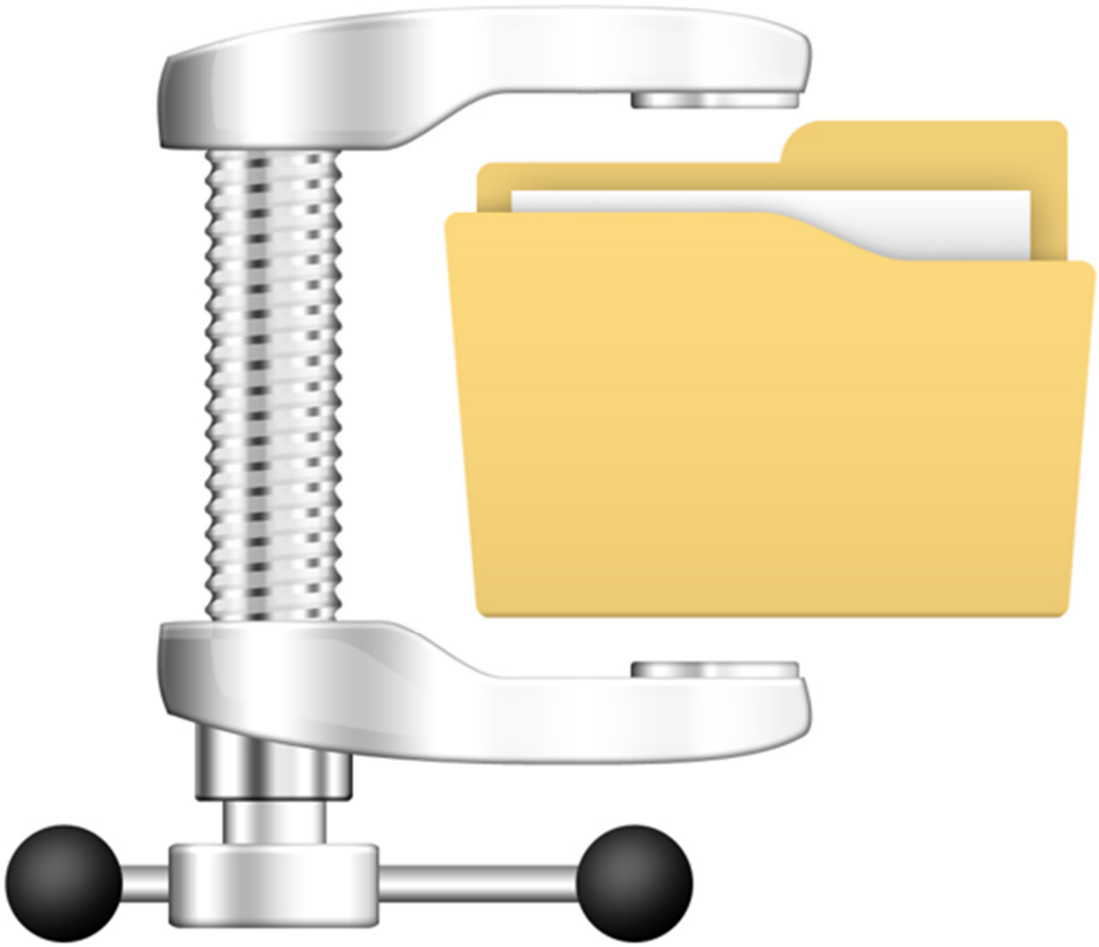

Figure 1: Vice Compressing Documents

How to Reduce the File Size of Documents and Photographs So They Can Be Emailed

This article describes how to reduce the file size of a Microsoft Word (MS Word) or pdf document so it can be sent as an email attachment. Specifically, it describes best practice low risk methods for reducing the file size of a:

- *MS Word document by:*
  - *Compressing it (Section 3.5.1); and,*
  - *Converting it to a pdf (Section 3.6.1).*
- *Pdf document by:*
  - *Compressing it (Section 3.6.2); and,*
  - *Combining-merging it with other pdfs (Section 3.6.3).*

