**” tab. Annotations can be sorted by “**Type**”, “**Page**”, “**Author**”, “**Date**”, “**Color**” and “**Checkmark**” status. Checkmarks have no specific meaning and can be used by user to indicate a custom information or status.



Click “**Search**” button to open a search panel that lets you quickly search all comments (exemption codes are part of the comments) for occurrences of a specific string. Search results are displayed in the separate window. Click on a search result to highlight corresponding annotation. “**Search**” functionality is very useful when you want to look only at redacting annotations with a specific exemption code.



Click the “**Print Comments**” button to print or created PDF with summary of comments. Summary document contains pages with comments from the original

document as well as automatically generated “summary” pages (“summary” pages are inserted right after corresponding document page). “**Summary**” page contains detailed information about each annotation on the given page. There might be more than one “summary” page for each document page containing annotations. If certain page has not annotations then a blank “summary” page will be attached with message “This page contains no comments”.

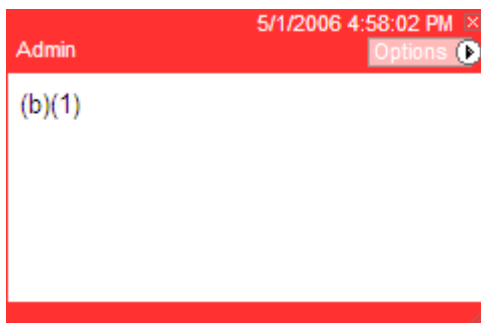
## Editing Exemption Codes

There is a number of different methods that can be used to edit the exemption code. AutoRedact™ uses comments or notes attached to redacting annotation to store the exemption code. You can edit exemption codes in the popup window of the note or use “**Comments**” tab. Using “**Comments**” tab is convenient when you have to modify many redacting annotations or search for a specific exemption code.

Only the first line of the note is used as an exemption code during the redacting process. Use extra lines to add comments, notes or any other information you may find useful while preparing documents for redacting. All but the first text line will be ignored during the redacting process. This simple method allows you to keep the exemption code and custom comments related to a single annotation in one place.

To edit exemption code or comments in the popup note window:

1. Double-click the annotation using “**Hand**” or “**Select**” tool. Popup window should appear on the screen. Click inside the popup and type or edit the text.



2. Click on the little “x” button in the upper-right corner of the window to close the popup window once you’ve finished working with it. Popup window will disappear from the screen.

To edit the exemption code in the “**Comments**” navigation tab:

1. Select “**Plug-ins > Redacting > Show/Hide Navigation**” or click on “**Show/Hide Navigation**” button in the “**Redacting**” toolbar.

2. Select annotation from the list and click on the comments area. It will be converted into a text box where you can edit the exemption code.

## Moving and Resizing Redacting Annotations

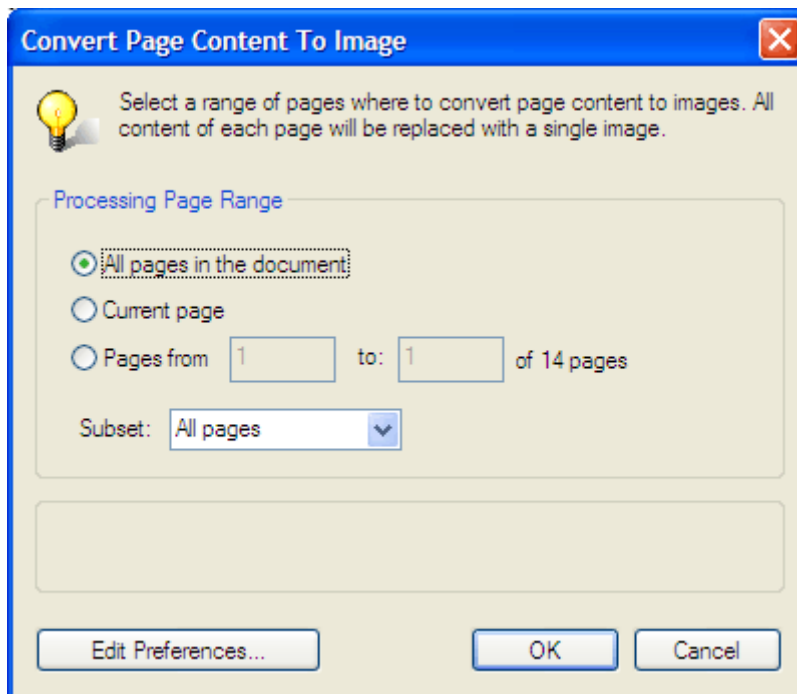
Redacting annotations of the “***Rectangle***” style can be easily moved or resized using standard “***Hand***” or “***Select***” tools. Click on border of the annotation and then drag it to the desired location on the page. Move the cursor over the corners of the annotation (cursor will change its shape to indicate “resize” mode) to resize the annotation.

Redacting annotations of “***Highlight***”, “***Underline***” and “***Cross-out***” styles can not be moved in Adobe Acrobat®. They are typically created in conjunction with text elements and are not movable or resizable using standard Acrobat tools.

## Converting Page Content to Image

AutoRedact™ plug-in can redact information that is contained in the text and image elements of PDF documents. Postscript graphics can't be safely redacted in their original form so they need to be converted to an image. Such drawing or graphics are represented in the PDF file as a series of drawing commands (instructions) and can't partially modified without affecting the rest of the graphics. AutoRedact™ plug-in offers a solution for this problem by providing “**Convert Page Content To Image**” conversion operation. This operation will convert ALL page contents into a black-and-white image and remove all original page elements. Black-and-white images can't adequately reproduce color or gray-scale information, however they offer the smallest data size available compared to other data types. Images take up considerably more disk space than graphics or text. The resulting document size will increase in size after converting pages to images. The amount of this increase depends on how much information is presented on the page. Mostly white or mostly black images can be efficiently compressed and will not significantly increase the size of the output document. It's suggested to convert only those pages that are actually contain graphics that need to be redacted rather than converting the whole document.

1. Select “**Plug-ins > Redacting > Advanced > Convert Page Content to Image...**” from the menu to convert pages that contain drawings (graphics) that need to be converted to images.



2. Select a range of pages and page subset that needs to be processed. Whole content of each page will be replaced with a single image and all other elements will be



deleted from the document. The output resolution greatly affects quality and appearance of the resulting image. Image resolution can be adjusted from low-quality 150 dpi to high-quality 600 dpi. Note that higher quality and resolution of the image comes with significantly increased file size needed to represent more information. This conversion operation creates a black & white images and will change appearance of the color graphics.

To adjust image resolution for the conversion process click on “***Edit Preferences...***” button. Adjust “***Graphics to image conversion resolution***” option to a desired value and close the document. You have to do it once only, since AutoRedact™ will remember this preference for the next time.

## Exporting Text Content to ASCII File

Document content can be exported into ASCII text file to keep the record of document content before and after redacting. AutoRedact™ uses slightly different export format than standard text export available in Adobe Acrobat®. Text files created by AutoRedact™ also include page breaks, page numbers and word counts to help navigate and review the exported text.

To export a document to an ASCII text file:

3. Select “**Plug-ins > Redacting > Advanced > Export To Text File...**” from the main menu. “**Save As**” dialog box should appear on the screen.
4. Select output filename and location. Click “**OK**” to save the document.

