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- For those reasons, we encourage you to make the PDF even though
 - this IS added work at this busy time, and
 - you may not know how to access PDF maker software on your computer.
- On the next pages are instructions** covering a number of ways to find and use a PDF maker. One of these will work for you.
- You will find it doesn't take much time at all, and is a useful skill to have.**
- See Contents list, next page.**

* Unless the author has received approval of their Withhold Request from the Dean of Graduate Studies. See Theses Office webpage for more information, if needed.



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Set-up for making an archive quality PDF: PDF/A

An archive quality PDF is essential for long term electronic management of your PDF, to ensure it will look and remain the same, years after you created it. You will be able to request this backup copy of your thesis if you should ever lose your original. And yes, it can be converted back into MSWord.

- To view details of the following illustrated instructions, please use zoom to enlarge the view.

First, compress your graphics

- At issue here is the need for a reasonable “trade-off” between print quality and size limits.
- Compression reduces the overall size of your document. You can compress the graphics any time your file seems to be getting too big, including for sharing by email.
- Why worry about file size? To allow your scholarship the widest distribution to contribute to your discipline and field of knowledge. Large files are hard, and sometimes impossible, to download. PDF files that cannot be readily downloaded and opened are less likely to be read.
- Worried about losing some graphics quality? Try this: Insert sample of your graphics into a new, a one or two page document, compress the graphics, save as a PDF, and print. If satisfied, compress all the graphics in your thesis document.
- It **IS** possible to have it both ways: You can prepare one best graphic quality document with no compression to make a PDF for printing; then compress the graphics to make a PDF for rapid, easy download and screen use by web users.
- Compressing graphics in advance of making a PDF is simpler than having to compress them when using the PDF maker, which may offer more complex, harder-to-understand, choices.

How small?

- Downsizing to 300 dots per inch (dpi) is reasonable for both print and online use.
- Compression for “Web” at 150-160 dpi or “Print” at 220 dpi may be the only alternatives offered. Choose the higher value for slightly better quality.

On a Mac

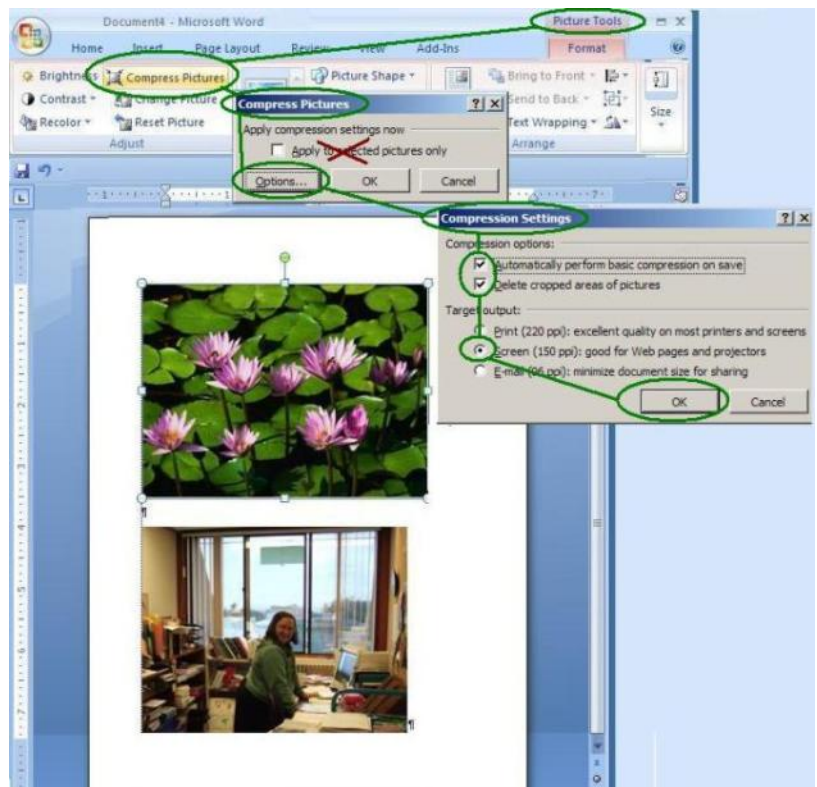
- How? There is no simple way provided on Mac MSWord for compressing graphics. See compression options when creating a PDF.

