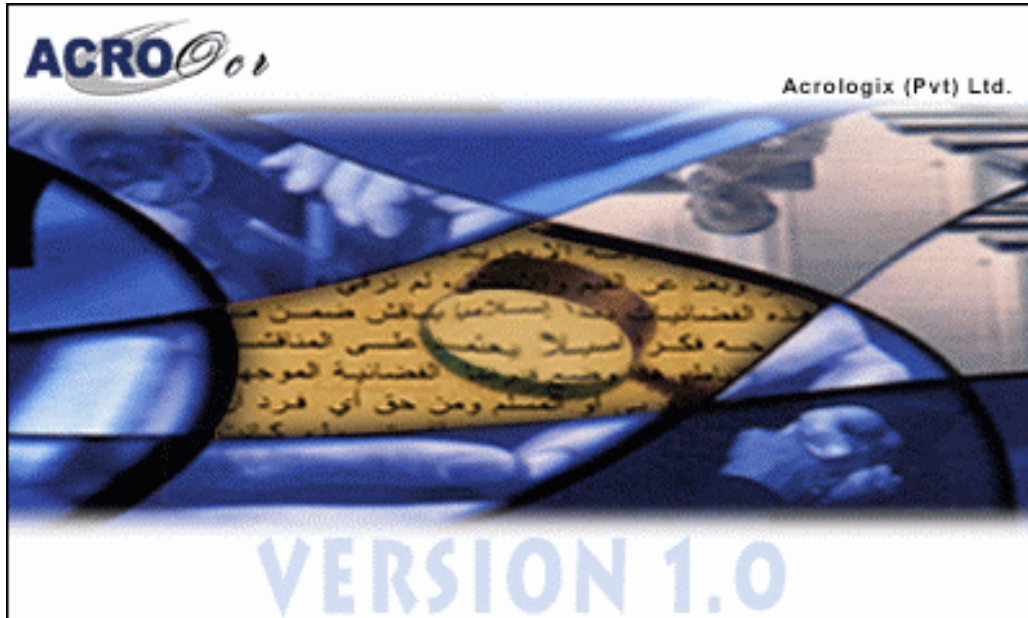


Arabic OCR



User Manual

Main Application

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Chapter 1: Image Administration

1.1 – New Workspace

To create a new workspace, Click on 'New Workspace' in 'File' menu. New workspace can be created by using short key 'Ctrl+O'.

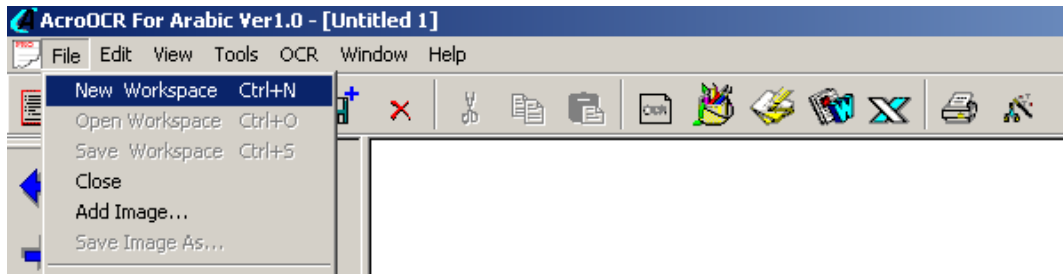


Figure.1.1 'New Workspace'

1.2 – Opening an Image

To open an image file, Click on (+) icon on the toolbar and chose the file from the open file dialog. You can also add images by clicking on 'Add Image' in 'File' menu.

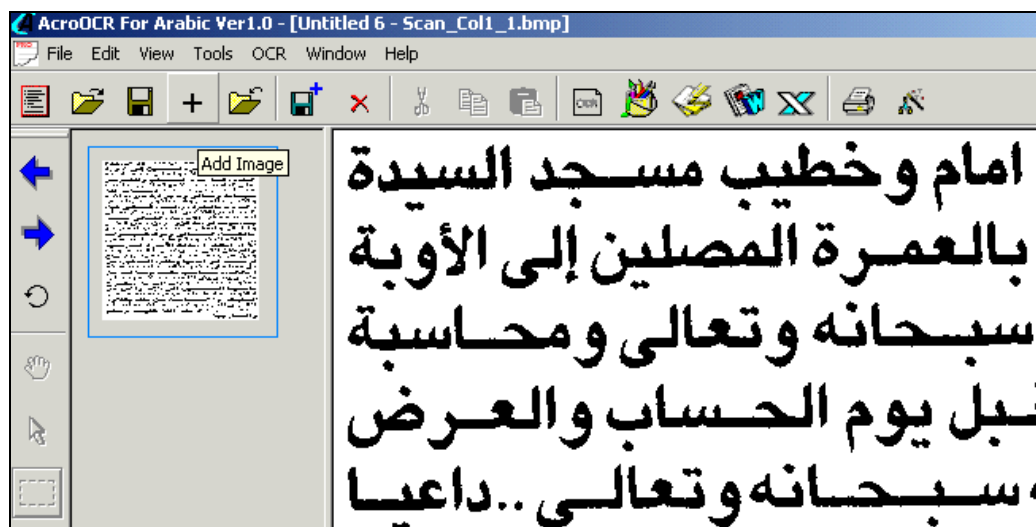


Figure 1.2 'Opening Image'

1.3 – Opening Multiple Images

To open multiple images in a project repeat the process for adding images.