The sample below shows a portion of ASCII text file that has been exported using this operation:

```
----- PAGE 1 -----  
Report # I333-015R-2005  
Date 12/13/2005  
Redacting with Confidence: How to Safely Publish  
Sanitized Reports Converted From Word to PDF  
Architectures and Applications Division  
of the  
Systems and Network Attack Center (SNAC)  
Information Assurance Directorate  
National Security Agency  
ATTN: I333  
9800 Savage Rd. STE 6704  
Ft. Meade, MD 20755-6704  
(410) 854-6191 commercial  
(410) 854-6510 facsimile  
W2Kguides@nsa.gov  
CLASSIFICATION//X1  
----- NUMBER OF WORDS ON PAGE 1 : 69 -----
```

## Printing Redacting Annotations

Redacting annotations can be printed as a part of the document by using a regular “**File > Print...**” menu or printed as a part of the comments summary document.

To print redacting annotations on top of the document:

1. Select “**File > Print...**” from the main menu. “**Print**” dialog box should pop up on the screen.
2. Select desired output device and printing options.
3. Select “**Comments and Forms**” > “**Document and Markup**” to print annotation on top of the document.
4. Click “**OK**” button to start printing. This will print document pages with redacting annotations on top. No exemption codes or comments will be printed. See the next section “**Printing Redacting Summary Document**” for details on how to print redacting annotations and all the corresponding information together.

The snapshot below shows a small sample of the printed document with redaction annotations on top:

### Abstract

There are a number of pitfalls for the person attempting to sanitize a **Word** document for release. This paper describes the issue, and gives a step-by-step description of how to do it with confidence that inappropriate material will not be released.

### SUMMARY

Both the Microsoft Word document format (MS Word) and **Adobe Portable Document (PDF)** are complex, sophisticated computer data formats. They can contain many kinds of information such as text, graphics, tables, images, meta-data, and more all mixed together. The complexity makes them potential vehicles for exposing information unintentionally, especially when downgrading or sanitizing classified materials. Although the focus is on MS Word, the general guidance applies to other word processors and office tools, such as **WordPerfect**, **PowerPoint**, Excel, Star Office, etc.

This document does not address all the issues that can arise when distributing or downgrading original document formats such as MS Word or **MS PowerPoint**. Using original source formats, such as MS Word, for downgrading can entail exceptional risks; the lengthy and complicated procedures for mitigating such risks are outside the scope of this note.

## Printing Redacting Summary Document

To print redacting annotations along with exemption codes as a “summary” document:

1. Open “**Comments**” navigation tab by selecting “**Plug-ins > Redacting > Show/Hide Navigation**” or click on the “**Show/Hide Navigation**” button in the “Redacting” toolbar.
2. Click on the “**Print Comments**” menu and select “**Create PDF of Comments Summary**”. Comments summary document will be generated and displayed in Adobe Acrobat®. You can print this summary as a regular PDF document by selecting “**File > Print...**” from the main menu.

Summary document contains pages with comments from the original document as well as automatically generated “summary” pages (“summary” pages are inserted right after corresponding document page). Summary page contains detailed information about each annotation on the given page. There might be more than one “summary” page for each document page containing annotations. If a certain page contains no annotations then a blank “summary” page will be attached with message “This page contains no comments”. The snapshot below shows a sample of the summary document with an original page on the left (note a small number by each redacting annotation) and redacting annotation summary (including an exemption code) on the right.

attempting to sanitize a **Word**<sup>1</sup> document for release. p-by-step description of how to do it with t be released.

(MS Word) and **Adobe Portable Document (PDF)**<sup>2</sup> are . They can contain many kinds of information ta, and more all mixed together. The complexity formation unintentionally, especially when . Although the focus is on MS Word, the general l office tools, such as **WordPerfect**<sup>4</sup> **PowerPoint**<sup>3</sup>

that can arise when distributing or downgrading of **MS PowerPoint**<sup>5</sup>. Using original source formats, l exceptional risks; the lengthy and complicated le the scope of this note.

### Page: 3

Sequence number: 1  
Author: Admin  
Subject: Redacting  
Date: 5/11/2006 7:10:51 PM  
[Redacted] (b)(1)(c)

Sequence number: 2  
Author: Admin  
Subject: Redacting  
Date: 5/11/2006 7:10:41 PM  
[Redacted] (b)(5)

Sequence number: 3  
Author: Admin  
Subject: Redacting  
Date: 5/11/2006 7:10:59 PM  
[Redacted] (b)(1)(c)

Sequence number: 4  
Author: Admin  
Subject: Redacting  
Date: 5/11/2006 7:10:56 PM  
[Redacted] (b)(1)(c)

Sequence number: 5  
Author: Admin  
Subject: Redacting  
Date: 5/11/2006 7:11:11 PM  
[Redacted] (b)(5)


## Redacting Marked Content

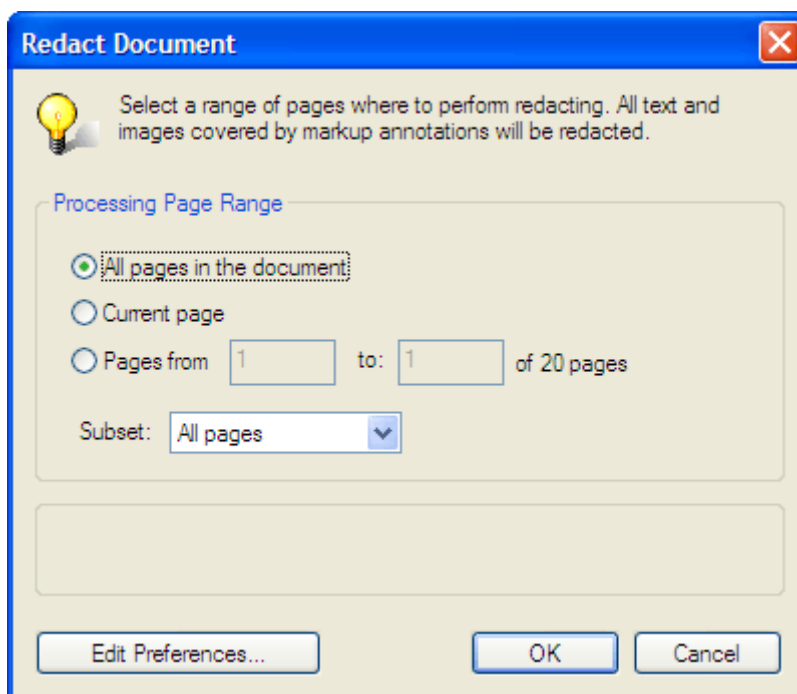
Once all of the desired text and images have been marked for redacting you can run the actual redacting procedure to remove selected content from the document. Redacting can be performed directly on the original document or on an automatically created copy. Text can be redacted using either blank space symbol or any other selected character. Various options are available that affect final appearance of the redacted document. Color bars and exemption codes can be added to the document to indicate where and why the information has been removed.