OpenOffice

- In Open Office (PC or Mac) the compression is carried out at the time the PDF is created. See instructions for making the PDF, to follow.

On a PC, within MSWord 2007

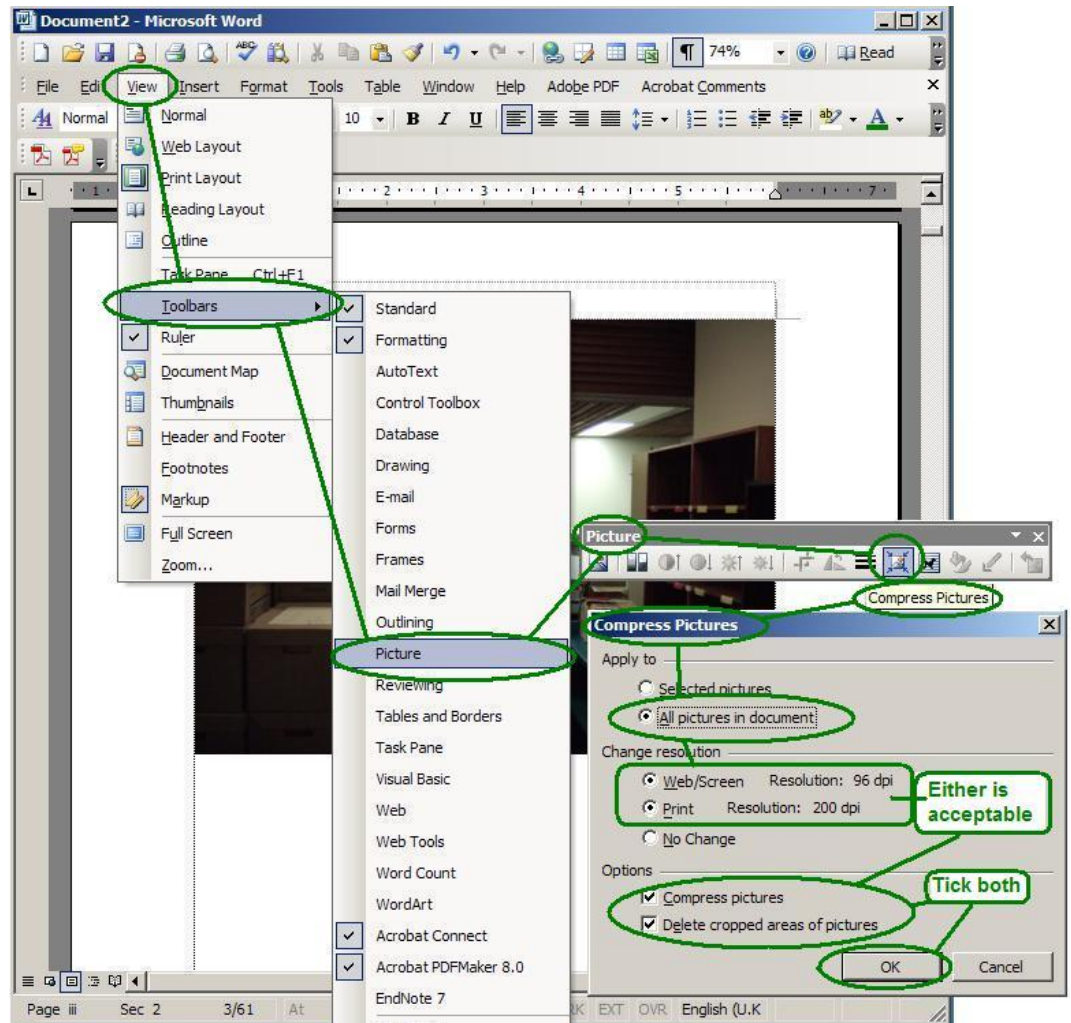
- Find and click on any graphic, to open access to the “Picture Tools”,
- Then follow the steps shown in the graphic to the right.



