Scanner workshop

<u>Outline</u>:

❏ **Introduction:**
- Explanation of technical terms.
- Review Quick Guide to Scanning.

❏ **Step by step process of scanning images:**
- Begin demonstration on scanning image for web.

❏ **Step by step process of scanning text:**
- Begin demonstration of text scanning using OCR software (OmniPage Pro 9).

❏ **Hands-on exercise for scanning images (staff):**
- Staff exercises begin.

❏ **Hands on exercise on scanning text (staff):**
- Staff exercises begin.

❏ **Staff Exercises:**
- Select one
  1. Exercise for images
  2. Exercise for text
  3. Exercise for images into Word

❏ **Wrap up:**
- Summarize.
- Answer questions.

Explanations of key Technical Terms:

Scanner is a device that can read text or illustrations printed on paper and translate the information into a form, the computer can use. In this workshop we will be using what is referred to as a flatbed scanner. Flatbeds consist of a flat surface on which you lay documents to be scanned.

Scanners do not distinguish text from illustrations. Therefore, to edit text read by a scanner, you need an optical character recognition (OCR) system to translate the image into computer characters. This involves reading text from paper and translating the images into a form the computer can manipulate using a word processor.

Resolution is a setting that must always be considered before scanning a document. When thinking about setting your resolution there is one fact that we must always remember, the higher the resolution the bigger the file, which results in a better quality picture. The same is true for the opposite of this idea--the smaller the resolution, the lower the quality the less disk space it occupies. Typically, scanners support resolutions ranging from 72 through 600 dpi and higher.

Dpi, which means *dots per inch,* indicates the resolution of images. The more dots per inch results in a higher resolution, which in turn results in a bigger file size. In essence when we talk about increasing the size of the resolution we are, in fact referring to increasing the dpi.

File format is how binary information is stored on a file. There are many different type of file format. The computer, to determine which program it will use to open a file, looks for its file format extension. With this information the computer knows how to interpret the difference between images and or if it's an ASCII (computer text) character format. In this workshop will refer to the **gif** or **jpeg** format for images and doc format for text documents. We will refer to these two formats because they are the two best known formats for images and text.

<u>Quick Guide to Scanning:</u>

Before you begin scanning, these are some of the few questions you should ask yourself.

❑ **What program should I use to edit and import my pictures and or text?**
- Recommended applications: Photoshop 6, Fireworks 4.
  In this workshop we will only use the scanner's software to scan, not an image editors.
  All scanners come equipped with software scanning management tool.

❑ **What resolution should I use for my pictures and or text documents?**
- Recommended resolution (70 - 75 resolution for web, 150 for pictures and for text this is not applicable)
  It's not applicable for text because the image will be turned into computer characters.
  Note: The larger the resolution, the bigger the file, but the better quality picture.

❑ **What Image type should I set my scanner?**
- Recommended image type (Color for colored pictures, B.W for black & white and or text documents. Almost all scanners have built in setting for text, color, or web pictures. You can use these predefined settings or choose to customize them yourself. In this workshop we will customize our own settings.

❑ **Should I preview a picture before I scan?**
- I recommend always previewing it before performing a real scan. In this way you are sure, that your document is aligned properly and, if you choose to, you can select a desired region to scan. (You may choose to scan the whole document or just a section of it.)

❑ **What file format to use to save your image or text document?**
- I recommend always using the gif format for all images, and using doc for text documents. However, not all scanner software support saving as a gif format, especially on older model scanners. In this case then save the file as a bmp (Windows native format) and later resave with an image editor as a gif file.

Scanning a Picture for the Web:

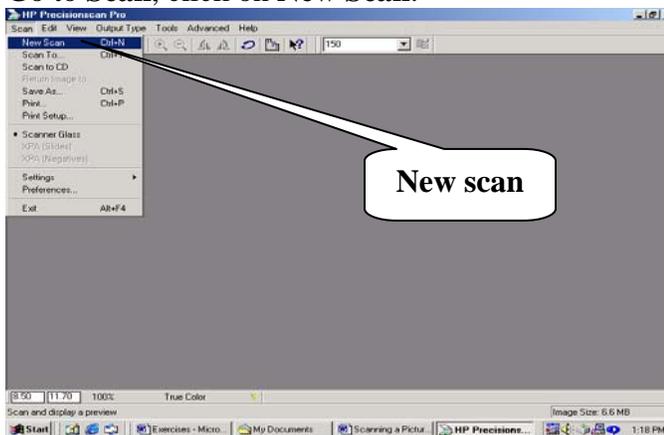This tutorial assumes you have placed an image to scan in the scanner.
Note: This tutorial only applies to HP Scanjet 4400c located in room E255 and
E256.