### Specifying Redacting Preferences

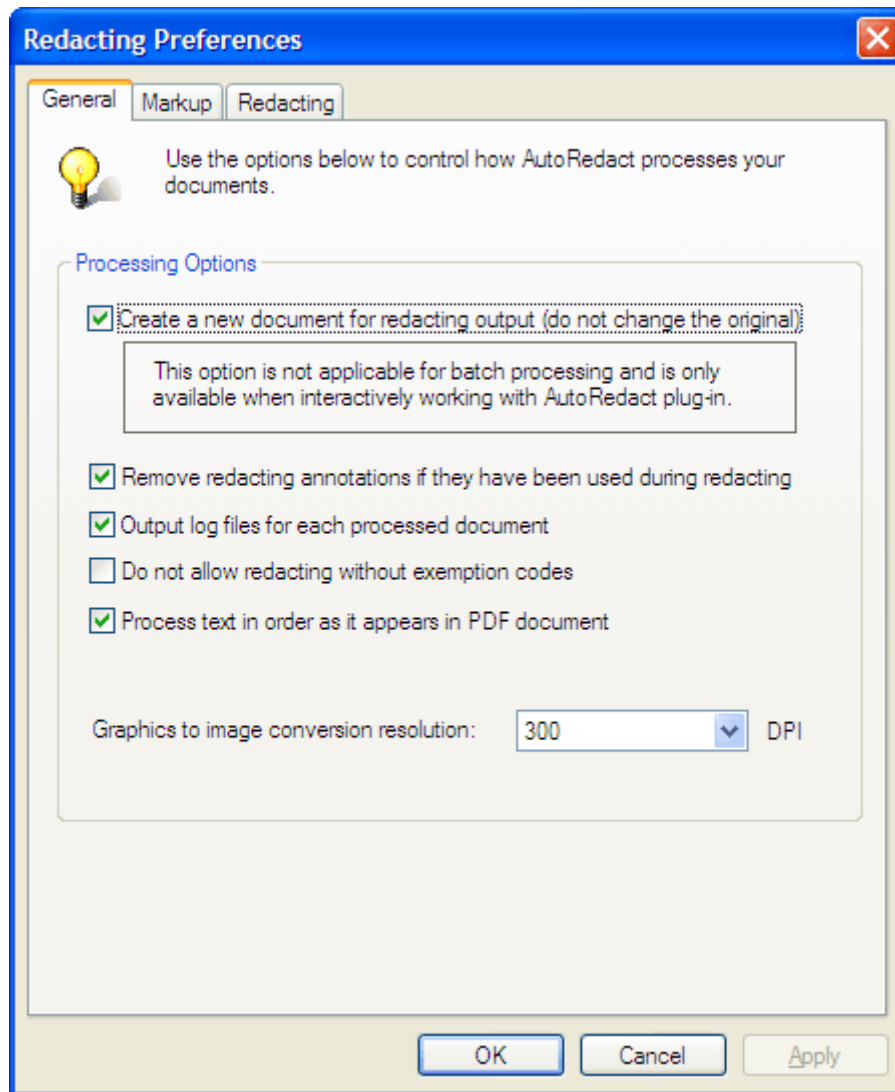
Redacting preferences can be accessed from the menu or from the redacting toolbar. Select “**Plug-in > Redacting > Preferences...**” from the menu to open the “**Redacting Preferences**” dialog box. “**Redacting**” tab contains options and settings that control visual appearance of the final redacted document and the processing logic of the redacting operation. Consult “**Redacting Preferences**” chapter in this manual for detailed description of all redacting options and settings.

### Redacting the Document

1. Select “**Plug-ins > Redacting > Redact Marked Content...**” from the menu or click on the “**Redact marked Content**” button (  ) on the redacting toolbar. “Redact Document” should popup on the screen:



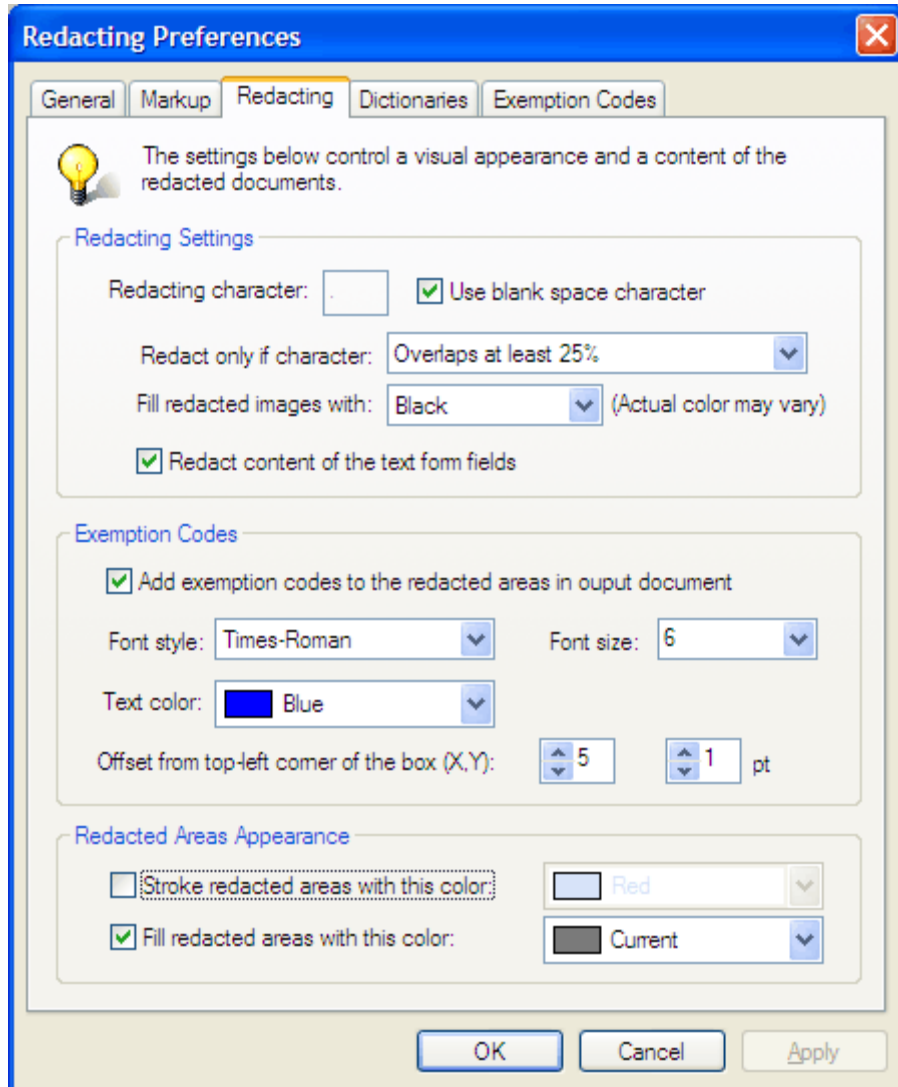
2. Select a range of pages and page subset for processing. Only selected pages will be redacted.
3. You can access redacting preference by clicking the “*Edit Preferences*” button. “*Redacting Preferences*” dialog box will appear on the screen. Specify all redacting preferences and click “OK” to close the preferences dialog box and save settings. AutoRedact™ will remember your preferences so that you don’t have to enter them every time you run the software.



4. Check “*Create a new document for redacting output*” option if you do not want to modify your original document. A copy of the document will be created and redacting will be performed on it without touching the original. Note that this option is not applicable when redacting in the batch framework. Batch processing performs all operations directly on the input document and provides a way to save output document under a different name or in the different location. Consult

“*Selecting Redacting Preferences*” chapter in this manual for detailed description of settings and parameters.

5. Click on the “*Redacting*” tab of the “*Redacting Preferences*” dialog to specify the visual appearance of the redacted document and processing logic.



Consult “*Selecting Redacting Preferences*” chapter in this manual for detailed description of all settings and parameters.