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- *Selection of photographs by:*
  - *Creating a pdf contact sheet (Section 3.6.4).*

1 Introduction

It is no surprise that countless projects use digital photographs (photographs) in documents and emails to improve reader comprehension. Readers may include business partners, clients, project teams, suppliers, and others. With today's technology, it is easy to produce photographs. However, the sheer number of photographs taken and large photograph file sizes mean they are difficult to manage and share. How many times have you tried and failed to email several photographs in one email because the files sizes of the attachments were too large?

Photographs with large file sizes are problematic because they may not be emailed as attachments if they exceed the maximum attachment file size limit of set by an internet service provider (ISP) or information Technology (IT) network administrator. This varies but typically the maximum file size is ≤20 MB. Sending an email attachment that is too large (e.g., >20 MB) will fail in most cases.

This article addresses how to reduce file sizes so they may be emailed once and for all! Section 2 describes quick workarounds that involve some risk. Section 3 describes best practice low risk methods.

> *A picture is worth a thousand words*
> - Fred R. Barnard
> *Less is more*
> - Robert Browning

Related: ***Creating Video Presentations Using PowerPoint Alone***

2 Quick Workarounds for Reducing the File Size of Photographs

Sections 2.1 and 2.2 describe quick workarounds for reducing the file size of photographs that involve some risk. While these workarounds *work*, Section 3 describes best practice low risk methods.

2.1 Workaround 1 – Provide a Hyperlink or Share Files in a Cloud Folder

To circumvent file size limitations, provide a hyperlink in an email to an internal folder that contains the photographs. The problems with this method are:

- Files can be inadvertently deleted;
- It requires the receiver to open, process, or save the photographs for themselves;

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- The location of the folder may change (which changes the file path and breaks the hyperlink!); and,
- Those with no access to the shared folder will lack access to the photographs.

Using a cloud folder has similar risks. The folder's location could change. And saving files to a shared cloud folder can still lead to inadvertent deletion of files unless the cloud service offers document versioning, which eliminates this problem.

Both methods work. But both have inherent risks. Grrr!

2.2 Workaround 2 – Distribute Documents or Photographs in Separate Emails

Distributing documents or photographs in multiple separate emails is undesirable because it:

- Confuses and frustrates email recipients;
- Requires that email recipients open, view, close, save, manage, and organize multiple files (which is rarely performed consistently). This puts the files at risk of being ignored, lost, or overlooked; and,
- Requires time from email recipients that could be spent elsewhere. For accessibility and efficiency, recipients need the ability to access all photographs from one location (e.g., in 1 document – *not 16*)!

The more attachments sent by email, the higher the potential confusion and greater time requirements from the email recipient – all of which brings inherent risks. Grrr – again!

But wait. What methods eliminate these inherent risks? What recommended best practice low risk methods eliminate these risks and replace these workarounds? See Section 3.

3 Best Methods for Reducing the File Size of MS Word and PDF Documents, and Photographs

From an email recipient perspective, the best way to receive photographs is in a central location. This provides easy access to all photographs while minimizing required mouse clicks. The goal is to include all photographs in 1 document – *not 16*, while maintaining a file size that can be emailed (≤20 MB). This section describes recommended methods for reducing document file size. These best practice low risk methods avoid the inherent risks of workarounds described in sections 2.1 and 2.2.

3.1 Taking Photographs with File Size in Mind

To lower the file size of photographs, lower the resolution or file size settings in the camera that takes the photographs. This alone may be enough to reduce file sizes sufficiently.

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3.2 Using Software to Reduce the File Size of Existing Photographs

There are many free image optimization software that compress images and reduce the file sizes of photographs.[1] Compress the file sizes of photographs using one of these tools before inserting them into an MS Word document or including them in a pdf.

