Remark Office OMR

User's Guide

Revision 10.3

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Contents

Chapter 1: Remark Office OMR Overview

Software Overview

Remark Office OMR is a software package designed to collect data from marks (bubbles, checkboxes) on plain paper forms. In addition, the software recognizes machine printed text (OCR) and barcodes. The software works in conjunction with an image scanner to collect the data. The software then analyzes that data and/or allows you to export it to various file formats.

The software is commonly used to grade tests and analyze various types of surveys. The following overview provides the basic steps to using the software. Click the links below to learn more about processing forms for your specific application.

General Use:

- Create a scannable form in the software package of your choice: word processing, survey design, etc. The forms you can use with Remark Office OMR vary tremendously, from tests and assessments to surveys and market research. Remark Office OMR can read marks (bubbles, checkboxes, etc.), machine printed text (OCR) and barcodes. While Remark Office OMR is not a form designer, you are allowed a great deal of flexibility in the design process because you do not need special marks or drop-out inks, nor do your respondents need to use a number 2 pencil to fill in the forms. Because Remark Office OMR works with forms that you create, we provide form design guidelines to help you get the best results possible.

- Use the Template Editor portion of the Remark Office OMR software to create a form template (definition file). The form template tells Remark Office OMR how to read your form. To create the form template, scan a blank copy of the form into the software and use the mouse to drag boxes around the areas you want recognized. You then provide the software with information about the area, including what type of data to output. Each form you wish to process requires a form template, but the form template is a one-time setup that tells the software how to read your particular form.

- Process filled-in forms using a scanner or saved image files. Remark Office OMR provides flexibility in terms of how you process images. For example, you can use a desktop scanner connected to the PC running Remark Office OMR, or scan with a networked multi-function printer (MFP) and save image files on your network (that Remark Office OMR will read). Remark Office OMR displays the data in a spreadsheet style grid based on the form template you created. Each row of this grid corresponds to one scanned form in its entirety and each column corresponds to one question or variable on the form.

- Correct any exception cases. Remark Office OMR denotes exceptions with color-coded data grid cells and by providing a descriptive word in the answer cell (e.g. "BLANK" for a question that was not answered). The software provides a Review Exceptions function to correct

exception cases as you process the forms or after the forms are processed. Remark Office OMR assists you in the data cleaning process by storing an image of each form as it is processed. The software then uses these images to help automate the correction of output errors and exception cases without needing to locate the appropriate paper form.

- [Save data](#) and/or use the built-in analysis tool, Remark Quick Stats®. Save the data to many output formats, including Access, Excel, SPSS, Oracle, SQL Server, ODBC, etc. Or, use the analysis program included with the software, Remark Quick Stats, to tabulate your survey or grade your test. If you use Remark Quick Stats, you can take advantage of powerful grade results, crosstabulations, graphs, charts and more.

This user's guide file is designed to provide information about all of the features of the software as well as guidelines for using the software. Software features are not only described, but you are also given steps for how to use the features. Items taken directly from the software, such as menus, buttons and dialogs, are in bold format whenever they are used in an instructional context.

You are encouraged to read the user's guide before designing your own forms or using the software with your own forms. There are two tutorials included with the software, which are accessed by clicking Start|Programs|Remark Office OMR|Documentation|Tutorials (and from the Help menu in the software). The tutorials are PDF files that can be printed or read on-screen (you need the Adobe Acrobat Reader to use these files: www.adobe.com). The help file and the user's guide contain answers to many of the common questions and/or problems users potentially face.

Getting to Know Your Software

The Remark Office OMR software has three basic parts:

- The Template Editor: You use the Template Editor to create template definitions for the forms you want to process.
- The Data Center: You use the Data Center to read filled in forms, clean up the data and save the data.
- Remark Quick Stats: You use Remark Quick Stats to analyze a survey or grade a test.

Each part of the software has a similar layout with a main working window and a task pane to the left. The task pane shows you the possible things you can do based on where you are in the software. For example, if you just scanned filled in forms, the task pane gives you options to run Review Exceptions to clean your data and save options for saving your data. All of the functions in the task pane can also be found on the toolbar and in the main menus. You can also access help from any screen via the Help menu or by pressing F1. Remark Office OMR supports basic Windows functions that you see in most desktop software, such as:

- Cut, Copy, Paste from the Edit Menu (shortcut keys also supported)
- Home and End Keys in the Data Grid
- File|Save and File|Save As
- File|Print
- File --> Recent File Access

- Edit|Find/Replace
- Edit|Sort
- Tools|Spell Check

The software also has two tutorials included: a basic test and a basic survey. We strongly suggest performing the tutorial that applies to your applications. We recognize that you are using a wide variety of forms with the software, so these tutorials are designed to provide guidance on the basic functions of the software, which you can then apply to your specific forms. The tutorials are accessible from the Help menu. You will also find all of the user documentation under the Help menu. In addition, there are many video trainings and overviews on our website and YouTube channel.

Processing Tests Overview

If you are grading tests in Remark Office OMR, here are the basic steps for processing a test in Remark Office OMR and getting test results:

1. **Create a test or test answer sheet, or choose one of the included answer sheets.**

   - **Using Included Templates:** If you would like to use our answer sheets, first launch Remark Office OMR. The standard templates are then copied to your Documents library under Remark Office OMR\Templates\Gravic (use Windows Explorer to find this folder). Word versions of the files are included if you want to make modifications. Ensure that your changes still meet our form design guidelines. If you change the forms, be sure to reset the template image to match using Tools|Reset Images in the Remark Office OMR Template Editor.

   - **Creating Forms:** You can create your own test answer sheets in Word® or anywhere you are comfortable. Be sure to follow our form design guidelines when creating your forms and utilize our free form review service to check them over before using them. There are also other sample answer sheets on our website: www.gravic.com/remark if you need some help getting started.

2. **Create a template for your form in the Remark Office OMR Template Editor.**
   You can access the Template Editor from the Remark Office OMR Data Center or by clicking Start|Programs|Remark Office OMR|Remark Office OMR Template Editor. Creating a template tells the software where to look for data on your form and what to output. You only have to create the template one time per form. You can set up testing parameters, such as allocating points earned (the default is 1 point per correct response), setting up extra credit and allocating points for subjective (non-multiple choice) or rubric style questions. Don't worry about setting up an answer key yet... you will do that later in the process. Remember to use the same quality form as you will be distributing to respondents when you set up your template (e.g. if you photocopy forms, use a blank photocopy for the template).
   Don't forget to test your form and template before administering the test to make sure it works well (print a few out and fill them out like your students will and then scan them in).

   - **Tip:** If you want to have a few standard answer sheets, create the documents then create one template and copy it to make the other templates. You can reset the template image to another form and then make modifications instead of starting from scratch each time.

3. **Administer the test.**
   Have your students take the test.

4. **Scan your filled in test sheets.**
   You can either scan test answer sheets to an image file (this is common if you use a muti-function printer) or scan them directly into Remark Office OMR with a TWAIN scanner. If you want to bubble in an answer key, scan it along with the rest of your tests, putting it at the top of the stack of forms. This is the easiest way to get an answer key into the software.
   If you are scanning outside of Remark Office OMR, we strongly recommend you use the TIFF format for your images. When you are ready to process the tests, click the Read link from the task pane and choose to read from a scanner or import your images. Follow the steps in the Read window to complete the process.

5. **Review the results.**
   If there are any problem areas, such as blank responses or multiple responses, they are flagged in the data. Run Review Exceptions from the task pane to clean them up.

6. **Grade your test.**
   If you scanned an answer key as your first form, click the **Quick Grade** button. The tests are graded according to the scanned answer key and any grading options you set up in the template. If you want to do more advanced grading or didn't scan an answer key, click the **Advanced Grade** button, where you can turn off grading for questions, change point values, allow multiple correct responses, set up learning objectives, set benchmarks and modify your grade scale.

7. **Export data and test results.**
   If you want to get the data or reports out of Remark Office OMR, click the File|Save options. For data, there are several formats in the list, including CSV, which is the most commonly accepted format in other programs. For graded results, you can choose to export full reports to PDF or Excel, or you can export the grades (with or without the actual data) to various formats including CSV and Excel.

This topic is meant to help you understand the steps to take when using Remark Office OMR for test grading. For more detailed information about any of the topics above, please see the appropriate section of this file. Some related links are included below.

Processing Surveys Overview

If you are working with survey-style forms, here are the basic steps for processing a survey form in Remark Office OMR and getting results:

1. **Create a form.**
   You can create your own forms in Word® or anywhere you are comfortable. Be sure to follow our form design guidelines when creating your forms and utilize our free form review service to check them over before using them. There are also sample forms on our website: www.gravic.com/remark if you need some help getting started.

2. **Create a template for your form in the Remark Office OMR Template Editor.**
   You can access the Template Editor from the Remark Office OMR Data Center or by clicking Start|Programs|Remark Office OMR|Remark Office OMR Template Editor. Creating a template tells the software where to look for data on your form and what to output as data. You only have to create the template one time per form. You can set up processing and analysis parameters, such as which questions identify respondents, how to handle multiple responses and add question text so that your reports are more meaningful. Remember to use the same quality form as you will be distributing to respondents when you set up your template (e.g. if you photocopy forms, use a blank photocopy for the template). Don't forget to test your template before administering the form to make sure it works well (print a few out and fill them out like your respondents will and then scan them in).

3. **Administer the survey.**
   Have your respondents fill out the survey.

4. **Scan your filled in forms.**
   You can either scan forms to an image file (this is common if you use a muti-function printer) or scan them directly into Remark Office OMR with a TWAIN scanner. If you are scanning outside of Remark Office OMR, we strongly recommend you use the TIFF format for your images. When you are ready to process the forms, click the Read link from the task pane and choose to read from a scanner or import your images. Follow the steps in the Read window to complete the process.

5. **Review the results.**
   If there are any problem areas, such as blank responses or multiple responses, they are flagged in the data. Run Review Exceptions from the task pane to clean them up.

6. **Analyze your data.**
   The quickest way to run reports on your data is to click the Quick Survey button on the toolbar, which opens Remark Quick Stats and several reports. If you want to dive deeper into your analysis, click the Advanced Survey option, where you can change properties of individual questions and create groups of questions to analyze together.

7. **Export data and results.**
   If you want to get the data or reports out of Remark Office OMR, click the File|Save options. For data, there are several formats in the list, including CSV, which is the most commonly accepted format in other programs. For tabulated results, you can choose to export full reports to PDF or Excel, or you can export the data and statistics (with or without the actual data) to various formats including CSV and Excel.

This topic is meant to help you understand the steps to take when using Remark Office OMR for survey data collection and analysis. For more detailed information about any of the topics above, please see the appropriate section of this file.

Support and Maintenance

Remark Office OMR includes a user's guide and online help. You will also find a knowledgebase on the [Gravic website](#), where you will find the answers to frequently asked questions and [training videos](#). In addition, there are two tutorials included with the software (Start|Programs|Remark Office OMR|Documentation|Tutorials), which we strongly recommend you perform before using the software with your forms. Most questions can be answered by consulting these reference materials.

If a problem with Remark Office OMR arises that cannot be solved using the materials above, customers who purchased Technical Support and Maintenance may contact Gravic technical support. Technical Support and Maintenance includes unlimited phone and email support as well as software updates. Technical support and Maintenance is renewable annually. Please note that without technical support and maintenance, you will not receive product updates.

Before contacting technical support, please gather the following information:

- The version and serial number of the Remark Office OMR software (you can find this information by selecting the Help menu and then clicking About in the software or look in the lower right hand corner of the Data Center)

- The steps required to reproduce the problem

- The type, model and configuration of your computer and scanner, if applicable

Gravic's technical support team provides product support to customers with valid Technical Support and Maintenance via [email](#), [web](#) and phone (610.647.8595. In addition, you will find free support tools on our [website](#).

Chapter 2: Software Installation and Activation

Remark Office OMR is installed on a Windows® based computer. Once installed, the software is activated. See the following sections for further details on installation and activation. If you need to uninstall the software, you may do so via the Windows Control Panel under Programs.

System Requirements

The following section provides the system requirements for running Remark Office OMR.

Minimum requirements:

- Personal computer with 2 GHz or faster processor

- Supported Microsoft Windows® 32-bit and 64-bit desktop operating systems: Windows 8.1, Windows 10

- .NET 4.7.2 (or higher) framework

- Microsoft Visual C++ 2015 Redistributable Package (will be installed if not present)

- 2 GB RAM

- 1 GB free fixed disk space

- Screen/monitor resolution of 1024x768 or higher and at least 32-bit color

- Mouse or other pointing device

Recommended optional requirements:

- Supported scanner (includes multifunction printer that has scanning capabilities)

- Windows-supported printer

- Internet connection recommended for initial software activation and email functionality

- PDF viewer required to view installed documentation

- Microphone for speech recognition

- Microsoft Outlook 2007 or greater can be used for email functionality; if not present an internal Remark Office OMR email client (using your SMTP server) may be used

*The software uses activation for license regulation. If you choose to install on a virtual machine (VM), due to the nature of how virtual environments behave, activation is required every time the software is run.

Installing the Software

You must run the Remark Office OMR installation program in order to use the software. Install Remark Office OMR on a fixed drive with at least 1GB of free disk space. To scan directly into Remark Office OMR, you must install the software on the same system to which the scanner is attached. (Note: Scanners can be used if they are not connected to the PC running Remark Office OMR. You must first scan forms and save them as image files outside of Remark Office OMR. Then the software reads those images.) Before installing the software, make sure you are an administrator on your computer. Each single license of the software can only be installed on a single computer, which is validated through activation of the license after installation.

If you are upgrading to Remark Office OMR 10 from an earlier version, do not install the software in the same directory as your previous version. Once the installation is complete, you can copy information from your old installation that you want to use in the new version (e.g. form templates, data, etc.).

- **Note:** Form template files, RMK/RMX/ROA/ROX data files, answer keys (AKY) and survey definition files (SDF) are not backwards compatible. Remark Office OMR 10 converts these files from previous versions of the software automatically. However, once a file has been converted, it cannot be opened in a previous version of the software. Always make copies of these files before converting them.

To install Remark Office OMR

1. Double click the file you downloaded.
2. Follow the on-screen instructions to display the **Remark Office OMR Installation** window.
   - **Note:** The .NET 4.6.1 Framework is required to install Remark Office OMR. If you do not have it installed on your system, you are prompted to install it. Once the .NET Framework installation completes, the Remark Office OMR installation resumes normally.
3. Follow the on-screen instructions to complete the installation. You are prompted for a serial number and authentication code. You can find this information in the email that you received when you purchased the software.
4. Some operating systems may ask whether you wish to install the software for all users or only the person currently logged into the computer. In most cases, and especially if multiple people use this computer and need to use Remark Office OMR on this computer, you should choose the option for "all users."
5. When the installation completes, click the **Finish** button to close the installation program.

Please retain the download in case you need to reinstall the software in the future. Once the download completes, you may run the software. You may be prompted to activate the software. When you first run the software, folders are created in your Documents folder under Remark Office OMR for you to store files for use within the software (using these folders is optional).

Software Activation

Remark Office OMR requires activation in order to run on your computer. Activation means that the copy you have installed is licensed to the computer. *Once the software is activated, it cannot be installed on another computer without deactivating it from the current computer.* You may activate your software over the Internet (recommended) or through a manual (offline) method.

The first time the software runs it attempts to activate. If you are connected to the Internet, the activation is seamless. It will connect to the Gravic server to ensure that the license is not already in use, and then activate automatically. There is nothing else you need to do. Note that the software also validates activation periodically.

Manual Activation

If you do not have an Internet connection, you can activate the license manually. You are provided with a "token," which is a file with a ".key" extension. You save that file and then take it to a computer with Internet connectivity. You upload the token, which activates your software. Then an activation key is returned to you to take back to the computer without Internet connectivity.

We strongly suggest printing the manual activation steps so that you can easily follow them.

Please use the following steps:

1. When the **Software Activation** Required window appears, click the link for **Want to activate manually?**

2. Under Step 1, click the blue "here" text to receive an activation token (file). Save the file on your computer or network.

3. Take this token to a computer with Internet access.

4. Log on to **https://activations.gravic.com**.

5. Upload the token from Step 2.

6. You receive an activation key in return.

7. Go back to the computer with Remark installed and click the link for **Do you have an activation key?**

8. Select the key from Step 6 and click **OK**.

The software is now activated. Note that the software also validates activation periodically so you may need to repeat these steps if the computer running Remark is always offline (not connected to the Internet). In this case, you receive messages that you need to activate. There is a Software Activation link under the Help menu that you can access to perform the same steps above.
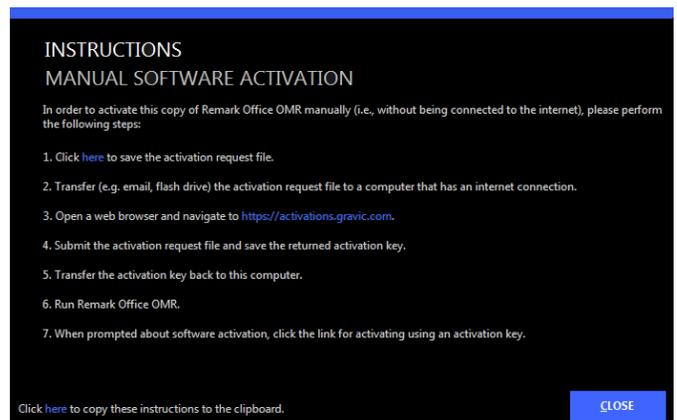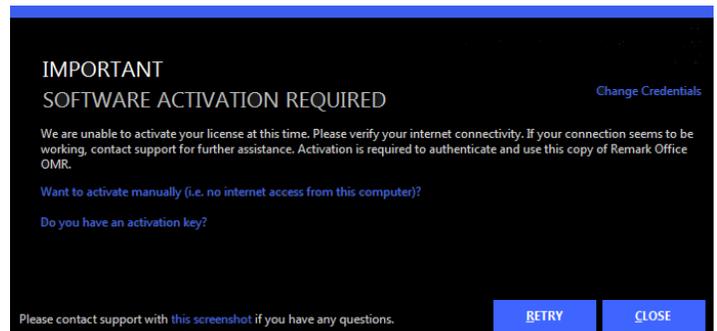
Transferring a License

The Gravic software license agreement states that any one copy of the software can only be installed on one computer. If you need to transfer your software to another computer, you may deactivate the license on one computer and then activate the software on the new computer. Transferring a license typically occurs when something happens to your computer and you acquire a new one, or when the person using Remark leaves and you need to assign the license to a new person. Note that once a license is deactivated on a computer, it cannot be activated on that computer again. You will need to contact Remark Support in this case.

To Transfer a License:

1. Install the software on the new computer.

2. Run Remark. You are prompted that a message indicating there are no activations available. Click the link for **Want to transfer your license?**

3. A list of previous activated computer(s) is presented. You can choose to deactivate the license from a computer in the list and activate it on the current computer. This action is most likely if you reformatted your computer or received a new computer. If you do not recognize the computer(s) listed we recommend contacting your IT department to ensure that you deactivate the proper computer. Once a computer is deactivated, Remark will no longer run on that computer.

- **Note:** Remark Support cannot help you decipher the list of activated computers, as this is internal to your organization. If you are unsure what to deactivate, you must contact your internal IT help desk to assist you.

4. Read the warning that states **I understand that Remark Office OMR will no longer run on my old computer** and then mark the checkbox next to it to accept this statement.

5. Click the **Transfer** button.
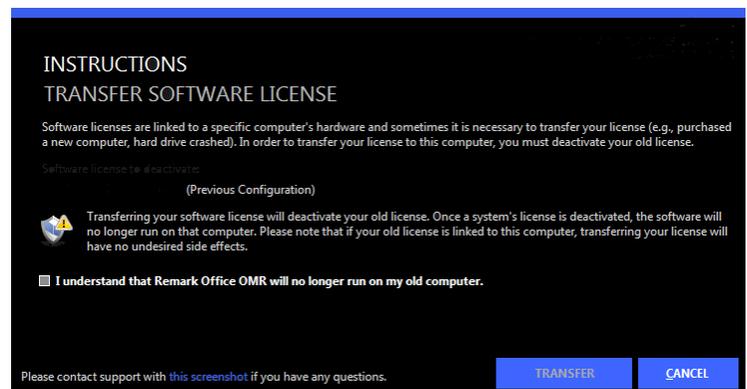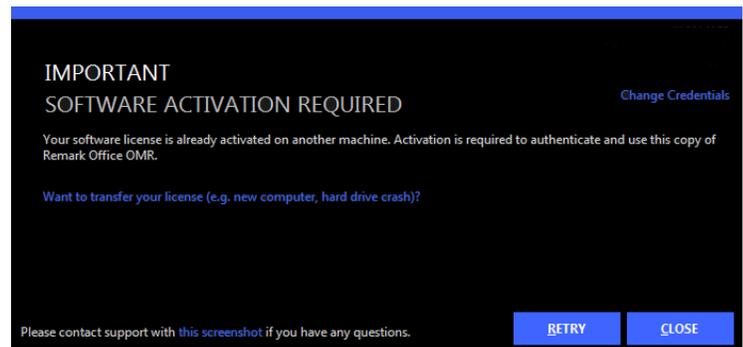
The license is now transferred to the new computer. After a few seconds, Remark Office OMR will run on your system. The software is now inoperable on the old computer and can be uninstalled (if available).

Chapter 3: General Scanner Information

Scanner Overview

Scanners come in many different flavors, but the two types typically used with Remark Office OMR are desktop scanners and multi-function printers (MFP). A desktop scanner is connected directly to the computer, typically with a USB cable, running Remark Office OMR. In this case, you use the scanner's TWAIN driver to scan pages into Remark Office OMR. An MFP can print, scan, copy and sometimes fax, and is usually used over a network. Some MFPs also have TWAIN drivers and can scan directly into Remark Office OMR. You can also use a wireless scanner to send pages through and save the resulting files on a computer or in the cloud.

How you perform scanning varies depending on the type of scanner you are using. Use the links below to understand each type:

[Direct Scanning with a Desktop Scanner](#)

[Scanning to Image File with an MFP or Non-TWAIN Scanner](#)

Direct Scanning with a Desktop Scanner

Scanners communicate with Remark Office OMR through a TWAIN driver. TWAIN is a standard for controlling scanning equipment. Most scanners ship with a TWAIN driver. If you are uncertain whether you have a TWAIN driver, check with your scanner manufacturer.

- **Note:** Individual scanner manufacturers write their own scanner drivers. The TWAIN standard leaves some areas unclear/open for interpretation, and as a result, the functionality of some TWAIN drivers is questionable. Remark Office OMR supports the TWAIN protocol, however, since scanners come onto the market so quickly and different companies have different software quality standards, Gravic, Inc. cannot guarantee that all TWAIN drivers work correctly. Scanner manufacturers typically revise TWAIN drivers frequently to correct for any problems; therefore it is a good idea to check for updated drivers for your scanner from time to time. Manufacturer websites often have updated drivers available for download.

When scanning in Remark Office OMR with a TWAIN driver, there are several basic settings that you want to use. Remark Office OMR supports color and grayscale scanning. However, it is not necessary. Most scanners achieve optimum scanning rates when used in black and white scanning mode. If you choose to scan in grayscale or color, you will likely experience slower scan rates. The resolution on the scanner, measured in dots per inch (DPI), should be set at 200-300 DPI. 200 DPI is usually sufficient, but you may wish to use 300 DPI if you are scanning barcodes or using OCR (optical character recognition). You should also verify that the page size your scanner is using matches the actual paper size you are scanning. You

can also utilize the scanner's brightness (sometimes called threshold) and contrast settings to make scanned images lighter or darker. Under normal conditions, you want to use the scanner's default brightness and contrast settings. If, however, you need to make shading or a lightly colored paper background drop out (disappear), you could raise the brightness setting to accomplish these tasks. On the same token, you could set the brightness setting to a darker level to help compensate for light marks or lightly filled marks on forms.

- **Tip:** It is important to remember that the settings used to create the form template should also be used to scan the filled-in forms in order to maintain a level of consistency and achieve optimum recognition rates.

In order to select a TWAIN source in Remark Office OMR, the TWAIN driver must first be installed. Consult your scanner's documentation for installation instructions and information about obtaining a TWAIN driver for your scanner. Once the driver is installed, use the following procedures to select the scanner in Remark Office OMR.

To select and configure a scanner

1. From the **Remark Office OMR Data Center**, select the **Tools** menu and then click **Scanner Properties** to display the **Scanner Properties** window.

2. Click the **TWAIN Source** drop-down arrow to display a list of TWAIN compliant scanners that are available on your system.

   - **Note:** Your scanner must be turned on and connected to the computer, and you must install your scanner's TWAIN driver in order for the scanner to display in this list.

3. Click the appropriate scanner to select it.

   - **Note:** Some versions of Windows come with Windows Image Acquisition (WIA) drivers. If you see two drivers for your scanner, we do not recommend selecting the one beginning with WIA. Whenever possible, it is better to use the driver provided by the manufacturer.
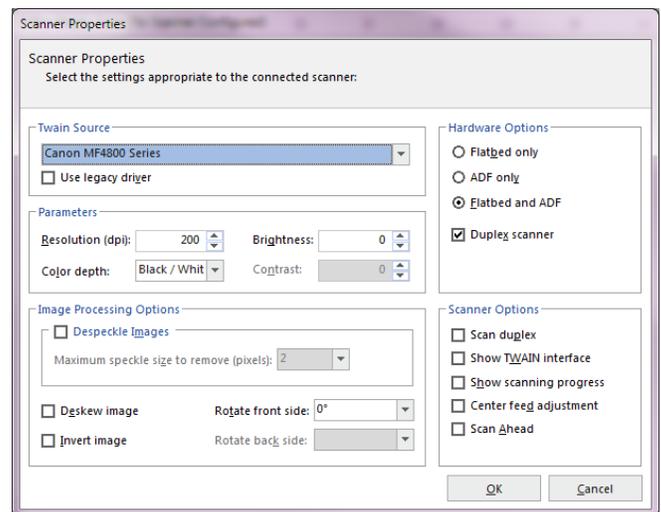
Once your scanner is set up, there are many possible properties to set:

Parameters

The following Scanner Properties are available in the Parameters section:

Resolution:

Use the Resolution setting to set the scanning resolution in Dots Per Inch (DPI). We recommend scanning at 200-300 DPI. This setting is not available if you have chosen to show the scanner's TWAIN interface (you select DPI when you scan a page).

Color Depth:

Use the Color Depth setting to choose a scanning mode: Black/White, Grayscale or Color. For most cases, scanning in Black/White is fine and recommended. However, if your scanner supports grayscale or color scanning, you may select to use it here without having to do so in your scanner's TWAIN driver. Scanning in color or grayscale may be appropriate if you plan to use the images outside of Remark Office OMR or have dropout colors on your form. Note that scanning in color or grayscale slows down scanner and software performance.

Brightness:

Use the Brightness setting to set the scanner's brightness. We recommend scanning at your scanner's default brightness setting unless you encounter problems. The default setting in Remark Office OMR is 0. This setting is not available if you have chosen to show the scanner's TWAIN interface (you select brightness when you scan a page). Use a positive number to scan lighter and a negative number to scan darker.

Contrast:

Contrast is the difference between the color or shading of printed material on a document and the background on which it is printed. Most scanners can adjust contrast for a sharper image. Use the Contrast setting to set the scanner's contrast when scanning in grayscale or color. We recommend scanning at your scanner's default contrast setting unless you encounter problems. The default setting in Remark Office OMR is 0. This setting is not available if you have chosen to show the scanner's TWAIN interface (you select contrast when you scan a page). Use a positive number to lighten the contrast and a negative number to darken the contrast.

Image Processing Options

The following Scanner Properties are available in the Image Processing Options section:

Despeckle Images:

Mark the Despeckle Images checkbox to remove speckling from the image. If you scan your forms and see black specks on the form, this is speckling. Note that sometimes scanning at a lighter brightness setting on your scanner can also remove speckling. We recommend only turning on this feature if you are having trouble with speckled forms.

Maximum Speckle Size to Remove:

Use the Maximum speckle size to remove option to select the pixel size to remove when using the Despeckle Images option. A pixel by definition is the smallest piece of information in an image. Pixels are represented using dots or squares. The default setting is 2 pixels. Use a higher number to remove larger speckles. Note that if you go too high, you run the risk of removing or damaging the marks (bubbles, checkboxes) on your form image.