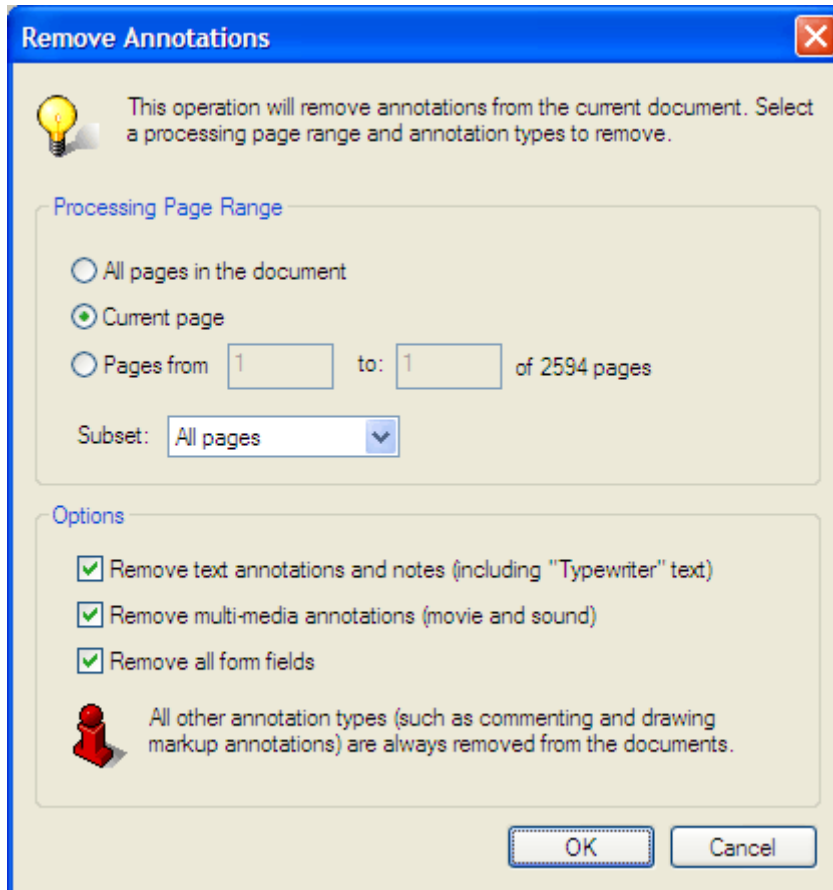
6. Click “**OK**” button to close “Redacting Preferences” dialog. Click “**OK**” button on the “Redact Document” dialog to start processing. Confirmation dialog box appears on the screen at the end of the processing stage displaying processing time, number of pages processed, and the total number of annotations created. Review redacting output and save the document under desired filename.

## Removing Annotations

There are many types of annotations that are used in Adobe Acrobat for a wide variety of tasks. Comments, notes, drawing markup, highlights, multimedia clips, text notes, typewriter text, and interactive form fields are all examples of Acrobat annotations. Many of these annotation types can potentially contain confidential information (such as notes) or only be used while working on the document. Once a document has been redacted, it's a good idea to remove all annotations (including redacting annotations) from it for an additional degree of protection from accidental disclosure of confidential information.

To remove annotations from the document:

1. Select “**Plug-ins > Redacting > Remove All Annotations...**” from the main menu. “**Remove Annotations**” dialog box should appear on screen:



2. Select a range of pages and page subset that needs to be processed.
3. Optionally select whether you want to remove certain types of annotations that sometimes may be necessary to retain in the document (such as text notes, multimedia annotations, and form fields).



4. Click “**OK**” button to start removing annotations from the document.
5. Inspect the document to make sure that annotations have been properly removed.

## Removing File Attachments

PDF documents can contain embedded file attachments. This capability poses additional risk of accidental disclosure of confidential information. File attachments may not be easily visible on screen (especially in older version of Adobe Acrobat) and it’s quite easy for them to slip unnoticed during the redacting review. You would have to specifically check for presence of file attachments in order to verify if the document has any. AutoRedact™ plug-in provides a one-step operation that automatically removes all file attachments from the document. This operation is also available in Acrobat batch framework to allow automatic removal of file attachments in the batch mode.

To remove all file attachments from the document:

1. Select “**Plug-ins > Redacting > Remove All Attachments...**” from the main menu.
2. Click “**OK**” in the verification dialog to start removing embedded file attachments.
3. Software will display an information message if a current document does not have any file attachments.

## Inspecting the Results

After all redacting operations have been completed it is generally a good idea to inspect the resulting document for possible omissions and perform other steps that may be necessary before releasing the document to the public:

1. Perform a text search or apply some of the redacting markup operations such as “**Markup by Text Pattern**” or “**Markup Words From Dictionary**” to see if there are any unwanted words or phrases accidentally left in the document.
2. Make any final changes to the document.
3. Make sure that no unwanted annotations have been left in the document. Apply “**Remove All Annotations**” operation if required.
4. Make sure that the final document has no file attachments that should not be there. Click on the “**Attachments**” tab in the document view or select “**View > Navigation Tabs > Attachments**” from the menu. Review the list of attached files and remove any unwanted files.
5. Edit document properties – enter or modify “Author” , list of keywords and document descriptions. Select “**File > Document Properties...**” to access “**Document Properties**” dialog.
6. Optionally secure document content or restrict document access, editing privileges or printing privileges. Select “**Document > Security > Secure This Document...**” from the menu to review and modify document security settings.
7. Optionally digitally sign the document. Select “**Document > Digital Signatures > Sign This Document**” from the menu to secure the document.
8. Save final version of the redacted document by selecting “**File > Save As...**” from the menu.

## Saving and Loading Preferences

Most options and settings that are used by AutoRedact™ for markup and redacting are accessible from the “**Redacting Preferences**” dialog box. This dialog box can be accessed by selecting “**Plug-ins > Redacting > Preferences...**” from the main Acrobat menu or by clicking on the “**Preferences**” icon in the “Redacting” toolbar. The redacting preferences that are listed on “**General**”, “**Markup**” and “**Redacting**” tabs can be saved to a settings file. You can share settings file with other team members to ensure that everyone in your team are working with the same configuration.

To save current redacting preferences to a settings file:

1. Select “**Plug-ins > Redacting > Manage Preferences > Save Preferences...**” from the main Acrobat menu. “**Save As**” dialog should appear on the screen prompting you to select output file name and location.
2. Select output file name and location for the setting file and click “**OK**” button. You can select new or existing file. This will save current preferences to a selected settings file with \*.RED extension.

To load redacting preferences from a settings file:

1. Select “**Plug-ins > Redacting > Manage Preferences > Load Preferences...**” from the main Acrobat menu. “**Open**” dialog box should appear on the screen prompting you to select an input settings file.
2. Select previously saved settings file (AutoRedact™ settings files have \*.RED extension) and click “**OK**” button. Redacting preferences will be loaded from the selected file and will overwrite any preferences you are currently using.

# Redacting Logs

## Overview of the Redacting Logs

AutoRedact™ plug-in keeps track of all redacting operations it performs on each document by maintaining a special log file. The plug-in automatically creates a separate log file for each processed document. The log file is created in HTML format making it easier to view, navigate and print using any web browser (such as Microsoft Explorer, or Firefox).

Redacting log files are stored in the same folder as the corresponding PDF documents. Log files have the same name as PDF files, but a different extension – HTM. Each redacting operation automatically adds records to the log file describing the details of the performed processing. It's possible to turn logging on and off by checking “***Output log files for each processed document***” option in “***Redacting Preferences***” dialog. Log files are enabled by default.

To turn automatic logging on or off:

1. Select “***Plug-ins > Redacting > Preferences...***” from the main menu.
2. Make sure “***General***” tab is selected.
3. Use “***Output log files for each processed document***” check button to toggle automatic logging.

Log files can be viewed, printed and cleared.