3.3 Managing Few Photographs

When managing only a few photographs, attach them to an email or insert them directly into an MS Word document. Reducing the file size of a small number of photographs is usually not required because their total file size is usually sufficiently small.

3.4 Managing Many Photographs

After inserting many photographs into an MS Word document, it is possible to compress the MS Word document and make it small enough to send as an email attachment. To compress an MS Word document, follow the steps in Section 3.5.1.

3.5 Working with MS Word Documents

Use MS Word to compress or reduce the file size of an MS Word document. The more photographs an MS Word document contains, the greater the file compression or file size reduction may be expected. By contrast, compressing a text-heavy document will yield little file size reduction.

Con: Compressing an MS Word document reduces the quality or resolution of all document images and photographs.

Pro: Compressing an MS Word document reduces its file size so it can be sent as an email attachment. Exceptions are extremely large documents.

3.5.1 Procedure to Compress an MS Word Document

Software needed: MS Word.

Follow the next procedure to compress and reduce the file size of an MS Word document.

Procedure:

1. Open the MS Word document that needs to be compressed.
2. Double-click an image in the document to reveal the *Picture Format* tab (see 1 in Figure 2).

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3. Click *Compress Pictures* (see 2 in Figure 2) to reveal the *Compress Pictures* dialog (Figure 3).

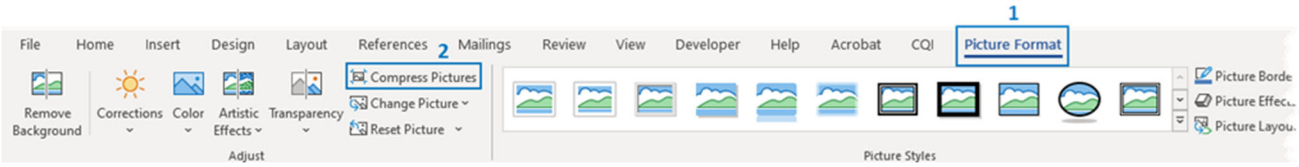

Figure 2: Picture Format Tab

4. To compress:
   a. The selected image:
      i. Select the *Apply only to this picture* check box (see 1 in Figure 3).
      ii. Click *OK* (see 2 in Figure 3).

      Congratulations, you have compressed the selected image.
   b. All document images:
      i. Clear the *Apply only to this picture* check box (see 1 in Figure 3). Clearing this check box maximizes total file size reduction.
      ii. Click *OK* (see 2 in Figure 3).

      Congratulations, you have compressed all document images.

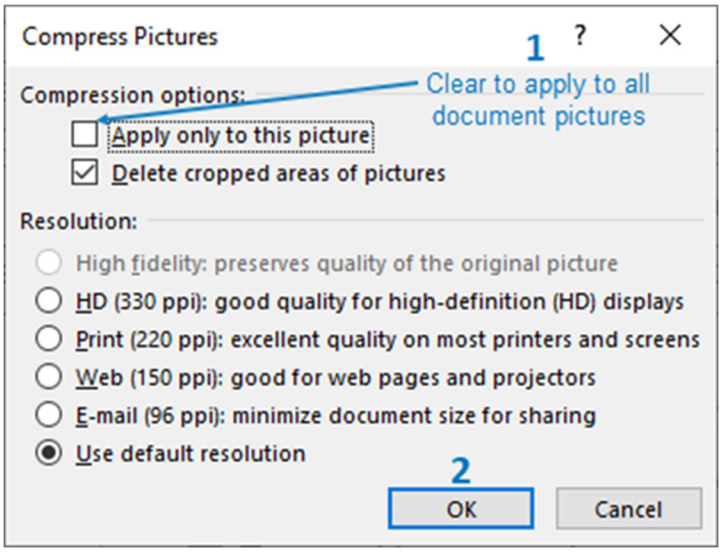

Figure 3: Compress Pictures Dialog

5. Save the file. If the file size is ≤20 MB it is likely small enough to send as an email attachment.

File still not small enough? Follow the procedure in Section 3.6.1 to reduce file size further by converting it to a pdf.