- Use the settings shown. For optimal size reduction: Select “Screen” (150 dpi), or for slightly better quality, select “Print” (220 dpi). If offered a broader range of choice, we recommend 300 dpi.

On a PC, within MSWord 2003

- Find and click on any graphic, then go to the “View” menu to open the Toolbars menu, then find and open the “Picture” toolbar.
- Click the “Compress” button to open the “Compress Picture” menu, and follow the instructions and choices indicated in the illustration to the right. We recommend the higher “Print” resolution of 200 dpi.

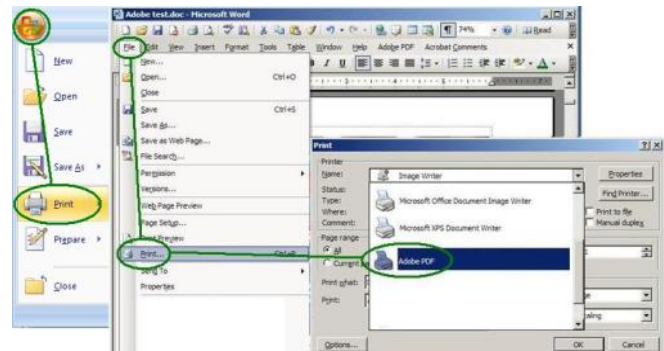
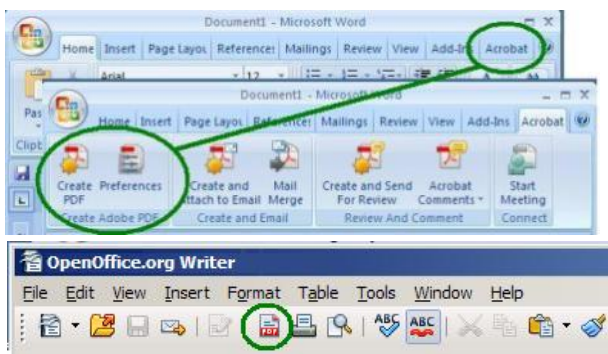
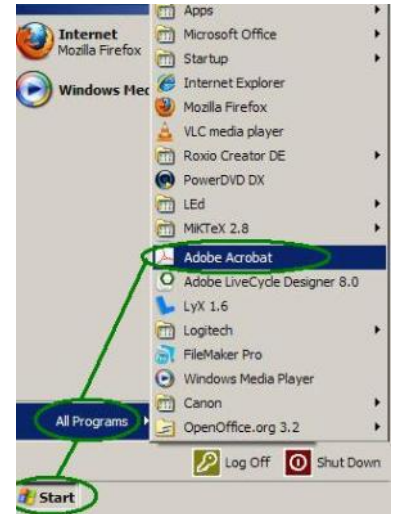


Next, check to see if you have a PDFmaker on your computer

Most computers (both PC and Mac) since about 2003, have Adobe or other PDF-maker on it, even if it is not very obvious.

On PCs

- From your PC desktop, open the “Start” menu, then “Programs” or “All Programs”, to search for “Adobe Acrobat” or “PDFmaker”.
- Open MSWord 2007, MSWord 2003 or OpenOffice (or other wordprocessing software), then check two places:
 - Menu bar, to see if there is an Adobe icon available to click.
 - From the “File” or “Office icon” menu, check “Print” to view the printer choices



On a Mac

- Newer Macs, which have OpenOffice, do have a PDFmaker that offers the PDF/A archive quality conversion.
- Older Macs, or those with only MSWord or MSWorks, may not offer a PDFmaker that is sufficiently sophisticated to make an archive quality PDF (PDF/A). We have searched for it! Please check your own computer.