Deskew Image:

Use the Deskew image option to have Remark Office OMR automatically correct for skewing during the scanning process. Skewing can occur when pages are not fed neatly in the scanner's ADF or if your scanner pulls in the pages unevenly, in which case you may want to have your scanner serviced. In either case the result is a crooked image, which can make it hard for the software to read the marks on the image. We recommend only turning on this feature if you are having trouble with skewed forms.

Invert Image:

Use the Invert image option to correct an image that scans in reverse: black background with white text. The default setting is No. You only need to adjust this setting if your image comes in reversed.

Rotate Front Side:

Use the Rotate front side option to rotate the front side of each page that is scanned. Select the rotation degrees in the box provided. Only use this option if the front side of your form does not rotate correctly on its own.

Rotate Back Side:

Use the Rotate back side option to rotate the back side of each page that is scanned when scanning duplex (two sides at one time). Select the rotation degrees in the box provided. Only use this option if the back side of your form does not rotate correctly on its own.

Hardware Options

The following Scanner Properties are available in the Hardware Options section:

ADF/Flatbed/ADF and Flatbed:

Choose the option that matches your scanner: Flatbed Only, ADF (automatic document feeder) only or Flatbed and ADF.

Duplex Scanner:

Select the Duplex scanner checkbox if the scanner you are using has duplex capabilities for double-sided form scanning (meaning the scanner can scan both sides of a piece of paper at one time).

Scanner Options

The following Scanner Properties are available in the Scanner Options section:

Scan Duplex:

Mark the Scan duplex checkbox if you have selected a duplex scanner and wish to scan both sides of a page at one time. This feature is used for scanning double-sided forms.

Show TWAIN Interface:

Mark the Show TWAIN interface checkbox to show your scanner's TWAIN interface. By showing the scanner's interface, you can setup scanning parameters. We recommend turning this selection on initially to verify your scanner's settings (e.g. scanning mode, page size, resolution, brightness). Some scanners, but not all, support having the interface hidden. Once you verify all the settings within the scanner's interface, you can try turning off the TWAIN interface so that you do not have to see it every time you scan.

Show Scanning Progress:

Mark the Show scanning progress checkbox to show the scanner's progress indicator as pages are being scanned. Please note that not all scanners support this feature. Some scanner drivers always show

scanning progress and some never show scanning progress. If the scanner's driver allows applications to control the scanning progress indicator, marking this checkbox enables the feature.

Center Feed Adjustment:

Mark the Center feed adjustment checkbox to have the page aligned with the center portion of the ADF, regardless of how the ADF is positioned. This feature is useful when scanning pages that are smaller than 8.5x11 inches. An adjustment is made so that the image does not start at the left most part of the scanner and cutoff a portion of the image (which can happen on some scanners even if the ADF is in the center position). Please note that some scanners have this property built in to their drivers, and some do not support this feature at all.

Scan Ahead:

Mark the Scan Ahead checkbox if your scanner supports this feature. Scan Ahead allows the scanner to scan pages faster than processing occurs. It keeps the scanning moving so that there are not significant pauses while any processing takes place.

Scanning to Image File with an MFP or Non-TWAIN Scanner

A multi-functional printer, or MFP, is a printer that also scans, copies and sometimes faxes. These all-in-one units are becoming increasingly popular to automate workflows. Some MFPs are connected directly to a computer, while most are free standing and attached to your network. If you wish to utilize an MFP for scanning, you may do so with Remark Office OMR.

When using an MFP that is connected directly to the computer running Remark Office OMR, you scan documents just as you would with any desktop scanner.

When using an MFP on your network (not connected directly to a computer), you may scan the forms at the MFP and save them as image files, using the MFP's scanning software. Most MFPs can save images as TIF or PDF files. Remark Office OMR can then read those image files. Remark Office OMR users commonly scan the forms as TIF image files and save them on a network drive. Then they go to the computer where Remark Office OMR is installed and read the images from the network drive. You can also email the images to yourself, and then save the files from the email to a place on your computer or network. If you are using a networked MFP, you can determine the workflow that works best for you and your organization.

- **Tip:** If you have the choice of TIF or PDF images, choose TIF. PDF files are not native image files and require more processing by Remark Office OMR. The result is that the scanning process is slower. TIF Group IV images are the most compressed for smaller file sizes and faster processing.

Some network MFPs offer a network TWAIN driver that allows you to control the MFP from the computer running Remark Office OMR. Depending on the quality of the network TWAIN driver, you may be able to utilize it within Remark Office OMR. When using an MFP that has a network TWAIN driver, you scan documents just as you would with any desktop scanner.

To import images scanned on an MFP or Non-TWAIN Scanner:

1. Scan the filled in forms on the MFP, preferably as a multi-page TIF file.

   - **Note:** Talk to your IT staff about ways to optimize your MFP with profiles that allow the MFP to be preconfigured so that when you scan the documents are automatically in TIF format and to go a folder on the network.

2. Open Remark Office OMR on your desktop.

3. Open the desired template file by clicking **File|Open Template**.

4. Click the **Read** option in the task pane.

5. Select the **Read Images** button, if not already selected.

6. Click the **Next** button.

7. Choose the image(s) that you scanned in step 1.

8. Click the **Finish** button.

The images are read and your data is visible in the data grid. From here you can save the data or run Review Exceptions to clean the data.

Chapter 4: Creating Forms

Creating Forms Overview

Remark Office OMR provides a flexible solution for scanning forms you create and producing data and reports. Because there is so much flexibility, a wide variety of forms can be created. Good form design is a key component to using Remark Office OMR successfully. Therefore, we have created a set of form design guidelines to help you create forms that will work well with the software. Remark Office OMR works with plain paper forms; no special inks or marks are needed. Respondents can use pen or pencil to complete the forms.

- **Note:** Remark Office OMR is not a form designer. Forms used with Remark Office OMR are created independently of the software in programs such as word processing and survey design packages.

Where do I create forms?

The first step in designing a scannable form is determining where you prefer to design the form. Some of your options include:

- Word processing software
- Survey design software
- Form design software

Word processing software (e.g. Microsoft® Word®) is commonly used for creating forms, as many people already have this software and are familiar with using it. If you are comfortable with word processing software, this may be the best choice for you.

Software created specifically for survey design and analysis can offer the additional benefits of question banks (the ability to draw and save questions to and from a question library), layout assistance and analysis components. Form design software can give you advanced layout tools to create professional looking forms.

Determining what software application to use is an individual decision. You should base your decision on what you are comfortable with using, your budget and your overall data collection needs. No matter what your choice, the design guidelines set forth in this file apply. Please read through them thoroughly before undertaking your own form design.

Sample test answer sheets are included with the software. They are found in your Windows Documents library: \Documents\Remark Office OMR\Templates\Gravic once you run the software. Just remember that if you modify a form, you will need to reset the image provided with the template file so that it matches your version of the form. You can also find sample forms on our website that you are welcome to download and modify to suit your needs.

Once you decide what tool you will use to create forms, the following guidelines apply:

Mark and Character Selection

Important Keyword: Mark: A mark is any type of complete shape used on a form. Respondents darken the marks to indicate their answer choice. Marks are typically bubbles or checkboxes on OMR forms.

Forms need to be created so that Remark Office OMR can recognize the data on them. Remark Office OMR recognizes optical marks, which include bubbles (a circle or oval), checkboxes, etc., that respondents darken with a pen or pencil to indicate their response. Although Remark Office OMR works with almost any complete shape (e.g. circle, square, triangle), experience indicates that bubbles between 10 and 14 points in height work the best. Non-oval shapes are somewhat harder to fill completely. Respondents typically fill bubbles more completely and neatly, which leads to better recognition rates. If you need to use a checkbox, we recommend our OMR Checkbox font that installs with the software.

When using word processing software, we recommend using a capital "O" in an Arial font. You may also use our OMR Bubbles fonts, which creates a circle or square with a letter or number (e.g. Ⓐ). The OMR Bubbles fonts install with the Remark software. They can also be downloaded from the Gravic website. Once installed, you may access the fonts from Windows applications on your computer just as you would any other font. While it is possible to place numbers or letters inside of marks, the number/letter must be as small and light as possible. Dark, thick or bolded characters may cause Remark Office OMR to interpret the mark as being filled. Therefore we recommend using our tested OMR Bubbles fonts if you require encircled numbers or letters.

We do not recommend creating bubbles using the Times New Roman font, which may be the default font in some word processing programs. This font does not create an evenly defined bubble and can therefore break apart when scanned. Using the Arial font yields a well-defined bubble that scans consistently.

OCR

Remark Office OMR includes the capability to recognize machine printed text. This functionality is called OCR, or optical character recognition.

- Note: OCR does not include handwriting recognition (commonly called ICR or intelligent character recognition). In order to use the OCR feature, the text must be machine or computer generated.

While the software's sensitivity level can be adjusted, certain fonts and font sizes recognize better than others. We recommend using a common font such as Arial or Times New Roman. You do not want to select a handwriting style font. The font size should be a minimum of 14 points (even larger is better), and you do not want to use bold, underline or italics formatting. If you notice areas where letters almost touch each other due to the shape of the letter, we suggest increasing the character spacing slightly, which is supported by most word processing applications. When scanning forms, a scanning resolution of 300 DPI (dots per inch) is recommended. Always test your forms with the Remark software to ensure that the characters are recognized properly before you print and distribute large quantities.

Form Spacing

Allowing enough white space on a form is an important part of good form design. Allow at least 3/8 inch of space between any text, lines or graphics on the form and all user-markable areas (bubbles, checkboxes, barcodes, text you plan to read using OCR, etc.). The white space around your marks provides a buffer that can help Remark Office OMR accommodate scanner skew, form offset and not-so-perfect markings from your respondents.

The more white space you have, the better Remark Office OMR is able to tolerate differences from form to form. In contrast, the more crowded a form (or the less white space there is), the harder it is for Remark Office OMR to compensate for form differences.

Although groups of bubbles need to be 3/8 inch away from any visible lines or text, the individual bubbles within the group can be as close to one another as one or two character spaces.

We recommend staying away from the use of lines or boxes around or between the marks on a form. If you find it necessary to use lines or boxes, you may make them a light gray that drops out (completely disappear) during the scanning process. In addition, follow the spacing guidelines above.

- **Note:** You cannot photocopy forms that use gray lines as the gray becomes too dark. Only use clean printouts for forms utilizing gray lines.

Margin space along the edges of a form is important. We recommend leaving a one inch margin around all sides of the page. At a minimum, do not go below ½ inch margins. The margin space allows some shifting in forms without having the marks fall off of the page when scanned. The smaller the margin, the less tolerance you have for inconsistencies from form to form.

Positioning all of the marks for the same question type in a single region area minimizes your efforts when you create form templates within the software. Whenever possible, try to place similar types of questions together. For example, place all true/false questions in one area of the form and all multiple choice questions in another. All marks you want to define in a single OMR region must align horizontally and vertically.

When possible, place the labels for a group of questions on the top of each column or at the beginning of each row (at least 3/8th inch away from the marks); this allows you to select the entire group of questions within one region when you create a form template in the software. If the labels are between marks, you may have to select questions individually and/or link marks together to form logical questions.

Shading and Lines

Remark Office OMR works best with marks printed in black ink on white paper without shading. While we do not recommend the use of shading in areas containing marks, you can create shading that completely drops out when scanned (a 5-10% gray typically works well). A better alternative is to shade the questions but leave the area containing the marks white. Similarly, we do not recommend putting visible lines between rows of bubbles or anywhere within 3/8 inch of the bubbles. If you must use lines, again, you can use a light gray that drops out during scanning.

- **Note:** You cannot photocopy forms that use shading or lines as the shading and lines become too dark. Use clean printouts for forms utilizing shading.

Always test your form with your scanner before printing large quantities. Shading varies from printer to printer and scanner to scanner. If your scanner supports color drop-out, you can shade questions using a pale shade of one of the colors your scanner drops out. Note that this may slow down the scanning process and should be thoroughly tested before printing and distributing forms.

Barcodes

Remark Office OMR can read many types of barcodes. Barcodes can be used to capture a variety of information, including, but not limited to, names, ID numbers, session/class numbers, other demographic information, etc. The software recognizes the following barcode types:

- Code 3 of 9 (Code 39): Alphanumeric
- Interleaved 2 of 5: Numeric
- Codabar: Numeric
- PDF 417: 2D, Alphanumeric
- Data Matrix: 2D, Alphanumeric
- QR Code: 2D, Alphanumeric
- Code 11: Numeric
- Code 128: Alphanumeric
- Code 93: Alphanumeric
- EAN 13: Numeric
- EAN 8: Numeric
- UPCA: Numeric
- UPCE: Numeric

You may put one or more pieces of data within one barcode. If using multiple pieces of data in one barcode, you must separate the data with some character (called a delimiter), such as a space, comma or tab. Remark Office OMR outputs the individual pieces of data to separate cells in the data grid when the forms are processed.

Use the following guidelines when placing barcodes on your forms:

- Barcodes should be at least 26 points in terms of size (about 1/4 inch high).
- Barcodes may be placed on forms horizontally or vertically.
- If using barcode stickers, place a lightly colored placeholder on the form so that the person affixing the stickers to the form knows where to place the barcodes. The barcodes must be in the same place on each form in order for Remark Office OMR to recognize them. Ideally, the placeholder should be covered by the sticker or light enough to drop out (completely disappear) when scanned. You do not want the placeholder to interfere with recognition of the barcode.
- Do not put text, lines, etc., within ½ inch of the barcode (*with the exception of the tip below).

- **Tip:** If you would like to be able to read the barcode with the human eye, place the text of the barcode in small, light print directly beneath the barcode.

The Code 3 of 9 Barcode

The Code 3 of 9 barcode is created by installing the Code 3 of 9 barcode font. This font installs automatically with the Remark software or can be downloaded from the Gravic website.

When using the Code 3 of 9 barcode font you need to begin and end the barcode with asterisks. These asterisks become bars in the barcode and are necessary for proper recognition of the barcode. Without these asterisks, Remark Office OMR cannot read your 3 of 9 barcode. Use caution as some word processing applications use the asterisks as an auto formatting feature to bold the text and drop the asterisks. Check your form design's program options for this auto formatting feature. In addition, do not use spaces in the barcode. If you need to represent a space, use the exclamationpoint (!) character. The Code 3 of 9 barcode always outputs letters in upper case.

Example: To barcode the name Jane Doe, you would type: *Jane!Doe* and then convert the entire sequence to the Code 3 of 9 barcode font.

Paper Selection

Remark Office OMR works best with plain white paper and black ink. Utilizing standard 20# copier paper works well for single sided forms and 28# or higher paper works well for double-sided forms (heavier paper helps avoid bleed-through). While we recommend using white paper for the best recognition, you may use colored paper (pastel colors tend to work well), as long as the color completely drops out when scanned. Test your paper selection with your scanner before printing large quantities of your forms.

- **Tip:** You can test colored paper by scanning a form in the Remark Office OMR Template Editor. The resulting image should have a white background with black text. If you see speckles or other black marks in the background, your paper may be too dark. You can try raising the brightness setting on your scanner to see if the rest of the color from the paper drops out without compromising the marks on the form.

Remark Office OMR supports any paper size or thickness supported by your scanner. Consult your scanner's user's guide for further information about what your scanner can handle.

Duplicating Forms

When reproducing forms, quality and consistency can reduce form processing errors. You have the flexibility to duplicate forms in several ways: using a laser printer, a high quality photocopier or a professional printer. Consistency from form to form is important. Try to use the same source to duplicate all of the forms you will need for a single form type.

When photocopying forms, the accuracy of page placement into the photocopier and your overall form design are the limiting factors as to how large your margins must be in order to minimize errors. Forms with inadequate spacing have a low tolerance for offset/skew. Carefully placing forms directly on the

photocopy machine's glass tends to yield better copies than using the document feeder, which can skew the page as it is pulled into the copier. Test your form by creating a form template in the software and processing a batch of forms that are filled out as you expect to have them returned (e.g. not perfectly) before printing large quantities. Once you feel that your form design is adequate, try to photocopy all of the forms that you will need in one batch. This eliminates the need to make photocopies from photocopies at a later date, which can lead to form inconsistencies.

Regardless of how you duplicate your forms, be sure to keep blank copies on hand. You always want to create your Remark Office OMR template using the same quality form that you distribute to your respondents. For example, if you photocopy your form, use a blank photocopy to make the form template in the software.

It is best to maintain as much control over form duplication as possible. However, if your workflow is such that multiple locations print and distribute their own forms, request that at least one blank copy of the form is returned to you with the filled in forms from each location. This allows you to realign your scanning template to the printout if you find that the forms have shifted significantly.

- **Tip:** Save forms to the Adobe PDF format to retain original form formatting. If you need to have someone else print your form, this format is preferable over other native word processing formats. Remember to embed the fonts you use in case the person printing the form does not have the same fonts. Do not turn on page scaling or fit options for printing. And remember, do not use the PDF to create the form template; always use a blank scanned image.

Testing Forms

The best way to know whether you have created a good, scannable form is to test it. Always test any forms you plan to use with Remark Office OMR before printing and distributing them. It is much easier to find and fix problems before the forms are printed and distributed.

To test your form, create a form template in the Remark Office OMR Template Editor. Then fill out a sampling of forms as you expect to get them back from your respondents (not perfectly!). Scan the forms and check your results. If you do not get the accuracy you expect, check your form's design against the guidelines presented in the user's guide, and make the appropriate modifications. Remember to use the same scanner settings for form template creation and when scanning the filled-in forms.

Form Review Service

We will review any form after it is created to ensure it is compatible with Remark Office OMR. You can email or fax forms to our technical support department and we will check them for known issues. We can often head off potential issues before they become problems. Be sure to use this service before you print and distribute your forms. We recommend checking your form to see if it meets the form design guidelines outlined in this file before sending it for review. If the form does not meet our guidelines, we will not recommend that you use the form in its current state, and point out the areas that need improvement.

Chapter 5: Template Editor

Template Editor Overview

The Remark Office OMR Template Editor is used to create form templates for the forms you process in Remark Office OMR. You must create one form template file for each form that you process with the Remark software. The form template file defines all of the information needed for the software to process your form correctly. Once a form template is created, the form can be used as often as desired without needing to create a new form template (as long as the form does not change). Example: If processing student exams, you can create form templates for various forms (e.g. 25 questions, 50 questions and 75 questions) and then use those form templates as often as needed.

The form template file holds information about where the marks, barcodes and text are located on the page, how many pages your form contains and what type of output you would like. A single template can hold up to 150 pages.

- **Tip:** The form template is the key to accurate recognition in Remark Office OMR. When creating form templates, be sure to use the same quality form as you will be distributing to respondents (e.g. if you are photocopying forms, use a blank photocopy for the form template). Also use the same scanner and scanner settings for both the form template and filled-in forms (e.g. resolution, brightness).

- **Tip:** It is strongly recommend that you perform the tutorials included with the software to get an understanding of the Template Editor. You can find the tutorials under the Help menu in the software or by clicking Start|Programs|Remark Office OMR|Documentation on your computer.

Important Keyword:
Region: A region is an Image, Barcode, OCR or OMR area that you define. A single OMR region can contain one or more questions.

The Remark Office OMR Template Editor contains three basic components that you use to create and edit your form templates. The left portion of the template editor window contains a tree view (an item list) with nodes representing each region in your template.

Also in the left portion of the window, you can find the task pane. The task pane contains links to commonly used features and updates automatically based on your selections to help you navigate through the software. (Note that you may turn off the task pane by clicking View|Task Pane.) The right side of the window contains an image representation of your form. You provide this image via the scanner or a saved image file. You may use
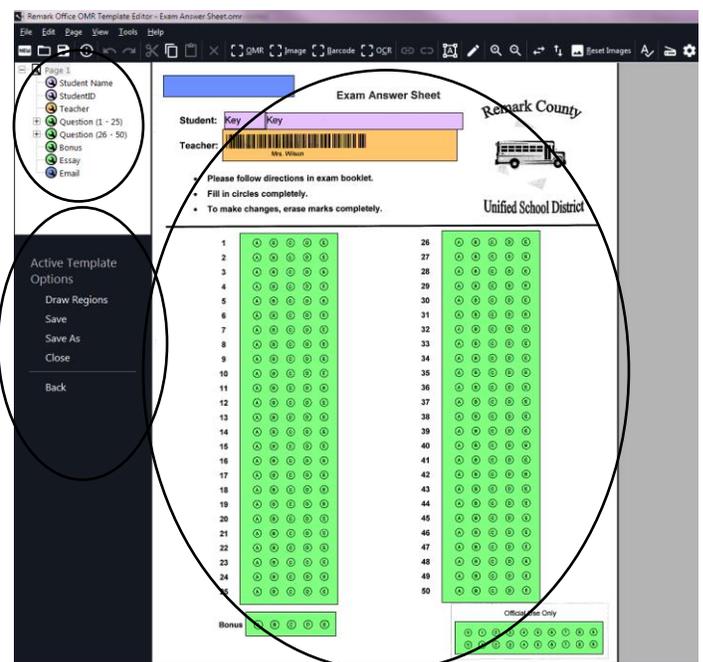
the tree view and the image representation area to work with your form template. Each region in the tree view contains the properties of that region, which are accessed by double clicking the region. You may think of a region as a question or item on your form. You may also double click within a region in the image representation area to view the region's properties.

Once the form template is created, use the **File** menu to save it (it will have a .omr file extension). Form templates can be shared among Remark Office OMR users if you process the same form types.

Creating New Templates

Form templates are created in the Remark Office OMR Template Editor. There are two main ways to access the Template Editor to create a new form template:

1. From the **Remark Office OMR Data Center**, select the **File** menu and then click **New Form Template**. Alternatively, with the **Templates** tab selected in the task pane, click **New form template**.

2. From your **Windows Start** menu, click **Start|Programs|Remark Office OMR|Remark Office OMR Template Editor**.

To create a new form template

1. From the **Remark Office OMR Template Editor**, select the **File** menu and then click **New**, to begin a new form template. Alternatively, select **New form template** from the task pane. The **Properties** window appears. This window allows you to specify general information about the template, including a description, page size and page orientation.

2. [OPTIONAL] If desired, enter a description for the form template in the **Form template** description box.

3. Select the appropriate size of the form(s) you are scanning in the **Page size** drop-down box. All pages contained in a form template must be of the same size. Use the custom option if your page size is not listed. (Remark Office OMR can recognize any size form that your scanner can scan.)

4. Select the orientation of the form in the **Page orientation** area. You may choose **Portrait** or **Landscape**. All pages contained in a form template must be of the same orientation.

   - **Tip:** You may not change the Page Size and Orientation once the form template is created. Therefore, make your selections carefully in this window.

5. Click the **Capture Image** button to continue.
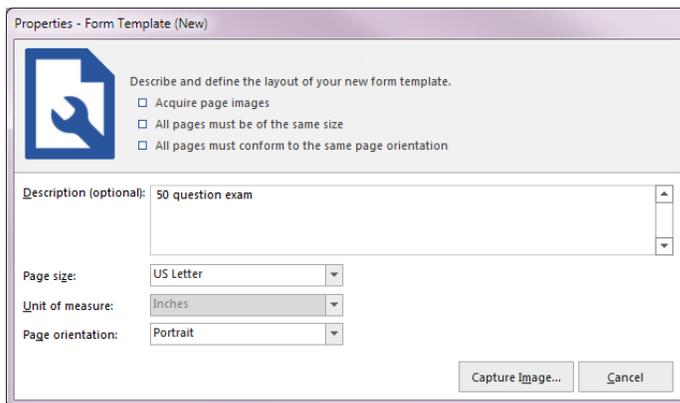
The **Create Page Elements** window appears. From this window, select how you want to import the images of your form. You may scan pages directly into the Template Editor or you may import image files

(that you previously scanned and saved) of the form. Regardless of how you import these images, remember to always base your form template on a blank copy of your form.

- **Note:** You must scan the blank form for template creation in order for accurate recognition. Do not import a PDF or similar file that did not originate from a scanner. Creating a PDF file directly from a document is not the same as scanning a form and producing an image file, and therefore your form template does not match the scanned images of your completed forms, leading to recognition errors.

The next step is to determine whether you want to create your template by scanning a page directly from the scanner or use an existing image file that you have already scanned.

Creating New Templates - Scanning the Form

Once you begin the form template, you need to acquire a blank image of your form. The following instructions explain how to scan a copy of your form in order to create the template file.

To create a form template image using the scanner

1. Continuing from creating form template instructions, in the **Image Collection Method** section, click the **Scan** button.
2. Note: If you need to configure your scanner, you may click **Scanner Properties** to view the **Scanner Properties** window.
3. [OPTIONAL] If you are using drop-out colors on your form, choose the color you wish to drop-out of the form: Red, Blue, Green. You may also select a **Drop-out threshold**. This threshold determines how close the color match must be in order for the color to drop-out. The higher the number, the closer the match must be.
   - **Note:** Dropping out color is useful on forms where you have colored lines or shading near your marks. Dropping out the color means that the color disappears as the form is scanned. The marks (bubbles, checkboxes) must not be the same color you are dropping out or they will drop-out as well, making the form unreadable. Using drop-out colors via the software works with any scanner that can scan in color. If your scanner can also drop-out colors, we recommend using the scanner's color drop-out by turning on the scanner's TWAIN interface for optimum performance. Please note that dropping out color will likely slow down the scanning process.
4. Place the blank page(s) to be scanned in the scanner. You may scan pages one at a time or all of the form's pages at once.
5. Click the **Begin Scanning** button to scan the page(s). The page(s) are scanned and then a thumbnail image of the form appears in the Image window. If scanning multiple pages at once, use the arrows under the image to view all scanned images. You may also delete images by clicking the **Delete** icon.
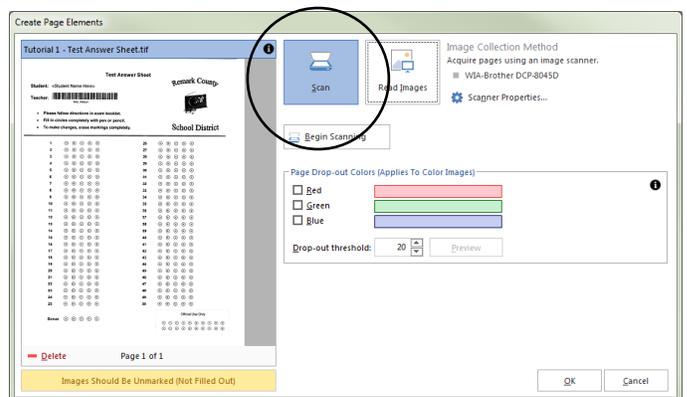
25

6. If you are satisfied with the image(s), click the **OK** button. Otherwise, click **Begin Scanning** again to rescan a page. (Make sure images do not look severely skewed; if they are, acquire the images from the scanner again.)

Remark Office OMR opens a window with a tree view (item list) on the left and an image representation of your form on the right. In this window you outline the areas to be recognized.

Creating New Templates - Using an Existing Image File

Once you begin the form template, you need to acquire a blank image of your form. The following instructions explain how to import a scanned image of your form in order to create the template file.

To create a form template image using an existing image file

1. Scan a blank copy of your form using your preferred scanner of multi-function printer (MFP). Preferably scan to the TIFF format. Save the image in a place where you can access it in Remark Office OMR.
2. Continuing from creating form template instructions, in the **Image Collection Method** section, select the **Read Images** button.
3. [OPTIONAL] If you are using drop-out colors on your form, choose the color you wish to drop-out of the form: Red, Blue, Green. You may also select a **Drop-out threshold**. This threshold determines how close the color match must be in order for the color to drop-out. The higher the number, the closer the match must be.