1. Go to s**tart**, **programs**, click on **HP Precisionscan Pro**.
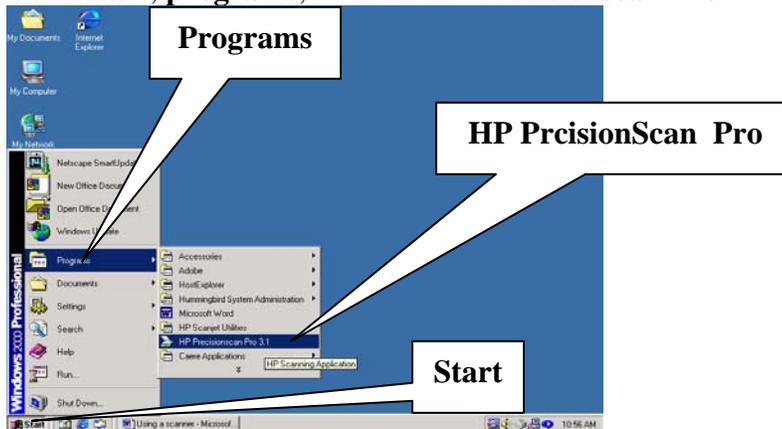

Note: Wait until the scanner program opens.

2. Go to **Scan**, click on **New Scan**.

Note: Wait for scanner to finish previewing the image.

3. We will select the portion we wish to scan only. Do so by moving over the **image** and from the **beginning corner** of the region you wish to select, **left click on the mouse**, **hold**, while moving the **selection tool over the image** area you wish to scan.
    Note: Notice the size of the file (**image size**) as you select a smaller region of the image on the bottom right hand corner.
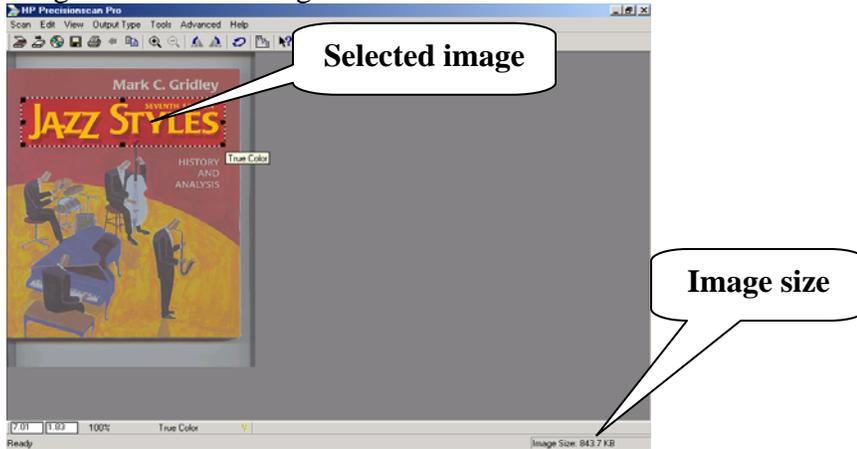
4. Go to **Output Type** located on top of the scanner software and make sure **True Color** is selected.
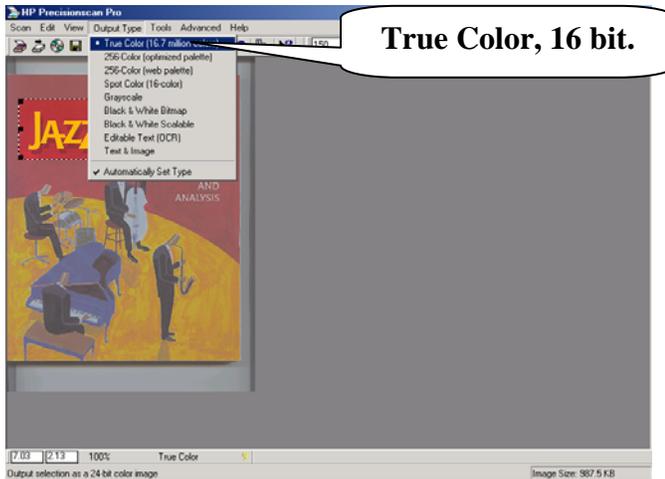
5. Change the resolution by adjusting the **drop-down arrow** key at the upper-middle of the program. Set this to **70**. **Note:** Again notice the effect reducing the resolution has on the file size.
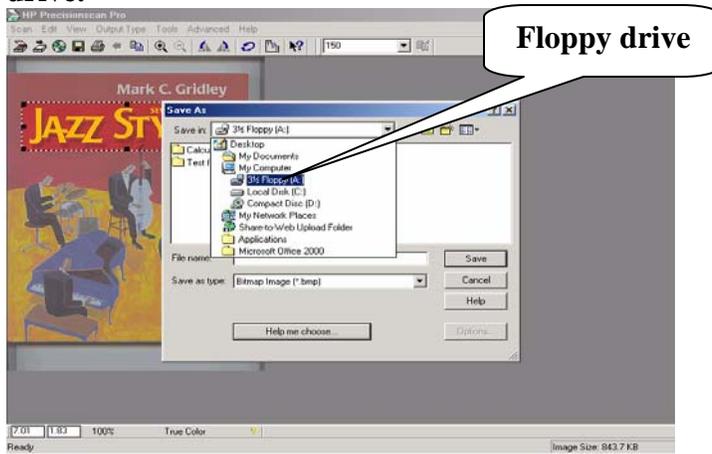