If you can't find a PDFmaker on your computer, try an internet search

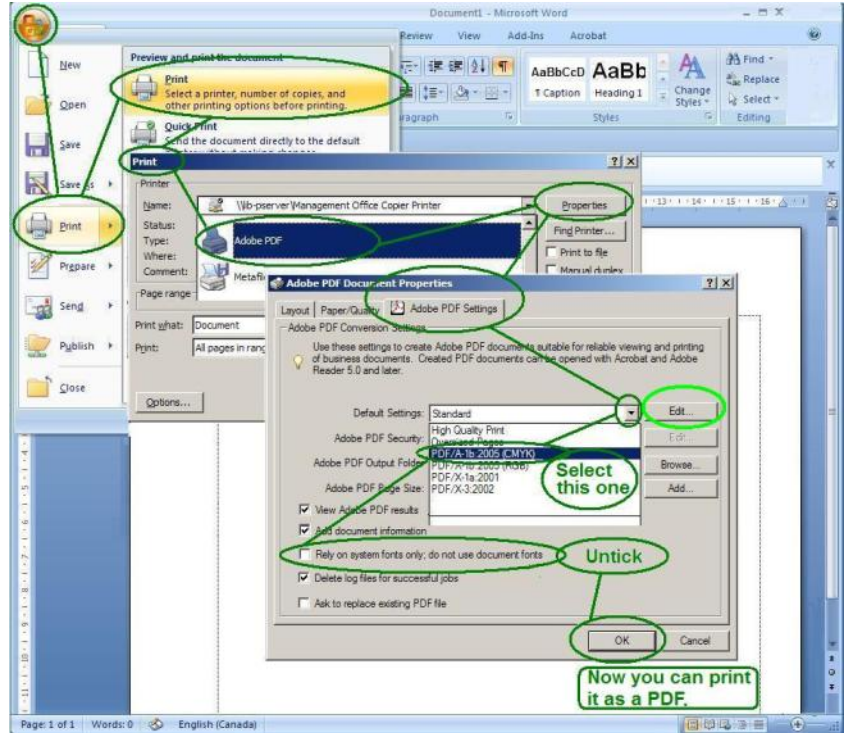
- This may be the quickest option.
- Find a free PDFmaker suitable for your computer or to use online.
 - Always check to ensure that it offers the output option of “PDF/A”. This is the archive quality version of PDF.
 - Illustrated on the right are three I found by searching for “PDF/A” or “PDF/A”, and checked out. Size limits may apply.
 - Choose the service that offers a maximum size that will accommodate your thesis/project/essays document.



Converting your document to an archive quality pdf: PDF/A

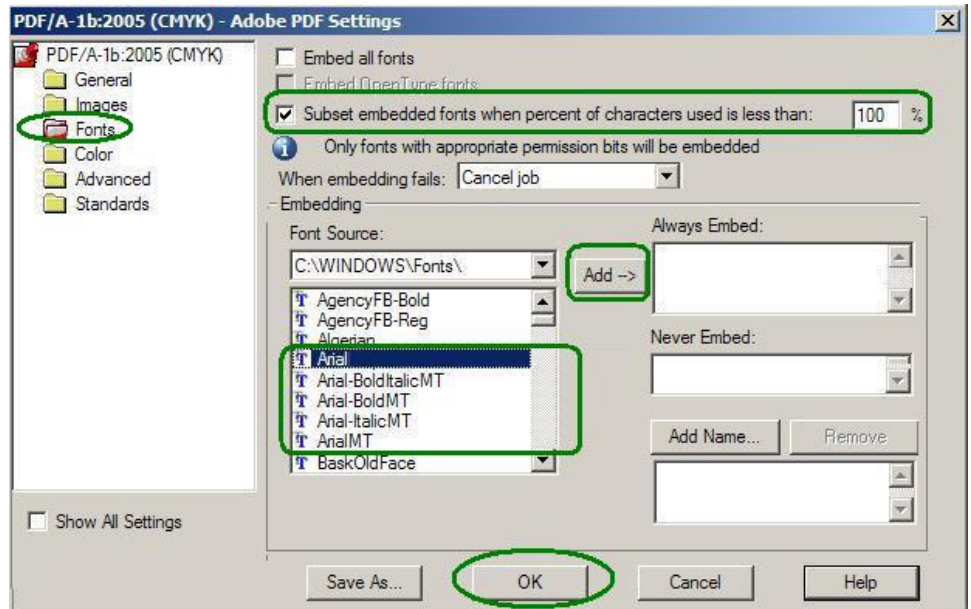
PC MSWord users

- MSWord 2007:
 - First try the “Save as” PDF choice **if it offers the PDF/A option.**
 - If that is not sufficient, or for more detailed selection of options: access the PDF maker through “Print”.
 - See choices in graphic to the right.
- In MSWord 2003, start at “File” then “Print”. The process and menu choices are the same as in MSWord 2007, once you arrive at the grey “Print” menu box.
- Always check your PDF to see if all your fonts and formatting have remained as you wish them to appear.