The example below shows a small portion of the sample log file:

```
Operation performed: MARKUP TEXT PATTERNS
Processing started: Tuesday, May 09, 2006 at 18:58:03
Processing stopped: Tuesday, May 09, 2006 at 18:58:05
Processing time: 00 hour(s) 00 minute(s) 02 second(s)
Adobe Acrobat Version: 7.5
AutoRedact Plug-in Version: 1.1, Build Date: Apr 27 2006
Author: Admin
Number of records: 28
Number of pages processed: 66
Number of deleted characters: 0
Number of redacted images: 0
Number of words marked up: 20
Number of images marked up: 0
Number of annotations deleted: 0
To end of the report
To top of the log file
Total number pages in the document: 66
```

Document PDF version: 1.6  
Document creator: Adobe InDesign 2.0.2  
Document producer: Adobe PDF Library 5.0  
Processing page range: All  
Processing page subset: All

-----START-----

Pattern: Passport  
Page 6, Keyword: "passport"  
Page 6, Keyword: "passport"  
Page 8, Keyword: "passport"  
Page 16, Keyword: "passport"

.....

## Viewing and Print Redacting Logs

To view the redacting log file for the current document:

1. Select “**Plug-ins > Redacting > View Log File...**” from the main menu or use “**View Log File**” button on “**Redacting**” toolbar.
2. Software will automatically find and open corresponding log file in an external browser window. Use the browser to view, navigate and print redacting logs.
3. Warning dialog will be displayed if no log file is currently available for the current document.

## Clearing Log Files

To clear (remove) a log file for the current document:

1. Select “**Plug-ins > Redacting > Advanced > Clear Log File For Current Document...**” from the main menu. Confirmation dialog box will appear on the screen. Click “**OK**” to proceed.
2. Software will automatically find and delete corresponding log file.
3. Warning dialog bx will be displayed if no log file is available for the current document.

# Batch Processing

## Overview of the Batch Processing

When you apply one or more sets of commands to your documents, you can save time and keystrokes by using an automated batch sequence - a defined series of commands with specific settings and in a specific order that you can apply in a single step. You can apply this sequence to a single document, to several documents, or to an entire collection of documents. Your custom batch sequences appear on the list with the predefined sequences in the "**Batch Processing**" dialog box. When you quit the application, your batch-processing definitions are saved so that you can reuse them in later work sessions.

AutoRedact™ plug-in installs several commands that can be accessed and executed via "**Batch Sequences**" dialog. These commands may be used alone or inside another batch sequences allowing you to incorporate redacting operations into your existing workflow. You need Adobe® Acrobat Professional® (versions 6.0 and 7.0) or Adobe® Acrobat® 5.0 in order to have a batch processing available on your system.

Another software product from EverMap, LLC - AutoBatch™ plug-in, can be used to invoke batch sequences from outside of the Adobe Acrobat®. This allows for a complete integration of Acrobat® batch sequences into a larger document processing workflow. You can read more about AutoBatch™ plug-in at <http://www.evermap.com/autobatch.asp>. Free trial version of AutoBatch™ plug-in is available to download.

## Redacting Commands

Acrobat batch processing can be accessed via "**Advanced > Batch Processing...**" from the main menu (in versions 6.0 and 7.0). AutoRedact™ installs the following commands into the batch processing framework:

- Mark Up Text From Dictionary
- Mark Up Text Patterns
- Mark Up Text With Template
- Mark Up All Text
- Mark Up All Images
- Convert Page Content To Image
- Redact Document
- Remove Markup Annotations
- Remove All Attachments

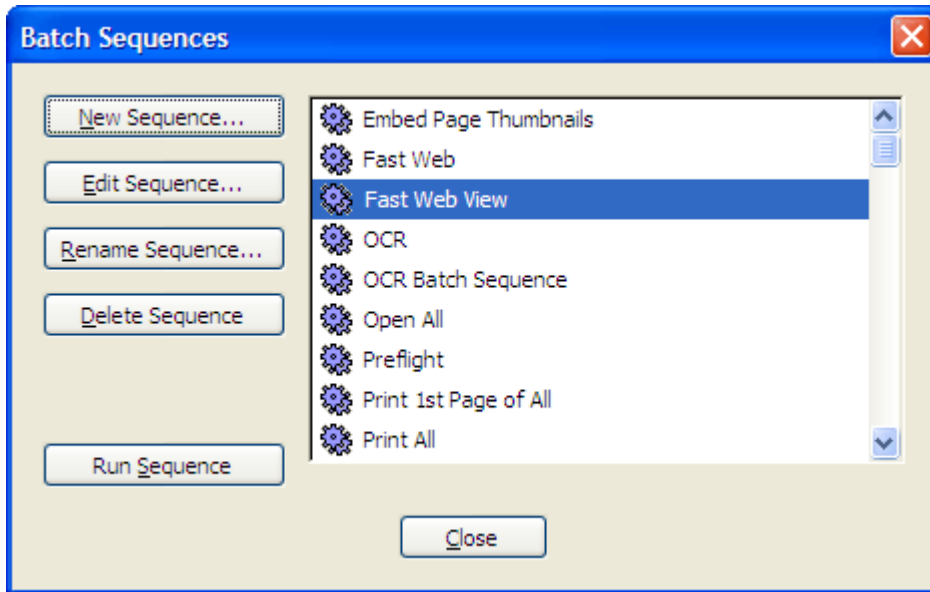
The functionality of each command is equivalent to the corresponding AutoRedact™ operation that is available from "**Plug-ins > Redacting...**" menu. Use these commands to create custom document redacting sequences. Each batch sequence can execute

multiple commands on input documents. Each command can be configured differently and uses separate redacting and markup preferences.

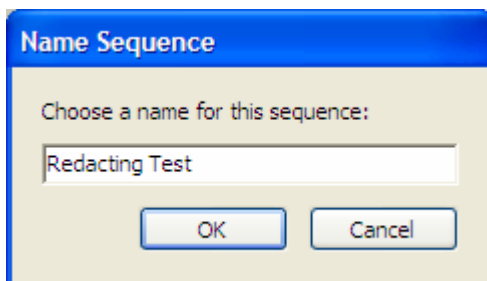
## Creating Custom Batch Sequences

To create a custom document redacting batch sequence:

1. Select “*Advanced > Batch Processing*” from the main menu. “*Batch Sequence*” dialog will pop up:

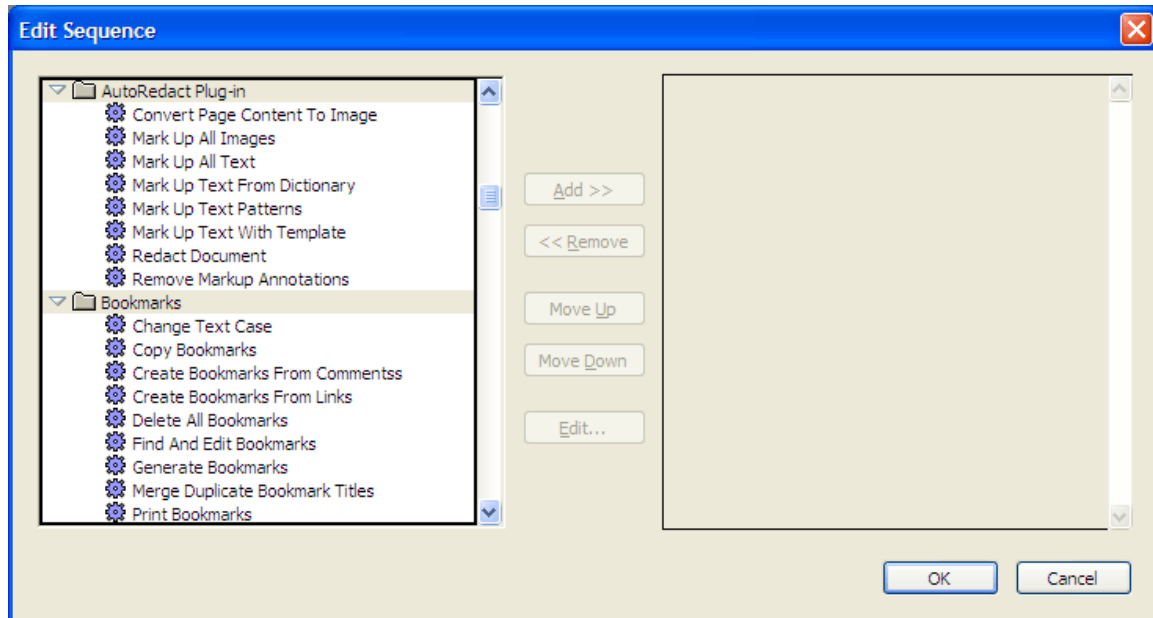


2. Click “*New Sequence...*” button and “*Name Sequence*” dialog box will appear on the screen. Enter a unique name for this sequence and click the “*OK*” button to continue.