Resolution setting
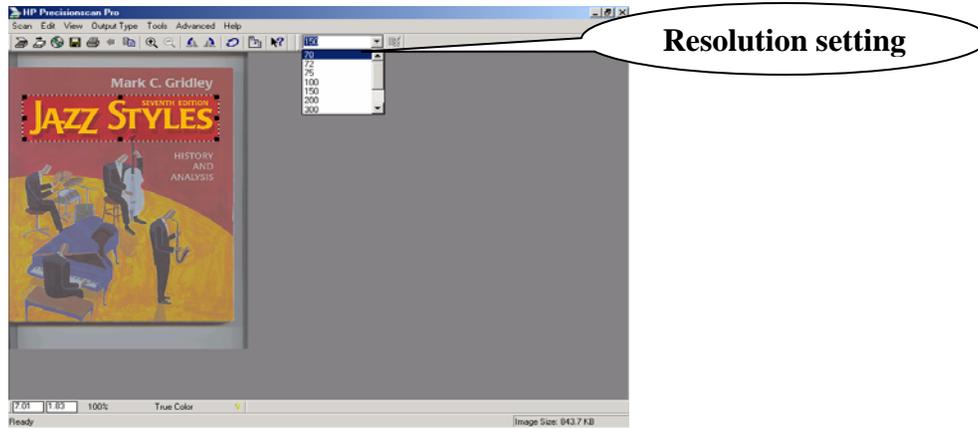
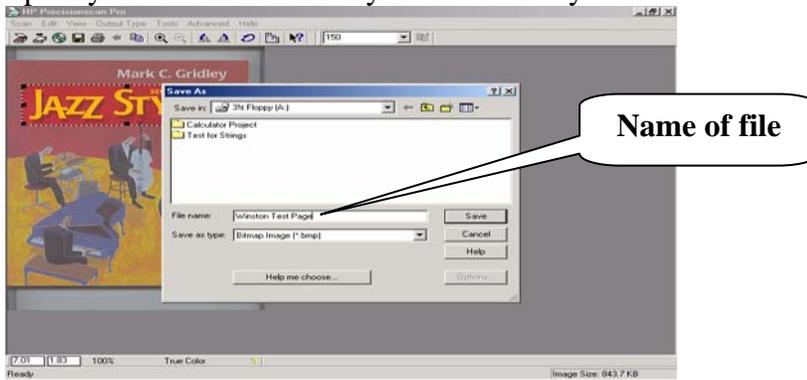Note: Once complete we will are ready to save our file.

6. Go to **Scan**, and click on **save as**.
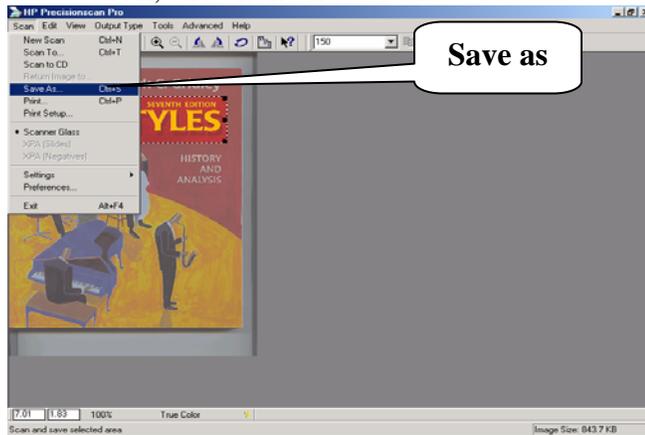
Save as

7. When the **save as** dialogue box appears, make sure you're **A drive is selected**. If it is not do so by clicking on the **drop-down arrow** button and selecting the **A drive.**
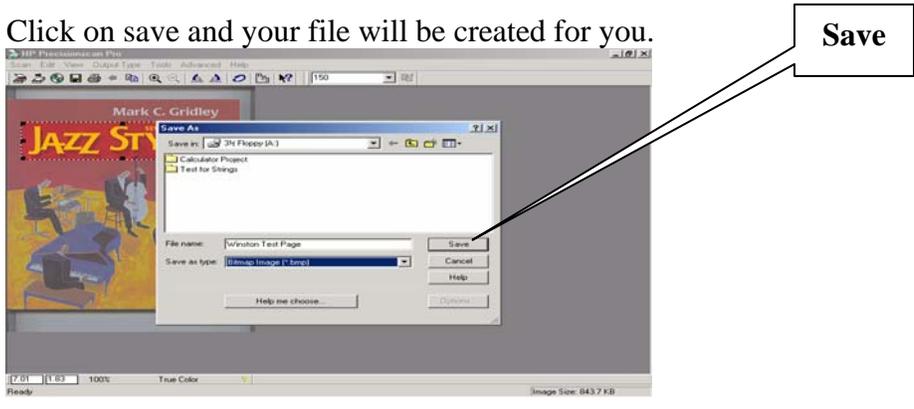
Floppy drive