3.6 Working with PDFs

Converting an MS Word document into a pdf greatly reduces file size using vector graphics. Pdf conversion is usually enough to reduce file size so the file may be sent as an email attachment (Section 3.6.1). After pdf creation, the pdf may be compressed for further file size reduction (Section 3.6.2). After producing two or more pdfs, these pdfs may be combined into one pdf document (Section 3.6.3).

Finally, use MS Word to create a pdf contact sheet. A contact sheet contains multiple photographs with a reduced file size arranged in a pre-set layout (Section 3.6.4).

3.6.1 Procedures to Convert an MS Word Document to a PDF

This section contains two useful procedures for converting an MS Word document to a pdf.

For maximum file size reduction, first compress the MS Word document (see Section 3.5) and then perform one of the procedures in Section 3.6.1.1 or Section 3.6.1.2 to convert the Word document into a pdf document.

3.6.1.1 Procedure 1: Convert an MS Word Document to a PDF Document (Using PDF Software)

Software needed: Any pdf conversion software, such as Adobe Acrobat DC or CutePDF[2].

Follow this procedure to convert an MS Word document to a pdf document:

1. Open the MS Word document that needs to be converted to a pdf document.
2. Click *File*, *Print*.
3. Click the Printer drop-down and then click *Adobe PDF* or similar pdf-making software to specify it as the printer (e.g., Adobe or CutePDF). See outlined object in Figure 4.

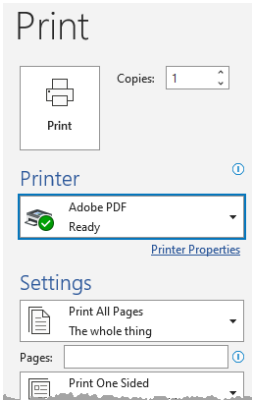

Figure 4: Print Sidebar

4. Click *Print* (see Figure 4) and follow the prompts.
5. Save the file. If the file size is ≤20 MB it is likely small enough to send as an email attachment.

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Congratulations. You have converted an MS Word document to a pdf document using pdf-making software.

File still not small enough? Follow the procedure in Section 3.6.2 to reduce file size further by compressing the pdf.

3.6.1.2 Procedure 2: Convert an MS Word Document to a PDF Document (Using MS Word)

Software needed: MS Word.

Follow this procedure to convert an MS Word document to a pdf document:

1. Open the MS Word document that needs to be converted to a pdf document.
2. Click *File*, *Save as*.
3. Click the drop-down arrow and then click *PDF (*.pdf)* – 1 and 2 in Figure 5, respectively.