   - **Note:** Dropping out color is useful on forms where you have colored lines or shading near your marks. Dropping out the color means that the color disappears as the form is scanned. The marks (bubbles, checkboxes) must not be the same color you are dropping out or they will drop-out as well, making the form unreadable. If your scanner can also drop-out colors, we recommend using the scanner's color drop-out feature when you scan the forms so that when the images are read in Remark Office OMR, the color is already gone.
4. Click the **Browse** button to select an image from file.
5. In the **Select Image File** window, use the Look in drop-down list to find the image file you wish to use for the form template (from step 1). You may only select one image at a time; however you can go back to this window to select more images in succession. A thumbnail image of the form appears in the Image window.
6. Repeat Steps 3-4 to add any other images to the form template, if desired.
7. If you are satisfied with the image(s), click the **OK** button. Otherwise, click **Browse** again to reselect an image.
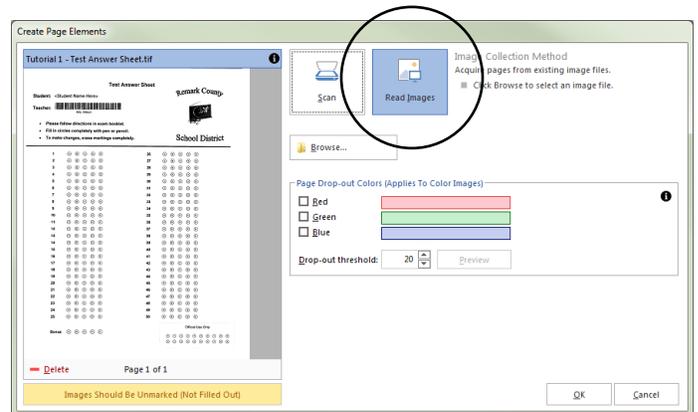
Remark Office OMR opens a window with a tree view (item list) on the left and an image representation of your form on the right. In this window you outline the areas to be recognized.

Important Note: Do not save a Word or other document as a PDF and then import that PDF into Remark Office OMR to create your template. While Remark Office OMR does read PDF files, they must be scanned PDF files. The image used for the template must be the same quality form you are distributing to your respondents, which is a scanned form.

Region Types Overview

There are four types of regions you can create. A region is an area on the form for which you want Remark Office OMR to recognize and output data.

OMR (Optical Mark Recognition) Regions:

OMR regions are used to capture marks, such as bubbles and checkboxes, on your form. Marks can be used to collect many varying types of information, ranging from multiple choice questions to ID numbers to names.

How are they represented?

Bubbles, checkboxes or any other complete shape, often used for answering multiple choice questions, filling in names and codes, etc.

Barcode Regions:

Barcodes are used to encode just about any desired information, ranging from names to ID numbers to other demographic information.

How are they represented?

Horizontal or vertically positioned typically at the top or bottom of a form, often to capture demographic and descriptive information.

OCR (Optical Character Recognition) Regions:

OCR regions are used to read text that is machine printed (computer generated) on your form (not handwritten). The software can read characters, such as ID numbers and names, as long as they are machine printed.

How are they represented?

Machine printed text anywhere throughout the form, often to capture demographic and descriptive information.

Image Regions:

Image regions capture handwriting from comment areas and other open ended questions. The software does not automatically interpret handwriting, but it does either take a picture of the handwriting, allow you to hand enter the written comments using image assisted data entry or type qualitative codes to apply themes to the handwritten comments.

How are they represented?

An area for handwritten text, or other information that cannot be automatically converted to data.

OMR Regions

An OMR region is an area on the form containing OMR bubbles, checkboxes, or some other complete shape. The respondent darkens the marks that correspond with his or her answer choice. Each OMR region contains a specific number of rows and columns. A single OMR region can contain one or more questions. When an OMR region is created, you must specify certain properties pertaining to the region, including the size of the region, the type of region and what output (data) Remark Office OMR should generate.

Types of OMR Regions

There are seven types of OMR regions. The most commonly used regions are:

- **Multiple Region:** A Multiple region designation is used for multiple-choice style questions. These questions can allow a single response or multiple responses. One Multiple region may contain more than one question, depending on how the marks are arranged on your form (e.g. a test answer sheet with rows of questions).

- **Grid Region:** A Grid region designation is used for questions where the output from the rows and columns of bubbles represents one piece of data. The respondent typically fills in several bubbles that make up one response (e.g. student ID numbers, names, social security numbers).

The less commonly used regions are:

- **List Region:** List region designation is used for regions that contain multiple choice style questions, but the response bubbles are not contained in a single row or column. Each bubble has a unique output value.

- **Add Region:** An Add region designates a region where the values of all of the chosen OMR bubbles are added together to produce one value. You can assign individual values to each answer choice (or mark on the form).

- **Boolean Region:** A Boolean region designation is used when you want a user-defined value (e.g. Yes) to be output if an answer choice is selected and another user-defined value (e.g. No) for answer choices that are not selected. Each response is output to a separate cell in the data grid during form processing. In comparison, when you use the Multiple or List region types for questions that allow multiple responses, Remark Office OMR places the data in a single cell, delimited by commas. The Boolean region type is useful for questions that allow multiple responses but for which you need the data in separate cells.

- **Binary Region:** A Binary region designation is used when you want a pre-defined value (1) to be output if an answer choice is selected and another pre-defined value (0) for answer choices that are not selected. Binary regions output all responses to one cell.

- **Rank Region:** A rank region designation is used for multiple-choice questions where each response or response set can only be used one time. For example, on a voting ballot you may be asked to put a list of candidates in order. Using the Rank question type allows you to limit how many times each answer choice can be selected.

OMR Region Orientation

An OMR region can be oriented in columns or rows. The region orientation property in the form template determines how the region is positioned on the form: by column or by row.

Column: Regions oriented by column contain question(s) that are positioned on the form in columns (it can be one column or several columns).

Examples:

Select the best response:

O   Excellent

O   Good

O   Fair

O   Poor

What is your gender?

O   Female

O   Gender

Row: Regions oriented by row contain question(s) that are positioned on the form in rows (it can be one row or several rows).

Examples:

	Excellent	Good	Fair	Poor
Question 1	O	O	O	O
Question 2	O	O	O	O
Question 3	O	O	O	O

What is your age group?

18-24	25-34	35-44	45-54	55-64	65+
O	O	O	O	O	O

Creating an OMR Region

There are three ways to create any region type:

Toolbar: Click the **OMR** toolbar button. This option creates a new OMR region after the item you currently have selected in the tree view (question list).

Task Pane: Click **Insert OMR Region** from the task pane (you may need to click **Draw Regions** first). This option creates a new OMR region after the item you currently have selected in the tree view (question list).

Menu: Click the **REGION** or **PAGE** menu (depending on your selection point) and then choose either OMR Region After or OMR Region Before, depending on where you want the region placed in the tree view (question list).

Remember that the order in which the regions appear in the tree view is the order in which they are read during form processing.

To Create an OMR Region

1. Use one of the methods d to begin inserting an OMR region.

2. The mouse cursor turns to a crosshair, indicating you need to drag a box around the region in the image representation area of the screen. When you drag a box around an OMR region, do not include any surrounding text, lines or graphics.

3. Place the crosshair in the top left corner of the region, hold down the left mouse button and drag a box to the lower right hand corner of the region. When drawing the box, you want to leave a little bit of space between the outermost marks and the box border. If you do not get it perfect the first time, you can always adjust the box later using the image handles along the edges of the region in the image area.

4. Release the mouse button.
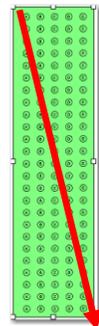
The **Properties** window appears. Learn more about how to [define an OMR region](#) by continuing to the next section.

Defining an OMR Region's Properties

Once you have inserted an OMR region, the **Properties - OMR Region** window appears. The following table contains a brief summary of the OMR region properties.

Property	Function
Region name	A name assigned to an OMR region. Region names are used as grid column headers in the data grid window and are exported when saving data to common file formats. Region names are limited to 60 characters. The following characters cannot be used in region names: : . – Period, ! – Exclamation, ' - Singe quote, [- Left bracket,] - Right bracket, , - Comma, " – Doublequote, (- Left paren,) - Right paren.
OMR type	The type of OMR region being described. Region types include:
	Multiple- indicates a region containing multiple-choice questions.
	Grid- indicates a grid or matrix of marks (bubble, checkbox) that equates to a single piece of data (e.g. student ID number).
	List- indicates a region where each mark is assigned a unique output value, but the marks are not contained in a single row or column (e.g. a list of answer choices).
	Add- indicates a region where the values for each of the answers that are filled by the respondent are added together to produce a single value for numeric data, or concatenated together for textual data.
	Boolean- indicates a region where a user-defined value (e.g. Yes) is output for filled responses and another value (e.g. No) is output for non-filled responses. Boolean regions output one piece of data for each mark (answer choice) in the region.
	Binary- indicates a region where a value of 1 is output for filled responses and a value 0 is output for non-filled responses. Binary regions output a string of responses (1s and 0s) to a single cell.
	Rank- indicates a region containing multiple-choice questions where each selection choice can only be selected one time.
Data type	Sets whether the data should be considered text or numeric when saved/exported.
Region orientation	Sets the orientation of the region in terms of columns and rows:
	Column- the region contains questions that are oriented in columns.
	Row- the region contains questions that are oriented in rows.
	There is an option to read right to left (for column orientation) and read bottom to top (for row orientation) if your marks are oriented in such a pattern to support your language of choice.

Property	Function
Columns in the region	Sets the number of columns of marks contained in the region. Remark Office OMR attempts to determine the number of columns in the region for you but you should check this value.
Rows in the region	Sets the number of rows of marks contained in the region. Remark Office OMR attempts to determine the number of rows in the region for you but you should check this value.
Possible label scales	Sets a range of pre-determined values as output **Labels** (e.g. A-E or 1-5). Use this setting to quickly enter labels into the **Labels** grid as opposed to entering each label individually. Each mark on your form is represented by a label. The label is the output when the filled in form is processed. Note that only label scales corresponding to the number of answer choices you have selected appear in this list.
Labels	Sets the output data that appears in the data grid when reading forms. Each mark on your form is represented by a **Label**. The **Label** is the output when the filled in form is processed. You cannot use the following reserved characters in the list of labels: commas, quotation marks, semicolons or parentheses. Enter labels carefully because once you have processed data, you cannot change your labels without reprocessing your forms.
Values	Use this setting to associate a numeric value with each textual answer choice (label). Values are used for calculating statistics for responses that are set to the textual data type. Values are also used when saving to the SPSS file format. Note: Values are not used as point values when grading tests. You cannot use them to assign partial credit to individual answer choices when performing test grading. If you need to assign partial credit, use Advanced Grade.)
Possible value scales	Sets a range of pre-determined numbers as **Values**. Use this setting to quickly enter **Values** for each of your textual output Labels into the Values grid as opposed to entering each **Value** individually.
Save Current Scale	Saves a scale of user-defined labels and values as output **Labels** that you can save and use over again (e.g. Excellent, Good, Fair, Poor). Click the **Save Current Scale** button after entering your labels in the **Labels** grid to save the scale for future use.
NA Label	If your question has a Not Applicable (NA) answer choice and you do not want the NA responses to be included in the Remark Quick Stats statistics (e.g. when calculating a mean), choose the appropriate label from the **NA Label** drop-down list. This list is automatically populated with the labels you defined in the Labels grid. Only one option can be selected as NA per question. In the Remark Quick Stats preferences you can choose whether to include or exclude the NA responses (they are excluded in the statistics by default, though you still see how many times they were selected).

Property	Function
Define Format	The **Define Format** feature applies to Grid OMR regions only. Mark this checkbox to enter a pattern for the data that is output during form processing. The default setting (*) indicates that the characters are displayed one after the other with no separators. The * is a placeholder for your data. You may change this pattern to enter items such as slashes for a date, decimal points, etc. Enter the appropriate character in the proper position (e.g. for a date: **/**/****).
Include region in read operation	Mark this checkbox to include data from this region when processing forms. If this checkbox is not marked the region exists in the form template, but no data is captured during form processing. This checkbox is on by default.

5. In the **Properties** window, enter the appropriate properties for the region, as described above. There are additional [advanced](#) features that may be defined.

6. Click the **OK** button to create the region.

After creating an OMR region, you can see the region in the image representation area and a new node is added to the tree view. Each OMR region in the image representation area is green to differentiate the regions. When you select a region, it has white image handles (tiny squares) around it to indicate it is the active region. You may use these handles to adjust the size of the region if needed.

Combining OMR Regions (Linking)

Marks that are separated by text, lines or graphics cannot be selected in one region definition. When creating an OMR region in an area that contains items such as text or lines, you can only select the marks. The Append Linked Region function allows you to link these types of marks into one OMR region. OMR region types that can be linked include Multiple, Grid, List, Rank, Binary and Add. The following is an example of a question layout that would require a linked OMR region:

What is your gender?

O   Female   O   Male

The marks (bubbles) are separated by the response text in between them, but are still logically considered one question. However, you cannot select the word "Female" within your OMR region. Therefore, you create a region around just the mark for Female and then link the mark for Male to the original region.

- **Tip:** When designing your form try to avoid having to use linked regions by laying out questions without text, lines or anything else between the OMR bubbles whenever possible.

To use the append linked region function

1. Create an OMR region around the first region to be linked as if it were its own region (in the example above, you would select the bubble for "Female"). Enter all of the region details as previously [described](#). For the region size, only enter what pertains to what you have defined so far (in the example, the region is only one row by one column at this point).

2. After defining the first part of the region, select the **REGION** menu and then click **Append Linked Region**. The mouse turns into a crosshair.

3. Drag a box around the second area to be defined (in the example, you would select the OMR bubble for Male).

4. When you release the mouse button the **Properties** window appears. This window contains the same settings that were defined for the first part of the region that you selected. You need only define the **Labels** and **Values** (if desired) section of the window (unless the number of bubbles in each appended region varies, in which case you can adjust the number of columns or rows).

5. Make any necessary changes to the region definition and then click the **OK** button.

Regions that are defined with the Append Linked Region feature are automatically linked to the previous region. These regions are a green color in the image representation window like OMR regions, but also have a dashed line around them and a plus sign in the tree view to represent their linked status. If you click a linked region, its square image handles are gray instead of white (like an unlinked OMR region).

5. My top three (3) reasons for taking this class were:
O Required for major   O The professor's reputation   O A friend recommended the class
O Required for minor   O The class interested me   O My advisor suggested it
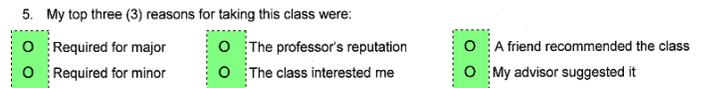
- **Tip:** Only regions of the same OMR type, data type and orientation can be linked. However, the columns/rows of marks do not have to have the same number of answer choices in order to be linked.

To make changes to a region that is already linked, first separate the regions by breaking the link, then make the changes and relink the regions. Many properties can only be accessed by first separating the linked regions.

To break a linked region

1. Use the tree view or image representation area to select one of the OMR boxes within the linked set you want to separate.

2. Select the **REGION** menu and then click **Break Region Link**.

The regions are separated into individual OMR regions. If you need to make changes to the regions, edit the regions and then relink them.

To relink regions

1. While holding down the **Shift** key, select each OMR region to be linked by either clicking its node in the tree view or clicking it in the image representation area.

2. After all regions are highlighted, select the **REGION** menu and then click **Link Regions**.

Troubleshooting OMR Regions

Each region in the form template has a different color so that you can tell one from the other easily. As indicated, OMR regions are green. If you create an OMR region and it turns a solid red, this is an indication that Remark Office OMR cannot properly recognize the region as it is set up. When a solid red region is encountered, you can place your mouse over the region and the Template Editor provides details of the problem. Flagged regions are also red and italicized in the tree view, indicating that you need to make a correction. Reasons for this issue include the following:

- The number of columns or rows entered in the Properties window is not correct.
- One of the region borders is touching something else on the image. It could be touching a mark, text, lines or graphics that are present on your form image. Borders cannot be touching anything on the image. You should have adequate white space on your form so that you can create regions without touching anything on the image.
- You have captured something other than marks (bubbles) within your OMR region (e.g. text or lines). Only capture the actual marks within a given OMR region. If there is something such as text prohibiting you from selecting all of the marks for a single question, you need to use the Append Linked Region function.
- You are using a form that does not have optical marks. In order for Remark Office OMR to read your form, the form must contain complete shapes, such as bubbles or checkboxes. You cannot process forms that use circle the number style questions or those that have a line that someone marks to indicate a response.
- The image used for the form template is degraded. When scanning forms, the quality of the resulting image is sometimes not as clear as expected. The marks may break up, meaning that they have tiny gaps in them. You can use the zoom options on the toolbar to zoom in on your image to see if your marks are complete. When marks are not complete, Remark Office OMR cannot properly recognize them. If this problem occurs, reacquire your form template image by scanning it at a darker brightness setting (sometimes called threshold) on your scanner.
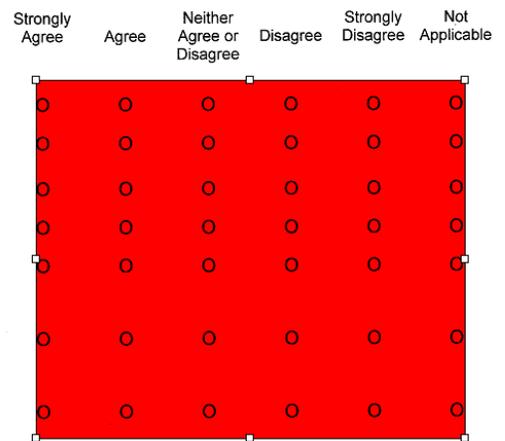
Note that you may save templates that have solid red OMR regions but you need to correct the problem before you begin processing forms to have the software recognize the forms properly.

To reposition or redefine a region

1. If a region is solid red in color, place your mouse over the region to see the tooltip describing the problem. Then review the potential reasons for the red color listed above. If you need to move the entire region, place the mouse over the region and drag the entire region with the left mouse button to its new position and release the mouse. If you need to move a portion of the region, drag the box where you see the white image handle boxes. You can drag right, left, up, down or diagonally to adjust the region's borders. You know you have the image handle selected correctly when the mouse turns into a double arrow.

2. If the region appears to be positioned properly but still appears as solid red, double click inside the red box to display the **Properties** window.

3. Ensure that the number of columns and rows specified match what has been captured in the region. Make corrections if necessary and then click the **OK** button.

If neither of these solutions addresses the red region, you may need to reacquire a cleaner image of your form or adjust your form design.

Barcode Regions

Barcodes are a reliable way to capture information from a form while using a small amount of space. Barcodes can be placed directly on a form or on a sticker that is placed on a form. The barcode must be located in the same position on each form. You can create barcodes using special barcode generation software or by using a barcode font in a word processing program. Barcodes can be placed horizontally or vertically on the form. The barcode should be at least 26 points in terms of size (about ¼ inch high). A single barcode can contain one or more pieces of data. If using multiple pieces of data within one barcode, you must separate the data with a delimiter (e.g. comma, space, tab, etc.). When separating the data, make sure you choose a delimiter that is supported by your specific barcode type.

Remark Office OMR recognizes several barcode types:

- Code 3 of 9 (Code 39): Alphanumeric

- Interleaved 2 of 5: Numeric

- Codabar: Numeric

- PDF 417: 2D, Alphanumeric

- Data Matrix: 2D, Alphanumeric

- QR Code: 2D, Alphanumeric

- Code 11: Numeric

- Code 128: Alphanumeric

- Code 93: Alphanumeric

- EAN 13: Numeric

- EAN 8: Numeric

- UPCA: Numeric

- UPCE: Numeric

Barcode regions have the following properties:

Property	Function
Region name	A name assigned to a Barcode region. Region names are used as grid column headers in the data grid window and are exported when saving data to common file formats. Region names are limited to 60 characters. The following characters cannot be used in region names: : . – Period, ! – Exclamation, ' - Singe quote, [- Left bracket,] - Right bracket, , - Comma, " – Doublequote, (- Left paren,) - Right paren.
Barcode type	Use this setting to select the type of barcode to be recognized. You may use the **Auto Detect** setting to have Remark Office OMR automatically determine what type of barcode is in the region. However, if you know the barcode type that you are using, we recommend that you choose it from the list.
Barcode orientation	Use this setting to select the orientation of the barcode: horizontal (left to right) or vertical (top to bottom).
Data type	Sets whether the data should be considered textual or numeric when saved/exported.
Barcode Contains Multiple Items	Barcodes can contain multiple pieces of data. When outputting more than one piece of data, the barcode must include a delimiter to separate the pieces of data. You can choose the delimiter that separates the pieces of data in the barcode using the box marked **Item delimiter**. Your choices are comma, tab, space, tilde (~), carriage return, line feed, carriage return/line feed. Make sure you set up the barcode with a delimiter that is supported by your specific barcode type. In the **Number of items** box, enter the number of pieces of data contained in the barcode. You may use the up/down arrows or type a number in this box. Delimited barcodes display in the tree view with an expandable plus (+) sign. You can expand the barcode node to see the separate pieces of data within that barcode. Opening the properties for one of the expanded nodes provides access to certain advanced features only for that piece of data.
Include region in read operation	Mark this checkbox to include data from this region when processing forms. If this checkbox is not marked the region exists in the form template, but no data is captured during form processing. This checkbox is on by default.

There are three ways to create any region type:

Toolbar: Click the **Barcode** toolbar button. This option creates a new barcode region after the item you currently have selected in the tree view (question list).

Task Pane: Click **Insert Barcode Regio**n from the task pane (you may need to click **Draw Regions** first). This option creates a new barcode region after the item you currently have selected in the tree view (question list).

**Menu:** Click the **REGION** or **PAGE** menu (depending on your selection point) and then choose either Barcode Region After or Barcode Region before, depending on where you want the region placed in the tree view (question list).

Remember that the order in which the regions appear in the tree view is the order in which they are read during form processing.

To create a barcode region

1. Use one of the methods above to begin inserting a Barcode region.

2. In the image representation area, use the mouse to drag a box around the barcode or the location where the barcode will be on the forms (e.g. if using stickers after the forms are returned, place the Barcode region in the area where the stickers will be affixed). Barcodes may vary in length depending on the data that you are capturing. Be sure to make the Barcode region large enough to capture the longest barcode you plan to recognize. If you do not get it perfect the first time, you can always adjust the box later using the image handles along the edges of the region in the image area.

3. In the **Properties** window, enter the appropriate properties for the region on the Barcode region, as described above. There are additional more [advanced](#) features that may be defined.

4. Click the **OK** button.
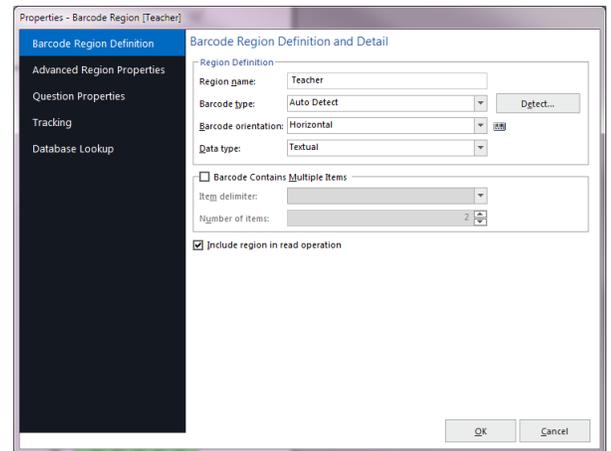
After creating a Barcode region, you see the region in the image representation area and a new node is added to the tree view. Each Barcode region is orange to differentiate the regions.

OCR (Optical Character Recognition) Regions

OCR (Optical Character Recognition) regions are used to recognize machine printed (computer generated) text. It is useful for demographic and other static information you may want to collect on your forms.

- **Note:** OCR does not include handwriting recognition (commonly called ICR or Intelligent Character Recognition). In order to use the OCR feature, the text must be machine or computer generated.

You can pre-print information on your form and have the software recognize it. Please note that some fonts work better than others when it comes to recognizing text.

Property	Function
Region name	A name assigned to an OCR region. Region names are used as grid column headers in the data grid window and are exported when saving data to common file formats. Region names are limited to 60 characters. The following characters cannot be used in region names: : . – Period, ! – Exclamation, ' - Singe quote, [- Left bracket,] - Right bracket, , - Comma, " – Doublequote, (- Left paren,) - Right paren.
OCR type	Use this setting to select the type of OCR to use. Remark Office OMR includes three types: Primary, Legacy (previously called Standard) and Microsoft Office Document Imaging (MODI). You only see the MODI option if you have Microsoft Office 2007 with the MODI option installed on the computer running Remark Office OMR. We encourage you to use the Primary option first and only switch to the other options if you encounter difficulties.
Data type	Sets whether the data should be considered textual or numeric when saved/exported.
Language	Use this setting to choose the language for the characters in the region. *Primary OCR:* Bulgarian, Catalan, Chinese Simplified, Chinese Traditional, Czech, Danish, Dutch, English, Indonesia, Finnish, French, German, Greek, Hungarian, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovakian, Slovenian, Spanish, Swedish, Tagalog, Turkish, Ukrainian, Vietnamese. *Legacy OCR*: English, French, Dutch, UK English *MODI OCR:* System Default, Chinese Simplified, Chinese Traditional, Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish
Text orientation	Use this setting to select orientation of the text: Left to right, Right to left, Top to bottom, Bottom to top. (Applies to Primary and Legacy OCR only.)
Define format	Mark this checkbox to establish a pattern of characters to be recognized. Use the following syntax for your format: # = number A = letter X = any character ? = optional character (for trailing purposes only) Other = character must match what you type exactly. For example, if you are reading a date field, type in ##/##/#### and if you are reading an abbreviated US State field, type in AA. (Applies to Legacy OCR only.)
Region contains more than one word	Mark this checkbox if the OCR region contains more than one word.
Region contains multiple lines of text	Mark this checkbox if the OCR region extends past one line of text.

Property	Function
Invert region image	Mark this checkbox to invert the colors on the text and background of the OCR region during recognition. This feature can be used if the text on your form is white and the background is black and you want to invert them in order to read the text.
Deskew region image	Mark this checkbox to deskew the OCR region during recognition to assist in reading the text.
Despeckle Image Region	Mark this checkbox to despeckle the OCR region during recognition to assist with reading the text. Despeckling can help with thick, dark letters. Use the Maximum speckle size setting to adjust how much to despeckle. It is recommended that you start with a small number to see how the image looks. (Applies to Primary and Legacy OCR only.)
Auto rotate region image	Mark this checkbox to automatically rotate the OCR region during recognition if the software is having difficulty reading the text. (Applies to MODI OCR only.)
Limit OCR Character Set	Mark this setting to choose the types of characters that are permitted: Numbers, Lower case text, Upper case text, Symbols or Custom character set. Limiting the character set can improve accuracy. If you do not wish to limit the character set, do not mark this option. When using a custom character set, you do not need to include a delimiter between items and there is a 256 character limit. (Applies to Primary and Legacy OCR only.)
Include region in read operation	Mark this checkbox to include data from this region when processing forms. If this checkbox is not marked the region exists in the form template, but no data is captured during form processing. This option is on by default.

There are three ways to create any region type:

Toolbar: Click the **OCR** toolbar button. This option creates a new OCR region after the item you currently have selected in the tree view (question list).

Task Pane: Click **Insert OCR Region** from the task pane (you may need to click Draw Regions first). This option creates a new OCR region after the item you currently have selected in the tree view (question list).

Menu: Click the **REGION** or **PAGE** menu (depending on your selection point) and then choose either OCR Region After or OCR Region before, depending on where you want the region placed in the tree view (question list).

Remember that the order in which the regions appear in the tree view is the order in which they are read during form processing.

To create an OCR region

1. Use one of the methods above to begin inserting an OCR region.

2. In the image representation area, use the mouse to drag a box around the text or the location where the text will be on the forms (it is okay if the text is not in your template image yet as long as you know where it will be located on the filled in forms). The text may vary in length depending on the data that you are capturing. Be sure to make the OCR region large enough to capture the longest text you plan to recognize. If you do not get it perfect the first time, you can always adjust the box later using the image handles along the edges of the region in the image area.

3. In the **Properties** window, enter the appropriate properties for the region, as described above. There are additional more advanced features that may be defined.

4. Click the **OK** button.

After creating an OCR region, you see the region in the image representation area and a new node is added to the tree view. Each OCR region is purple to differentiate the regions.