8. Specify a relevant name for your file for easy retrieval.

Name of file

9. Next, we will choose a file format; do so by clicking on the **down-arrow**, bottom of the **dialogue box** next to **Save as type.** Choose gif or jpeg as the file format.
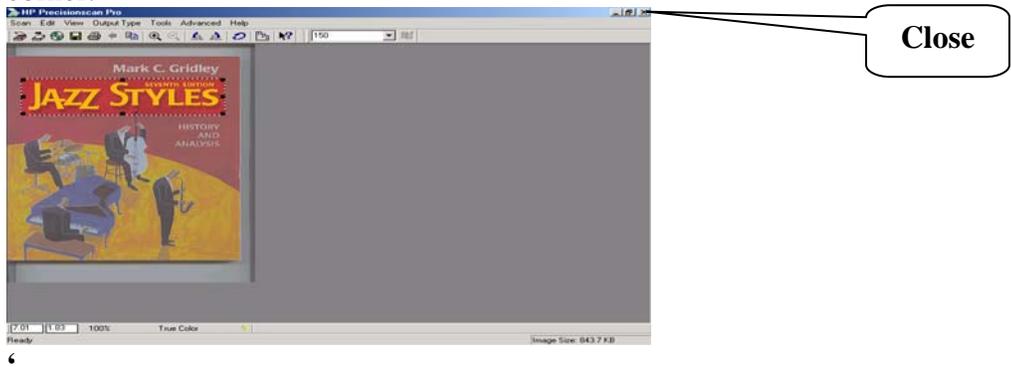

Choose gif or jpeg
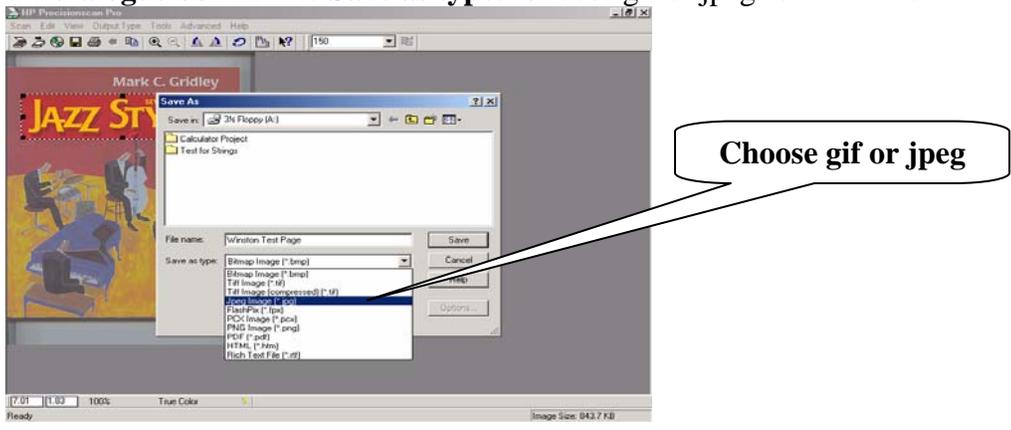
10. Click on save and your file will be created for you.

Save

Note: Wait for scanner to stop scanning.

11. Finally close the scanner software by clicking on the **X** at the upper right hand corner.


Close

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Note: When the file is created, the size will be reduced further. So, the size of the image you saw in the scanning software will not be the same as when you saved it.

<u>Digitizing Text Using OCR:</u>

This tutorial assumes you have placed an image in the scanner.
Note: This tutorial only applies to HP Scanjet 4400c located in room E255 and E256.

1. Go to **start**, **program**s, choose **Caere Applications**, and click on **OmniPage Pro 9**.
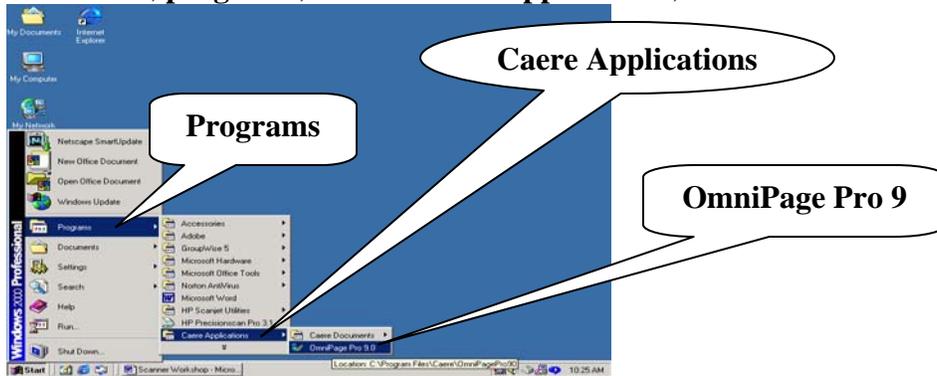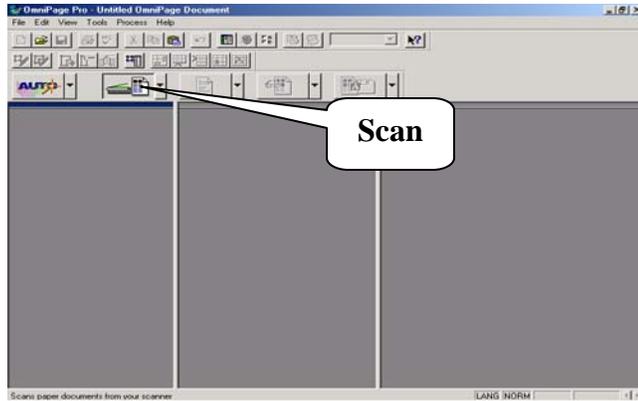

   Note: Wait for program to load.