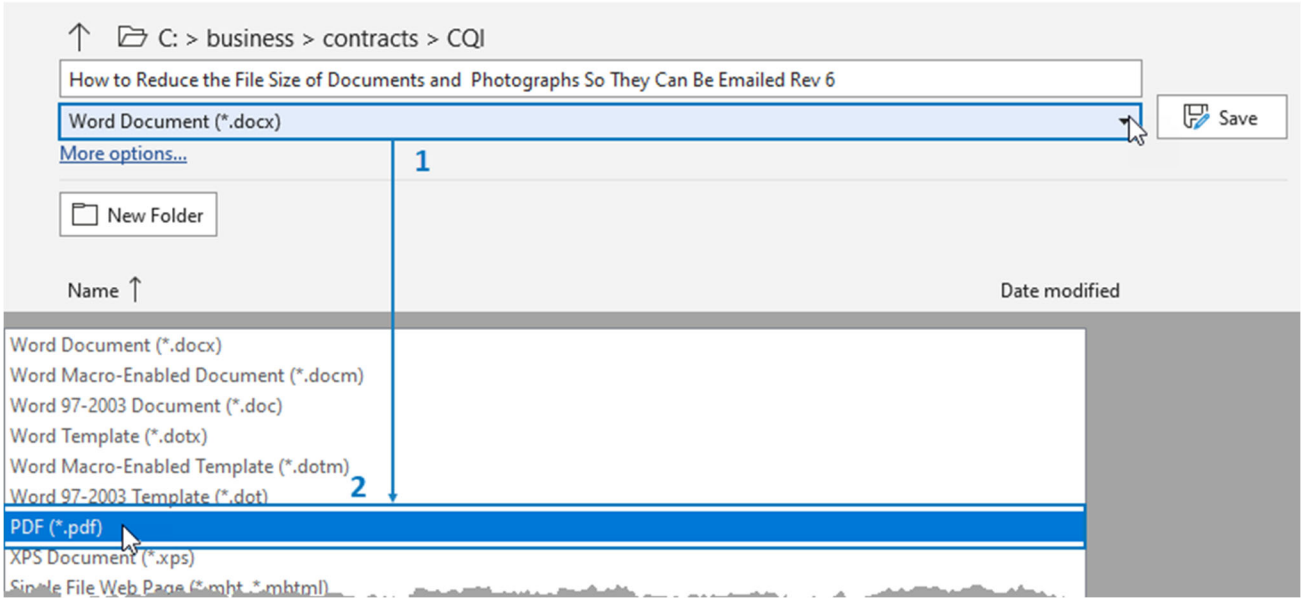

Figure 5: File Save As Window

4. Click *Save* to save the file. If the file size is ≤20 MB it is likely small enough to send as an email attachment.

Congratulations. You have converted an MS Word document to a pdf document using MS Word.

File still not small enough? Follow the procedure in Section 3.6.2 to reduce file size further by compressing the pdf.

3.6.2 Procedure to Compress a PDF

Sometimes, after an MS Word document is compressed and converted to a pdf document, the pdf file size is still too large. In these cases, compress the pdf itself. This method is most effective with image-heavy pdfs.

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3.6.2.1 Procedure to Compress a PDF Document (Using Adobe Acrobat DC)

Software needed: Adobe Acrobat DC.

Follow this procedure to compress a pdf document:

1. Open the pdf document that needs to be compressed using Adobe Acrobat DC.
2. Click the *Tools* tab (Figure 6).

Figure 6: Tools Tab

3. In the *Optimize PDF* toolbar, click the *Optimize PDF* drop-down (1) and then click *Open* (2). See Figure 7.

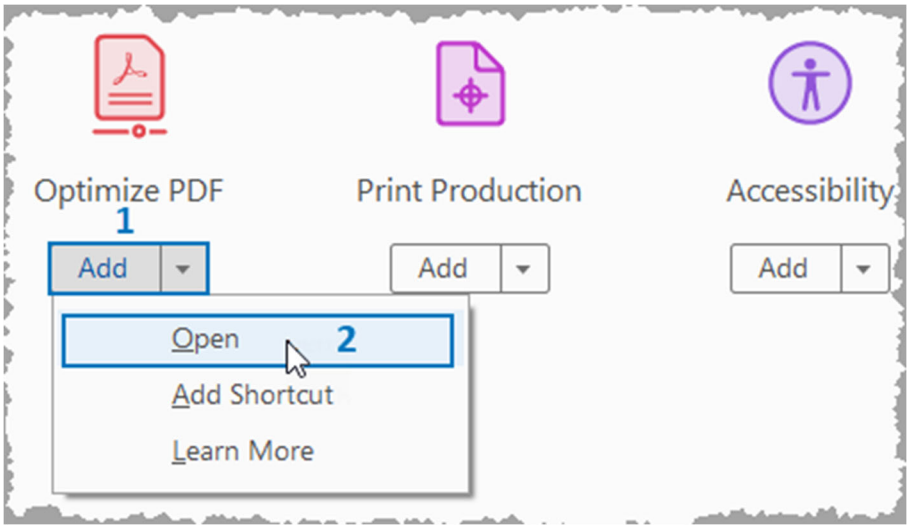

Figure 7: Optimize PDF

4. In the *Optimize PDF* toolbar, click *Reduce File Size* (Figure 8).

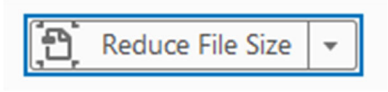

Figure 8: Reduce File Size Button

5. Save the file. If the file size is ≤20 MB it is likely small enough to send as an email attachment.

Congratulations. You have compressed a pdf document using Adobe Acrobat DC.

Need to combine two or more pdfs into one pdf? Follow the procedure in Section 3.6.3.

3.6.3 Procedure to Combine-Merge PDFs

You have two or more pdfs and want to combine-merge them into one. You've come to the right place. See Section 3.6.3.1

3.6.3.1 Procedure to Combine-Merge PDFs (Using Adobe Acrobat DC)

Software needed: Adobe Acrobat DC.

Follow this procedure to combine-merge two or more pdfs into one:

1. Navigate to the folder that contains the pdfs to combine-merge.
2. Right-click one pdf.
3. Click *Combine files in Acrobat* (Figure 9*)*.

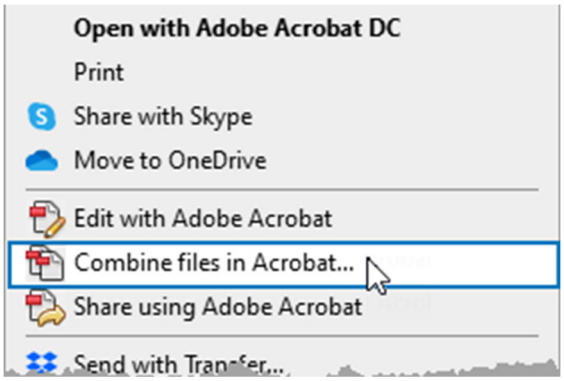

Figure 9: Combine files in Acrobat …

4. In the *Combine Files* toolbar, click *Add Files* (Figure 10).

Figure 10: Add Files …

5. Navigate to and click the pdfs that will be combined-merged.
6. Drag and drop the pdfs to sort them in the preferred sequence, as needed.
6. In the *Combine Files* toolbar, click *Combine* to merge-combine all pdfs into one pdf (Figure 11).

   Compiling a large file may take some time.

Figure 11: Combine Files

7. Click *File*, *Save* and then save the file with an appropriate file name (e.g., *Technical Notes Combined*). If the file size is ≤20 MB it is likely small enough to send as an email attachment.

Congratulations. You have combined-merged two or more pdfs into one using Adobe Acrobat DC.

Adobe Acrobat DC has many other useful and intuitive pdf editing features, including bookmark creation, hyperlink insertion, and page deletion and insertion. Explore and experiment with these features to improve pdf manipulation skills.

3.6.4 Procedure to Create a PDF Contact Sheet with MS Word

A *contact sheet* contains one or many photographs on one or many pages. It allows many photographs to be viewed simultaneously.[3] A contact sheet presents photographs with reduced file sizes in an automatically formatted layout. This is especially useful when photographs are for general information and adequate details can be described in document or email prose, making a caption for each photograph unnecessary. Assembling a contact sheet is easy, intuitive, and quick.

Figure 12 is a contact sheet featuring nine photographs. MS Word's Print Pictures feature, which automatically arranges between 1 and 35 photographs per page, created this contact sheet as one pdf document. This pdf can then be combined with other pdfs (see Section 3.6.3), sent independently as an email attachment, or both.

Figure 12: Contact Sheet Created Using MS Word's Print Pictures Feature

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Want to create a contact sheet? Follow the procedure in Section 3.6.4.1.

3.6.4.1 Procedure to Create a PDF Contact Sheet (Using MS Word)

Software needed: MS Word.