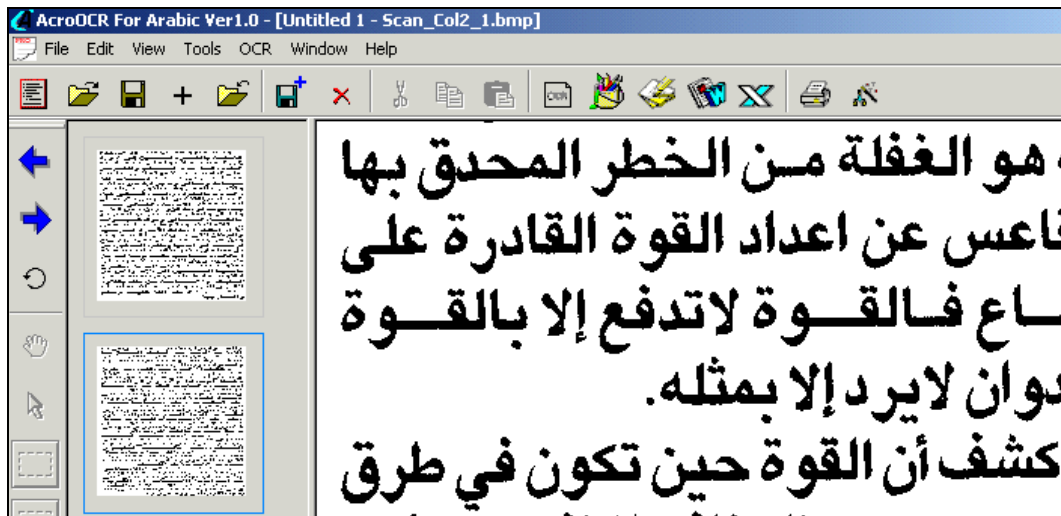


Figure 1.3 'Multiple Images'

The thumbnail Images would be displayed left pane. Currently selected image would have blue border. You can select a particular image by simply clicking on the thumbnail. Or by using the 'Arrow' buttons on the left vertical toolbar.

1.4 - Tool bars

1.4.1 Main Toolbar

The toolbar streamlines the OCR process.

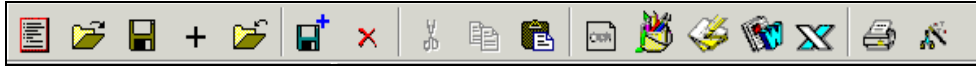



















Figure 1.4.1 'Main Toolbar'



Icon	Action
	Starts a New Project.
	Opens an existing project.
	Saves a Project.
	Adds Images to the project.
	Closes the Project.
	Saves the Image
	Deletes the Image from the Project
	Cut
	Copy
	Paste
	Run OCR
	Edit Bitmap
	OCR out put in Notepad
	OCR out put in MS Word
	OCR out put in MS Excel

	Print
	Customize the tool bar.

1.4.2 View Toolbar










Figure 1.4.2 'View Toolbar'



Icon	Action
	Zoom In
	Zoom Out.

1.4.3 Image Toolbar



Figure 1.4.3 'Image Toolbar'

Icon	Action
	Move to the previous loaded Image
	Move to the next loaded Image
	Rotates the Image
	Hand Scroll
	Object Picking
	Inclusive Mark
	Displays information about the loaded Image.

			About Icon. Displays information about the company.
			Exist the Application

Arabic OCR

Chapter 2:

Running OCR

2.1 Running the OCR

OCR running process consists of following steps,

Step 1- Inspecting the Page

To inspect opened image file, click on the 'Inspect Page' from the 'OCR' menu.

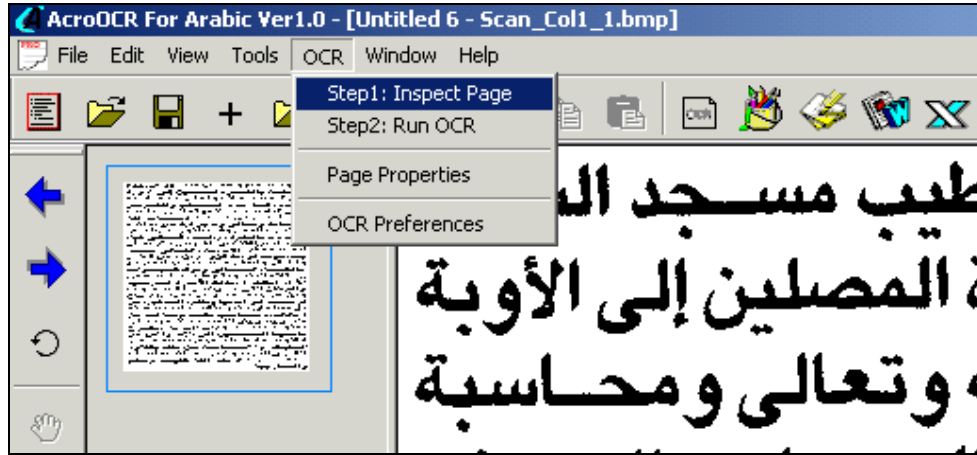


Figure 2.1.1- 'Inspect Page Menu'

After inspection process of the image file, the lines and paragraphs of the page are marked.