Image Regions (Handwriting)

Image regions are used for areas on a form that contain handwritten text (e.g. a person's name, comments, etc.). Remark Office OMR cannot read this type of information automatically, but does provide you with three options for capturing this information as an Image region.

- Data Entry Image regions reserve space in the data grid for the manual insertion of text. You can type the information contained in the Image region into the data grid using image-assisted data entry (typing while viewing the image on-screen). You can also use default fill data, such as a date, to automatically populate the data set during form processing.

- Image Clip Image regions save a snapshot image of the particular region to a user-specified location on your computer or network. The location is displayed in the data grid as the forms are being scanned. After collecting the Image region information, you may optionally run a Response report in Remark Quick Stats to view the results.

- Qualitative response coding allows you to set up codes for the responses you expect to get from your returned forms. Instead of typing long responses, you can code them into categories or themes. When entering the data during form processing, you can select a pre-defined code from a drop-down list as you read the response on-screen. An additional benefit of qualitative response coding is when you analyze the data in Remark Quick Stats, you can run item analysis reports to see a breakdown of the codes chosen for the particular question. As an example of qualitative response coding, suppose you have a comment question on your survey form. You probably want to read those comments. However, you also might want to be able to quickly see how many responses were positive, negative or mixed. In the Remark form template, you could

enter pre-defined codes of Positive, Negative and Mixed. When you process the filled-in forms, you could read each comment on-screen and then choose whether it was a positive, negative or mixed response. When you analyze the data, you could quickly see the number of responses that fell into each category. You can also allow more than one coded response per comment. You can even combine image clipping and qualitative coding so that you can see a report of the handwritten comments and apply codes.

An Image region has the following basic properties:

Property	Function
Region name	A name assigned to an Image region. Region names are used as grid column headers in the data grid window and are exported when saving data to common file formats. Region names are limited to 60 characters. The following characters cannot be used in region names: : . – Period, ! – Exclamation, ' - Singe quote, [- Left bracket,] - Right bracket, , - Comma, " – Doublequote, (- Left paren,) - Right paren.
Region type	Sets the type of Image region: Image Clip, Data Entry, or Data Entry and Image Clip. Use Image Clip to have Remark Office OMR capture an image of the region for later viewing in reports and output the location of the image in the data grid during form processing. Use Data Entry to hand enter the data that is captured in a region. Use Data Entry and Image Clip to both hand enter information (e.g. apply qualitative response codes or use a default fill) and store clipped images of the handwritten information.
Data type (Data Entry Image region only)	Sets whether the data should be considered textual or numeric when saved/exported.
Default fill	Sets a default entry to be used in the Image region. The information typed here is automatically output to the data grid when forms are processed. You may also select one of the following items from the drop-down list to be used as a default fill option: • Time Stamp • Date Stamp • Time and Date Stamp • Record Number • Page Number • Record and Page Number When selecting an item from this list, you can also insert text before or after the selected item if desired.

Property	Function
Auto increment fill value (Data Entry Image region only)	When used in conjunction with Default Fill, Remark Office OMR assigns the next value in the range you define to the Image region in sequential order. For example, you can enter the number 1 as the default fill and then mark the Auto increment fill value checkbox. Remark Office OMR automatically places sequential numbers in the Image region during form processing. When using a default fill in this fashion, you can create the Image region anywhere on the form as a placeholder.
Apply auto increment across auto form ID templates	When used in conjunction with auto increment, this feature allows you to add a value in the range you define to the Image region in sequential order across every template you are using in auto form ID mode. For example, you can enter the number 1 as the default fill and then mark the Auto increment fill value checkbox and Apply auto increment across auto form ID templates checkbox. Remark Office OMR automatically places sequential numbers in the Image region during form processing in all of the templates you are using with auto form ID. When using a default fill in this fashion, you can create the Image region anywhere on the form as a placeholder.
Prompt me for the fill value when reading	Use this setting to enter a custom value for the image region at the time of reading the filled in forms. This fill value may be something that describes the forms you are processing. For example, if you are processing conference session evaluations, you could type in the name of each session and it is added to each data record. Do not use *Attempt to detect the presence of handwriting in the region* if you are using this feature.
Attempt to detect the presence of handwriting in the region	Use this setting to have Remark Office OMR attempt to determine whether handwriting is in the region. For Data Entry Image regions, when text is detected during form processing, the Image region's cell in the data grid is colored blue. For Image Clip Image regions, the clip is captured when handwriting is detected and is not captured when handwriting is not detected. If you are not using this feature, image clips are captured for every Image region.
Target folder	Click the ellipsis (...) to select a location in which to store the Image Clips. You may also type or paste a location into this box.

Property	Function
Name builder	Click the **Name Builder...** button to further customize the stored image clip names and locations.

In the **Image base name** area, you may choose to add a region from the processed data to the image clip base name. Choose the region from the drop-down list and then click the **Insert Data Into Base Name** button. For example, if processing conference session evaluations, you could add a session name that is being collected from the form so that your processed image clips all have the session name them.

In the **Destination Folder** area, you may choose to add a region from the processed data to the folder structure that holds the processed image clips. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. For example, if processing conference session evaluations, you could add a session name that is being collected from the form so that each image clip is stored in a folder containing the conference session number.

In the **Name Builder** box, click the **OK** button to return to the **Properties** window**.** |
Begin names with (Image Clip Image region only)	Use this box to enter a beginning (base) name to use when storing Image Clips. This name has numbers appended to it to allow for the greatest number of images to be stored. For example, if you are storing Image Clips of a comment question on a survey, you may wish to begin the clips with the name "Comments"."
Clip file type (Image Clip Image region only)	Select an image type to use for storing images. The choices are: PCX, PDF, TIF or JPG.
Compression (Image Clip Image region only)	When saving images to the PDF or TIF formats, you can choose the compression level under **Compression level**: Uncompressed, Group 3, Group 3 2d, Group 4 and LZW. Group 4 creates the most compressed image (smallest file size that take up less space on your computer).
Link Region to an Existing OMR Region (Data Entry Image region only)	Use this setting to link a Data Entry Image region to one of the responses from another OMR region on the page (e.g. an "other" blank from a multiple choice question). The Image region is colored blue in the data grid if the linked mark is chosen so that you know which regions need attention for data entry. This feature is especially helpful when used in conjunction with Review Exceptions.
OMR region (Data Entry Image region only)	Use this drop-down list to select the region to which to link the Image region when using the Link Region to an Existing OMR Region option.
Question (Data Entry Image region only)	Use this drop-down list to select the individual question within the OMR region to which to link the Image region. Note that if the linked OMR region only contains one question, you only see this question in the list.

Property	Function
Answer (Data Entry Image region only)	Use this drop-down list to choose an answer response (Label) from the linked question. Alternatively, you may type an answer choice in the box. When this answer choice is detected during form processing, the linked Image region's cell is colored blue in the data grid.
Include region in read operation	Mark this checkbox to include data from this region when processing forms. If this checkbox is not marked the region exists in the form template, but no data is captured during form processing.

There are three ways to create any region type:

Toolbar: Click the **Image** toolbar button. This option creates a new Image region after the item you currently have selected in the tree view (question list).

Task Pane: Click **Insert Image Region** from the task pane (you may need to click **Draw Regions** first. This option creates a new Image region after the item you currently have selected in the tree view (question list).

Menu: Click the **REGION** or **PAGE** menu (depending on your selection point) and then choose either Image Region After or Image Region before, depending on where you want the region placed in the tree view (question list).

To create an image region

1. Use one of the methods above to begin inserting an Image region.

2. In the image representation area, use the mouse to drag a box around the location where the handwriting will be on the forms. Be sure to capture any lines or boxes in which the respondent will write.

   Comments:
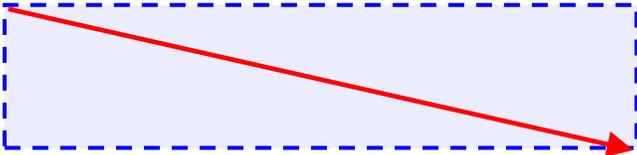
3. In the **Properties** window, enter the appropriate properties for the region, as described above. There are additional more [advanced](#) features that may be defined.

4. [Optional] If you would like to enter response codes for qualitative analysis:

   a. Click the **Question properties** link in the task pane on the left side of the **Properties** window.

   b. [Optional] If you want to use qualitative coding, enter the desired codes you wish to use for qualitative analysis in the **Codes** column. Assign a numeric value to each code for statistical analysis in the **Values** column (e.g. for calculating means). Note that you may also use pre-defined codes in the **Available scales** drop-down list to quickly fill the **Codes** and **Values** columns.

   c. [Optional] If you wish to allow multiple response codes to be applied to each question, click the **Advanced Region Properties** link in the task pane. Under **Multiple Response Exceptions**, select whether multiple responses are allowed by choosing **Not Allowed** or **Allow All**.

   d. [Optional] If you want to be able to tabulate the question with the qualitative codes (i.e. run statistical analysis on the question in Remark Quick Stats), while on the **Advanced Region Properties** screen, mark the radio button for **Tabulate this item**. Image regions are not set to tabulate by default.

   • **Note:** You can adjust qualitative codes from the **Tools** menu in the Data Center when processing forms as well. If codes are changed or added, they are also updated in the template.

5. Click the **OK** button.
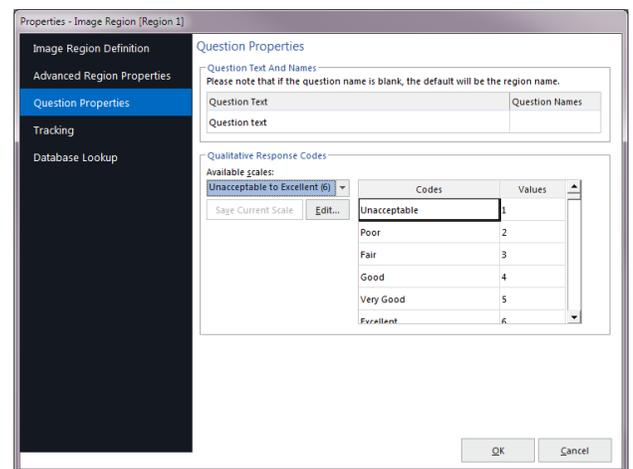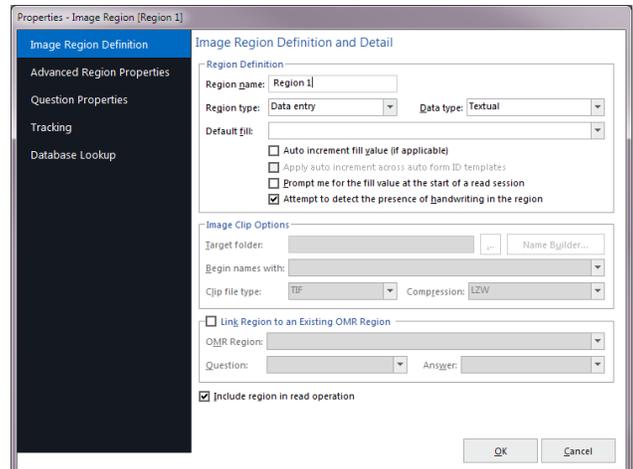
After creating an Image region, a new node is added to the tree view. Image regions are blue in the image representation area.

Advanced Template Options

There are many advanced properties that can be set to help you refine survey tabulation, test grading, form tracking and utilizing external databases for verification of information. Please read the following sections for more details.

Advanced Region Properties

Once you have defined the basics of a region, there are several additional options in the left task pane, all of which are optional. You can set up these additional options when you create a region or go back into a region's properties at any time to make changes. The **Advanced Region Properties** allow you to adjust the following items:

Test Settings

Choose whether or not to grade an item. By default, Multiple, Rank, Boolean and List regions have grading turned on by default. All other region types are off by default. In addition, if you are scoring multiple versions of the test you should have a region on the form that tells the software which version of the test is being scanned. You can mark the **Designate as test version ID** option to tell Remark Office OMR to look at this region to determine each student's test version. You can then use the available multiple answer key scoring options in the Advanced Grade feature of the Data Center.
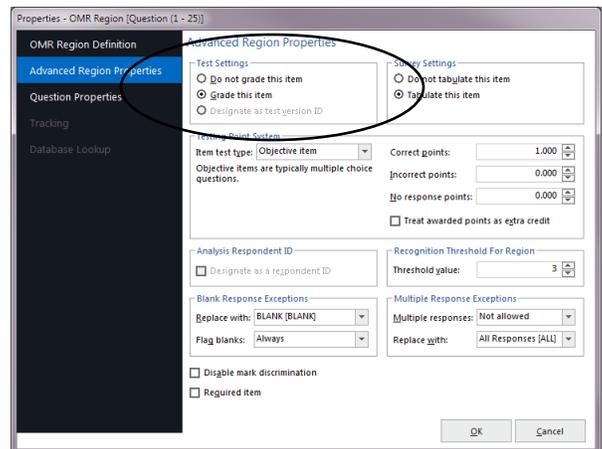

Survey Settings

Choose whether or not to include an item when running survey analysis in Remark Quick Stats. By default, Multiple, Rank, Boolean and List regions have tabulating turned on by default. All other region types are off by default.

Testing Point System

Questions can be designated as Objective, Subjective or Rubric questions:

An **objective** question is one where respondents choose one or more pre-defined answers on a form by darkening in a mark (e.g. bubble). These questions are typically multiple choice or true/false questions.

A **subjective** question is one that is open ended and must be graded by a teacher, such as an essay or short answer question. Remark Office OMR cannot automatically read this type of question; however, you can include points from

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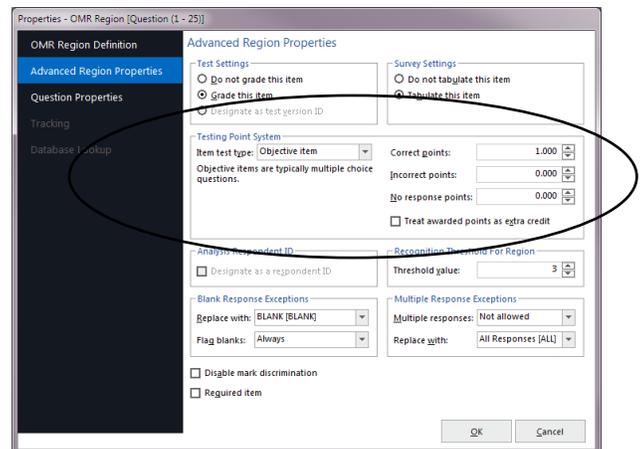
a subjective question when grading. First, place a region on the form where the teacher can enter the appropriate amount of points earned on the subjective portion of the test. This is typically an OMR region where the teacher bubbles in the points earned. Then designate the region as a subjective item in the form template. This region must be set to the numeric data type in order to use the region as a subjective region. When setting up your answer key, enter the maximum number of subjective points that can be earned. When grading, Remark Office OMR displays the overall, objective and subjective scores.

Rubric scoring is similar to subjective scoring in that the teacher awards the number of points to the student's answer. The major difference is that it may be a multiple choice style question with a defined number of answer choices (as opposed to grid style question with a wider variety of point possibilities). A rubric typically uses a range to rate performance on the question. As with a subjective question, you need a place on the form for the teacher to fill in the number of points to award. You typically define the OMR region as multiple, establishing the desired points scale in the Labels grid. However, regions used for rubrics can also be List or Boolean. The data type must be set to textual.

Extra credit is available using the **Treat awarded points as extra credit** checkbox. This feature allows you to use Quick Grade to grade the tests and still designate a question as extra credit. When this checkbox is selected, any points awarded for the question are added to the total score (therefore it may be possible to score greater than 100%).

Analysis Respondent ID

You may also set a particular region as an Analysis Respondent ID region so that it can be used as an identifier on reports. This feature is useful when you are capturing items such as ID numbers or names. When set as an Analysis Respondent ID region, the resulting reports show the information captured in the region alongside of the results. For example, if you administer a test where the students enter their ID number, the grade report shows the ID number and then that student's grade. Or, you can capture the students' handwritten name as an image clip and use it as the Analysis Respondent ID (note that you can only show one

image clip as an Analysis Respondent ID in the reports). When exporting data to some gradebook packages, you may also be required to set an Analysis Respondent ID.

- **Note:** Analysis Respondent IDs are included as identifiers in the analysis, but they are not tabulated or graded. In order to set a region as an Analysis Respondent ID, make sure it is set to **Do not grade this item** and **Do not tabulate this item**.
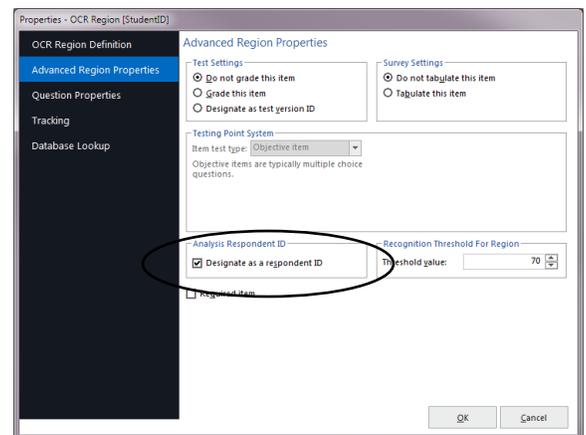
Recognition Threshold

The Recognition Threshold setting allows you to compensate for degraded images and poorly marked forms, assists with the recognition of text in OCR regions and assists with the recognition of handwriting in Image regions. Use the Recognition Threshold setting to increase or decrease standards for mark and text recognition.

You can set the Recognition Threshold on a region-by-region basis. For OMR and Image regions, the Recognition Threshold setting ranges from 1 to 6, with 3 being the default setting. It is recommended that you use the default values unless you encounter problems. Use a lower Recognition Threshold to compensate for errors when reading light pages, degraded images or pages where the respondent has not filled the marks completely. Use a higher Recognition Threshold to compensate for errors when reading dark pages or pages with many erasures.

- **Note:** The Recognition Threshold can only be set on a region basis. If you have a region containing multiple OMR questions, the Recognition Threshold setting applies to all questions in the region.

For OCR regions, the Recognition Threshold setting ranges from 1-100% (default setting is 70%). The threshold applies to each individual character. The software returns a confidence value for each character recognized (e.g. 70% certain it is a "G"). If any character returns a confidence value lower than the specified threshold, the OCR field is flagged as an exception for your review.

Recognition Threshold settings can also be adjusted on a global scale in the Template Editor Preferences as well as on the fly when reading forms.

Blank, Multiple and Duplicate Exception Handling

When people fill out forms, inevitably they will mismark them by leaving questions blank, filling in too many responses or leaving stray marks or erasures that might be interpreted as filled bubbles. You can specify how Remark Office OMR should handle blank, multiple and duplicate responses in OMR regions when processing forms and exporting data. The default settings are:

- Blank responses: The word BLANK is inserted for items that are not answered.

- Multiple responses: All responses are shown but flagged with green when more than one response is chosen and not permitted.

- Duplicate responses: The word DUP is inserted for Rank questions when more than one response is chosen.

Color coding is also applied to the data grid, making the exceptions easier to locate: yellow for blanks, green for mults and peach for duplicates. Also by default, only one answer response is allowed. You can replace these values on a region-by-region basis. You may choose one of the default options listed or type in a custom value. The default options include Asterisk (*), Nothing, Space Character and Tilde (~). In addition, the word VOID is available for blank responses.

Additional Options for Blank Responses: For a blank response, you can choose how you want to flag the region. Sometimes there are intentional blank characters in grid regions, for example, that you wouldn't want flagged. Suppose you are capturing a name and allow 10 letters. If a person's name is only 5 letters, you wouldn't want the region to appear as blank because they only used half of the allotted characters. Therefore, you have the following options available under **Flag blanks**:

- Always: If any character in the region is left blank, or the entire question is left blank, regardless of the replacement characters being used, the region is considered blank. Replacement characters, if used, are still utilized, but the region contains the yellow BLANK exception color.

- Ignore Leading/Trailing: If a leading or trailing character in the region is left blank, it is ignored. This allows you to capture data smaller than the allotted region without it being considered blank. You will see whatever data is captured and the region will not contain a yellow BLANK exception color. This setting applies to Grid regions only.

- Never: If any character within the region is blank, or the entire question is left blank, Remark Office OMR ignores it. The region never appears with a yellow BLANK exception color in the data grid.

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- Ignore Leading: If a leading character in the region is left blank, it is ignored. This allows you to capture data smaller than the allotted region without it being considered blank. You will see whatever data is captured and the region will not contain a yellow BLANK exception color. This setting applies to Grid regions only.
- Ignore Trailing: If a trailing character in the region is left blank, it is ignored. This allows you to capture data smaller than the allotted region without it being considered blank. You will see whatever data is captured and the region will not contain a yellow BLANK exception color. This setting applies to Grid regions only.

Additional Options for Multiple Responses: By default, questions only allow one response. If you wish to allow more than one response, you can choose the number of allowed responses in the **Multiple responses** drop-down list. Use **Allow All** if you do not any limitations on the number of responses people can choose. If you set a limit, anything marked above the limit forces the question to be considered a multiple response and is flagged as such in the data grid. There is also an option to choose **Select most filled**, which tells Remark Office OMR to determine the mark it thinks is the most filled when two or more responses are detected. Use caution when using this option, as you will never see a multiple response for your review.
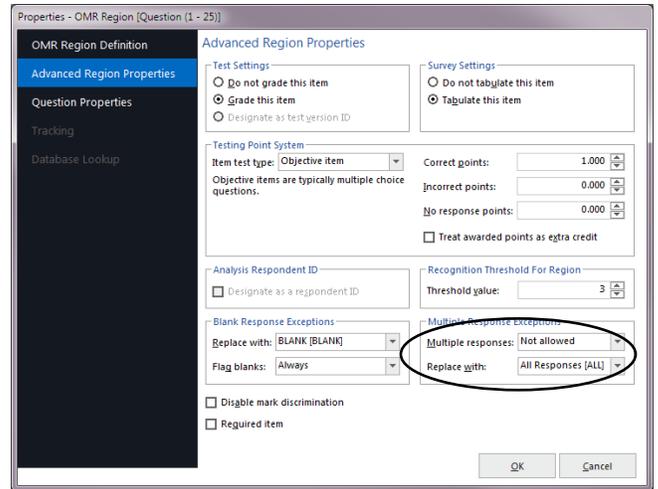
Mark Discrimination

Remark Office OMR allows you to disable mark discrimination on an OMR region. Mark discrimination sets the value that determines the difference between two (or more) marks that are filled/partially filled. This allows the Remark software to determine which mark is actually filled. If you turn off mark discrimination, Remark Office OMR does not try to determine which mark is more filled when more than one mark is filled (whether or not they are allowed). The result is a multiple exception in the data grid that you can review and correct if multiple responses are not found. If multiple responses are allowed, all marks considered filled are reported. Disabling mark discrimination is considered an advanced option and not recommended for most applications.

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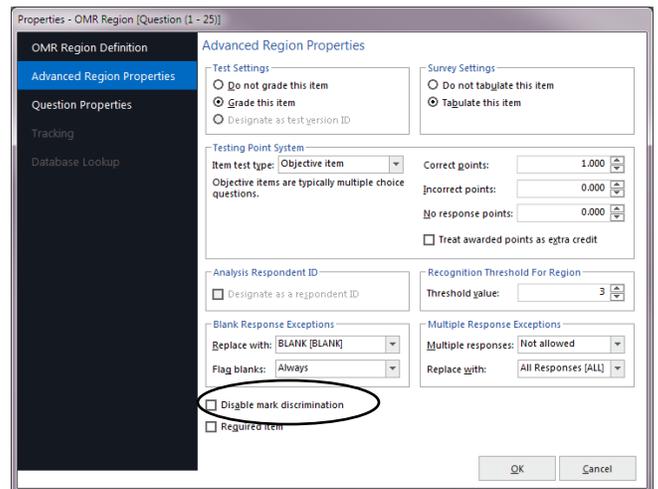
Required Items

Remark Office OMR allows you to make items required to be filled during processing. This feature is used in conjunction with Review Exceptions. If an item is marked as required in the form template and you are using the Review Exceptions feature, Remark Office OMR flags any items that are left blank. If you are using Review Exceptions during form processing, the processing stops so that you may review the unrecognized item. If you are using Review Exceptions after form processing, Remark Office OMR includes the unrecognized item during the review operation.

Question Properties

Once you have defined the basics of a region, there are several additional options in the left task pane, all of which are optional. You can set up these additional options when you create a region or go back into a region's properties at any time to make changes. The second item is **Question Properties** allow you to adjust the following items:

Question Text

Question text may optionally be added to make reports more meaningful. When question text is present, it is used on the reports to identify the question. If no question text is entered, the region names are used on the reports.

You may manually type question text into the question text grid or paste text from the Windows clipboard by using the keyboard shortcuts (Ctrl + V) or by double clicking a cell, then right clicking and choosing Paste from the menu. In order to paste information, you must first copy it from another location (e.g. a Word document). You may select multiple rows in the grid to paste multiple lines of question text. There is one grid row for each question you have included in the region.

Question Names

When defining an OMR region with multiple questions in the same region, you can specify individual question names for each question in the region. By using individual question names, it is easier to save data to existing databases and other file types that may already be set up with specific fields.

By default, Remark Office OMR uses sequential region names for each question in the same region. Sequential region names consist of adding numbers sequentially onto the region name you provide in the Properties - window. For example, if you enter a region name of Question, Remark Office OMR calls the individual question names within the region Question1, Question2, Question3, etc.

In contrast, if you use the Question Names section of the Question Properties window to enter individual question names, you are able to customize the question name for each question within the region. Question names are limited to 60 characters each.

- **Tip:** The following characters are not allowed in region/question names due to the problems they could cause when exporting data to certain formats:

. - Period
! - Exclamation
' - Singe quote
[- Left bracket
] - Right bracket
, - Comma
" - Double quote
(- Left paren
) - Right paren
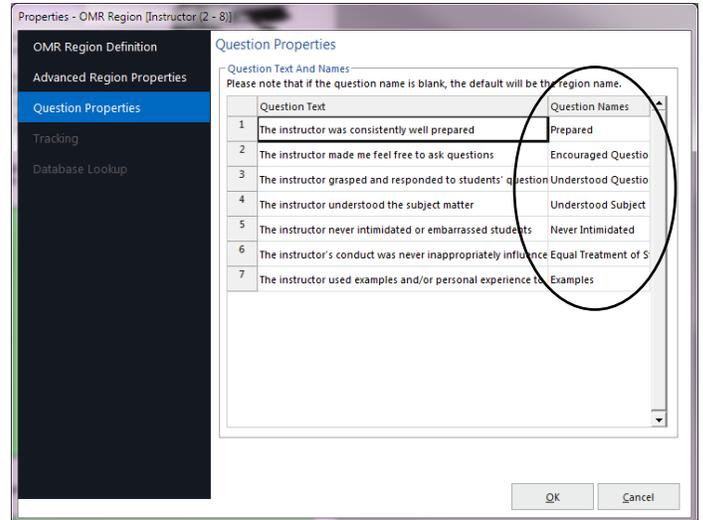
Qualitative Response Codes

When defining an Image region that uses data entry, the Question Properties window also includes a Qualitative Response Codes section. Using this feature allows you to read handwritten comments on the screen and then enter codes to categorize them (sometimes called "themes"). You can then analyze the qualitative coded data in Remark Quick Stats. Enter the desired codes you wish to use for qualitative analysis in the **Codes** column. Assign a numeric value to each code for statistical analysis in the **Values** column (e.g. for calculating means). Note that you may also use pre-defined codes in the **Available scales** drop-down list to quickly fill the Codes and Values columns. Don't forget to turn on tabulation in the Advanced Region Properties section of the Properties window if you want to include the codes in your reports.