Follow this procedure to create a pdf contact sheet using MS Word:

1. Save photographs that will comprise the contact sheet to a folder where they can be accessed.

   Delete or move unwanted photographs from the folder as needed.

2. Sequence (name or number) files in the preferred order as needed.

   Files will print by filename sequence.

3. If needed, crop, edit, format, and rotate files using photograph editing software (e.g., MS Office Picture Manager, Windows Picture and Fax Viewer).

4. Navigate to the folder that contains the photographs (saved in Step 1).

5. Click images that will be included in the contact sheet.

7. Right-click selected files and click *Print* to open the *Print Pictures* dialog (Figure 13).

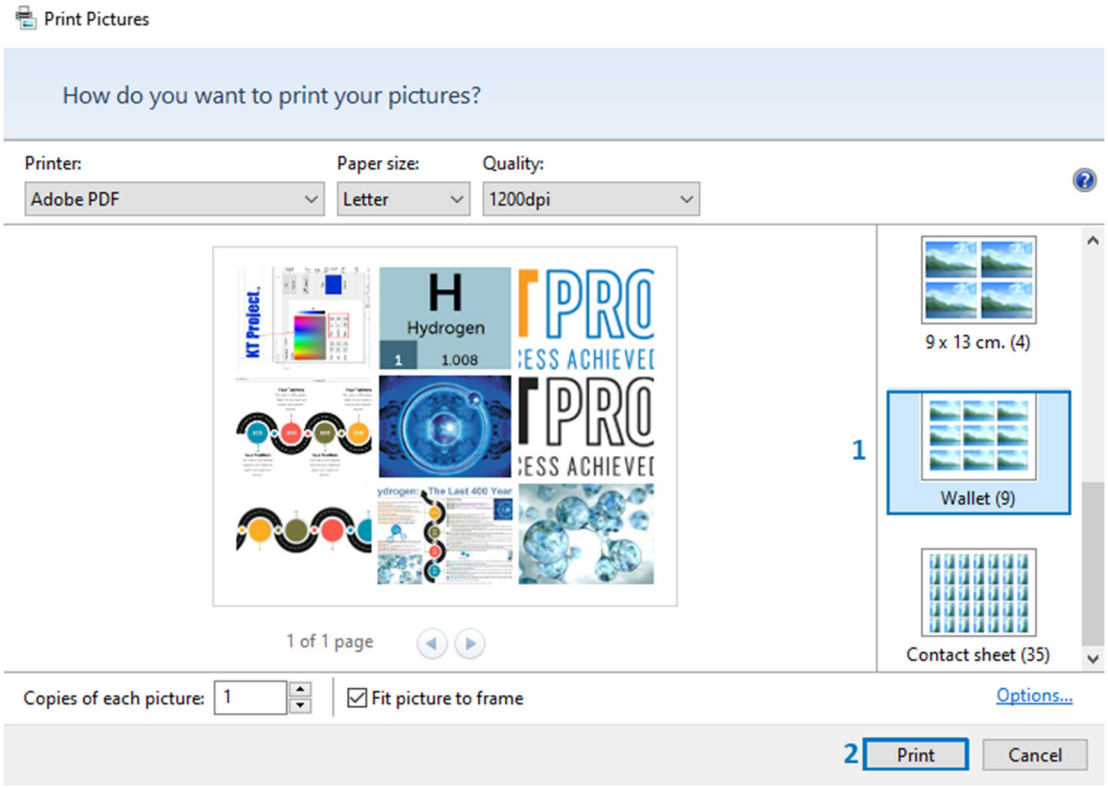

Figure 13: MS Word Print Pictures Dialog

8. Use Figure 13 to identify and specify desired options.

The example in Figure 13 will generate a letter-sized pdf with nine photographs per page (see 1 in Figure 13).

9. Click *Print* (see 2 in Figure 13) to generate the pdf.
10. Click *Save* and then save the file with an appropriate file name (e.g., *Photographs Combined*).