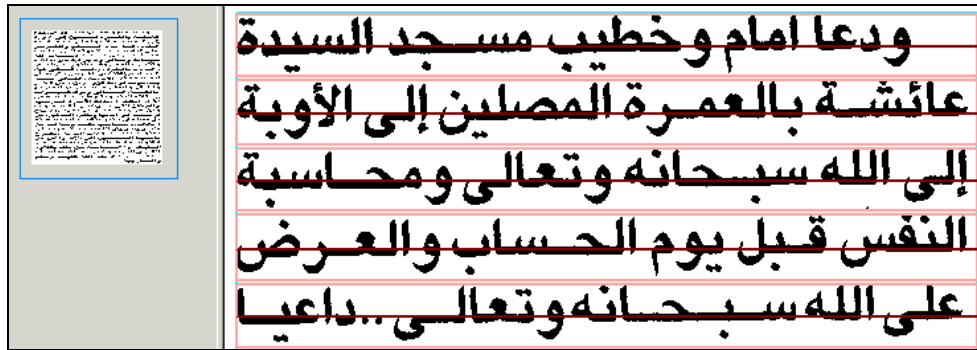


Figure 2.1.2- 'Inspect Image File'

Step 2- Run OCR

After inspection process of the image is completed, click on the 'Run OCR' from the 'OCR' menu.

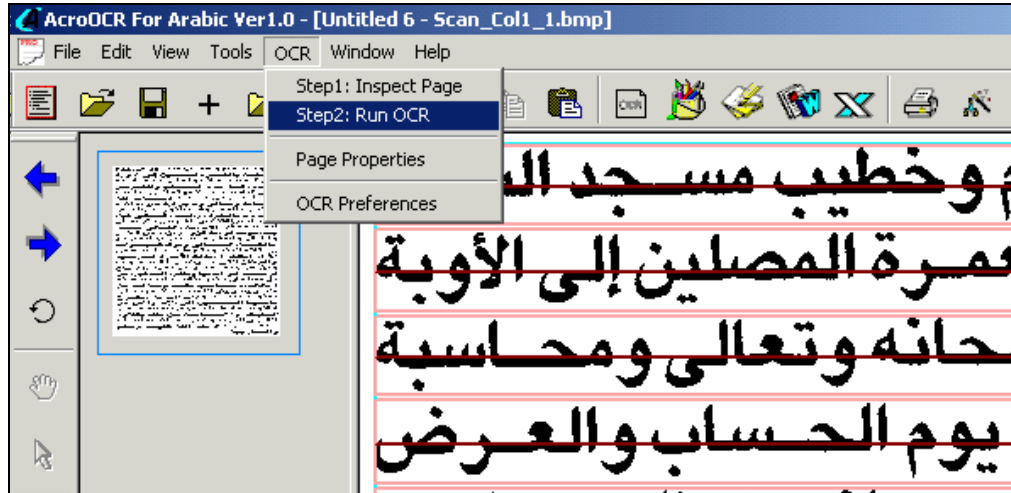


Figure 2. 2.1- 'Run OCR'

OCR Output

After the page inspection process has been completed, the output of the OCR will be shown in ArNotepad by default. The output could also be shown in the MS-Word, MS-Excel, Notepad.

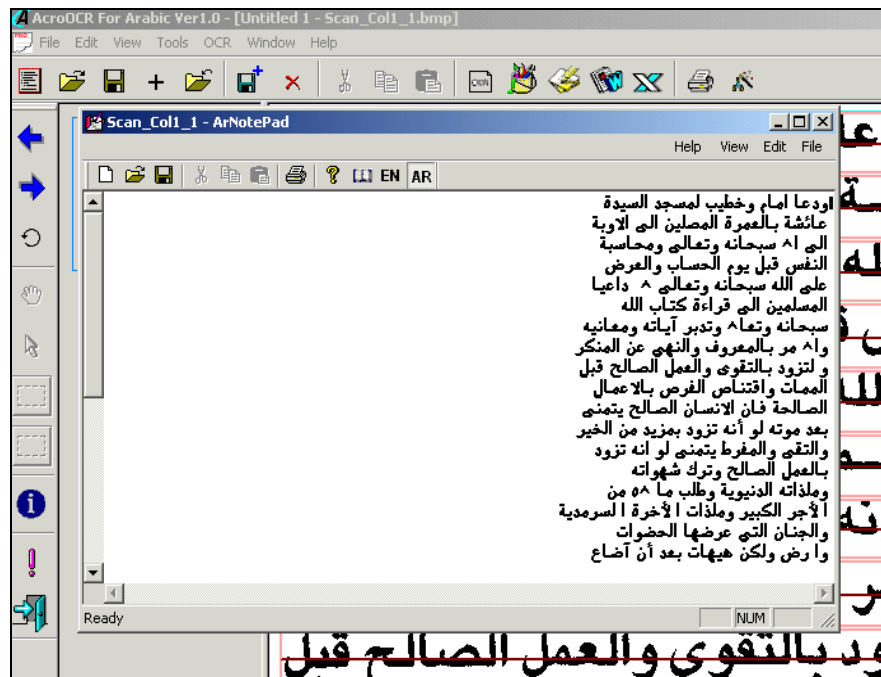


Figure 2. 2.2- 'OCR Output'

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Chapter 3: Preferences

3.1 –Page Properties

The page properties are invoked from the OCR menu. Click on 'Page Properties' to open the Page Properties dialog box.