2. Click on the **drop-down arrow** next to the **scanner picture** in the upper-left hand side of the software. Make sure **scan image** is selected. If it is not checked off, do so by clicking on it.
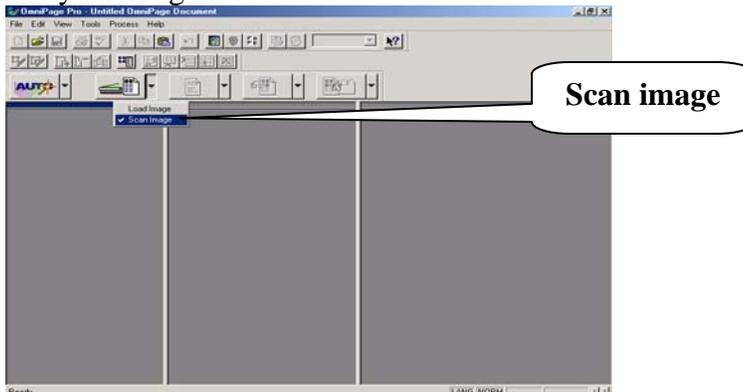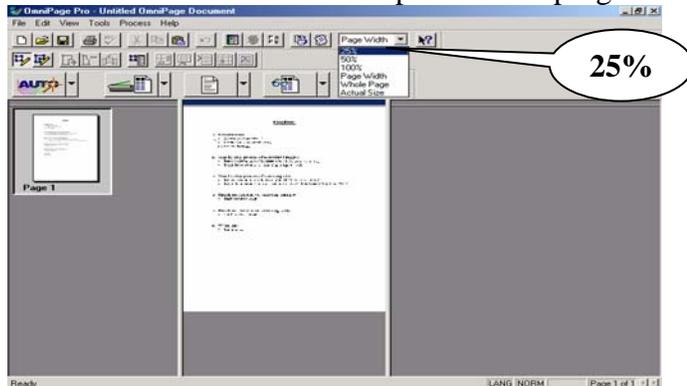
3. Click on the **scanner button** (second button left-to-right) and wait for the scanner to finish.

Note: When the document is scanned make sure the picture is selected. If it is not, do so by clicking on the document in the middle of the page.

4. We will now set the viewing area to **twenty-five percent** by clicking on the **drop down-arrow** located on the top-left of the program.


Note: This setting should be adjusted according to how much of the document area the user needs to see. Most of the time **twenty-five percent** is enough to see the entire document.

Note: We are now going to tell OmniPage how to format the text for us. This is user-supplied information. He makes that decision based on the type of document he has. For example, you would choose **multiple-column pages** if you are scanning a newspaper with many columns. In this tutorial we will use **single-column pages**, since we are using a one column sheet of paper.

5. To select your formatting mode click on the **drop-down arrow** located next to the third **button** in the middle of the page with a **picture of paper** on it. Select **single-column pages**.


Single column page
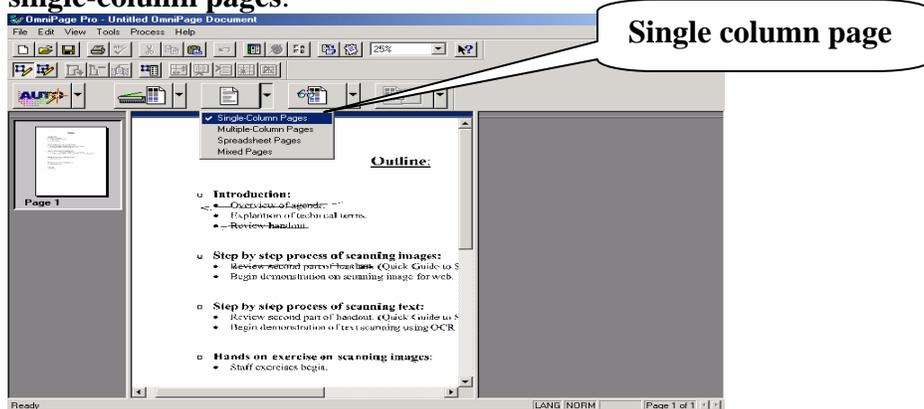
6. Next we are making sure the **pen selection tool is depressed**. If it is not we are going to select it by clicking on the pen located at the top-left hand corner of the OmniPage program. (This tool is called **draw rectangular zones**.)
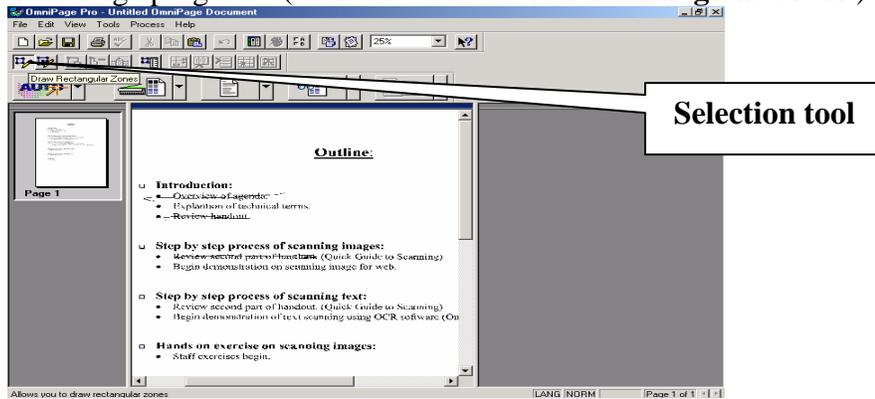