3. Click “*Select Commands...*” button to specify batch commands to execute on input documents. “*Edit Sequence*” dialog should appear on the screen. This dialog allows you to add and remove commands to the sequence, edit commands settings, specify a “silent” or “interactive” mode for each command and determine the order in which commands should be executed. Select the desired batch command from the list

and click “**Add >>**” button. This will add the selected command to the command sequence on the right side of the dialog.

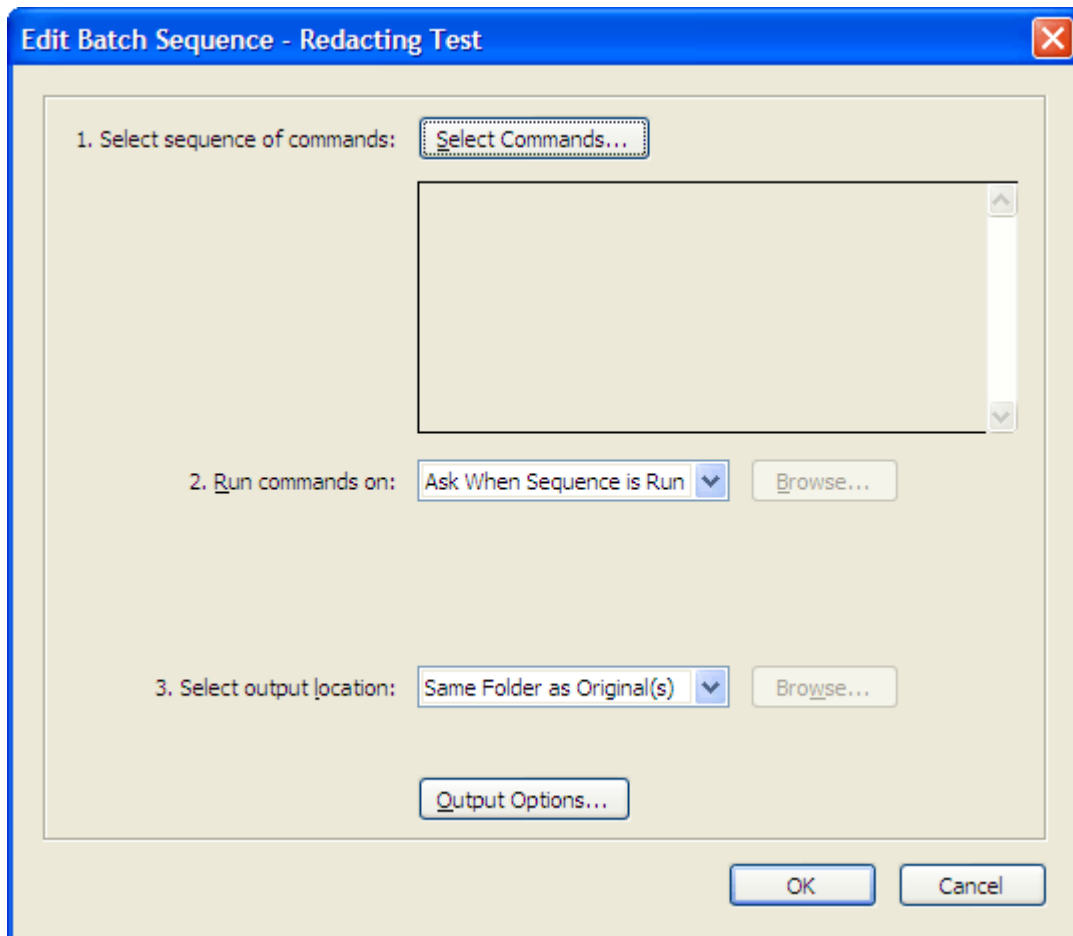


5. Click “**Edit...**” button to specify configuration settings for the command. Each command has a separate set of settings or preferences that can be configured during the design. For example, if you have two “**Markup Text Patterns**” commands then you have to specify their “**Markup**” preferences separately. Selecting preferences for one command in the sequence does not affect the settings of another one even if these two commands are of the same type.
6. You can optionally toggle a batch command between “silent” and “interactive” modes by clicking on the small toggle button in front of each command entry. This option affects how the particular command is going to be executed during the runtime. If the command is executed in the “interactive” mode then it will prompt users to select its “settings” during the execution. If “interactive” mode is turned off (this is a default behavior) then this particular command is executed with the design-time settings without displaying any dialog boxes. This is the most common way to execute batch commands.
7. Click “**OK**” button once you’ve finished configuring this batch sequence. “**Edit Sequence**” dialog box will be closed and you are back to “**Edit Batch Sequence**” dialog box.
8. Specify input documents for this command sequence by selecting one of the available input options from “**Run Commands On:**” pull down menu.
9. Select output location for processed documents from the “**Select output location:**” pull down menu. You can process one or more pre-selected files or a



content of the whole folder at the same time. Another option includes prompting for input each time this sequence is executed.

10. Click “**Output Options...**” button to specify output file name and file type options in “**Output Options**” dialog. It’s typically a good idea to specify a different output file name by appending extra characters after the input document name. This will ensure that the original input document will not be overwritten when this batch sequence is executed. It will allow you to keep both original and processed documents.



10. Click “OK” button once all the options has been set. This will save the batch sequence and add a new entry into the list of available batch sequences.

## Executing Batch Sequences

Existing batch sequence can be executed from the “**Batch Sequences**” dialog box.

1. Select “**Advanced > Batch Processing**” from the main menu to get to this dialog box.

2. Select a batch sequence from the list and click "**Run Sequence**" button.
3. Click "**OK**" in confirmation dialog and Acrobat will prompt you to select input document(s) unless pre-selected files or folder were specified as input for the sequence. Make sure that documents you want to process are not currently open in Acrobat viewer. Select one or more input documents and click "**OK**" button to start processing.
4. Open and review output documents in Adobe Acrobat (if necessary) to verify that batch sequence performs as expected.

## Advanced Batch Processing

Batch sequences can be also executed from outside of Adobe Acrobat using AutoBatch™ plug-in from EverMap Company, LLC. This method of executing batch sequences is not originally available in Adobe Acrobat®. Many organizations require the ability to integrate Acrobat batch sequences into bigger document processing workflow. AutoBatch™ adds the command-line batch file functionality to the Adobe® Acrobat Professional®. It allows users to execute any existing Acrobat batch sequence from a command-line prompt or a batch file. The plug-in provides easy to use interface for creating batch files and does not require any type of programming. The output command-prompt (DOS) batch file is created automatically based on user selection of an existing batch sequence and a required action. Resulting batch file can be started from a system command prompt and automatically launches Adobe® Acrobat Professional® that immediately starts executing a specified batch sequence. Adobe® Acrobat Professional® automatically exits once processing is complete. AutoBatch™ plug-in adds a missing functionality to the Acrobat software - ability to process PDF documents in the completely automatic mode. Visit <http://www.evermap/autobatch.asp> for more details.