Embedding fonts

- Embedding fonts permits you to retain accurate reproduction of your document in the PDF. However, this may involve unneeded extra detail work.
- Create a test PDF/A first without embedding fonts, by ticking the “Rely on system fonts” option. Check the PDF, page by page, to see whether any of your original formatting has been ruined or distorted by font substitution.
- If everything is fine, and the PDF is not too large (more than 250 MB), no further work is needed to embed fonts.



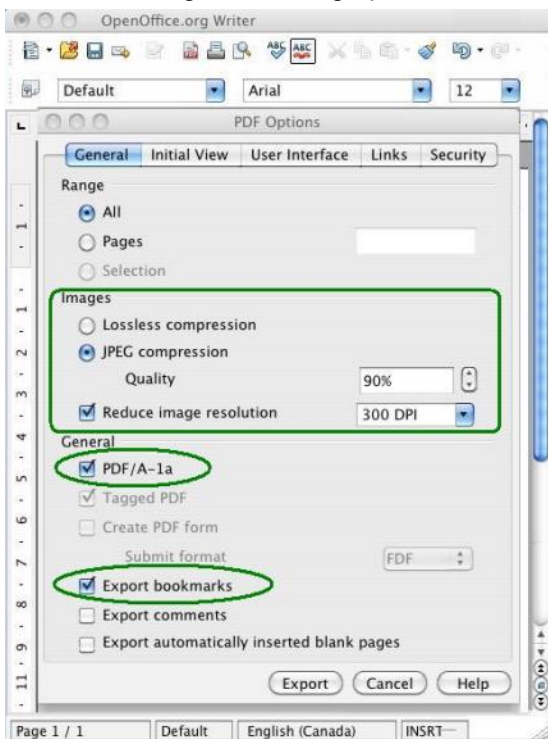
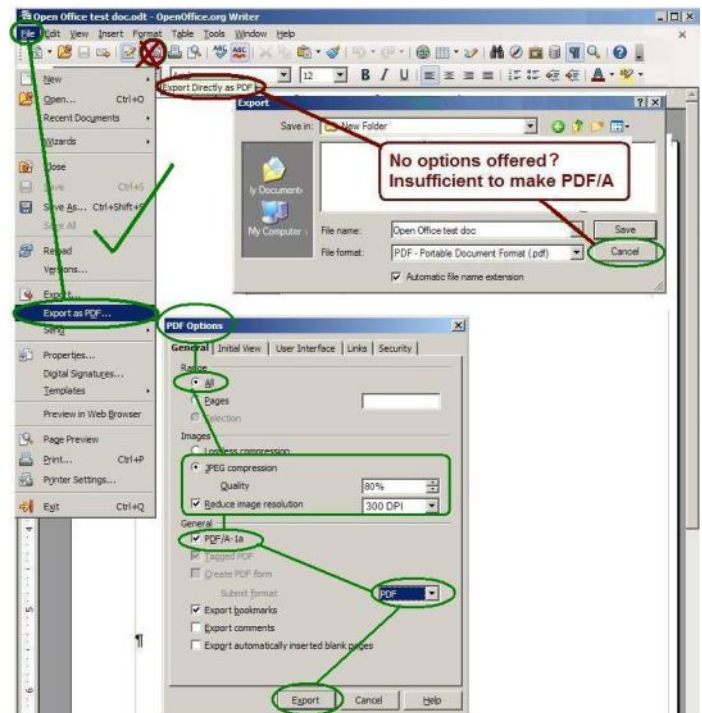
- However, if, in this PDF, your document no longer appears as you desire, or the size is still too great, it is not hard to create a new PDF that controls the fonts.
- The best choice is to embed **only the fonts you have used.** Embedding all fonts will increase, possibly even double, the size of your PDF compared to your original document.