Selection tool

Note: Once you have chosen your **selection tool** we will decide on a region of text for OmniPage to digitize for us.

7. When you are ready to select your text, move the mouse over the **top corner** of the **region of text** you want to recognize, and click on the **left mouse button**, while holding, drag the **mouse over the entire text**. When you covered the entire area you wish to digitize, **release** the mouse button.
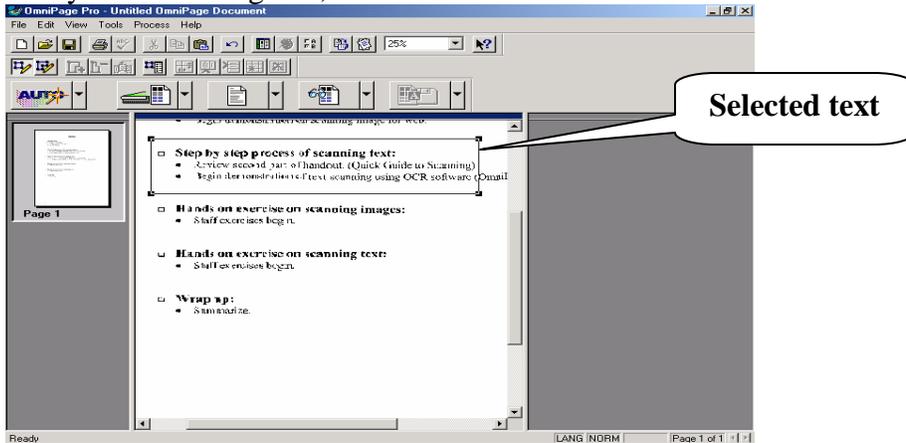
8. Once complete click on the **drop-down arrow** located next to fourth button (left-to-right) with a picture of a **document** and **sunglasses**. We will select **perform OCR**. Once complete click on the **big button** with **sunglasses** to perform OCR.
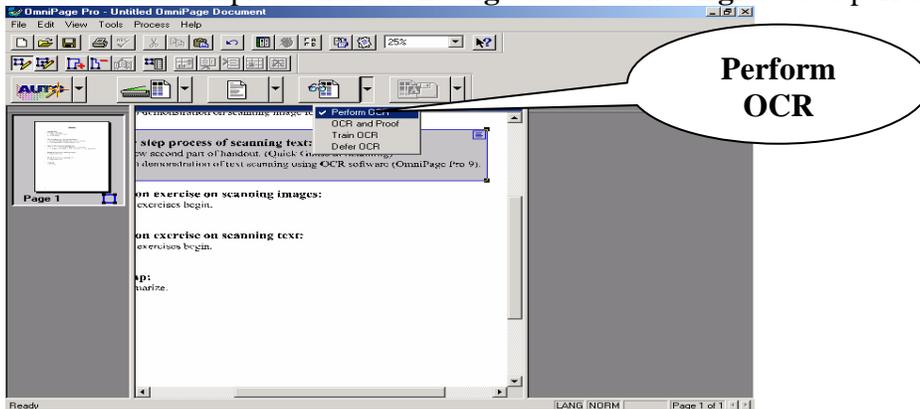
9. You should see a third row appear with digitized text.
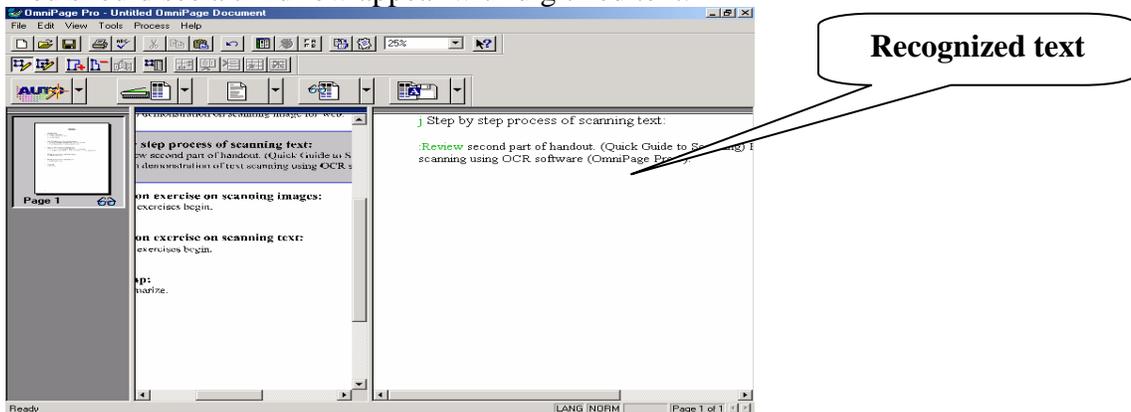
   Note: If you don't see the row then there is some windows resizing that is needed.