## Troubleshooting

**Q. I am trying to install AutoRedact™ plug-in but keep getting an error that tells me that “Can not find Adobe Acrobat (version 5.0 and up) installation on your system.”**

A. Most likely you do not have a full version of Adobe Acrobat software installed on your computer. AutoRedact™ plug-in does not work with the free Adobe Acrobat Reader.

**Q. Most menu entries on “Redacting” menu and buttons on “Redacting” toolbar are dimmed. Why is that?**

A. You have to open a PDF document first. Most of the menus and buttons will be dimmed if there is no active document open. Select “*File > Open...*” from the menu to open a PDF document for redacting.

**Q. I am getting “Document security settings do not permit document editing” message when I am trying to apply any redacting or markup operation. Why is that?**

A. This is because the document you are working with has security settings that do not allow document modifications. The author of PDF document can set restrictions that prevent you from using certain features. You can display security settings for the document by selecting “*File > Document Properties...*” from the menu. Choose “*Security*” tab in the “*Document Properties*” dialog. Modify security settings to allow document editing.

**Q. I am trying to search and markup text in the document but software does not seem to recognize any text in the document although I can see it on the page. What is wrong?**

A. Most likely you are working with a scanned document that does not contain any searchable text. Each page in such document is just an image. You need to run Optical Character Recognition (OCR) processing on this document to extract text from the image and make it searchable. In older versions of Adobe Acrobat this process is also known as “*Paper Capture*”. Save the document to retain text elements created by OCR process.

**Q. Form fields are redacted completely even if they are not completely inside a redacting area. Why is that?**

A. Text form fields are processed differently from regular document content because of their dynamic nature. They can’t be partially redacted. Although, AutoRedact™ can redact text form fields it’s recommended to flatten forms first before redacting. This will allow software to redact forms fields in the same way as regular text.

**Q. I have a drawing in my document that is not redacted by the software. The drawing is covered by a redacting area. What is wrong?**

A. AutoRedact™ can redact text, images, form fields and annotations, but it can't redact PostScript graphics or drawings. You will need to convert the whole page that contains this drawing to an image and redact it after that. Use "**Plug-ins > Redacting > Advanced > Convert Page Content To Image...**" operation to perform this conversion.

**Q. The software redacts more text that has been selected by redacting area.**

A. AutoRedact™ provides a number of options that determine how text is redacted. Software computes the overlap between redacting area and each character on the page and decides if it should be redacted based on "**Overlap**" settings. The best setting to use is "**Redact if character overlaps at least 25%**". It will ensure that text elements that are only touched will not get deleted. You can change these settings in the "**Redacting Preferences**" dialog. Select "**Plug-ins > Redacting > Preferences...**" from the menu to access it. Click on "**Redacting**" tab to access redacting preferences.

**Q. The software only redacts few characters of the selected word. Some characters are left untouched.**

A. Check redacting preferences and modify current "Overlap" mode that determines how AutoRedact™ determines that certain character needs to be redacted. Software computes the overlap between redacting area and each character on the page and decides if it should be redacted based on "**Overlap**" settings. The best setting to use is "**Redact if character overlaps at least 25%**". It will ensure that text elements that are only touched will not get deleted. If this is still not enough, you can specify for text to be redacted if it touches a redacting area (this will also redact text that is overlapped by the redacting area).

**Q. I want to print a document with redacting annotations but document is printed without any annotations. What is wrong?**

A. Make sure to specify that you want to print "Document and Markup" in the "Print Dialog". Select "Document and Markup" from "Comments and Fields" pull down menu. You should immediately see redacting annotations in the print preview area.

**Q. I want to run AutoRedact™ plug-in in the batch mode but I do not see "Advanced > Batch Processing..." menu in my installation of Adobe Acrobat.**

A. Batch processing framework is only available in Adobe Acrobat Professional product. You will need to upgrade to a Professional version if you want to create and execute batch sequences.

## Technical Support

If you have problems, questions or new feature requests while using AutoRedact™ plug-in you can contact our technical support. Make sure to first look at the relevant chapter in this manual and see if there is an answer or an explanation for your question. This manual assumes you have a working knowledge of your computer and its operating conventions, have some basic experience working with PDF documents in Adobe Acrobat® or Adobe Acrobat Professional®, including how to open, save, close and print documents. It also assumes that you are familiar with basic menus and commands available in Adobe Acrobat® products. If you have technical questions that are not directly related to AutoRedact™ functionality we suggest consulting Adobe Acrobat® “Complete Help” and “How To” pages. For detailed information on how to use “Complete Help”, choose “**Help > Complete Acrobat 7.0 Help**” from the main menu.

Technical support can be contacted via e-mail at [tech@evermap.com](mailto:tech@evermap.com) or using special form on our web site at <http://www.evermap.com/techsupport.asp>. Technical support is free of charge for all users of our software, including users of the free evaluation version.

In order to provide a prompt and quality technical support we typically ask for the following information:

- Version of operating system you are using.
- Version and build date of AutoRedact™ software (Select “**Help > About Third-party Plug-ins > AutoRedact...**” from the main Acrobat menu to access this information).
- Sample copy of the document you are working with (in case if a document is confidential or classified please provide a sample that closely resembles it or has been created using the same procedure or workflow). This is crucial for providing you with fast and efficient technical support. Most problems or questions can be quickly answered if we have access to a document sample, even if it’s small.
- AutoRedact™ preferences you are currently using. You can save them to the settings file and attach it to the email message. Select “**Plug-ins > Redacting > Manage Preferences > Save Preferences To File...**” from the main menu to save your current redacting preferences to a settings file. This file will allow us to have a full description of your AutoRedact™ configuration. It contains only application settings and does not include redacting dictionaries or any private information from your computer.
- Short description of the question or a problem you are experiencing.
- Name and contact information of the person to whom we should address our correspondence.

## Appendix A

### Freedom of Information Act (FOIA) Exemptions

The Freedom of Information Act is the federal law that makes government information accessible to the people. The law is based on the presumption that individuals have a right to know what their government is up to and that government agencies have a duty to provide full disclosure of all records that are not specifically and reasonably exempt.

The Freedom of Information Act (FOIA) was enacted in 1966 to provide people a means to access federal agency records, with the exception of those excluded from consideration under the FOIA or protected by nine FOIA exemptions. It is the policy of each federal agency to make records available to the public to the greatest extent possible, in keeping with the spirit of the FOIA, while at the same time protecting sensitive information that may be withheld pursuant to one of the FOIA's exemptions. In accordance with 5 U.S.C. § 552(b), the following is a list of these exemptions which apply to Government information subject to the FOIA:

(b)(1) EXEMPTION - Protects Classified Matters of National Defense or Foreign Policy. This exemption protects from disclosure national security information concerning the national defense or foreign policy, provided that it has been properly classified in accordance with the substantive and procedural requirements of an executive order.

(b)(2) EXEMPTION - Internal Personnel Rules and Practices.

This exemption exempts from mandatory disclosure records "related solely to the internal personnel rules and practices of an agency." Courts have interpreted the exemption to encompass two distinct categories of information:

(a) Internal matters of a relatively trivial nature--sometimes referred to as "low2" information; and

(b) More substantial internal matters, the disclosure of which would risk circumvention of a legal requirement--sometimes referred to as "high 2" information.