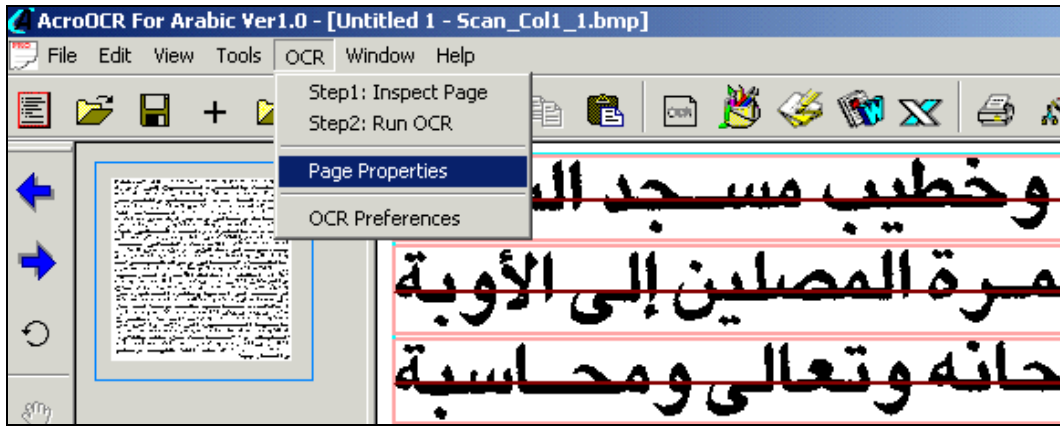


Figure 3.1.1- 'Invoking Page properties'

Page properties shows the total number of paragraphs, lines, words, ligatures and diacritics in an image.

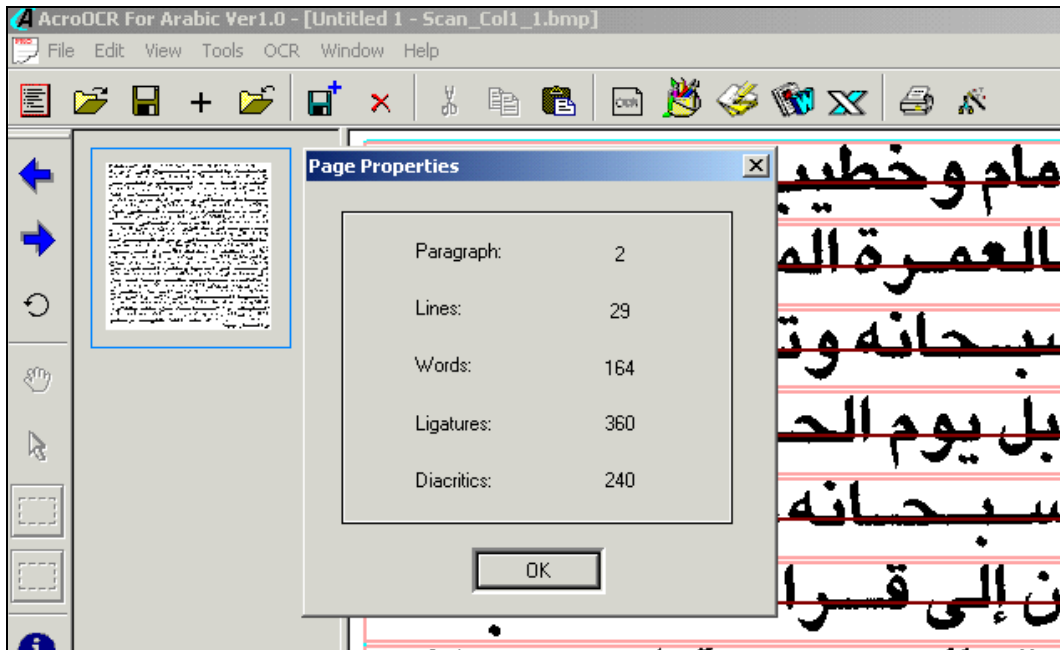


Figure 3.1.2- 'Page Properties'

3.2 OCR Preferences

OCR preferences are invoked from the OCR Preferences of the OCR menu.

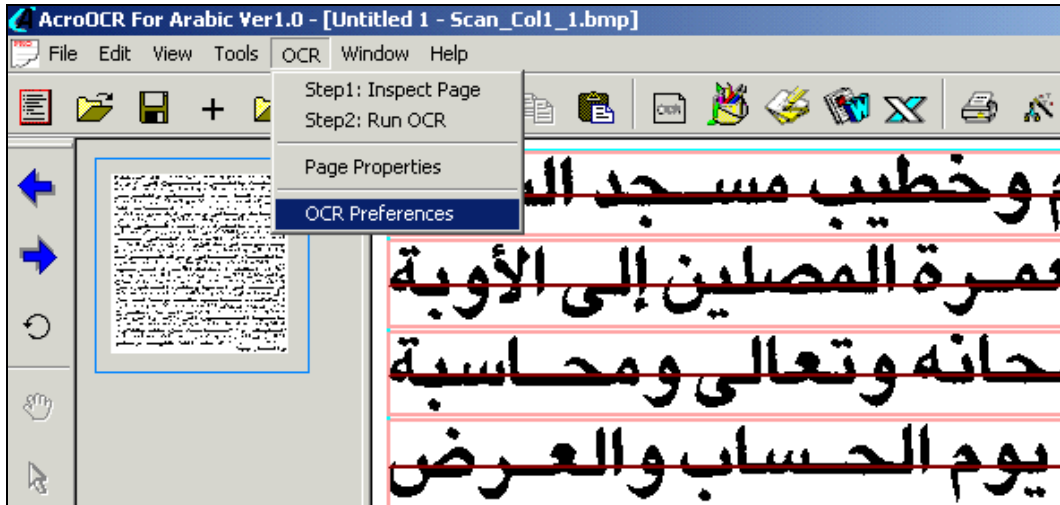


Figure 3.2.1- 'Invoking OCR preferences'

These are controlling values, which will control the page segmentation process. Provide values for available options and press 'Save' to view the effect.