Note: Not all the text will be perfect, remember that the computer tries to interpret graphic text into computer characters. It is by no means a perfected science; some editing is always going to be required. OnmiPage has it's own proofreader, which you can use when you've done your recognition of text. However, I do not recommend using this feature, it is not very accurate. What I do recommend is discussed in the following instructions.
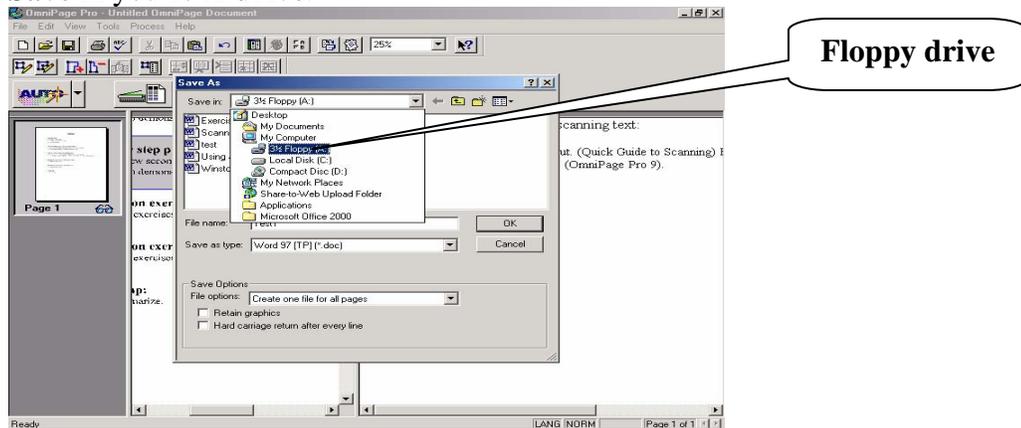
10. We will now finalize our documents by saving it into Word. We do this by clicking on the **down-arrow** next to the last **button** (left-to-right) with a picture of a **disk**. Make sure **save as** is selected. Then click on the big button and the **save as**, **dialogue box** should appear.
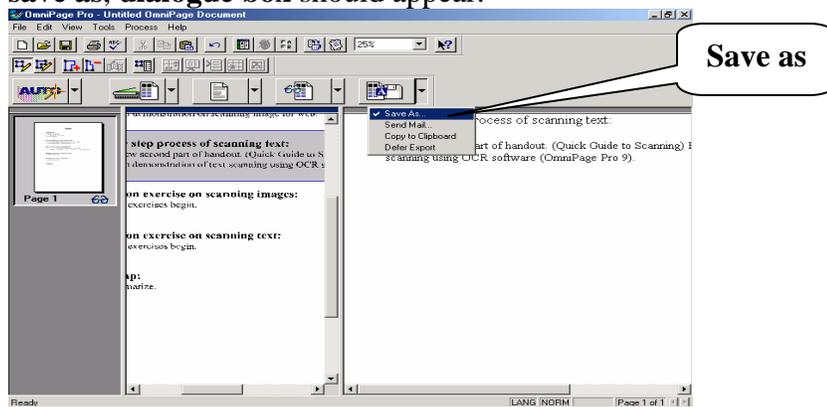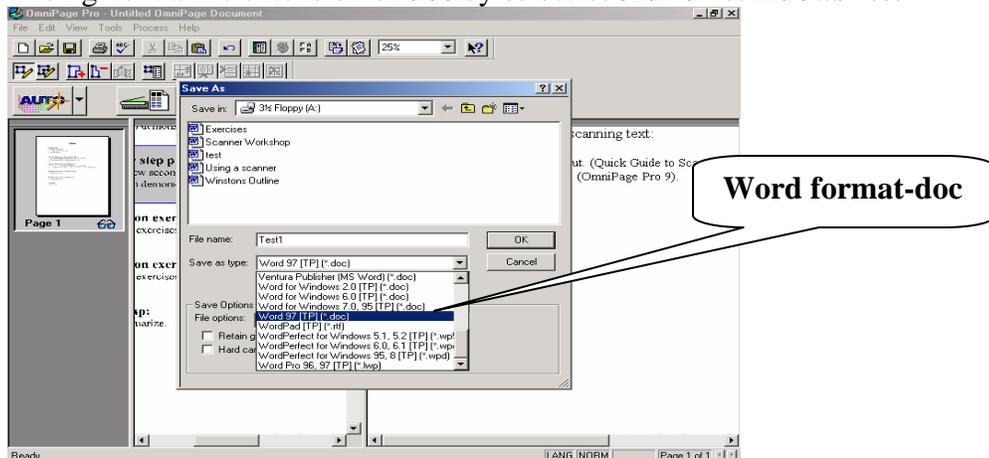