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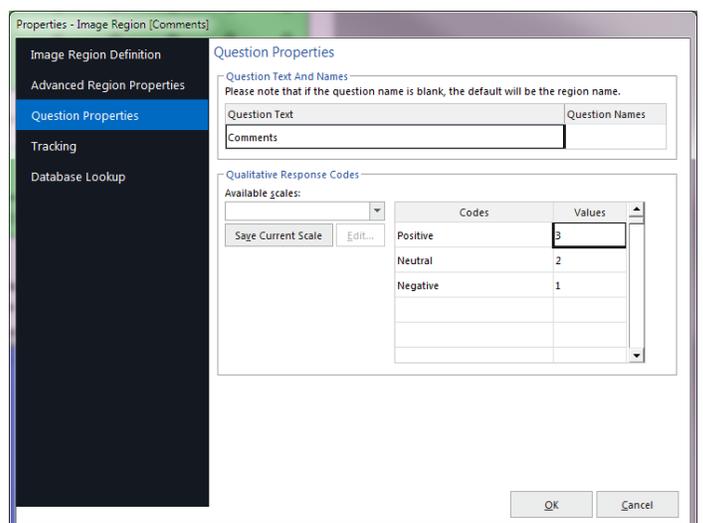
Database Lookup

Remark Office OMR has a Database Lookup feature that can: 1) verify that recognized data from a region appear in an external database, and 2) lookup and replace recognized data with additional fields from an external database. To use this feature, you link a region in the form template to an external database. As each form is processed, Remark Office OMR verifies that the recognized data appear in the selected database field. If the data are not present, Remark Office OMR flags the question as a Database Lookup error for correction. Database Lookup can be used with OMR, OCR, Image and Barcode regions.

This feature is useful for validating names, identification numbers, zip codes, etc. It is also useful for pulling information you have already collected out of a database and inserting it into your processed form data. When you set up a Database Lookup region, you tell the software what field to validate, and whether to replace the output with a field from the external database and/or append additional fields from the external database.

For example, suppose you are grading tests and you have the students fill in their ID numbers on the forms being processed. You could verify the ID numbers in a database to ensure the right forms are being scanned, and then specify another value that corresponds to the ID number (e.g. a name). If the ID number is found in the database, Remark Office OMR automatically displays the corresponding value (student name in this case) for that ID number in the data. When you run your grade reports, they are produced with each student's name, yet you did not have to type in that information (or have students bubble it in on the form).

To use database lookup

1. Create a region.

2. From the **Properties** window, click the **Database Lookup** link in the left task pane.

3. Mark the checkbox for **Use Database Lookup**.

4. In the **Database Selection** area, use the **Type** drop-down list to select the type of database to which you want to connect this region (e.g. Access, Excel, etc.).

5. Click the **Browse...** button to locate and select the database file.

6. Select a file and then click the **Open** button (or double click the file name).

If using an ODBC connection, perform the Steps 7-9 (you need to obtain specific information from your database administrator to complete these steps). Otherwise, skip to Step 10.

7. [OPTIONAL]: Select your database type from the **DSN** drop-down list.

8. [OPTIONAL]: Select the appropriate checkbox to indicate whether your database is Directory or DSN based: **Directory based** or **DSN based**.

9. [OPTIONAL]: If your database utilizes password protection, use the **Username** and **Password** boxes to enter your login information. If the database is not password protected, you may skip this step.

10. In the **Lookup & Return** section, click the **Connect to Database** button to link the database to the region.

11. Use the **Table** drop-down list to select the table in the database containing the fields to which you are linking the region.

12. Use the **Lookup** drop-down list to select a field in the connected database to which you want to link this region. When the forms are processed, the respondents' answers are verified against the values in this database field. If the answer is found in the database field, Remark Office OMR outputs the Replace value. If the answer is not found in the database field, Remark Office OMR flags it for review.

13. Use the **Replace** drop-down list to select a field in the connected database to return when the Lookup field is verified. If you only want to verify data and not replace it with anything else, use the same field in both the **Lookup** and **Replace** lists. If you want to look up the value and then replace it with a different database field's information, select the appropriate field in the Replace list.
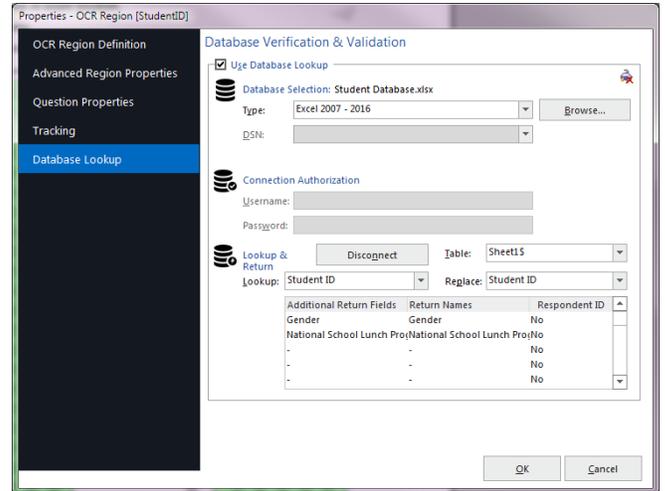
If you would like to pull other data out of your database to include in your Remark data, continue with steps 14-17. This is a quick and easy way to get information out of the existing database and into your processed data without having to put on the physical form. Otherwise skip to step 18.

14. [OPTIONAL]: If desired, select database fields from the **Additional Return Fields** list to insert additional information from the database into the data grid during form processing. You may look up a field once but return several database fields' worth of information. Fields are listed in the data grid in the order in which they appear in the **Additional Return Fields** list.

15. [OPTIONAL]: If desired, use the **Return Names** column to specify region names for the **Return** fields. By default, the name is taken from the external database to which the region is connected. You may type a new name in the **Return Names** cell if desired.

16. [OPTIONAL]: Use the drop-down arrow to select **Yes** in the **Respondent ID** box to include the **Return** field in the reports as a respondent identifier. If this setting is set to **Yes**, the data collected from this region is used on the appropriate reports to identify the respondent.

17. Click the **OK** button to save the changes and return to the tree view.

When you process your filled in forms, Remark Office OMR looks up the captured data in the database and if found, returns your Replace and Additional Return Field data. If the captured data does not match what is in the connected database, Remark Office OMR flags it for your review.

- **Tip:** If your database name or location changes once you have set up your database lookup, when you open the template in the Data Center for processing, you are prompted to restore the connection settings.

Tracking (Automatic Form Processing)

Remark Office OMR offers three types of tracking to assist with the automation of forms processing:

- Auto Form ID: Provides automatic identification of a form when processing multiple form types at the same time.

- Auto Page ID: Provides automatic identification of pages within a form template.

- Respondent Tracker: Provides automatic identification of respondent data.

With Auto Form ID, Remark Office OMR can automatically recognize a form and match it to its template, allowing you to process various form types at once without pre-sorting the forms. With Auto Page ID, Remark Office OMR takes it a step further and identifies specific page order within a form template if the pages are processed out of order. With Respondent Tracker, Remark Office OMR recognizes a specific respondent's page and place it in the correct grid row with the rest of that respondent's data even if the pages are processed out of order. When you design your paper form, you add the tracking identification to each form (e.g. bubbles or barcodes indicating form or page numbers). These features can be used with OMR, OCR or Barcode regions. When combined, the three types of tracking allow you to process forms without pre-sorting and Remark Office OMR is able to match each page to the correct form (template), page number and respondent within the appropriate template grid.

- **Tip:** You can use delimited barcodes as identifiers. Delimited barcodes contain multiple items within a single barcode. When set up in the Template Editor, you can tell the software which part of the barcode to use as the Form, Page or Respondent Identifier.

Setting up the form, page or respondent identifier begins with the same process:

1. Create a region.
2. From the **Properties** window, click the **Tracking** link in the left task pane.
3. Mark the checkbox for **Use Region Tracking**.

Form Identifiers (Auto Form ID)

You must have a form identifier on each page of your form to use the Auto Form ID feature. When you create a paper form, place optical marks (e.g. bubbles), computer generated text (OCR) or barcodes on it that identify the form. If you already have an existing form you wish to process, add the bubbles, text or barcodes to the form so that they identify the form. These markings must be the same on each page of the same form. However, they should be unique from any other types of identifiers you are using, such as Page IDs or Respondent IDs on this form or other forms. An example could be the words "Form A" in barcode format. Alternatively, you could place bubbles on the form and mark them as A, B, C, etc. (depending on how many forms you want to automatically recognize) to identify each particular form.

- **Note:** If using barcodes as identifiers and the barcodes contain multiple pieces of data within a single barcode (called Barcode Contains Multiple Items in the Barcode Properties window), you can set up tracking after creating the barcode region. Set up the barcode as usual. You then see it listed in the tree view with a plus sign (+). Click the plus sign to expand the barcode, showing its separate pieces of output. Then select the individual item from the tree view to which you want to apply the tracking.

To set up an Auto Form ID region

1. Create an OMR, barcode or OCR region that captures the form identifier.

2. From the **Tracking** section of the region's **Properties** window, mark the checkbox for Use Region Tracking.

3. Select the radio button for **Form Tracking (Auto Form ID)**.

4. If using an OMR region, type in the **ID value**. Note that the ID value for an OMR region must be one of the labels you defined for the region. If using a barcode or OCR, click the **Recognize** button to have Remark Office OMR automatically recognize the region's value. This value acts as the identifier for this particular form. All forms that you wish to process with this form template (using Auto Form ID) must have this value present.

5. If desired, mark the checkbox for **Insert ID value into the data grid during the read process**. Viewing the ID data captured along with the rest of the data can be useful for verification of processed data.

6. Click the **OK** button to save the changes and return to the tree view.
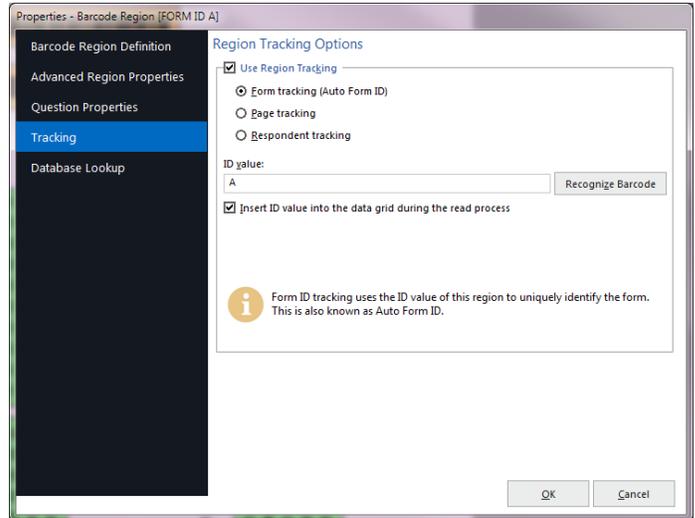
When you are ready to process forms, open any form templates containing Auto Form ID regions in the Remark Office OMR Data Center. In the **Read** window, turn on the Auto Form ID feature under **Advanced Options**. Remark Office OMR begins processing the forms, searching for the Auto Form ID regions first. When it matches a region on the form to the region in the form template, it automatically places that data in the corresponding data grid. Any regions that are not recognized are flagged for your review or placed in the Unrecognized Images queue.

Page Identifiers

You must have a page identifier on each page of your form to use the Auto Page ID feature. When you create a paper form, place optical marks (e.g. bubbles), computer generated text (OCR) or barcodes on the form pages that identify each individual page. If you already have an existing form you wish to process, add the bubbles, text or barcodes to the form to identify the individual form pages. These markings must be unique for each page on the form. They should also be unique from any other types of identifiers you are using, such as Form IDs or Respondent Tracking identifiers. An example could be the words "Page 1" in barcode format. Alternatively, you could place bubbles on the form and mark them as 1, 2, 3, etc. (depending on how many pages you have in a particular form) to identify each particular page.

- **Note:** If using barcodes as identifiers and the barcodes contain multiple pieces of data within a single barcode (called Barcode Contains Multiple Items in the Barcode Properties window), you can set up tracking after creating the barcode region. Set up the barcode as usual. You then see it listed in the tree view with a plus sign (+). Click the plus sign to expand the barcode, showing its separate pieces of output. Then select the individual item from the tree view to which you want to apply the tracking.

To set up a Page ID region

1. Create an OMR, barcode or OCR region that captures the page identifier on the form.

2. From the **Tracking** section of the region's **Properties** window, select the radio button for **Page tracking**.

3. If using an OMR region, type in the **ID value**. Note that the ID value for an OMR region must be one of the labels you defined for the region. If using a barcode or OCR, click the **Recognize** button to have Remark Office OMR automatically recognize the region's value. This value acts as the identifier for this particular page. All form pages that correspond to this form template page must have this value present in order for the software to automatically recognize the page. Each page within a single form template must have a different page value.

4. If desired, mark the checkbox for **Insert ID value into the data grid during the read process**. Viewing the ID data captured along with the rest of the data can be useful for verification of processed data.

5. Click the **OK** button to save the changes and return to the tree view.

6. Repeat steps 1-5 for the remaining pages of the form.
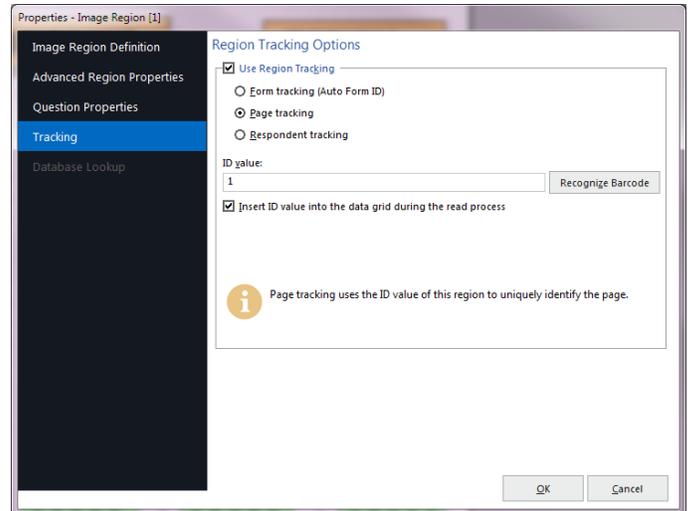
When you are ready to process forms, open the form template containing Page ID regions in the Remark Office OMR Data Center. Use the Read window to process your forms. Remark Office OMR begins processing the forms, searching for the Page ID regions first. When it matches a region on the form to the region in the form template, it automatically places that data in the correct page order. Any regions that are not recognized are flagged for your review or placed in the Unrecognized Images queue. Note that if you are not using the Respondent Tracker feature, you must process all of the pages belonging to one respondent's form before beginning those of a different respondent.

- **Tip:** Page IDs can be used alone if you only want to recognize various pages within the same form. If you want to be able to recognize various pages within different forms at the same time, you need to use Form IDs as well.

Respondent Trackers

Respondent Tracker regions can be setup to identify each respondent's form. To use Respondent Tracker, you must also have a page identifier on each page of your form. When you create a paper form, place optical marks (e.g. bubbles), computer generate text or barcodes on every form page to identify the individual respondents. For example, if the respondent fills in an identifier such as name or ID number on each page, or you have such information captured in a barcode, these regions could be used as Respondent Trackers. These markings must be unique from any other types of identifiers you are using, such as Form IDs or Page IDs. Each respondent identifier must also be unique among all respondents. However, the Respondent Tracker output must be the same for each page within a particular respondent's form.

- **Note:** If using barcodes as identifiers and the barcodes contain multiple pieces of data within a single barcode (called Barcode Contains Multiple Items in the Barcode Properties window), you can set up tracking after creating the barcode region. Set up the barcode as usual. You then see it listed in the tree view with a plus sign (+). Click the plus sign to expand the barcode, showing its separate pieces of output. Then select the individual item from the tree view to which you want to apply the tracking.

To set up a Respondent Tracker region

1. Create an OMR, barcode or OCR region that captures the form identifier.

2. From the **Tracking** section of the region's **Properties** window, select the radio button for **Respondent tracking**.

3. If desired, mark the checkbox for **Insert ID value into the data grid during the read process**. Viewing the ID data captured along with the rest of the data can be useful for verification of processed data.

4. Click the **OK** button to save the changes and return to the tree view.
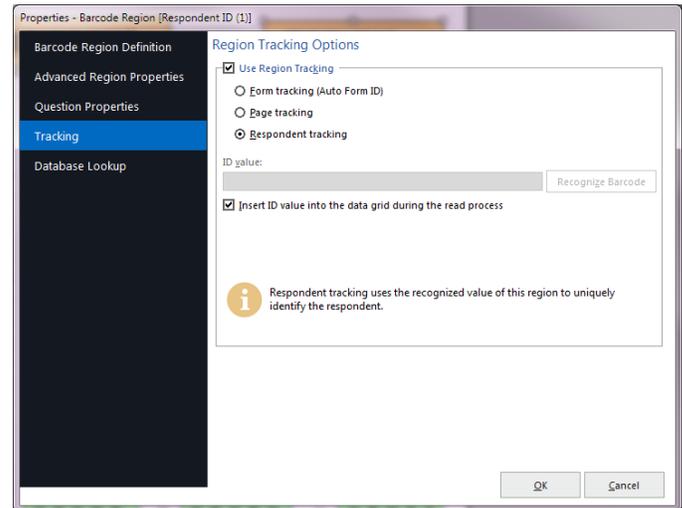
When you are ready to process forms, open the form template containing Respondent Tracker regions in the Remark Office OMR Data Center. Use the Read window to process your forms. Remark Office OMR begins processing the forms, searching for the Page ID regions first. When it matches a region on the form to the region in the form template, it automatically places that data in the correct page order. It then searches for the Respondent Tracker and matches that respondent's data to an existing record or begins a new record. Any tracking regions that are not recognized are flagged for your review or placed in the Unrecognized Images queue.

- **Tip:** If you want to be able to recognize various pages and respondents within different forms at the same time, you may want to use the Auto Form ID and Page ID features as well as Respondent Tracker. Use of all three features allows you to scan various form types without pre-sorting and still keep pages and respondents together.

Editing Regions

Regions can be modified after they have been created in order to change properties such as region names, data types, orientation, labels, etc. If you select the entire region, you have access to all of the properties that are valid for that region. If you are editing an OMR region that contains multiple questions, you may only edit certain properties when selecting individual questions. The ability to edit individual questions allows you to change items such as test points, the ability to accept multiple responses and blank and multiple exception handling on an individual question basis, yet still only create one OMR region.

- **Note:** Changing regions in a form template does not change data that have already been processed. To update data that have been read you need to process the forms again, or use the Find/Replace option to change the existing data to match the revised form template. Changing a form template can also invalidate Grade/Survey analysis files. If you have already created these files, it is recommended that you recreate them based on the current form template settings.

To edit regions

1. Double click within the boundaries of the region you want to edit, or double click the item in the tree view, to display the **Properties** window.
2. Make the desired changes and then click the **OK** button.
3. Save the form template when finished editing.

For OMR regions:

To edit a region with multiple questions

1. Double click within the boundaries of any region you want to edit, or double click a region node in the tree view to display the **Properties** window. You have access to the **OMR region properties**, **Advanced Region properties** and **Question properties**.
2. Make the desired changes and click the **OK** button. Remember that changes made at this level apply to the entire region.
3. Save the form template when finished editing.

To edit individual questions within an OMR region

1. Expand the region containing multiple questions by clicking the plus sign next to the region node in the tree view.
2. Double click the question node representing the question you wish to change. You can also select multiple nodes by holding down **Ctrl** on the keyboard and clicking each region or by clicking a region, holding down **Shift** on the keyboard and then clicking another region; all items in between the selections are highlighted.

   - **Note:** If multiple questions are selected, you are not able to edit **Question Text** or **Question Names**. You are able to adjust the Labels for all selected questions, however.

3. The **Properties** window appears. You are able to adjust **Advanced region properties** and **Question properties.**

   - **Note:** When viewing properties for individual questions within an OMR region, the **Question text and names** window changes to **Question text,**
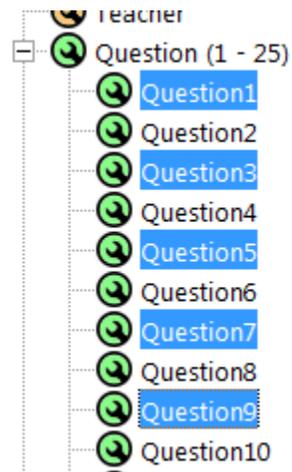
names, and responses. You can find the question's labels on this screen. Question text and names are only displayed for the selected question(s).

4. Make the desired changes.

5. Click the **OK** button to save your changes and return to the tree view.

Working with Regions

Once regions are created, you can use basic Windows functions to make modifications, including:

- Drag/drop

- Cut, copy, paste

- Delete

- Zoom in/Zoom out

- Spell check

There are various ways to access these basic functions, including the keyboard, menus and toolbar. You can use whichever way is comfortable for you.

Drag/Drop, Cut, Copy, Paste, Delete

When you create templates, the tree view (question list) on the left defines the order in which the regions are read when the forms are processed. If you need to rearrange the order, simply drag the regions into the right order. Holding Shift while you drag places the item before the selected item. Alternatively, you can cut a region and paste it elsewhere. You can also utilize the Windows copy function to create similar regions. When you copy a region, you need to then drag it to its proper location on the image. You can double click the copied region to make any adjustments to the properties. If you want to remove a region entirely, click the Delete button on the keyboard.

Auto Align

The Auto Align feature attempts to adjust all regions on a page so that they are situated properly around the marks. This feature is useful if you need to scan a new image for the form due to form changes or a badly skewed image. It is also useful if you plan to share form templates with another user. Form templates created with one scanner should be realigned to new images when a different scanner is used. You can align one page or an entire form template.

To use Auto Align for one page

1. Select the page node you wish to align.

2. Right click the page node, select the **REGION** menu or right click in a blank section of the image representation area.

3. Choose **Auto Align Page** from the menu. The regions move to the appropriate positions on the form.

To use Auto Align for the entire form template

1. Select the **Tools** menu and then click **Auto Align Form Template**.

Once you have aligned pages or the entire form template, you should review the changes to make sure the regions are in the right position. You may need to do some additional moving of regions, particularly non-OMR regions, as the software is not able to tell exactly where you want these regions since there are no marks within them.

Resetting Template Images

There may be times when your form template images no longer match your actual form. For example, suppose that you create a form and then decide to remove one of the questions from the form. Or, perhaps you create the form template from a printed version of the form and then decide to make photocopies for distribution, which causes the entire form to be shifted. In either case, if you have already created your form template, you can use the Reset Images feature to bring in new images with your existing form template without having to recreate the entire form template.

- **Tip:** If you receive forms back from multiple locations, have each location include a blank copy. That way if the location's forms are skewed or offset from their copier or printer, you can reset the template image with their specific blank copy and their forms will better match the template.

To use Reset Images with a scanner

1. In the **Remark Office OMR Template Editor**, select the **Tools** menu and then click **Reset Images**.

2. In the **Image Collection Method** section, click the **Scan** button.

   - **Note:** If you need to configure your scanner, you may click the **Scanner Properties** link to view the **Scanner Properties** window.

3. Place the page(s) to be scanned in the scanner.

4. Click the **Begin Scanning** button to scan the page(s).

5. The page(s) are scanned and then a thumbnail image of the form appears in the Image window. If scanning multiple pages at once, use the **Previous Page** and **Next Page** arrows under the image to view all scanned images. You may delete any images you do not wish to keep by clicking the **Delete** button or using the drop-down arrow on the **Delete** button to fine tune what you are deleting.

6. If you are satisfied with the image(s), click the **OK** button. Otherwise, click **Begin Scanning** again to rescan a page. Once you click OK, You may be prompted to have the software attempt to move
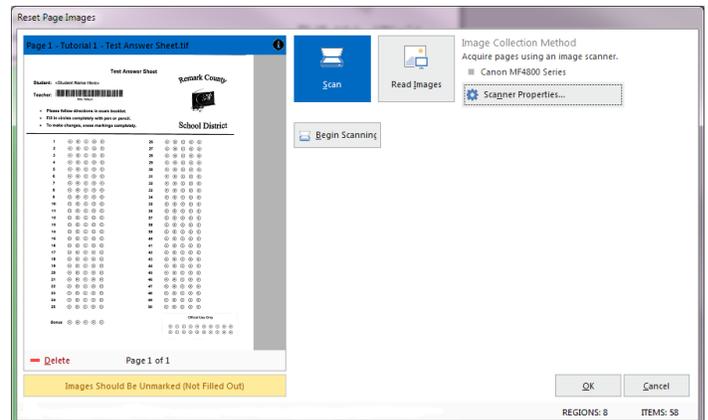
your existing regions to the appropriate place on the new image. Review changes carefully after repositioning to ensure regions are in the right spots.

To use Reset Images with an image file

1. Scan a blank copy of the form and store it somewhere where you can access it in Remark Office OMR.

2. In the **Remark Office OMR Template Editor**, select the **Tools** menu and then click **Reset Images**.

3. Click the **Read Images** button.

4. Click the **Browse** button to select an image file.

5. In the **Select Image File...** window, use the **Look in** drop-down list to find the file(s) you wish to use for the form template. You may only select one image at a time; however, you can go back to this window to select more images in succession.

6. A thumbnail image of the form appears in the Image window. If acquiring multiple images, use the **Previous Page** and **Next Page** arrows under the image to view all images. You may delete any images you do not wish to keep by clicking the **Delete** button or using the drop-down arrow on the **Delete** button to fine tune what you are deleting.

7. Repeat Steps 4-5 to add any other form images to the form template.

8. If you are satisfied with the image(s), click the **OK** button. Otherwise, click **Browse** again to reselect an image. Once you click OK, you may be prompted to have the software attempt to move your existing regions to the appropriate place on the new image. Review changes carefully after repositioning to ensure regions are in the right spots.
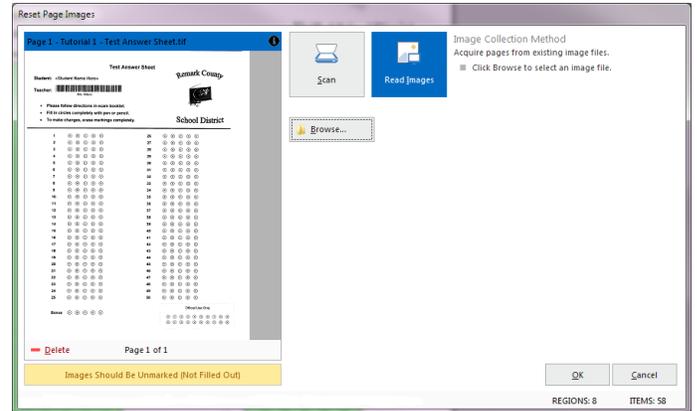
To reset a single page

You may optionally reset the image for a single page instead of using the Reset Images function.

1. Double click the page node in the tree view representing the page you want to reset.

2. In the **Page Properties** window, reacquire the image via the scanner or an image file (same instructions as above).

3. Click the **OK** button to save the updated image. Once the new image is acquired, the existing image is automatically overwritten.

Once you have reset your images you see all of your existing regions with the new image(s). You may find that you need to adjust the existing regions so that they are in the right position on the new image(s). You may move or delete regions as needed to line them up with the new image(s). You may also use the Auto Align feature to have the software automatically try to readjust the regions.

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Answer Response Scales

Remark Office OMR allows you to save the response scales that you use as labels in your OMR regions or codes in your Image regions that use qualitative response coding. When you enter custom labels in the Region Properties window, you can save them for later use or to edit existing scales. From within the Properties window, you only have access to the response scales that fit the region you are defining. For example, if you have defined an OMR region that has five possible answer choices, you only have access to response scales that offer five answer choices. Therefore, the software allows you to access all of the saved response scales under the Tools menu.

To view or modify response scales

1. Select the **Tools** menu and then click **Response Scales**.

2. Select a scale to view or modify from the **Response scales** drop-down list.

3. To delete the scale, click the **Delete** button.

4. To edit the scale, type the new information. To overwrite the scale, click the **Save** button. If you want to save the edited scale as a new scale, enter a new **Scale name** before clicking the **Save** button.

5. To create a new response scale, click the **New** button, provide a **Scale name** and then enter the possible responses in the **Labels** grid and their corresponding numeric values in the **Values** grid, one per line. You may also click the down arrow on the **New** button and choose **From Copy**. This copies the selected scale and allows you to make modifications to the copy instead of starting over when you want to create similar scales. Click the **Save** button when you have finished creating your new scale.