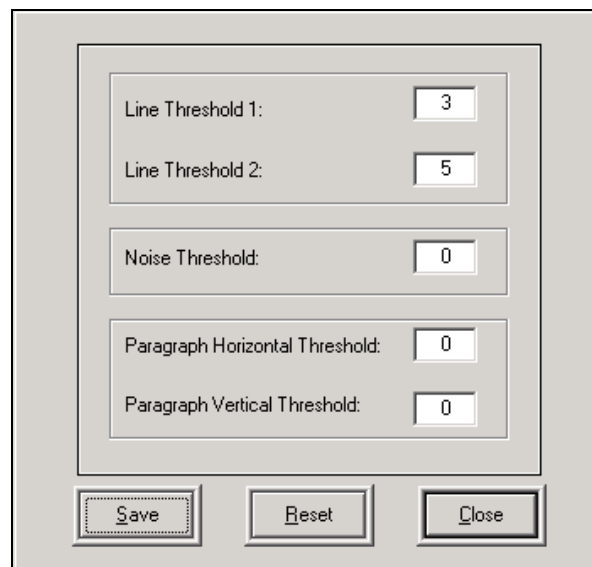


Figure 3.2.2- 'Page Preferences'

Following is the detail of the properties

Property	Description
Line Threshold 1	This property sets the upper threshold for the line
Line Threshold 2	This property sets the lower threshold for the line
Noise Threshold	This property will control the noise if present
Paragraph Vertical Threshold	This property controls the segmentation of multiple paragraphs in a single row.
Paragraph Horizontal Threshold	This property controls paragraph segmentation horizontally in a page.

By modifying these values, page segmentation process is changed. For e.g.

Set following values,

Line Threshold 1: 1

Line Threshold 2: 5

Press 'Save' button to apply the changes. Image would be detected as

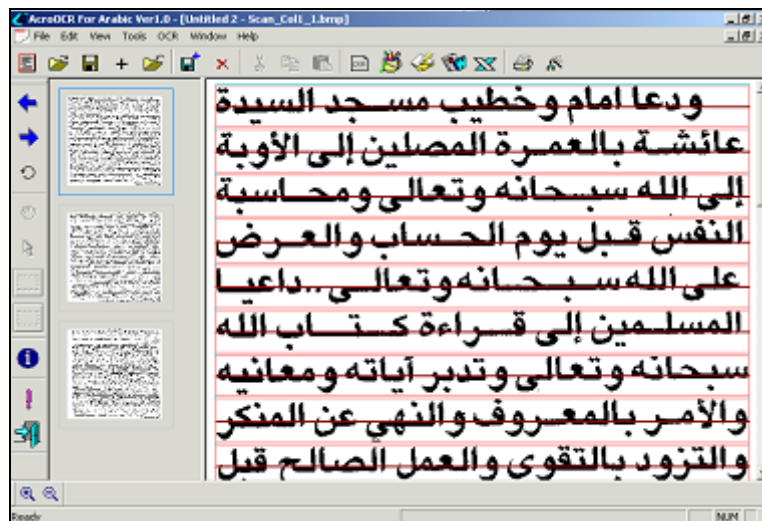


Figure 3.2.3- 'Page Preferences Example'

Now change the values to

Line Threshold 1: 8

Line Threshold 2: 10

Press 'Save' button to apply the changes. Image would be detected as

والأرض ولكن هيهات بعد أن أضاع
فرصته في الدنيا وطلب الخطيب من
كل مسلم أن يخلو بنفسه لله سبحانه
وتعالى ويحاسب نفسه وما قدم من

Figure 3.2.4- 'Page Preferences Example'

The whole paragraph has been detected as one line.

3.3 -View Settings

The view options are invoked from the view menu. Click on 'Options' to open the view options dialog box.

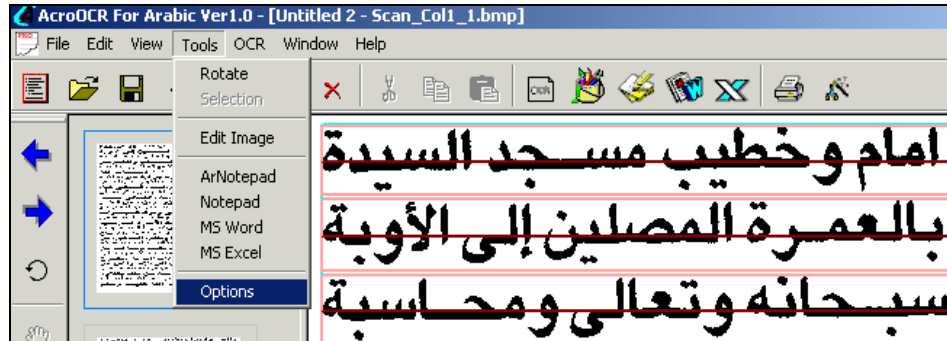


Figure 3.3.1- 'Invoking View Options'

The view settings dialog box appears with a list of available options for viewing image. Check option to view image with selected options.