    Saving a large file may take some time.

Congratulations. You have created a contact sheet pdf using MS Word.

4 Conclusion

To reduce file sizes, consider using the workarounds described in Section 2 but beware the inherent risks! The following summarizes best practice low risk methods for reducing the file size of a:

- MS Word document by:
  - Compressing it (Section 3.5.1); and/or,
  - Converting it to a pdf (Section 3.6.1).
- Pdf document by:
  - Compressing it (Section 3.6.2); and/or,
  - Combining-merging it *with other pdfs (Section 3.6.3).*
- Selection of photographs by:
  - Creating a contact sheet (Section 3.6.4).

Experiment with file size reduction settings to acquire a suitable file size with acceptable photograph quality. Document or remember the preferred file size reduction procedure so it can be repeated and shared. Find additional instructional videos on YouTube that demonstrate how to perform these and similar tasks.

Remember – a picture is worth a thousand words … and less is more!

5 Figures

1. Free Icons PNG. *Vice Compressing Documents*. https://www.freeiconspng.com/downloadimg/15945
2. Roy O. Christensen. Microsoft Word screen capture. *Picture Format Tab*.
3. Roy O. Christensen. Microsoft Word screen capture. *Compress Picture Dialog*.
4. Roy O. Christensen. Microsoft Word screen capture. *Print Sidebar*.
5. Roy O. Christensen. Microsoft Word screen capture. *File Save As Window*.
6. Roy O. Christensen. Adobe Acrobat DC screen capture. *Tools Tab*.
7. Roy O. Christensen. Adobe Acrobat DC screen capture. *Optimize PDF*.

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8. Roy O. Christensen. Adobe Acrobat DC screen capture. *Reduce File Size Button*.
9. Roy O. Christensen. Adobe Acrobat DC screen capture. *Combine Files in Acrobat*.
10. Roy O. Christensen. Adobe Acrobat DC screen capture. *Add Files*.
11. Roy O. Christensen. Adobe Acrobat DC screen capture. *Combine Files*.
12. Roy O. Christensen. Contact Sheet Created Using MS Word's Print Pictures Feature (see references below, top to bottom, and left to right):
    a. Mining.com. *Glass-fibre Reinforced Plastic (GRP) Tank*.
    b. Pillar. *Piping Module*.
    c. OCL Group. *Sub Arc Welding (SAW)*.
    d. The Tyee. *Crumpled Pipeline*.
    e. Foremost. *Oil Storage Tanks*.
    f. Kerr Marketing. *Actuated Butterfly Valves*.
    g. PS Filter. *Coalescing Filter Fabrication*.
    h. Heavy Lift Specialist. *Pressure Vessel Lift*.
    i. TV Dredging. *Structural Steel Fabrication*.
13. Roy O. Christensen. Microsoft Word screen capture. *MS Word Print Pictures Dialog*.

6 References

1. Envira Gallery Blog. *Best Free Image Optimization Tools for Image Compression*. https://enviragallery.com/best-free-image-optimization-tools-for-image-compression/
2. CutePDF. *CutePDF Writer, Create PDFs from almost any application — Free Software!* http://www.cutepdf.com/Products/CutePDF/writer.asp
3. KT Project. Contact sheet definition. *KTP-GEN-002 Glossary of Common Industry and Project Terminology*.

7 Read More

To learn about project success, read this KT Project eBook:
Successful Projects Need Effective Communication.

8 About the Author

Roy O. Christensen founded the KT Project to save organizations significant money and time by providing key resources to leverage expert knowledge transfer for successful project execution.

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9 Notes

1. The procedures in this document may vary depending upon software (e.g., Adobe Acrobat DC, CutePDF, or MS Word) and software version. Other alternative methods can be developed or established, or may exist.
2. This article was originally published as *How to Prepare Digital Photographs Quickly and Easily!* on LinkedIn 27-Mar-16.

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