6. When you are finished, click the **Close** button. The scale is now available when you create new template regions.

   - **Tip:** You may right click the mouse within the **Labels** or **Values** grid to access cut, copy and paste functions.
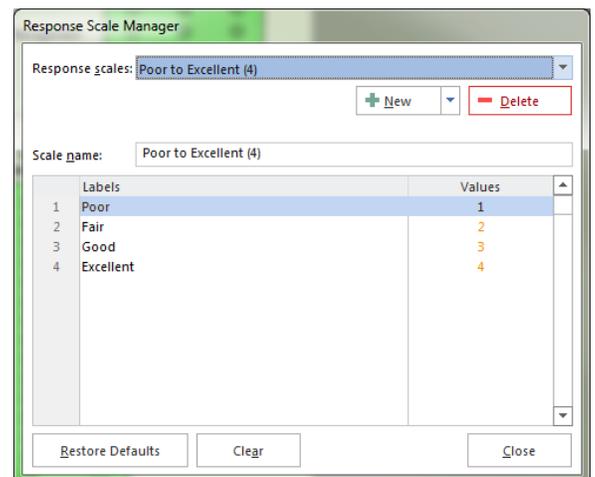
Chapter 6: Template Editor Preferences

Template Editor Preferences Overview

The Remark Office OMR Template Editor comes with a set of preferences to help you use the software optimally. Use these preferences to customize the software to the way you use it. By setting defaults, the software works in a way that you use most often. Keep in mind that these are only default settings; you can change individual form templates at any time. There are five preference areas you can customize: General, OMR regions, Image regions, Barcode regions and OCR regions.

Using the Template Editor preferences

1. In the **Remark Office OMR Template Editor**, select the **Tools** menu and then click **Preferences** to access the preferences.

2. Select the link in the task pane corresponding to the preference you wish to edit.

3. Make the appropriate changes.

4. Click the **OK** button to save the changes.

Preferences are global changes and take effect the next time you use the applicable feature. Changing the preferences does not affect existing form templates and regions. You may click the Defaults button at any time to return the preferences back to their original installation state.

Template Editor Preferences - General

The General window allows you to customize general features of the Template Editor. The following options are available:
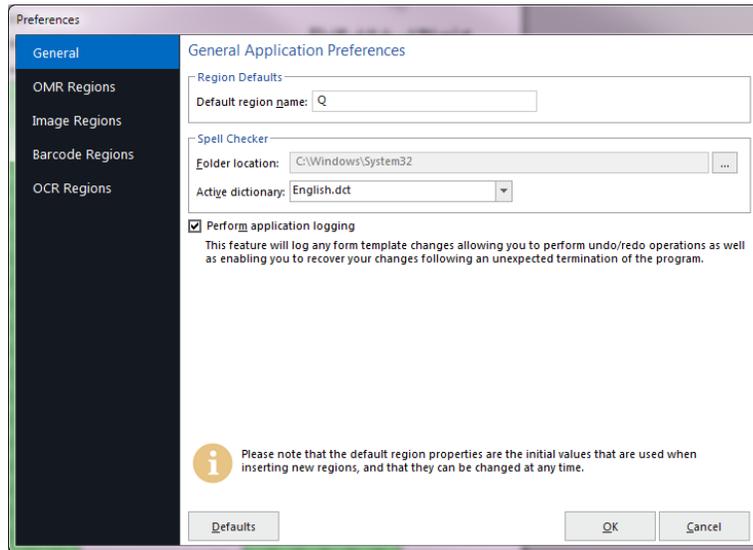
Section	Option	Description
General Preferences	Default region name	Enter a default region name to be used for every new region created. For example, entering "Q" causes every region name to be called Q. Remark Office OMR automatically appends numbers to the end of the region name so that your regions are called Q1, Q2, Q3, etc.
Spell Checker	Folder location	Use this setting to specify where the spell checker dictionary is located. The default location is the Windows\System32 folder.
	Active dictionary	Use this setting to choose the dictionary you want to use for the spell checker. Any dictionaries installed on your system are displayed in the list.

Section	Option	Description
	Perform application logging	Mark this checkbox to have Remark Office OMR store log files that can be recovered if the software terminates unexpectedly. The log file contains the work you were doing so that it can be restored when you restart the software. You are prompted to load the log file in the event of an unexpected termination. Use of this feature is strongly recommended.

Template Editor Preferences - OMR Regions

The OMR Regions window allows you to set up default settings to be used when creating new OMR regions. When creating new OMR regions, the selected settings are used automatically. However, you can always change individual OMR region properties as you go. The following options are available:

Section	Option	Description
Default OMR Region Definition	OMR type	Sets the default OMR region type to be used when creating new OMR regions: Multiple, Grid, Boolean, List, Add, Binary, Rank.
	Data type	Sets the default OMR region data type to be used when creating new OMR regions: Textual or Numeric. The data type is used when exporting data.
	Orientation	Sets the default orientation in terms of columns and rows: Column- the region contains questions that are oriented in columns. Row- the region contains questions that are oriented in rows. There is an option to read right to left (for column orientation) and read bottom to top (for row orientation) if your marks are oriented in such a pattern to support your language of choice.
	Threshold	Sets the default recognition threshold for OMR regions. Lower thresholds force the software to be more sensitive when reading light or less filled marks. Higher thresholds force the software to be stricter and therefore more discriminate when reading regions with multiple filled marks. Use the default setting of 3 unless you encounter problems when processing forms. Use caution when using extremely low or high thresholds. Low thresholds cause the software to be very sensitive, possibly picking up items such as erasures. High thresholds may cause the software to choose the most filled mark when two marks are encountered instead of outputting a multiple response for your review.
	Read GRID regions in reverse	Use this option if you want to read a grid region in reverse (right to left or bottom to top, depending on how it's oriented).
	Regions to Grade	Use the checkboxes to select the OMR region types that you want to be graded by default when performing a grade operation.
	Regions to Tabulate	Use the checkboxes to select the OMR region types that you want to be tabulated by default when performing a survey operation.

Section	Option	Description
Multiple Response Exceptions	Replace MULTIPLE, RANK and LIST Regions with	Select the replacement option to be used by default when a multiple response occurs for a Multiple, Rank or List region during form processing. The text entered in this box appears as output in the data grid and is exported in any saved data files. The default replacement is All Responses [ALL], meaning that all responses are output and the data cell is flagged green. Other pre-defined options include MULT, Asterisk (*), Nothing, Space Character, and Tilde (~). You may also type characters into the Replace with box.
	Replace GRID Regions with	Select the replacement option to be used by default when a multiple response occurs for a Grid region during form processing. The text entered in this box appears as output in the data grid and is exported in any saved data files. The default replacement is Asterisk (*). Other pre-defined options include MULT, Nothing, Space Character, and Tilde (~). You may also type characters into the Replace with box.
Blank Response Exceptions	Replace MULTIPLE, RANK and LIST Regions with	Select the replacement option to be used by default when a blank response occurs for a Multiple, Rank or List region during form processing. The text entered in this box appears as output in the data grid and is exported in any saved data files. The default replacement is BLANK. Other pre-defined options include Asterisk (*), Nothing, Space Character, Tilde (~) and VOID. You may also type characters into the Replace with box.
	Replace GRID Regions with	Select the replacement option to be used by default when a blank response occurs for a Grid region during form processing. The text entered in this box appears as output in the data grid and is exported in any saved data files. The default replacement is Nothing. Other pre-defined options include BLANK, Asterisk (*), Space Character, Tilde (~) and VOID. You may also type characters into the Replace with box.

Section	Option	Description
	Flag GRID, MULTIPLE, RANK and LIST Region Blanks	Use this setting to further customize how Remark Office OMR interprets blank responses: *Always*- If any character in the region is left blank, regardless of the replacement characters being used, the region contain a yellow BLANK flag. *Ignore leading/trailing*- If leading or trailing characters in the region are left blank, they are ignored. This allows you to capture data smaller than the allotted region without the data being flagged with a yellow BLANK flag. *Never*- If any character within the region is blank, Remark Office OMR ignores it. The region never appears with a yellow BLANK flag in the data grid.
Duplicate Response Exceptions	Replace RANK Regions with	Select the replacement option to be used by default when a duplicate response occurs for a Rank region during form processing. The text entered in this box appears as output in the data grid and is exported in any saved data files. The default replacement is DUP. Other pre-defined options include Asterisk (*), Nothing, Space Character and Tilde (~). You may also type characters into the Replace with box.
OMR Grid Format	Delimiter	Specify the character to use for the Define Format feature for Grid regions. Define Format allows you to format the output of a Grid region (e.g. put slashes in between numbers to produce a date: **/**/****). The Delimiter is the character displayed in the region properties window when you use this feature. Each asterisk represents a character in the region. Put the desired delimiter between these asterisks.

Template Editor Preferences - Image Regions

The Image Region window allows you to set up default settings to be used when creating new Image regions. When creating new Image regions, the selected settings are used automatically. However, you can always change individual Image region properties as you go. The following options are available:

Section	Option	Description
Default Image Region Definition	Image type	Sets the default Image region type: Data Entry, Image Clip or Data Entry and Image Clip. Data Entry regions allow you to hand enter data from the region into your data grid with the assistance of image files. Image Clip regions capture a snapshot image of the information in the region and store it on your computer. Data Entry and Image Clip regions allow you to capture image clips but still use other Image region properties, such as default fills and qualitative coding. The information captured from all types of Image regions can be viewed in reports in Remark Quick Stats.
	Data type	Sets the default Image region data type to be used when creating new Image regions: Textual or Numeric. The data type is used when exporting data.

Section	Option	Description
	Threshold	Sets the default recognition threshold for Image regions. Lower thresholds force the software to be more lenient when reading light text or image regions with smaller amounts of text. Higher thresholds force the software to be stricter and therefore less likely to pick up stray or light markings within the region. Use the default setting of 3 unless you encounter problems when processing forms. Use caution when using extremely low or high thresholds. Low thresholds cause the software to be very sensitive, possibly picking up items such as erasures. High thresholds may cause the software to not detect handwriting within light or less filled Image regions.
Image Clip Options	Target folder	Sets the default storage location for the images that are captured when using Image Clips.
	Clip file type	Sets the default image file format to use when capturing image clips. You may choose TIF, PCX, PDF or JPG. If using the TIF or PDF formats, you may also select the compression level. The TIF format is recommended.
Default Grading & Survey Analysis	Grade region	Mark this checkbox to grade Image regions by default when performing a grade operation. This option is not common, unless you are using qualitative coding.
	Tabulate region	Mark this checkbox to tabulate Image regions by default when performing a survey operation. This option is not common, unless you are using qualitative coding.

Template Editor Preferences - Barcode Regions

The Barcode Region window allows you to set up default settings to be used when creating new Barcode regions. When creating new Barcode regions, the selected settings are used automatically. However, you can always change individual Barcode region properties as you go. The following options are available:
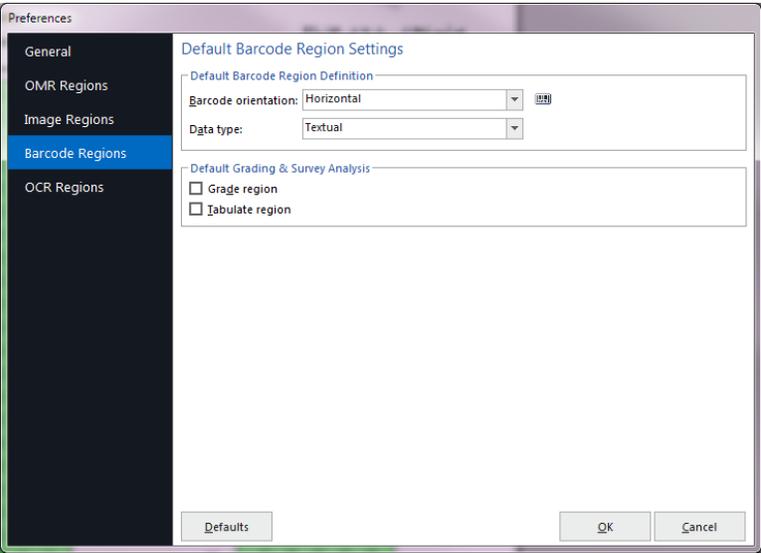

Section	Option	Description
Default Barcode Region Definition	Barcode orientation	Sets the default orientation to be used when creating new Barcode regions: Horizontal or Vertical.
	Data type	Sets the default Barcode region data type to be used when creating new Barcode regions: Textual or Numeric. The data type is used when exporting data.
Default Grading & Survey Analysis	Grade region	Mark this checkbox to grade Barcode regions by default when performing a grade operation. This option is not common.
	Tabulate region	Mark this checkbox to tabulate Barcode regions by default when performing a survey operation. This option is not common.

Template Editor Preferences - OCR Regions

The OCR Region window allows you to set up default settings to be used when creating new OCR (optical character recognition) regions. When creating new OCR regions, the selected settings are used automatically. However, you can always change individual OCR region properties as you go. The following options are available:

Section	Option	Description
Default OCR Region Definition	OCR type	Sets the type of OCR to use. There are three options: *Primary:* Primary OCR is Remark Office OMR's built-in OCR engine. It tends be faster but may be less accurate. We recommend using this engine as the default. *Legacy:* The Legacy OCR option is for backward compatibility with templates created in Remark Office OMR 7. You should only use this option if you are using an older template and it is working correctly. For new templates, use Primary. *Microsoft Office Document Imaging (MODI):* MODI OCR comes with Microsoft Office and is only available if you have this software installed with the MODI option. Using MODI tends to be slower but yields high accuracy rates.
	Language	Sets the default language to use when performing OCR functions. Note that the available languages change based upon the type of OCR you are using.

	Data type	Sets the default OCR region data type to be used when creating new OCR regions: Textual or Numeric. The data type is used when exporting data.
	Orientation	Choose the orientation in which to read the region: Left to Right, Right to Left, Top to Bottom or Bottom to Top. (Applies to Primary and Legacy OCR only.)
	Auto rotate region image	Mark this checkbox to have Remark Office OMR automatically rotate the image in order to read the text captured in the OCR region. If the software cannot read the text in one direction, it rotates the image to try again. (Applies to MODI OCR regions only.)
	Threshold	Select a threshold to use for the software to determine whether it recognizes the printed text. The threshold applies to each individual character. The software returns a confidence value for each character recognized (e.g. 70% certain it is a "G"). If any character returns a confidence value lower than the specified threshold, the OCR field is flagged as an exception for your review.
Default Grading & Survey Analysis	Grade region	Mark this checkbox to grade OCR regions by default when performing a grade operation. This option is not common.
	Tabulate region	Mark this checkbox to tabulate OCR regions by default when performing a survey operation. This option is not common.

Chapter 7: Processing Forms

Processing Forms Overview

The Remark Office OMR Data Center is used to process your filled in forms. You can scan forms directly into the software with a desktop scanner or import images that you already scanned, such as those you scan with a multi-function printer (MFP). When you process forms, you use a grid that is similar to an Excel spreadsheet. It utilizes all the familiar functions, such as:

- Cut, copy, paste

- Delete data or delete entire grid row

- Find and Replace

- Spell Check

- Sorting

- Freezing columns or rows

- Print

- Save/Save As

There are various ways to access these basic functions, including the keyboard, menus and toolbar. You can use whichever way is comfortable for you.

The *Read* feature is used to process filled in forms. You first choose whether to scan with a scanner or import images. Then the on-screen options walk you through the steps to take for each path. As each form is processed, there is an associated image for it in the Image Viewer at the bottom of the Data Center. You can use this image, as opposed to the paper form, to review results. Any problem areas are flagged for you with colors and special words, such as BLANK. You can click a cell to change a response or use the Review Exceptions feature for more automated data clean up. Once the data is cleaned, you can save it to various formats, including Excel, Access, SPSS, Oracle, SQL Server and CSV. You can also use Remark Quick Stats to grade tests and analyze surveys.

To get started, choose the method that you are using to scan forms below:

[I use a desktop scanner connected to the computer running Remark Office OMR and scan directly into the software.](#)

[I use an MFP or other scanning device to scan my forms to a file, and then import that file into Remark Office OMR.](#)

Scanning Directly into Remark Office OMR

Forms can be scanned with most TWAIN compliant scanners. Click here for more information about scanners and how to set them up in Remark Office OMR. As the forms are scanned, images of each form are stored on your computer. These images are used in the Image Viewer to review the data for easy clean up. There are many optional items when you scan forms that are mentioned below but discussed separately (click the related link to learn more about them).

To read pages from the scanner

1. In the **Remark Office OMR Data Center**, open the correct form template.

2. Select the **Tools** menu and then click **Read**. Alternatively, you may select the **Read** link from the task pane or **Read** toolbar button.

3. In the **Office Read** window, select the button for **Scan**. If the **Scan** button is not enabled, you do not have a scanner set up. Click **Scanner Properties** to configure your scanner.

4. [OPTIONAL] If desired, click the **Show Advanced Options** button and mark the appropriate checkboxes under **Advanced Data Collection Options**. Click a link below to understand more about each option.

Option	Description
Automatically associate data with the corresponding form template (Auto Form ID Mode)	Allows the software to automatically recognize form templates, form pages and respondents through identifiers you place on the forms.
Reset the auto-increment value for image regions using Auto Form ID	This feature is used in conjunction with auto incrementing image regions across templates. When you scan your forms, the auto incrementing will automatically take place among all open auto form ID templates within the same session. If for some reason you want to start over, in the same session, you can mark this checkbox. Regardless of this checkbox, when you close Remark, the next time you use the feature it will start all over again.

Option	Description
[Monitor the system for new images to be processed (Server Mode)](#)	Automates form processing by having Remark Office OMR run in the background using specific options.

5. [OPTIONAL] If desired, modify the recognition settings being used by the software by clicking the **Recognition Settings** button. This option opens the recognition settings that apply to this form template. Note that you should not modify the recognition settings unless you experience recognition problems with your form. The default settings are optimized for general use of the software. If you do modify the recognition settings from the Read window, the settings are stored with the form template and therefore still remain in effect the next time you use the same form template. The settings do not apply to other templates. Click the OK button when finished modifying recognition settings.
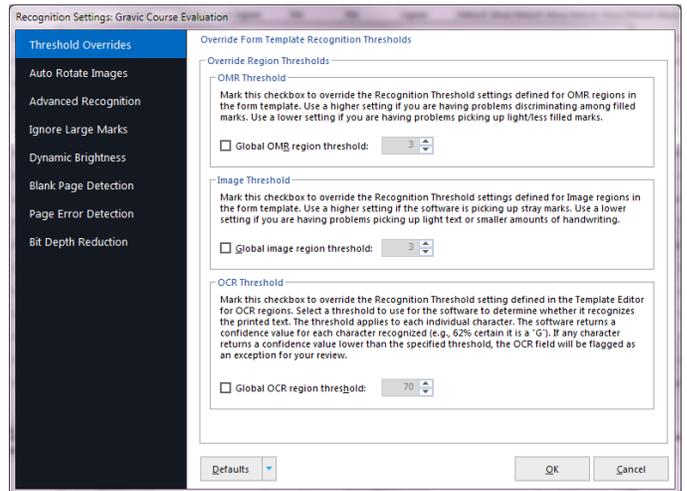
6. The first time you read forms you should click the **Next** button to configure how the related form images are stored. You can optionally skip this step on subsequent scans.

7. The next window allows you to customize the images that are stored for every form that you scan.

    -   The image archiving window allows you to specify options about the images that are automatically stored each time you scan forms. In the **Begin image names with** box, enter a file base name that the software can use to name the images stored for this form. The default base name is the form template name; however, you may use any name you like. We suggest using something that identifies to you that the images belong to a certain form. The images that are stored all begin with this base name and then have the page number (if scanning a multi-page form), date and time appended to them to keep track of the various images. You may optionally choose a region from the form template to use as the base name. The value that is collected from the form for the specified region is used as the base name for the corresponding stored image. For example, if scanning student
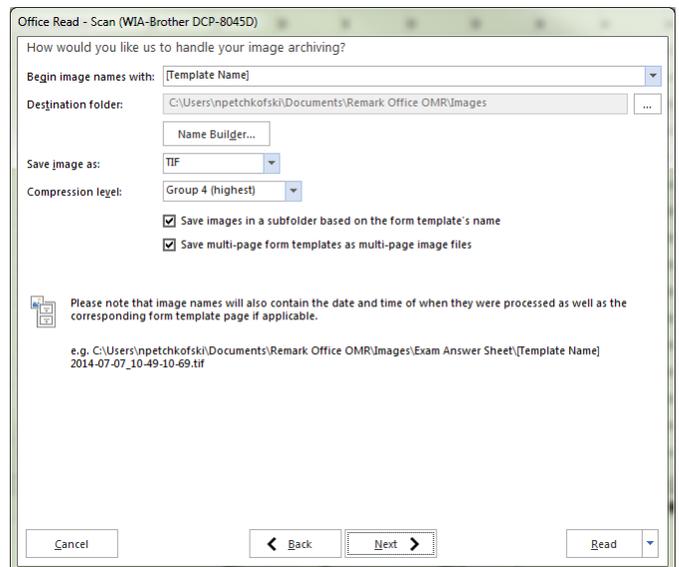
tests you could use a Student ID region with option to name the resulting image files by student. If you leave the Begin image names with blank, your images only have the page number (if applicable), date and time as the name of each image.

- In the **Destination folder** box, click the ellipsis (**...**) button to select a location in which to store the images for this form.

  - **Note:** Choose the image location carefully. The images should remain in this location once the data is saved using the RMX/RMK formats if you want to retain the link between the processed data and each image file. This link allows you to view the forms on screen as you click through the data grid, making it easy to correct exceptions in your data. Therefore, you should plan ahead on how you will store these images when the forms are processed.

  - **Tip:** If you are sharing files with other Remark Office OMR users, you may wish to save the image files on a shared network drive that all users have access to in the same manner (e.g. through a mapped network drive).

8. [OPTIONAL] If desired, click the **Name Builder** button to further customize the stored image names and locations.

- In the **Image base name** area, you may choose to add a region from the processed data to the image base name. Choose the region from the drop-down list and then click the **Insert Data Into Base Name** button. If you already added a region in Step 7, the Name Builder allows you to add additional regions. For example, if processing tests, you could add a Student ID that is being collected from the form so that your processed images all have the Student ID number in them.

- In the **Destination folder** area, you may choose to add a region from the processed data to the folder structure that holds the processed images. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. For example, if processing tests, you could add a Test ID that is being collected from the form so that each student's form images are stored in a folder containing the Test ID.
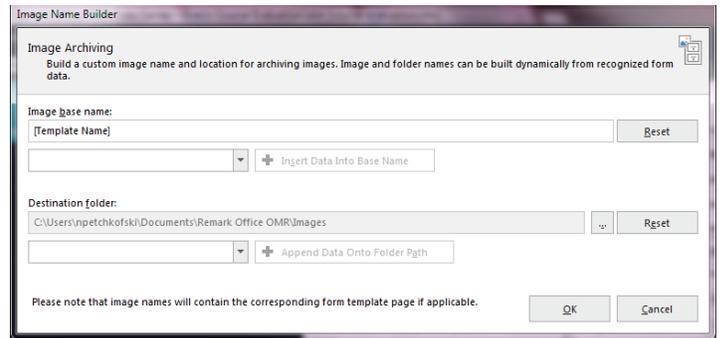
9. Click the **OK** button to return to the **Read** window.
10. In the **Save image as** box, select an image type to use for storing images. The choices are: PCX/DCX, PDF, TIF, PNG or JPG.

11. When saving to the PDF or TIF formats, you can choose the compression level under **Compression level**: Uncompressed, Group 3, Group 3 2d, Group 4 and LZW. Group 4 creates the most compressed image (smallest file size that take up less space on your computer).

12. Mark the checkbox for **Save images in a subfolder based on the form template's name** to have the Data Center automatically create a folder in which to store these images based on the template name. This is a handy way to store all images related to a specific form in one place.

- **Tip:** We recommend using the **Save images in a subfolder based on the form template's name** feature for easier organization of image files. Use of this feature keeps all images associated with each form template in one folder for easy access. The unique date and time portion of the image names prevents images from being overwritten.

13. Mark the checkbox for **Save multi-page form templates as multi-page image files** if you are scanning a multi-page form and would like all of the images for one complete form to be saved as one image file. Using this option creates fewer image files and is recommended.

- **Special Note if you do not have a duplex scanner:** If you are reading double sided forms without a duplex scanner (uncommon), use the Collate Mode options in this window.

14. If you would like to configure **Review Exceptions** options (whether to stop scanning when exceptions are found), click the **Next** button to continue. Otherwise click the **Read** button to begin scanning pages, ensuring the pages are in the scanner.

- **Note:** If desired you can click the drop-down arrow on the Read button and choose **Save** to have your Read settings saved as an Automation file (.rez). The Automation Control Center is used to automate form processing.

15. [OPTIONAL] If you have an Image region on the form that is set to prompt for a fill value, when the read process begins, a window appears where you can type the desired value.

16. Remark Office OMR continues scanning pages until the scanner's sheetfeeder (ADF) is empty.

17. After processing all of the pages, you are prompted to continue scanning. Click **Yes** to scan more pages or **No** to end the scanning process.
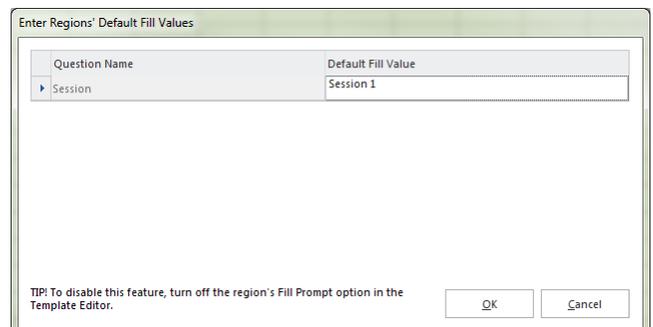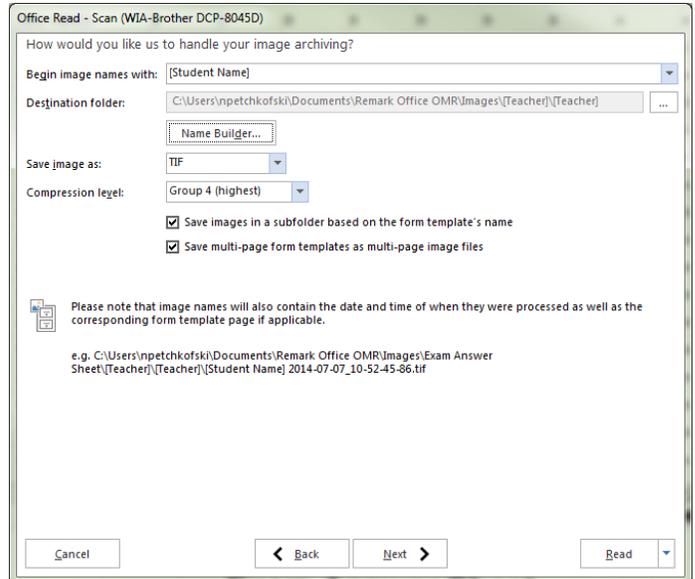
Once you have run through the Read window's configuration settings, you may optionally use the **Quick Scan** button on the toolbar for future scans with this template and all of your template's Read settings are utilized. We recommend returning to the Read window for any new templates you use to scan. If the

Quick Scan button is not enabled, you may not have a scanner set up in the software (Tools|Scanner Properties).

- **Tip:** You can overwrite specific grid rows of data by highlighting the row(s) first and then initiating the read process.

Importing Images into Remark Office OMR

Remark Office OMR can process image files that have already been scanned. For example, if you have a network multi-function printer (MFP) or a scanner that is not compatible with Remark Office OMR, you can scan your forms in another application and then save the resulting image files, which you then import into Remark Office OMR. The end result looks just as if you had scanned the forms directly in the Remark Office OMR Data Center.

Remark Office OMR can read the following image file formats:

- PCX (*.pcx)

- Multipage PCX (*.dcx)

- TIFF (*.tif, *.tiff)

- JPEG (*.jpg, *.jpeg)

- Portable Document Format (*.pdf)

- PNG (*.png)

- Windows Bitmap (*.bmp)

    - **Tip:** It is strongly recommended that you use the TIF/TIFF format for pre-scanned image files, particularly if you have a choice between TIFF and PDF (very common on multi-function printers). PDF files are not native image files and require more processing time, making the reading process slower. TIFF Group 4 compression gives you the most compressed file for fastest processing.