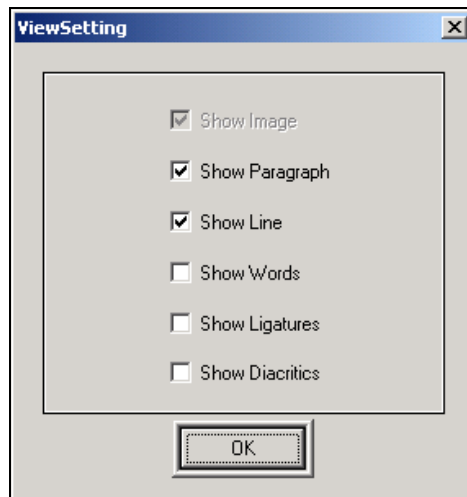


Figure 3.3.2- 'View Settings'

Following is the detail of the available view options

View Option	Detail
Show Paragraph	Displays the Paragraph in a Box
Show Line	Displays the Line in a Box
Show Words	Displays the Words in a Box
Show Ligatures	Displays the Ligatures in a Box
Show Diacritics	Displays the Diacritics in a Box

All the view options can be enabled at the same time or any combination of the options can be used according to the requirement. Here is the detail of each view option if selected alone,

3.3.1 – Show Paragraph

Check 'Show Paragraph' option and press 'Ok'. This option will outline the paragraphs of the image.

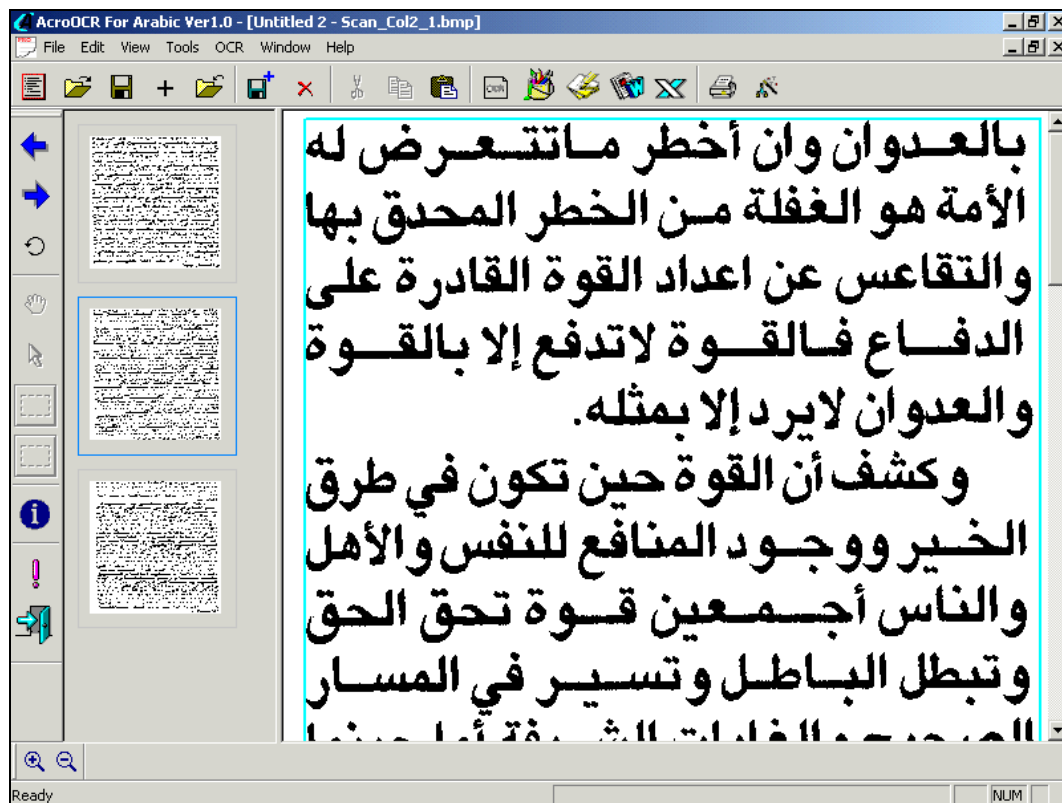


Figure 3.3.3- 'Show Paragraph'

3.3.2 – Show Line

Check 'Show Line' option and press 'Ok'. This option will display lines of the paragraph.