- How to embed only the needed fonts? Click the “Edit” button, which is circled in bright green in the first graphic above, to open more detailed options, shown in the second graphic.
- Go to the fonts menu, then tick the “subset” option. Leave the percentage at 100% to capture all the fonts you used, however little.
- Then select and add each of the fonts one at a time. Add all the variations of each font you may have used, i.e. Arial, Arial bold, Arial bold italic, Arial italic.
- If you can’t remember all of them, select a bit generously. Example: In a primarily Arial document, you might have used Arial Narrow for a table. Add that and its variants (bold, italic, etc.), just in case. This is still a much smaller selection than if you had chosen to embed all possible fonts and all variants of all fonts.

OpenOffice users

OpenOffice Writer is available for both PCs and Macs

- Adobe Acrobat will not necessarily be available on your computer. If not, first check to ensure the generically named “PDFmaker” offers the PDF/A option. If not, then use the online PDF/A converter.
- **PC Open Office Writer:** Check both pathways to the PDF maker. The icon on the menu bar may not offer sufficient options. If not, then start with “File” then “Export as PDF”. See graphic on right.
 - Now is the time to compress your images: See green box in the graphic to the right. “Quality”: 80-90% is good. “Reduce image resolution”: **Select 300 dpi.**
- **Mac Open Office Writer:** Same as for PC OpenOffice.
 - Go to File menu, then “Export as PDF, and review and select the “PDF Options” shown marked in green in the graphic below.



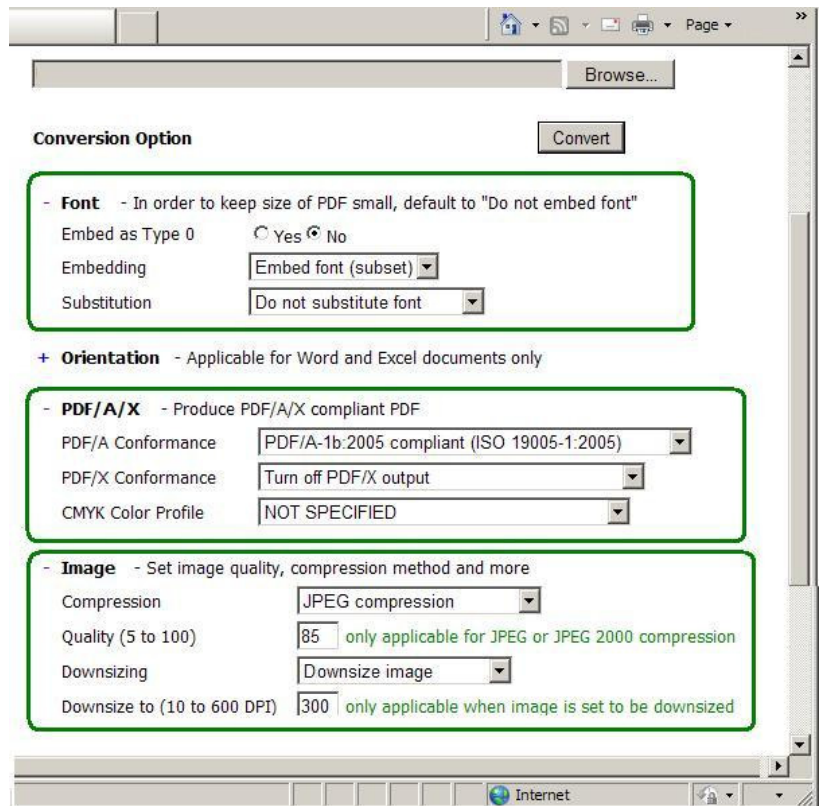
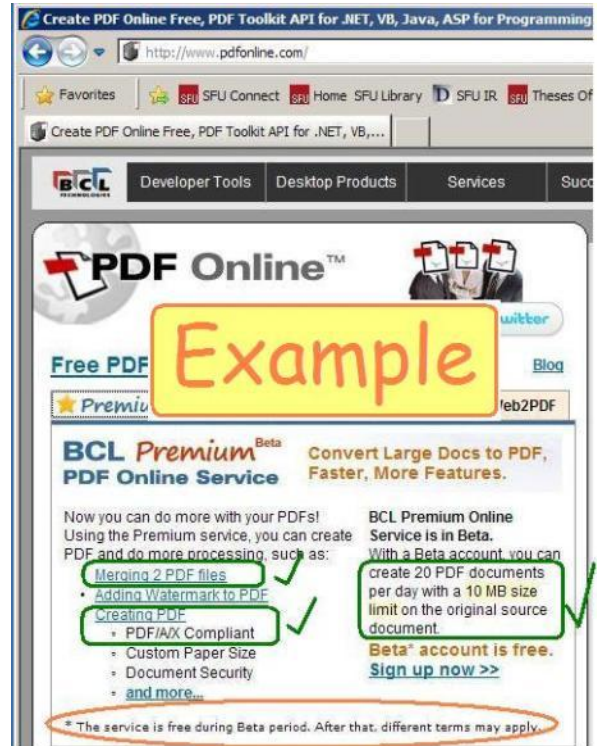
Online PDF/A converters