To import image files

1. In the **Remark Office OMR Data Center**, open the correct form template.

2. Select the **Tools** menu and then click **Read**. Alternatively, you may select the **Read** link from the task pane or **Read** button on the toolbar.

3. Select the **Read Images** button if it is not already selected.

4. [OPTIONAL] If desired, click the link for **Processing Attributes**. This link allows you to set the following options: Invert image, Auto deskew
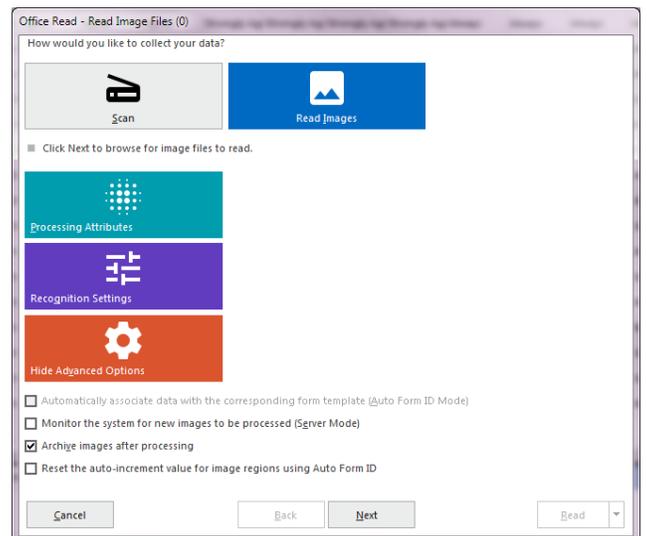
images during recognition, Auto despeckle images during recognition and flatten fillable form fields on PDF images. The last option should be turned on if you are reading electronically filled PDF files (ones that were not scanned).

- **Caution:** We do not suggest making changes to the **Image Processing Attributes** unless you encounter difficulties related to these settings.

5. [OPTIONAL] If desired, click the **Advanced Options** button and mark the appropriate checkboxes under **Advanced Data Collection Options**. Click a link below to understand more about each option.

Option	Description
Automatically associate data with the corresponding form template (Auto Form ID Mode)	Allows the software to automatically recognize form templates, form pages and respondents through identifiers you place on the forms.
Reset the auto-increment value for image regions using Auto Form ID	This feature is used in conjunction with auto incrementing image regions across templates. When you scan your forms, the auto incrementing will automatically take place among all open auto form ID templates within the same session. If for some reason you want to start over, in the same session, you can mark this checkbox. Regardless of this checkbox, when you close Remark, the next time you use the feature it will start all over again.
Monitor the system for new images to be processed (Server Mode)	Automates form processing by having Remark Office OMR run in the background using specific options.
Archive images after processing	Allows you to archive the images in a different format and/or location. (See below for more information.)

6. [OPTIONAL] If desired, modify the recognition settings being used by the software by clicking the **Recognition Settings** button. This link opens the recognition settings that apply to this form template. The link is provided in the Read window for your convenience. Note that you should not modify the recognition settings unless you experience recognition problems with your form. The default settings are optimized for general use of the software. If you do modify the recognition settings from the Read window, the settings are stored with the form template and therefore still remain in

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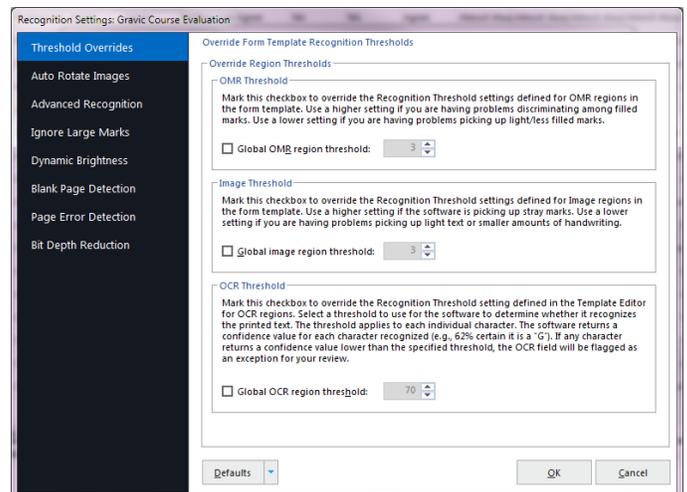
effect the next time you use the same form template. The settings do not apply to other templates.

- **Caution:** We do not suggest making changes to the **Recognition Settings** unless you encounter difficulties related to these settings.

7. Click the **Next** button to continue.

8. In the **Which images would you like to process** area, use the drop-down list to locate the folder on your computer or network that contains the images you wish to process.

9. Once you have located the correct folder, select the images you wish to process. You may make multiple selections by holding down the **Ctrl** key and clicking images or holding down the **Shift** key and selecting a range of images (click the first and last image and all images in between are selected).

10. Click the **Add Selected** button to move the images into the bottom window. Alternatively, you can select an entire folder's set of images by clicking the bottom **Add All** button. The images are moved to the **Image List (in Read Order)** box. The selected images are processed in the order in which they appear in this box.

11. If an image appears in the Images in **Image List** box and you wish to remove it, select the image and then click **Remove Selected**. You may make multiple selections by holding down the **Ctrl** key and clicking images or holding down the **Shift** key and selecting a range of images (click the first and last image and all images in between are selected). You can also remove all images by clicking the **Remove All** button.

12. Click the **Next** button to continue.

13. If you are using the **Archive images after processing** option from Step 1 of the Read window, proceed to step 14. If you are not using this feature, proceed to Step 15.
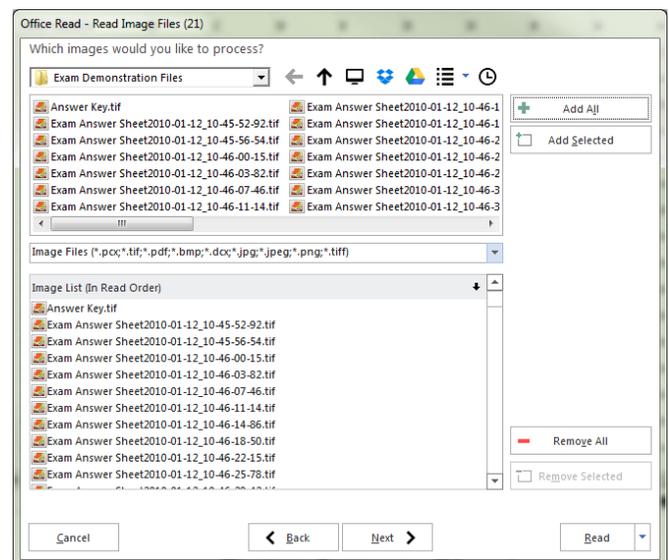
14. [OPTIONAL] If you chose the **Archive images after processing** option on the first step of the Read window, the image archiving window appears, allowing you to specify options for archiving the processed images.

- In the **Begin image names with** box, enter a file base name that the software can use to name the images of each form. The default base name is the form template name; however, you may use any name you like. We suggest using something that identifies to you that the images belong to a certain form. The images that are stored all begin with this base name and then have the page number (if processing a multi-page template), date and time appended to them to keep track of the various images. You may optionally choose a region from the form template to use as the base name. The value that is collected from the form for the specified region is used as the base name for the corresponding stored image. If you leave the **Begin image names with** option blank, your images only have the page number (if applicable), date and time as the name of each image.
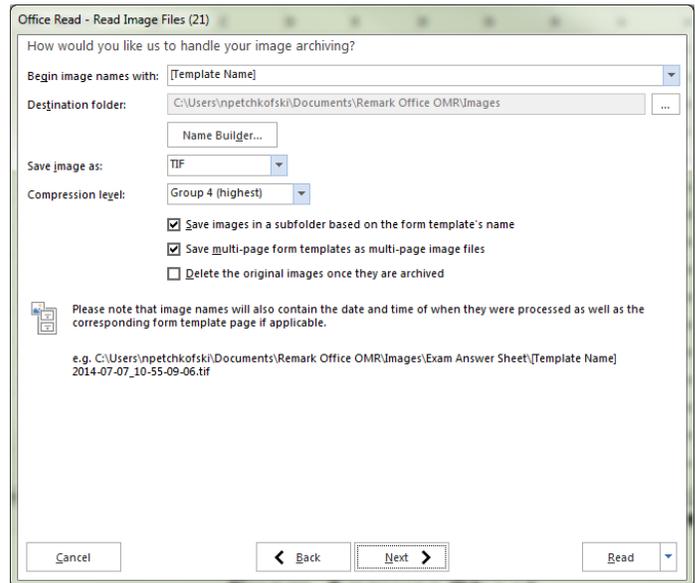
    - **Note:** If you are processing images for multiple form templates using the Auto Form ID feature, as long as all open form templates have a region name in common, you may use that region as your Begin image names with choice. Remark Office OMR names the images appropriately by pulling the data from the corresponding form template file.

- In the **Destination folder** box, click the ellipsis (...) button to select a location in which to store the archived images for this form.

    - **Note:** Choose the image location carefully. The images should remain in this location once the data is saved using the RMX/RMK formats if you want to retain the link between the processed data and each image file. This link allows you to view the forms on screen as you click through the data grid, making it easy to correct exceptions in your data. Therefore, you should plan ahead on how you will store these images when the forms are processed.

    - **Tip:** If you are sharing files with other Remark Office OMR users, you may wish to save the archived image files on a shared network drive that all users have access to in the same manner (e.g. through a mapped network drive).

- [Optional] If desired, click the **Name Builder** button to further customize the stored image names and locations.

    - In the **Image base name** area, you may choose to add a region from the processed data to the image base name. Choose the region from the drop-down list and then click the **Insert Data Into Base Name** button. If you already added

a region on the previous screen, the Name Builder allows you to add additional regions. For example, if processing tests, you could add a Student Name field that is being collected from the form so that your repackaged images all begin with the students' names.
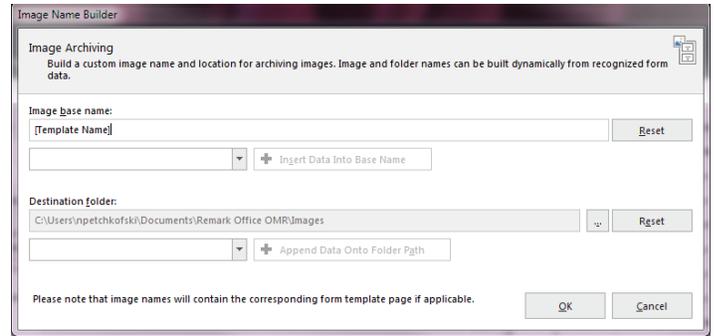
- In the **Destination folder** area, you may choose to add a region from the processed data to the folder structure that holds the archived images. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. For example, if processing tests, you could add teacher name and student ID fields that are being collected from the form so that each student's form images are stored in a folder containing the teacher's name and then a subfolder named by the student ID number.

- In the **Name Builder** box, click the **OK** button to return to the Read window.

- In the **Saved image as** box, select an image type to use for storing the repackaged images. The choices are: PCX/DCX, PDF, TIF or JPG. For example, you may be processing TIF images, but want to archive them as PDF files for others to view.

- When saving to the PDF or TIF formats, you can choose the compression level under **Compression level**: Uncompressed, Group 3, Group 3 2d, Group 4 and LZW. Group 4 creates the most compressed image (smallest file size that takes up less space on your computer).

- Mark the checkbox for **Save images in a subfolder based on the form template's name** to have the Data Center automatically create a folder in which to store these images. The folder name is the name of the form template and the folder is created in the directory you have selected in the Image target directory box.
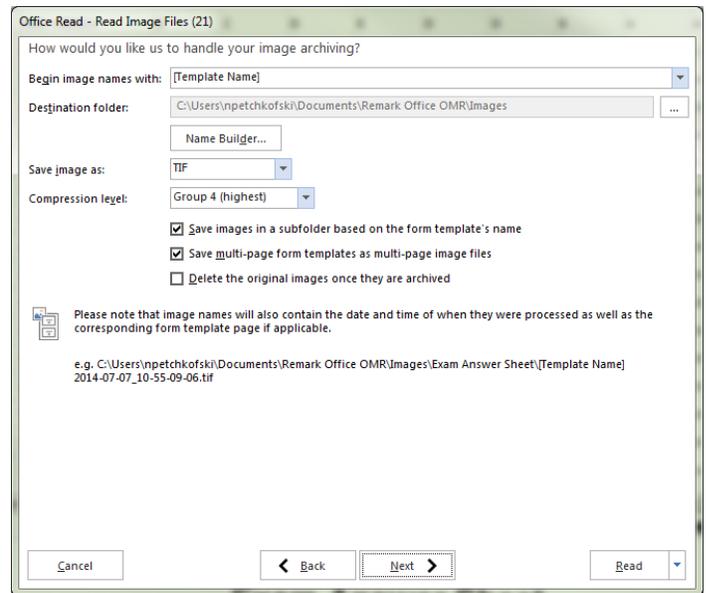
  - **Tip:** We recommend using the **Save images in a subfolder based on the form template's name** feature for easier organization of image files. Use of this feature keeps all images associated with each form template in one folder for easy access. The unique date and time portion of the image names prevents images from being overwritten.

- Mark the checkbox for **Save multi-page form templates as multi-page image files** if you are processing a multi-page form and would like all of the images for one complete form to be saved as one image file. Using this option creates fewer image files and is recommended.

- Mark the checkbox for **Delete the original images once they are archived** if you want to permanently delete the image files you processed, leaving you only with the archived images.

15. If you would like to configure **Review Exceptions** options, click the **Next** button to continue. Otherwise click the **Read** button to begin processing image files.

16. [OPTIONAL] If you have an Image region on the form that is set to prompt for a fill value, when the read process begins, a window appears where you can type the desired value.

- **Note:** If desired you can click the drop-down arrow on the **Read** button and choose **Save** to save your Read settings as an Automation file (.rez). The Automation Control Center is used to automate form processing.

The Data Center continues processing images until all of the specified images are read. You then see a spreadsheet of data. Each row represents one complete form and each column represents each question you defined in the form template.

Using Batch Headers

The Remark Office OMR Data Center includes a batch processing feature that allows you to process batch header forms along with your forms. Batch header forms provide further information about the group of forms being processed that make your data more meaningful. For example, if you are processing student tests or course evaluations, you can process a batch header form containing information such as instructor name, class name, class section, and so forth. The batch header form is processed once, at the beginning of each batch. Then the forms that correspond to that batch header form are processed subsequently. The data from the header form is pre-pended to (added to the beginning of) each data record. You can start processing a new batch and its corresponding forms at any time. The header data is also available when it comes time to report on the data in Remark Quick Stats.

To create a batch, you create form templates for the batch header form(s) and the form you wish to process with that batch header form (called a primary form template). You can use multiple batch header forms but only a single primary form template. You then combine these form templates into a batch file. Both forms must have unique Page IDs on them. Remark Office OMR uses the page IDs to understand when a batch header form is being read versus a regular form. Therefore page IDs are required, even for single page forms.

To use batch headers

1. Create a form template for the form you wish to process as a batch header form. Ensure the form has a Page ID.

2. Create a form template for the form you wish to process along with the batch header form. Ensure the form has a unique Page ID.

3. In the **Remark Office OMR Data Center**, select the **File** menu and then click **Batch Creator**.

4. In the **Batch Creator (Step 1)** window, select the form template that is being used as the primary form template (not the header form). This is the form template that corresponds to the form you wish to process after each batch header form. Click the **Add File(s)** button to add the form template to the **Primary Form Template** box.

5. Click the **Next** button to continue.

6. In the **Batch Creator (Step 2)** window, select the form template corresponding to your batch header form. Click the **Add File(s)** button to add it to the **Batch Header Form Templates** box. You may select multiple batch header form templates if desired.

7. Click the **Next** button to continue.

8. In the **Batch Creator (Step 3)** window, enter a file name for the new combined batch file. The Data Center combines the form template and batch header form template(s) into one batch file. The new combined file has a .obf file extension.

9. Click the **Create Batch** button to combine the templates and exit the Batch Creator. When the batch file opens in the data grid, a dark line defines the end of the batch header form template regions from the beginning of the primary form regions.

10. Process the first batch header form (or forms) by starting the Read process and either scanning forms or reading image files. If you need information about how to use the Read window, click here if reading from a scanner or click here if importing image files.

11. Follow the batch header form with the forms that correspond with the group identified on the batch header form.
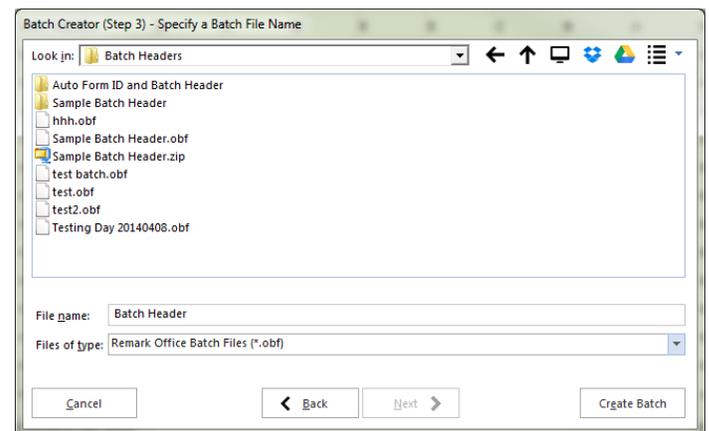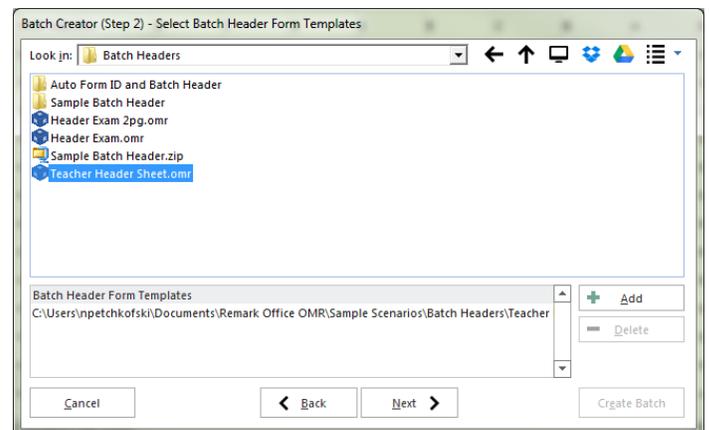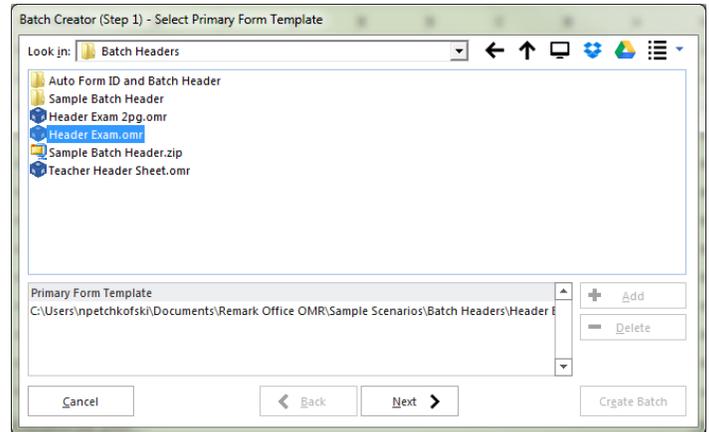
12. When the first group of forms has been processed, insert a new batch header form and follow it with the corresponding forms. Continue processing forms in this fashion until you have processed all of your batches. In the end, you see an entire data set with all of the batch header information pre-pended to the records.

- **Tip:** If you have already created a batch file and want to open it without using the Batch Creator, select the **File** menu and then select **Open Form Template**. Change the Files of type drop-down list to **Remark Office Batch Files** to view available batch files. Recently used batch header files are also included in the Recent list in the task pane.
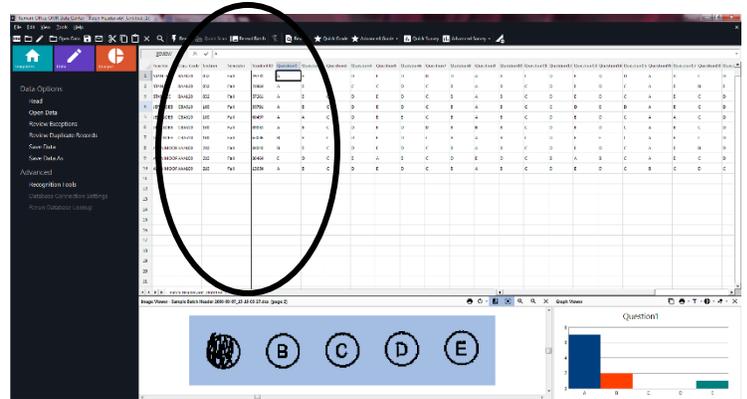
Collating Forms

The Remark Office OMR Data Center provides Collate Mode to read duplex (double-sided) forms when you have a simplex (single side only) scanner. Therefore, if you do not have a duplex scanner (one that reads both sides of a form in a single pass) you can still process double-sided forms in the software. Collating forms only applies when you are reading forms with a scanner that is directly connected to the computer running Remark (not when importing image files from another scanner/MFP). Please note that most scanners have duplex capabilities and using Collate Mode is an uncommon situation. Use the Scanner Properties link to turn on and off duplex mode if your scanner has this capability.

If you do not have a duplex scanner, to use Collate Mode you perform two basic steps: place a stack of forms in the scanner's automatic document feeder and scan the odd numbered pages, flip the stack over and then scan the even pages. The forms are placed in the scanner in regular page order. The Data Center reads all odd numbered pages first, regardless of how many sets of forms you place in the scanner. The software then reads the even numbered pages in reverse order so that the data are written to the correct position. For example, suppose you have a six page, double-sided form. You would first scan pages one, three and five, then flip the stack over and scan pages six, four and two. When scanning in Collate Mode, make sure the forms are in regular page order, with all pages belonging to one complete form together.

- **Note:** If your form does not have an even number of pages (e.g. the last page has a blank backside), Remark Office OMR automatically compensates for the blank backside. You do not need to create a blank form template page.

To process pages using Collate Mode

1. Open the correct form template.

2. Select the **Tools** menu and then click **Read**. Alternatively, you may select the **Read** link from the task pane or **Read** toolbar button.

3. Select the button for **Scan**. If the Scan button is not enabled, you do not have a scanner set up. Click **Scanner Properties** to configure your scanner.

4. Click the **Next** button to continue. If you need assistance with general **Read** properties, please click here and then return to Step 5.

5. In the image archive window, mark the checkbox for **Automatically organize pages while processing (Collate Mode)**. Note that there is an option here to resume a the last collate session should you need it (e.g. you do two scanning sessions in a row or your scanning session is interrupted).

    - **Note:** Collate Mode is only enabled if you open a multi-page template and you do not have the **Scan Duplex** option marked in the **Scanner Properties** window.
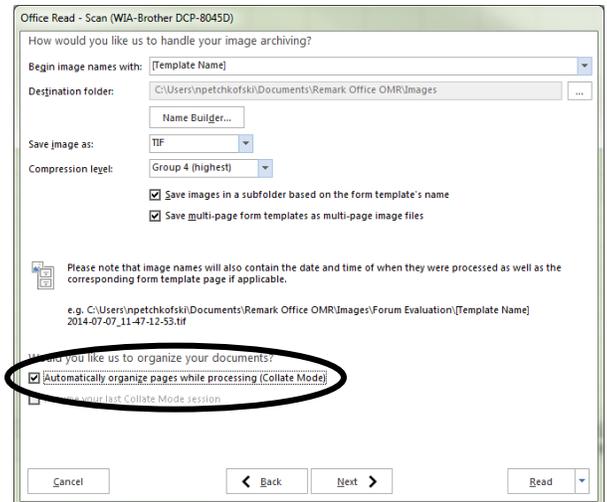
6. Place all double-sided forms you want to read in the automatic document feeder of your scanner in normal page order and then click the **Read** button. The Data Center begins reading the odd numbered pages (the front sides of the forms). When finished processing the odd numbered pages, you are prompted to read in the other direction.

7. When prompted, turn the stack of forms over and place it back in the automatic document feeder of the scanner. Do not rearrange the forms. The Data Center collates the forms properly.

8. Click the checkbox for **Begin Scanning in the Other Direction**.

9. Click the **Continue** button.

10. When finished reading the even pages (the backsides), you are prompted to start a new batch or finish processing. Continue reading forms in this manner until all forms have been processed.
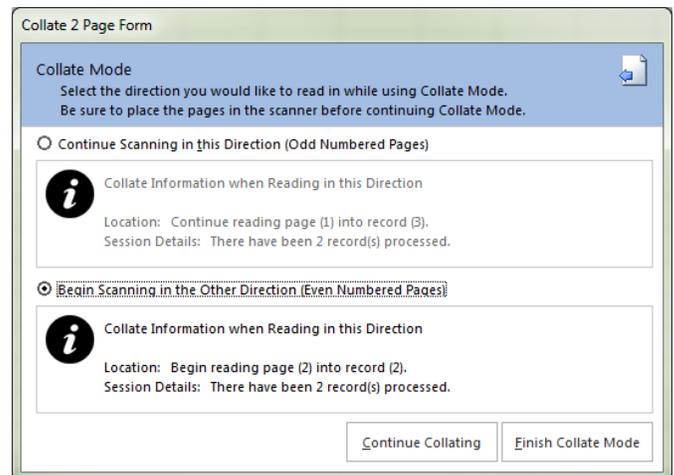
    - **Caution:** When using Collate Mode, scan complete form sets in batches. Complete an entire set of odd and even pages before scanning more forms in a single direction. This way if the scanning process is interrupted unexpectedly, you are less likely to lose any data and it is easier to recover.

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Respondent Detection

Remark Office OMR includes the ability to determine which respondents' forms have been processed, as well as locating duplicate respondents. This feature, called Respondent Detection, is used in conjunction with [Database Lookup](). If a region is linked to an external database using Database Lookup, the software provides a report of which respondents listed in the external database have been processed, not been processed or have been processed more than one time. For example, suppose you have a region on your form where the respondent fills in an ID number. You can link this ID number region to an external database that has all of the ID numbers of your expected group of respondents. You can then use Respondent Detection to compare IDs collected in the data set to IDs in the external database. Any time you use the Respondent Detection feature, you also have the option to return additional data from the external database if desired (this is not required to use Respondent Detection). When you process your forms, Remark Office OMR confirms which ID numbers from the external database exist in the processed data. The software then provides a report showing found ID numbers, missing ID numbers and duplicate ID numbers. If you are returning additional fields, this information is also available in the report. You can save this report as a text file to use outside of Remark Office OMR.

To use Respondent Detection

1. Setup a form template that uses the [Database Lookup]() feature.

2. Process forms using the scanner or by reading from image file using the **Read** window. If you need information about how to use the Read window, click [here]() if reading from a scanner or click [here]() if importing image files.

3. Once the forms have been processed and the data cleaned, select the **Tools** menu and then click **Respondent Detection**.

   - **Note:** You can run Respondent Detection with multiple data sets open. The **Data Sets** window opens, allowing you to choose the open files you wish to include in the save operation. Mark the checkboxes of all data sets you wish to include in the operation. You may use **Select All** to select all data sets in the list. Please note that the data set must correspond to the active form template in order for it to be included.

4. Choose the template region identifying respondents from the **Respondent region** drop-down list.

5. If the region is linked to a database containing additional fields, you may optionally select those fields from the **Database Field List**. Use the arrow to move the desired fields into the **Additional Fields** box. Any fields moved to the **Additional**

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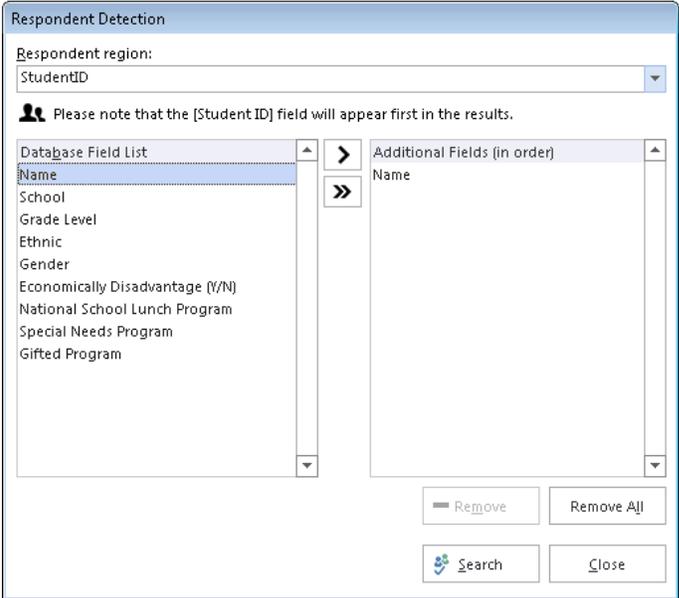
Fields box are also used for detecting respondents.