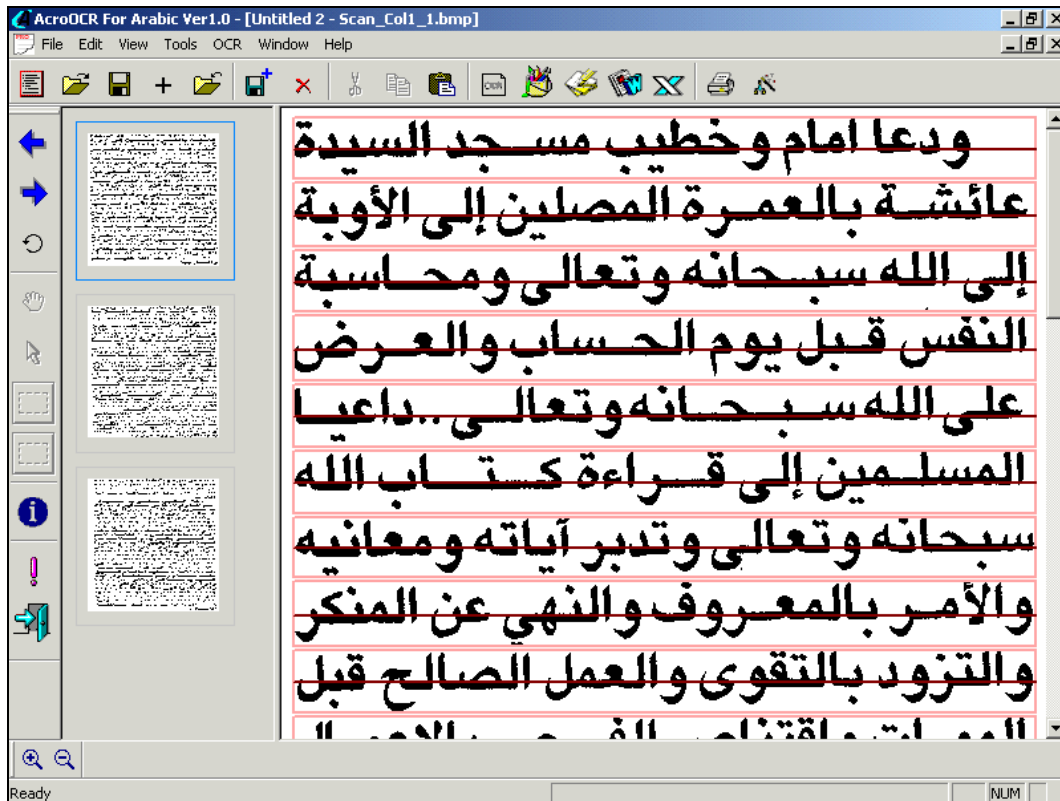


Figure 3.3.4- 'Show Line'

3.3.3 – Show Words

Check 'Show Words' option and press 'Ok'. This option will display each word of a paragraph enclosed in a box.

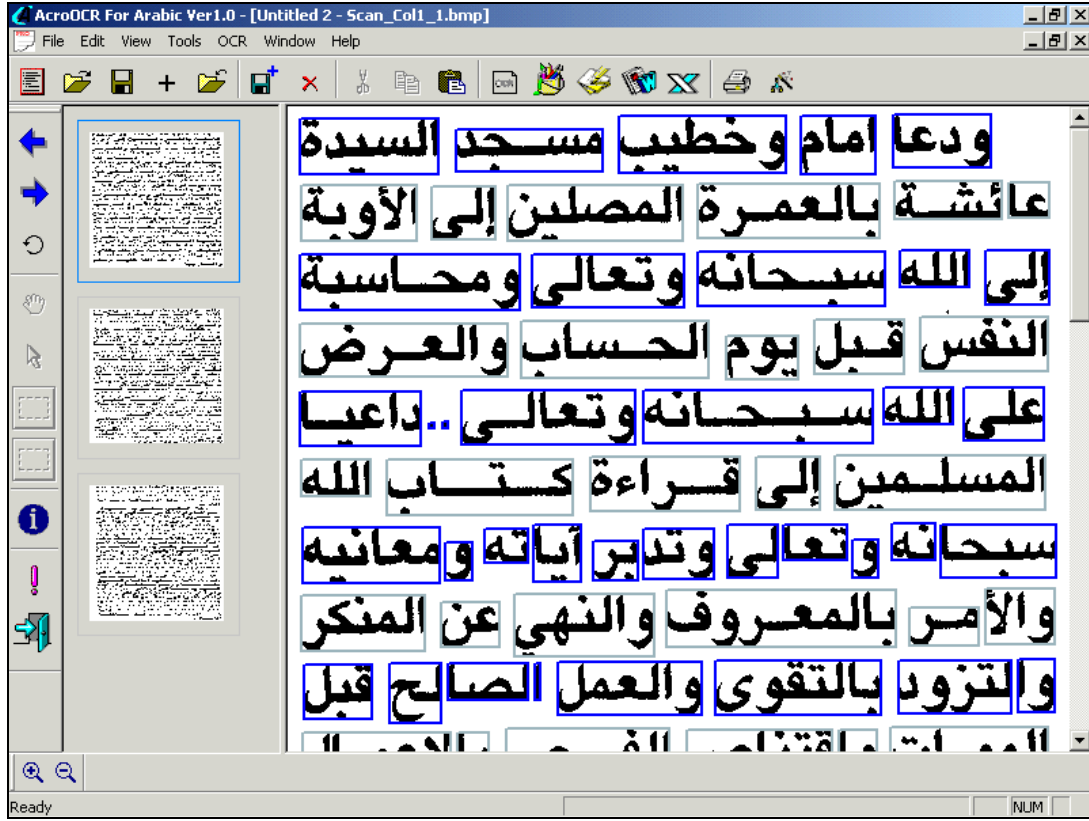


Figure 3.3.5- 'Show Words'

3.3.4 – Show Ligatures

Check 'Show Ligatures' option and press 'Ok'. This option will display ligatures enclosed in boxes.