Mac users

- If you don't have Adobe Acrobat on your computers, your first choice should be one of the online services.

What to look for

- Key to using an online converter is being alert to the options needed to produce a PDF/A – an archive quality PDF. Look for details such as “PDF/A Compliant” and size limits. Some may limit document size to 1 MB (1,000 KB).
 - Ignore the PDF/X compliance. This is not needed.
 - To the right is the easiest one we found to date (May 2010). Note the warning about terms changing when beta testing is completed. This is a hazard of free online service.
- **Settings:** At the point where you face making choices of settings, look for the following types of choices.
- Zoom to see details in green boxes in graphic below:
 - Look for the online service with the largest maximum size. Some may be as low as 1 MB (1,000 KB) or as high as 10 MG (10,000 KB).
- See details in graphic on the right
 - Under “embedding, select “subset.” You may be offered a menu to select those fonts by name. Instructions will be similar to those for the PC Word steps on previous pages. Embed only the fonts you have used to save on size but retain your final formatting.
- **This is your chance to compress those images, if you did not do this previously.**
 - Quality = % reduction of quality. **80-90% is reasonable for graphics with print and detail.**
 - Downsizing to no less than 300 dots per inch (dpi) is sufficient both for web quality graphics, and print quality.
 - **These are both reasonable “tradeoffs” between print quality from the online PDF, and size limits (to enable your readers to open and download the file.**
- **If you do not wish to make this graphics quality compromise,** make two separate PDFs, one for online use, with the compression (downsizing) in place, and one for printing the hard copies, with no compression.



Technical Alerts

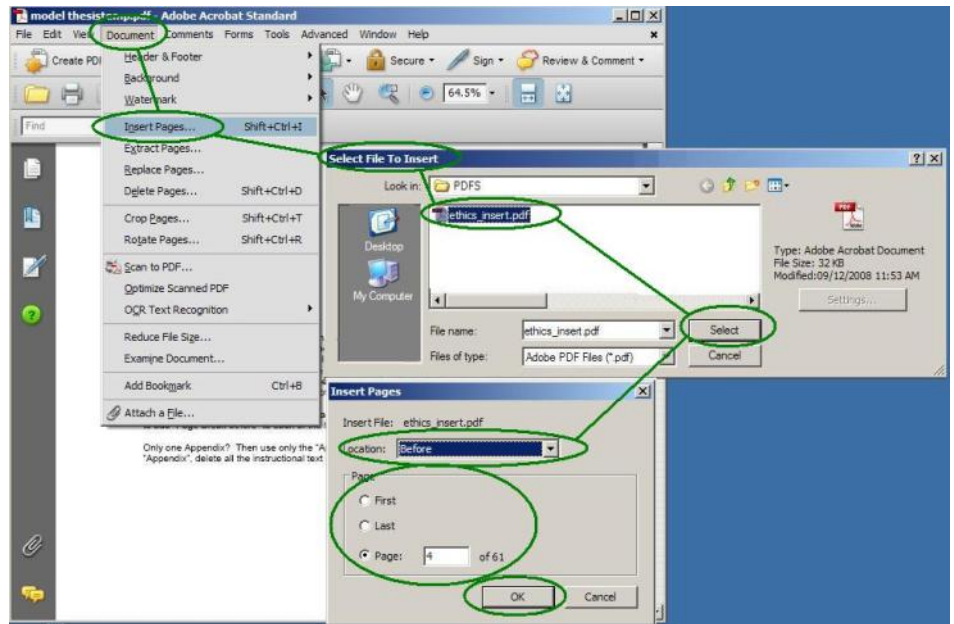
- **Switching from Mac to a PC.** This puts your document at risk, if you do not first ensure your document and its template are both saved in a “folder”. Then it is probably safe (for the formatting) to move the whole folder to a PC which has Adobe Acrobat, where it can be opened in MSWord on the PC. Without also taking the template, you risk having the controls, i.e. the “macros” which govern the formatting, eaten by the computers, and destroying the set-up and font choices you have just finalized.