11. Specify a valid **file name**.
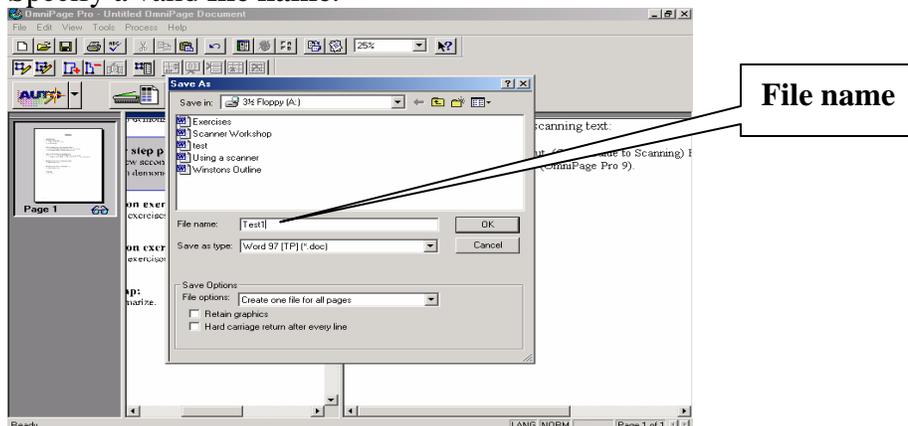
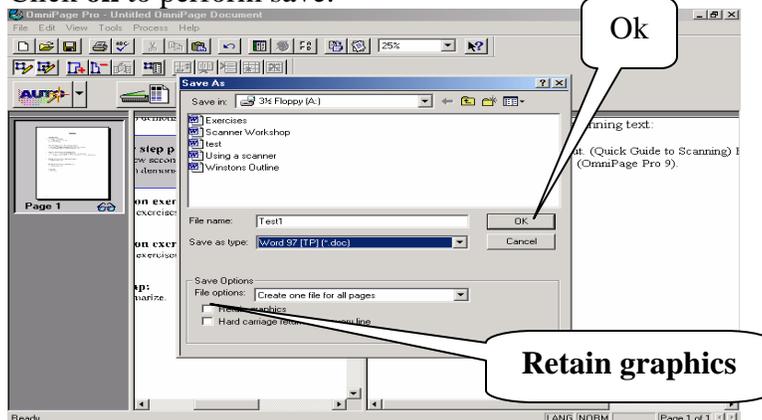12. **Save** in you're **A drive**.

13. Then give it a file extension of **doc** by select **Word for Windows 7.0.**

14. Under **file options** deselect **retain graphics** and leave the default setting of **one document for all pages**.

15. Click **ok** to perform save.

16. You have completed your document; you can go to word and edit you document for proofreading. Word is the better choice between OmniPage to proofread. It is a much more powerful and accurate then OmniPages proofreader.

17. Close OmniPage by clicking on the X.

   Note: OmniPage has a wizard button (First button from left-to-right) which guides you through all the steps mentioned above. If you choose to, you can click on the button and have OmniPage guide you through the process of recognizing text.

Reminder: Remember that if you want to scan a colored picture this software is not recommended. Only use it to scan text.

Choose one:		
<u>**Exercise for images:**</u>	<u>**Exercise for text:**</u>	<u>**Exercise for images into Word:**</u>
• Go to the **desktop** and open a **folder** name **Applications**. • Go to **Photoshop 6** and click on it. • Once it has loaded go to **File**, **open**. • In the **look in** box, click the **down-arrow** and select **A drive**. (If it is not already selected for you) • Once in the **A drive** select the picture you created and click open. **Note:** You can now customize your picture. You can apply any changes and effects to it. And, considering if the file is small enough it is ready for internet use.	• Go to **start** at the bottom-right had corner. • Go to **Microsoft Word** and click on it. • Once it has loaded, go to **file**, **open**. • In the look in box, click the **down-arrow** and select **A drive**. (If it is not already selected for you) • Once in the A drive, select the document you created and click open. **Note:** You can now customize your document. You can apply any editing or changes to it.	• Go to **start** at the bottom- right had corner. • Go to **Microsoft Word** and click on it. • Once it has loaded, go to **insert**, **picture**, **from file**. • In the look in box, click the **down-arrow** and select **A drive**. (If it is not already selected for you) • Once in the **A drive** select the picture you created and click insert. **Note:** You add pictures as well as text into into Word.