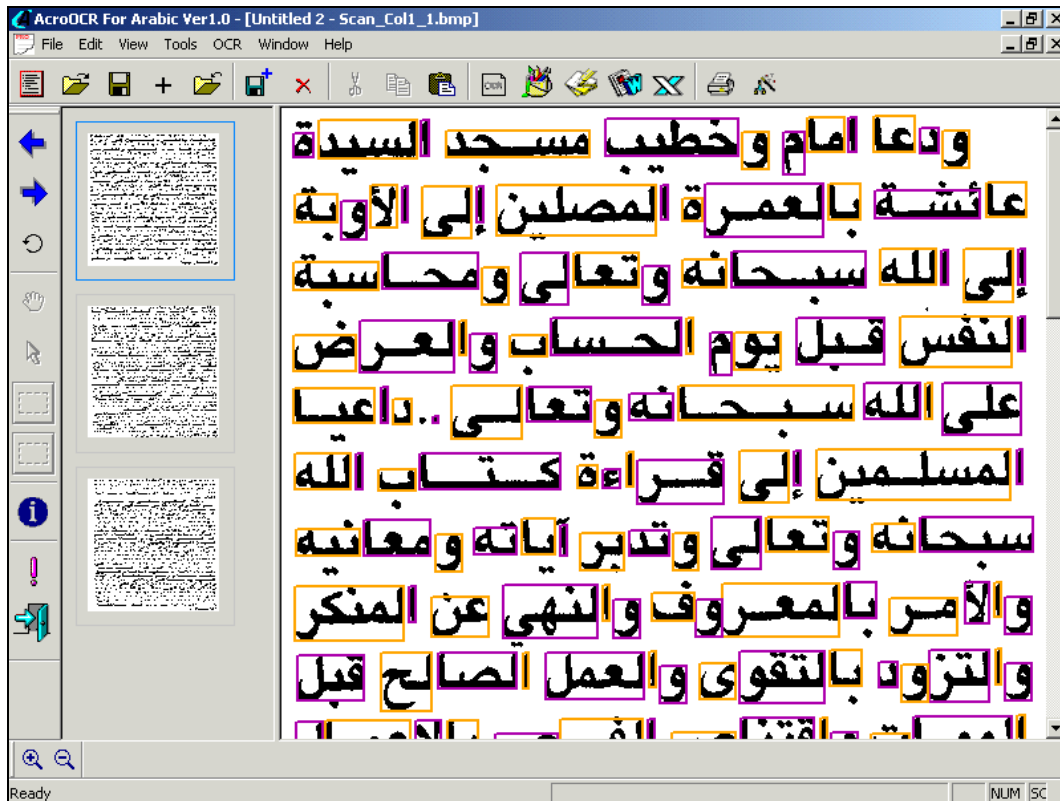


Figure 3.3.6- 'Show Ligatures'

3.4.5 – Show Diacritics

Check 'Show Diacritics' option and press 'Ok'. This option will display diacritics of each word enclosed in boxes.

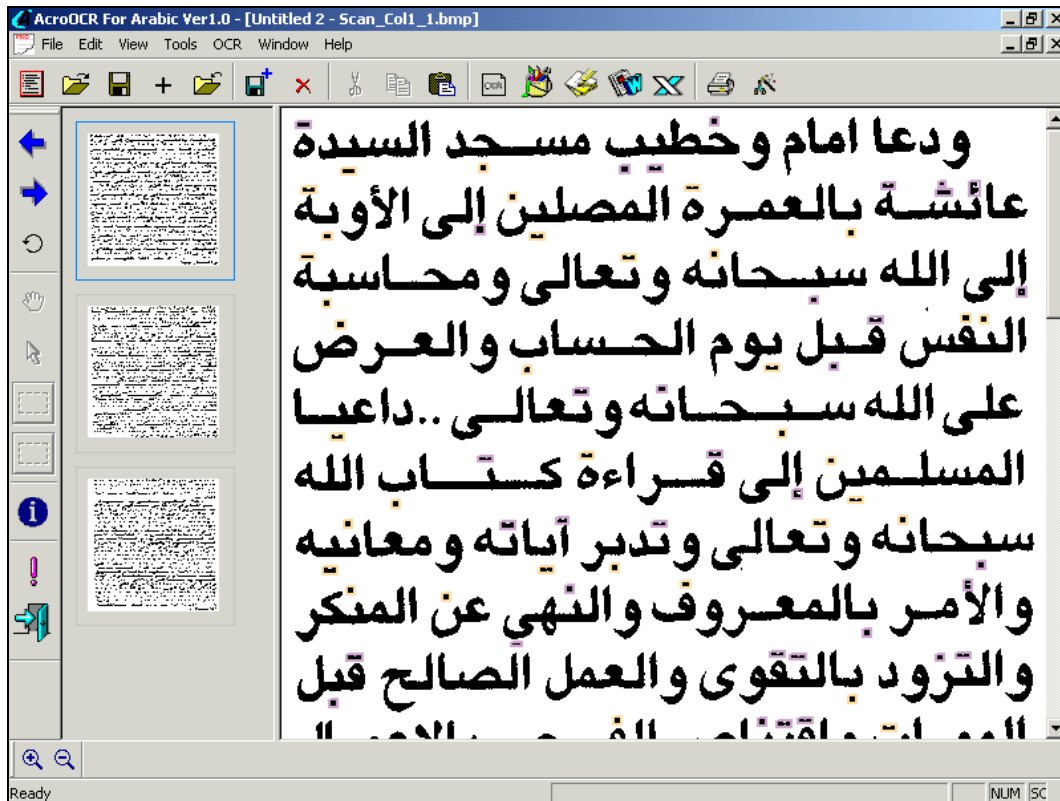


Figure 3.3.7- 'Show Diacritics'