(b)(3) EXEMPTION - Information Specifically Exempted by Other Statutes

This exemption incorporates the disclosure prohibitions that are contained in various other federal statutes. As originally enacted in 1966, Exemption 3 was broadly phrased so as to simply cover information "specifically exempted from disclosure by statute." The new Exemption 3 statute prohibits agencies from releasing under the FOIA any proposal "submitted by a contractor in response to the requirements of a solicitation for a competitive proposal," unless that proposal "is set forth or incorporated by reference in a contract entered into between the agency and the contractor that submitted the proposal."

(b)(4) EXEMPTION - Trade Secrets, Commercial or Financial Information

This exemption protects "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential." This exemption is intended to protect the interests of both the government and submitters of information.

(b)(5) EXEMPTION - Privileged Interagency or Intra-agency Memoranda or Letters  
This exemption protects "interagency or intra-agency memorandums or letters which would not be available by law to a party ...in litigation with the agency." As such, it has been construed to "exempt those documents and only those documents that are normally privileged in the civil discovery context."

(b)(6) EXEMPTION - Personal Information Affecting an Individual's Privacy  
This exemption permits the government to withhold all information about individuals in "personnel and medical files and similar files" when the disclosure of such information "would constitute a clearly unwarranted invasion of personal privacy." This exemption cannot be invoked to withhold from requester information pertaining to the requester.

(b)(7) EXEMPTION - Investigatory Records Compiled for Law Enforcement Purposes  
As amended, this exemption protects from disclosure "records or information compiled for law enforcement purposes....".

EXEMPTION 7(A) Records or information the disclosure of which could reasonably be expected to interfere with enforcement proceedings. This exemption authorizes the withholding of "records or information compiled for law enforcement purposes, but only to the extent that production of such law enforcement records or information ... could reasonably be expected to interfere with enforcement proceedings."

EXEMPTION 7(B) Records, the disclosure of which would deprive a person of a right to a fair trial or an impartial adjudication. This exemption is aimed at preventing prejudicial pretrial publicity that could impair a court proceeding, protects "records or information compiled for law enforcement purposes [the disclosure of which] would deprive a person of a right to a fair trial or an impartial adjudication."

EXEMPTION 7(C) Personal Information in Law Enforcement Records. This exemption provides protection for personal information in law enforcement records. This exemption is the law enforcement counterpart to Exemption 6, providing protection for law enforcement information the disclosure of which "could reasonably be expected to constitute an unwarranted invasion of personal privacy."

EXEMPTION 7 (D) Identity of a Confidential Source. This exemption provides protection for "records or information compiled for law enforcement purposes [which] could reasonably be expected to disclose the identity of a confidential source --including a State, local, or foreign agency or authority or any private institution which furnished information on a confidential basis--and, in the case of a record or information compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, information furnished by a confidential source."

EXEMPTION 7(E) Circumvention of the Law. This exemption affords protection to all law enforcement information which "would disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law

enforcement investigations or prosecutions if such disclosure could reasonably be expected to risk circumvention of the law."

EXEMPTION 7(F) To Protect the Physical Safety of a Wide Range of Individuals. This exemption permits the withholding of information necessary to protect the physical safety of a wide range of individuals. Whereas Exemption 7(F) previously protected records that "would... endanger the life or physical safety of law enforcement personnel," the amended exemption provides protection to "any individual" when disclosure of information about him or her "could reasonably be expected to endanger [his/her] life or physical safety."

(b)(8) EXEMPTION - Regulation of Financial Institutions

This exemption protects matters that are "contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of an agency responsible for the regulation or supervision of financial institutions."

(b)(9) EXEMPTION - Geological and Geophysical Information Concerning Wells

This exemption covers "geological and geophysical information and data, including maps, concerning wells."

AutoRedact™ software comes with standard pre-configured FOIA exemption code group that is ready to use for redacting documents.



## Privacy Act of 1974

The Privacy Act of 1974 works in tandem with FOIA to regulate federal agency records about individuals, restricting the disclosure of personal information that might violate privacy while allowing individuals access to records about themselves. You can find detailed information related to Privacy Act and its exemption online at any governmental agency website. Each agency maintains a web page with detailed explanations about FOIA and Privacy Act exemptions that are agency specific. You can read full explanation of Privacy Act exemptions online at <http://www.usdoj.gov/foia/privstat.htm>.

# Glossary of Terms

## Batch Processing

Adobe Acrobat Professional 6.0 and 7.0 provide batch processing capability that allow creating of custom document processing sequences and applying them to multiple files at once.

## Batch Sequence

An executable sequence of batch commands in Adobe Acrobat batch processing framework. Individual commands are chained in the document processing sequence that can be applied as a single operation to multiple files at once.

## Batch Command

An individual processing step in the Adobe Acrobat batch sequence. Adobe Acrobat comes with few standard batch commands such as “Set Security” or “Print All”. Third party may also add their own commands to the batch processing framework. AutoRedact™ offers most of it functionality as batch commands. Each batch command is expects an input document, performs some processing and passes the result to the next command in the sequence.

## Exemption Code

An exemption code is combination of letters and numbers that indicate the reason why a certain piece of information has been redacted from the document. Exemption codes refer to corresponding sections of federal or state law.

## OCR (Optical Character Recognition)

Optical Character Recognition (OCR) refers to the process by which scanned images are electronically "read" to convert them into editable and searchable text. This conversion is performed after scanning, and adds formatted text behind the images. This process was called “Paper Capture” in versions of Adobe Acrobat prior 7.0.

## PDF Text Element

An element in PDF document that represents text information. PDF document can be searched for occurrence of the specific text if it contains text elements. Text elements may represent one or more characters and do not necessary represent complete words.

Text elements also contain font and color information that define their appearance on the page.

## PDF Image

An element in PDF document that represents an image. Scanned documents always contain images that represent the appearance of the individual pages. Images can't be searched and are just rectangular arrays of pixels. Optical Character Recognition (OCR) can be applied to images to extract text information from them and make a document searchable.

## Redacting

Redaction, by definition, means removing certain types of information from documents. In the context of United States government agency documents, *redaction* generally refers more specifically to the process of removing classified information from a document prior to its publication, during declassification.

## Redacting Annotation

An Adobe Acrobat annotation that marks up a certain area on a page for redacting. AutoRedact™ uses highlight, cross-out, underline and rectangle annotation as redacting annotation. Redacting annotation may also contain a corresponding exemption code.

## Redacting Dictionary

A redacting dictionary is a collection of individual redacting entries that used for redacting markup. Each entry consists of *redacting text* and the optional *exemption code*. Redacting text represents any text, word or sentence that needs to be found in the document and marked for redacting. Each redacting text entry is unique within the dictionary.

## Redacting Template

A redacting template is a collection of redacting annotations that specify what areas on the page need to be redacted.

## Redacting Tool

AutoRedact™ plug-in offers redacting tool for manual markup of areas on the page for redacting. Redacting tool combines rectangle drawing tool with exemption code selection toolbar.

## Redacting Toolbar

AutoRedact™ adds a toolbar to the Adobe Acrobat that provides short-cuts to many redacting operations available in the software.



## Regular Expression

A regular expression (often abbreviated as regexp, regex, or regxp, with plural forms regexps, regexes, or regexen) is a string that describes or matches a set of strings, according to certain syntax rules. Regular expressions are used by many text editors and utilities to search and manipulate bodies of text based on certain patterns. AutoRedact™ software uses regular expressions in the “*Mark Up Text Pattern*” operation to describe a text that needs to be marked for redacting.

## Text Pattern

Any text word, phrase or a sentence that exhibits common appearance may represent a text pattern. Phone numbers, email addresses, social security numbers are all examples of the text patterns.