Standard before and after checks to ensure formatting stays as required

- **Before converting your document to PDF,** Check your document first to make sure this really is your final-final document: that all checks indicated in “Reviewing Your Own” have been done.
- **After conversion to PDF,** check your document in PDF to make sure the formatting has not gone wrong, and that all the images have transferred properly, and are not just blank boxes. This may be an artifact of lack of memory. Close all other programs (email, internet, etc.) to make more memory available to MSWord and the PDF maker. Then try again.
- **If you did not embed fonts, try again.** See the instructions for that procedure above.

Documents breaking up into separate PDFs.

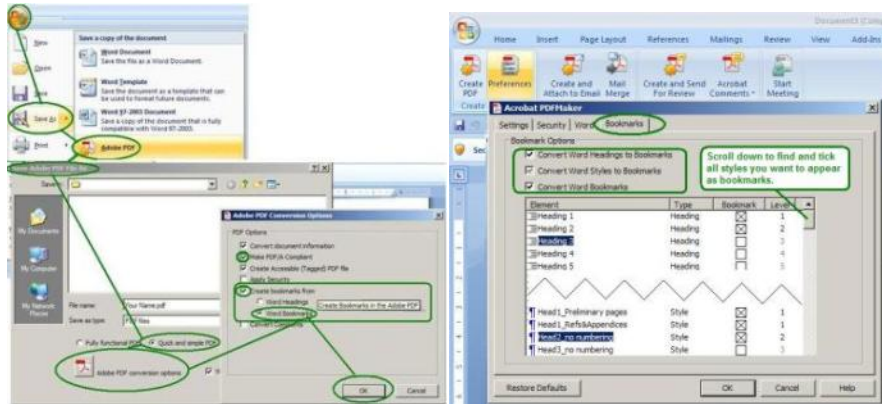
- We have recently heard that the PDFmaker sometimes breaks up your document into two or three separate PDFs, commonly on Macs. Don't worry about this.
 - If you have Adobe Acrobat (not just the Reader), you can open the first of your "pieces", go to the last page, and then go to the "Document" menu to find "Insert" that enables you to insert other PDFs into the open PDF. Follow the instructions. Repeat as needed to re-assemble your thesis document as one PDF.



- Some of the online PDF makers offer “combine documents” or “merge PDFs” capacity.
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 - If you have Adobe Acrobat on your computer, access it from within MSWord, with your document open. Open the “Preferences” then the “Bookmarks menu. Tick “Word headings”, then scroll down to tick (or untick) any of the heading styles you want to appear as bookmarks.
 - Check to be sure the “Settings” menu has the PDF/A option ticked.
 - Or, access the PDF conversion options through “Save as”/“Adobe PDF”, to tick “Create bookmarks from” “Word Bookmarks”. Be sure the PDF/A option is ticked.
 - Then proceed with saving [again] as a PDF.



If all else fails....

- Please consult the Theses Office: thesis@sfu.ca. There are a number of alternatives.
 - Please email first and describe your difficulties, if you need alternatives to these instructions.
 - However, once you find how to compress images and make a PDF, it is only a few minutes of work, so try that first. Knowing how to do this is a valuable skill set you will use many times in the future.