6. Click the **Search** button to continue. The **Detection Results** window appears.

7. Use the **Detection Results** window to view your results. The main region on which you are basing the detection is listed first. You then see a **Detected** column that marks the values that were detected. The **Duplicates** column is next, which marks any duplicate values that are found. After the **Duplicates** column, you see any additional return fields from the external database that you selected in Step 5 (if you selected any).

8. If desired, use the **Export** button to save the results to an external file. You may click the **Export** button to export the entire set of results, or use the arrow on the **Export** button to select which portions of the results to export. The export options are as follows:
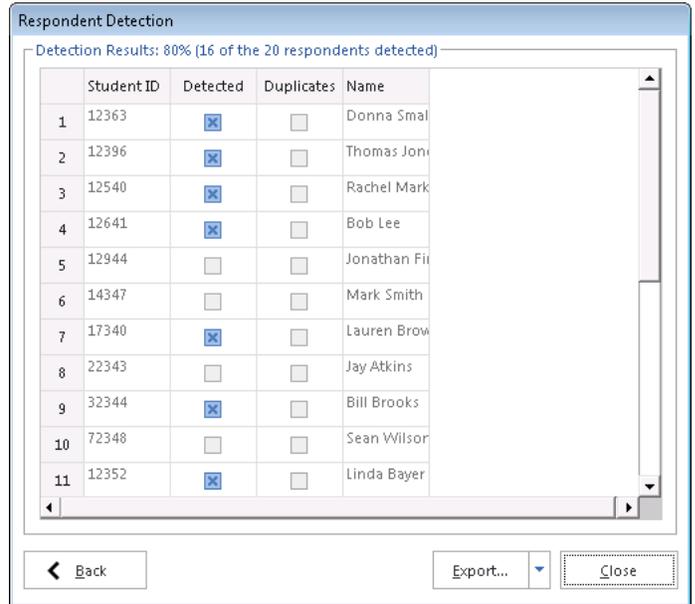
Option	Function
Export	Exports all results (region, detected, missing, duplicates and additional fields).
Export Missing	Exports only the missing respondents, those that exist in the external database but were not processed as part of the data file.
Export Detected	Exports only the detected respondents, those that both exist in the external database and were processed as part of the data file.
Export Duplicates	Exports only the duplicate respondents, those that appear more than once in the data file. The software only detects duplicate entries that have also been verified as existing in the linked database.
Print Results	Prints all results to the default printer on your computer.

9. Click the **Close** button to return to the Remark Office OMR Data Center.

Server Mode

Server Mode is a mode of operation in which Remark Office OMR runs in the background, processing pages or image files according to your instructions. Server Mode allows you to simultaneously use your computer for other things while using Remark Office OMR to process forms. Server Mode can also be used to process completed forms that are received as image files over a network or by fax. You can use Server Mode in conjunction with [Auto Form ID](#) to process a variety of form types.

Server Mode works in two ways: continuously polling the scanner for pages and/or checking a folder on your computer or network for image files. The following table summarizes how each event works.

Reading from a scanner: If you have a scanner set up in Remark Office OMR, you may use this option. Your scanner must have an Automatic Document Feeder (ADF). The Data Center polls your scanner for pages at a user-specified interval. If pages are found, they are scanned automatically with the open template(s). The Data Center stores images of these scanned forms for later correction. Note that some computer performance degradation should be expected while a page is being scanned

Reading from image files: You may have the Data Center process image files from a folder that you specify on your computer or network. Supported image files are processed in the order of file creation date. This feature allows you to use scanning software that came with just about any input device to scan your pages. Then save these scanned images to a folder and the Data Center automatically processes them.

To use server mode:

1. Open a template and then open the **Read** window.

2. After choosing whether to **Scan** or **Read Images**, click the **Advanced Options** button.

3. Mark the option for **Monitor the system for new images to be processed (Server Mode)**.

4. Click the **Next** button.

5. If you are polling a folder for images:

   - In the next window, choose the folder that contains the images you wish to read. Use the **Add Folder** and **Delete Folder** buttons to ensure you have the right folder(s) listed.

   - Choose the image types you want to read in the **Image Filters** box. For example, if your forms will all be TIF files (recommended), mark the checkbox for ***.tif**. If you are expecting a mix of image types you can select ***.*** for all supported types.
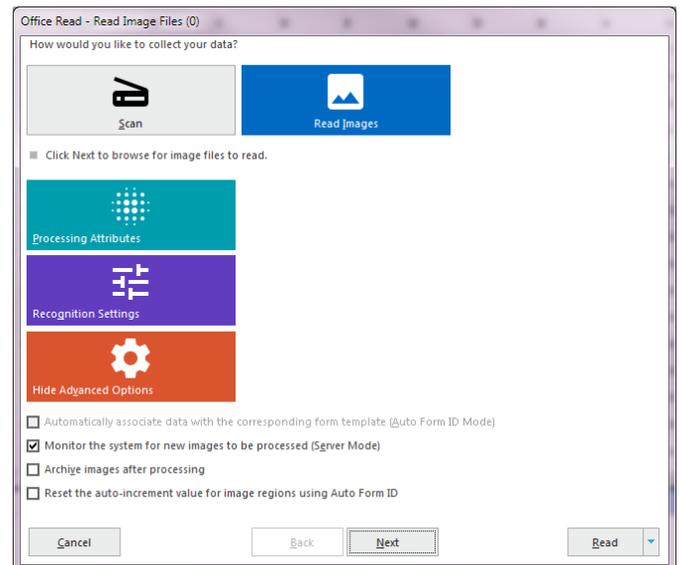
- [OPTIONAL] You may use a custom image filter to further define your image reading list. You can set up specific cases here by using wildcards. For example, if you wanted to process all images that start with "English 101" you could enter "English 101*.*" as a custom filter. Only images that start with this text are processed. Type the custom filter into the **Custom Filters** box and then click the **Add Filter** button. The filter is added to the **Image Filters** list and automatically selected. Unused custom filters are removed from the list automatically the next time you run the Read operation. Note that when specifying image types, an asterisk (*) can be used to indicate any number of characters (e.g. .jp* would allow any number of characters after the "jp" such as .jpg and .jpeg), and the question mark (?) can be used to indicate any single character in addition to the specified file extension (e.g. .jp? would only allow three character extensions such as .jpg). When using a custom filter, it is executed separately from any other filters you may have applied, so make sure you include the extension type if needed. For example, do not turn on the generic PDF filter and add a wildcard such as "English101" or else you will get all PDFs *and* all files beginning with "English101. Instead, if you want English101 PDF files, specify "English101.pdf".

- If you want the original images deleted once they have been processed, mark the **Clean them up; delete the images from my system** checkbox. Note that if you use this option you cannot get the images back. You may want to consider combining Server Mode with the Archive Images option on the first step of the Read window so that once the images are processed, you have a copy of them. If you do nothing with the images, Remark Office OMR continues to re-read the same images over and over again.

6. If you are scanning forms:

   - Simply follow the normal steps in the Read window; you do not have to do anything special to accommodate server mode.

7. Complete the remaining steps in the Read window. These steps are not outlined here; if you need assistance with the general Read window settings, click here if reading from a scanner or click here if importing image files.

8. Click the **Read** button to start Server Mode. Remark Office OMR searches for images or checks the scanner for pages, per your instructions.

9. When you are reading to end Server Mode, select the **End Server Mode** button on the toolbar or select the **Tools** menu and click **End Server Mode**.

   - **Important Note About Using Server Mode and Page IDs:** If you are using Page IDs with Server Mode, form processing stops if a Page ID cannot be recognized. You need to sort your

forms/images so that each respondent's form is scanned in its entirety before another form is processed.

Reviewing Duplicate Responses

Remark Office OMR includes a feature to detect duplicate responses even when not using the Database Lookup feature with Respondent Detection. The Review Duplicates feature allows you to choose any region in the data grid in which to search for duplicates. When a duplicate entry is found, you are prompted to take one of four possible actions: review the duplicates, keep only the first duplicate record, keep only the last duplicate record or delete all duplicate records. During the review process, the data grid is automatically sorted on your duplicate identifier region so that you can easily review the data. This feature is useful if you accidentally process a form multiple times, or someone fills out a form multiple times when this is not permitted.

To use Review Duplicates

1. Open a form template and process forms by either scanning or importing images with the Read option. If you need information about how to use the Read feature, click here if reading from a scanner or click here if importing image files.

2. Once the data is collected and cleaned, select the **Tools** menu and then click **Review Duplicates,** or select the **Review Duplicates** link in the task pane.

3. In the **Review Duplicates** task pane on the left side of the window, use the **Which column contains the respondent ID** drop-down list to choose a region or image files from your data that

    you want to check for duplicate entries. Using the **Image Names** option is useful if an entire set of forms was accidentally processed twice. If the same set of images exists more than one time (based on the image file names), the images are flagged as duplicates.

4. Click the **SEARCH** button to begin the search for duplicate entries. Remark Office OMR tells you how many duplicate records are found.

5. Determine the action you wish to take:

    - **Review:** If you want to review the duplicates before taking action, choose **Review Duplicate Records** and then click the **REVIEW** button. Remark Office OMR highlights any sets of duplicate records it finds. The **NEXT** button takes you to the next duplicate record within the same group. The **Go To Next Group** drop-down arrow on the **NEXT** button takes you to the next group of duplicates (you may have more than one set of duplicates within the same region). Similarly, the **PREVIOUS** button takes you back to the previous duplicate record within the same group, and the **Go To Previous Group** drop-down arrow on the **PREVIOUS** button takes you back to the previous group of duplicate

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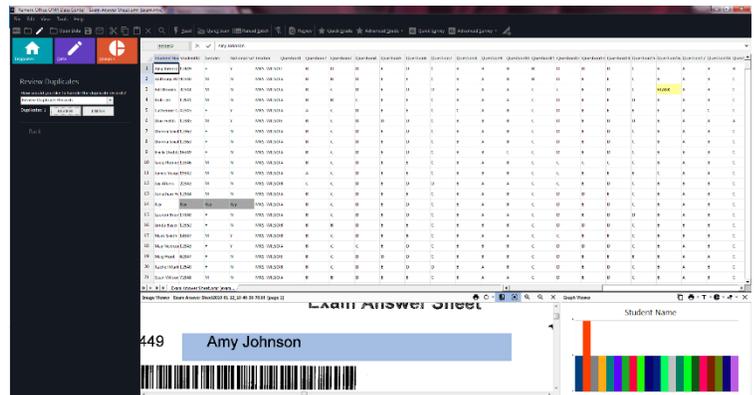
records. During the review, you can click the **DELETE RECORD** button to delete the highlighted record.

- **Keep First Duplicate Record Only:** If you select this option, the first record in every set of duplicate records found is kept and any duplicates are deleted. Click the **PURGE** button to take this action.

- **Keep Last Duplicate Record Only:** If you select this option, the last record in every set of duplicate records found is kept and any duplicates are deleted. Click the **PURGE** button to take this action.

- **Delete All Duplicate Records**. If you select this option, all duplicate records are deleted. Click the **DELETE** button to take this action.

6. If you choose any action that causes records to be deleted, you receive a warning message to ensure that you want to delete the records. Note that once the records are deleted, they cannot be recovered (unless you process the forms again). If you are sure you want to proceed, click the **Yes** button. The requested action is taken.

7. If you wish to search for more duplicates in other regions, repeat step 5.

8. When you are finished reviewing duplicates, click the **FINISH** button.

9. Click the **Back** arrow underneath **Review Duplicates** to return to the full task pane.

Recognition Tools

When form recognition errors occur, Remark Office OMR offers tools to help you diagnose and troubleshoot why the errors are occurring. The Recognition Tools feature allows you to view form template region offset, giving you an opportunity to reset your form template to the processed image on the fly and re-recognize the form. You can also save revised form templates as new form template files. This feature is useful, for example, if you receive forms from various sources and they are all offset from the original used to create the form template. Instead of resetting the form template for every batch, you can reset it to the batch in the Data Center. Another example where this feature is useful is if you photocopy forms. Suppose you run out of forms and photocopy more forms from a photocopy. It is very likely that the new batch will be offset compared to the old batch. Using the Recognition Tools, you can reset the form template to the new batch on the fly.

The Image Viewer is required to use the Recognition Tools feature. If the Image Viewer is not visible, click View|Image Viewer to turn it on. You may also find it helpful to close the Graph Viewer when using the Recognition Tools so that you have more room for the Image Viewer.

The Recognition Tools feature can only be used on data where the links to the images are intact. You can use the feature with data you just scanned or read from image files as well as with data saved to the RMK, RMX, ROA or ROX formats. If the data is saved to a different format, where the link to the processed images is no longer present, the Recognition Tools feature has no effect on the data.

The Recognition Tools draw feature allows for three basic activities, all of which are visible in the Image Viewer:

- *Highlight Recognized Question:* Highlights the recognized (active) question so that you can see where Remark is attempting to find data on the image. Recognized questions display in a blue color.

- *Highlight and Adjust Recognized Regions:* Highlights all regions on the image so that you can see where Remark is attempting to find data on the image. These regions display in a dark gray color with a solid border.

- *Highlight Template Regions:* Highlights all of the form template regions as they were defined when you created the form template. By viewing the defined form template regions and the current form template regions on the selected image, you can easily see any offset. Form template regions display in a light gray color with a dashed border.
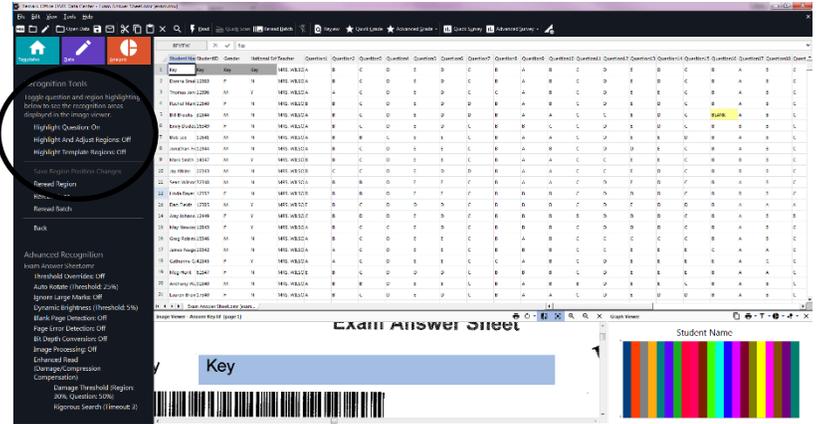
When viewing regions, if you notice that the image is significantly offset compared to the form template image, you can move regions, optionally save your changes and then re-recognize the data. Original form template regions cannot be moved, but you can move the gray regions that display when you select

Highlight and Adjust Recognized Regions. Once you have the regions moved to the correct place on the specific image, you have three options for rereading forms:

- *Reread Region:* The Reread Region option reads only the active region for the selected image. This option is best when you are having problems with only a specific region on a specific image.

- *Reread Page:* The Reread Page option reads all of the regions on the active page. The entire page is reread regardless of the Highlight options chosen. This option is best when an entire image within a batch is shifted.

- *Reread Batch:* The Reread Batch option reads all of the images corresponding to the data in the data grid. The entire batch is reread regardless of the Highlight options chosen. If you would only like to select a portion of the records to reread, choose the grid rows and then select the Reread Batch option. This option is best when you know an entire batch of forms is offset in the same way (e.g. all from the same photocopied form that is shifted to the left/right/top/bottom).
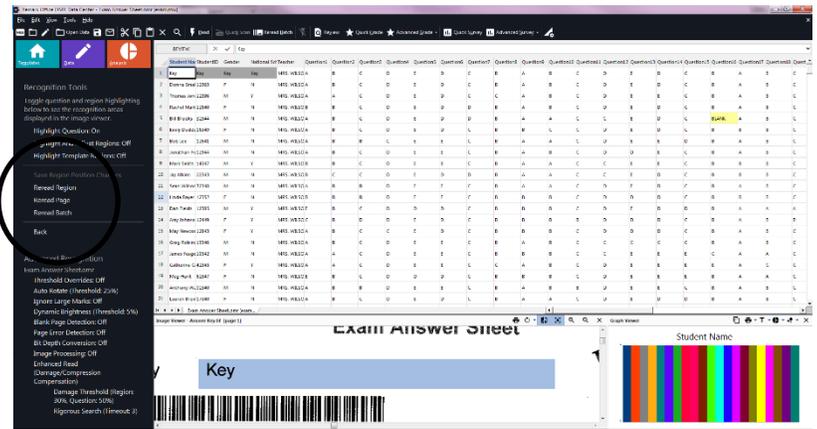
When you make changes to the positioning of the regions, you may optionally save the form template (overwrite existing or as a new form template) by clicking **Save Region Position Changes**. This feature is helpful if you want to reread an entire batch of forms using the adjusted positions. Suppose you discover that the new batch of forms was created off of a different printer or photocopied from a new photocopier. You may wish to save the adjusted form template so that you can continue using it with the newly offset forms or to reread the current batch with the modified form template. If you attempt to reread a batch without saving your modifications, the changes are lost and not applied while reading.

- **Note:** The newly saved templates have the new region locations saved with the original form template images. Therefore, if the newly modified template is opened in the template editor, the regions may or may not line up correctly. Ideally, you should replace the image with a more appropriate one if you want to edit the template in the template editor.

To use Recognition Tools

1. After processing data or opening an RMK/RMX/ROA/ROX data file, click the **DATA** tab in the task pane (if it is not already active).

2. Select the link called **Recognition Tools**. The task pane changes to reflect the available options. If the Image Viewer is not showing, click **View|Image Viewer**.

3. Determine what you want to view, based on the descriptions above: Highlight Recognized Region, Highlight and Adjust Recognized Regions and/or Highlight Template Regions.

4. Once you have viewed the desired regions, make adjustments to the regions by clicking them with the mouse and dragging them to the desired place on the image. Remember that only the **Highlight and Adjust Recognized Regions** option allows you to move regions in order to re-recognize them.

5. If you wish to save the changes to a new form template, click the **Save Region Position Changes** link in the task pane. Select a template name and location for the new file. We do not recommend overwriting the original template file. If you do not save the form template, all changes are lost.

   - **Tip:** If you are working from a saved data file and save the new form template, when you open the new form template with the old data file together, you receive an error stating that the files do not match. As long as you did not change the structure of the form template file (in the Template Editor), you should be able to click OK to attempt to open the data file anyway. Remark Office OMR is only displaying an error because the data was not originally saved with the new form template.

6. If you want to reread the images, choose one of the available options based on the previous descriptions: **Reread Region**, **Reread Page** or **Reread batch**.

7. You receive a warning message allowing you to choose whether to continue and overwrite the existing data in the grid. Click **Yes** to continue or **No** to stop the rereading process.

   - **Note:** If you choose to reread the batch, a preliminary warning asks if you want to save the changes to a new form template file. Click **Yes** to save a new form template and then reread the batch, click **No** to revert to the original form template settings (thus canceling any changes you made) and click **Cancel** to stop the rereading process (the changes you made using Recognition Settings are still intact). Then you can click **Yes** or **No** to the data overwrite warning if you choose to continue with the rereading process.

8. Once the rereading process completes, a message appears telling you if it was successful.

9. You may continue to make adjustments as needed.

10. To return to the regular task pane, click the **Back** link within the task pane or the **DATA** tab at the top of the task pane.

Database Connection Settings

If you set up a database connection in the form template, you can adjust the settings from the Data Center by using the Database Connection Settings link in the task pane. This feature allows you to change the database connection, the lookup criteria and save the settings to the existing or a new form template. This feature is useful if the database filename or file location changes. It also is useful if you want to save a connection for different users; you can set up the connection once, and then modify it for each user.

To use Database Connection Settings

1. Open the desired form template.
2. In the task pane, click **Database Connection Settings**. The **Database Connection Tool** window appears.
3. This window is the same as the window for setting up the database connection in the template editor. You can change the **Type**, **Lookup & Return Fields** and **Additional Return Fields**. Make the desired adjustments.
4. Choose whether to save the changes to the form template by clicking the **Save changes to the form template file** checkbox.
5. If you would like to rerun the lookup with an open data set, click the **Rerun lookup** checkbox. When you close this window, Remark Office OMR will cycle through your data and apply the new database connection to the open data set.
6. [Optional] If you want to save the changes to a new form template (e.g. for a different user) click the **Save As...** button. Enter a **file name** and choose a **location** for the form template file, and then click the **Save** button. You are automatically returned to the Data Center.
7. If you did not use the Save As option, click the **OK** button to return to the Data Center and process your forms.
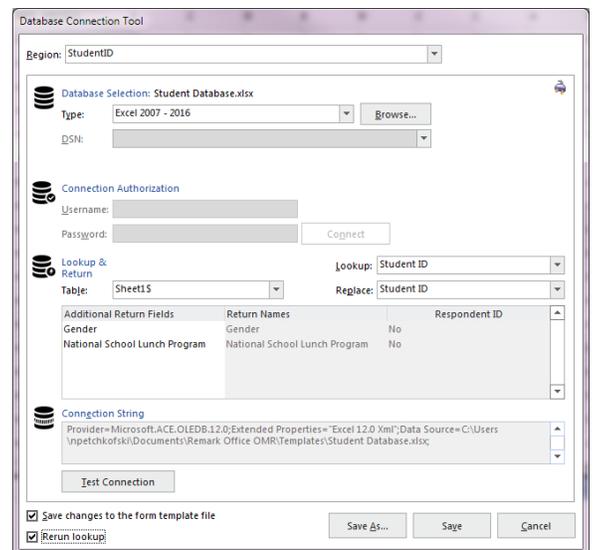
Automatic Form Processing Overview

Remark Office OMR allows for three types of automatic tracking and detection to assist with form processing: Auto Form ID, Auto Page ID and Respondent Tracker. With Auto Form ID, Remark Office OMR can automatically recognize a form and match it to its form template, allowing you to process various form types at once without pre-sorting the forms. With Auto Page ID, Remark Office OMR takes it a step further and identifies specific page order within a form template if the pages are scanned out of order. With Respondent Tracker, Remark Office OMR recognizes a specific respondent's page and places it in the correct data grid row with the rest of that respondent's data if the pages are processed out of order. Form, Page or Respondent IDs can be OMR, OCR or Barcode regions.

- **Tip:** You can use delimited barcodes as identifiers. Delimited barcodes contain multiple items within a single barcode. When set up in the Template Editor, you can tell the software which part of the barcode to use as the Form, Page or Respondent Identifier.

Using automatic identification is a two part process. You must first set up the template to include the identifier of your choice (form, page or respondent). If using form IDs, when you process forms you turn on the Auto Form ID feature. For page and respondent tracking, you simply process forms as usual.

Using automatic form identification is an advanced feature. Make sure you understand how to create templates and how to read forms before attempting to use this feature.

Automatic Form Identification

Remark Office OMR provides an Auto Form ID option for automatically matching a form with its corresponding form template. This type of form recognition allows you to process many different form types without pre-sorting the forms.

- **Note:** You cannot use the Collate Mode option with Auto Form ID. If you wish to process double-sided forms using Auto Form ID, you need to use a duplex scanner.

Each form type you want to use with Auto Form ID must contain an ID region on every form template page. The ID region can be an OMR, OCR or Barcode region.

- **Note:** For backwards compatibility, forms with an ID region on the first page only still work in Auto Form ID mode, when using Auto Form ID by itself. If you wish to use Auto Page ID or Respondent Tracker in conjunction with Auto Form ID, you must have identifying regions on every page of the form.

To use Auto Form ID

1. Outside of Remark Office OMR, create a form that contains a unique identifier on each page that can be captured as an OMR, OCR or Barcode region in the Remark Office OMR form template.

    - **Tip:** The Auto Form ID region could be a series of bubbles that represent form numbers, such as 1-4. Or it could be a barcode or OCR area that identifies a specific form, such as "Form A"."

2. Create a form template in the Remark Office OMR Template Editor for each form you wish to process in Auto Form ID mode. When creating the form template, set the region to be used as the Form ID region in the **Tracking** section of the region's properties. Mark the checkbox for **Use Region as a Unique Identifier**. Then select the radio button marked **Form ID**. Click here for further details on setting up the form ID in the template.

3. When you are ready to start processing forms, open the form templates you wish to use in Auto Form ID mode in the Data Center. Only open form templates that contain Auto Form ID regions.
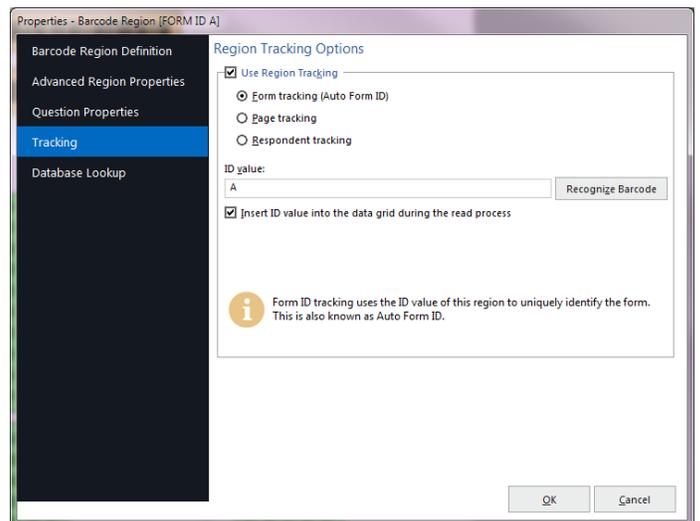
4. Read forms from either scanner or image file by selecting the **Tools** menu and then clicking **Read**. If you need information about how to use the Read window, click here if reading from a scanner or click here if importing image files.

5. In the **Read** window, go to the section titled **Advanced Data Collection Options**, click the **Advanced Options** button and then mark the checkbox for **Automatically associate data with the corresponding form template (Auto Form ID Mode)**.

6. Click the **Next** button to configure remaining Read window options.

7. On the final step, you can determine whether to stop the process if a form is not recognized by marking the **Review unrecognized images during the read process**. If this checkbox is not marked, any unrecognized images are stored in the **Unrecognized Image Queue** for later review (see below).

8. Make your selections and then click the **Read** button.

   - **Caution:** When using Auto Form ID alone, the Data Center processes multiple page forms sequentially. After recognizing the first page of a multiple page form, Remark Office OMR assumes the following pages belong to the same form template. You may optionally use the Auto Page ID and/or Respondent Tracking features to process pages out of sequential order.
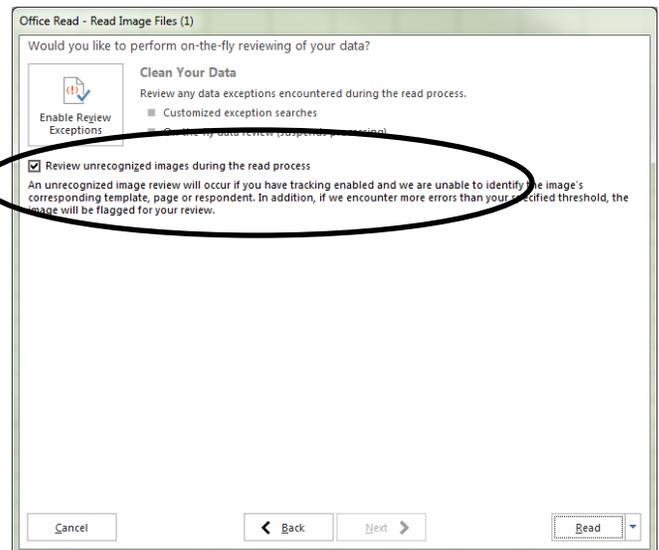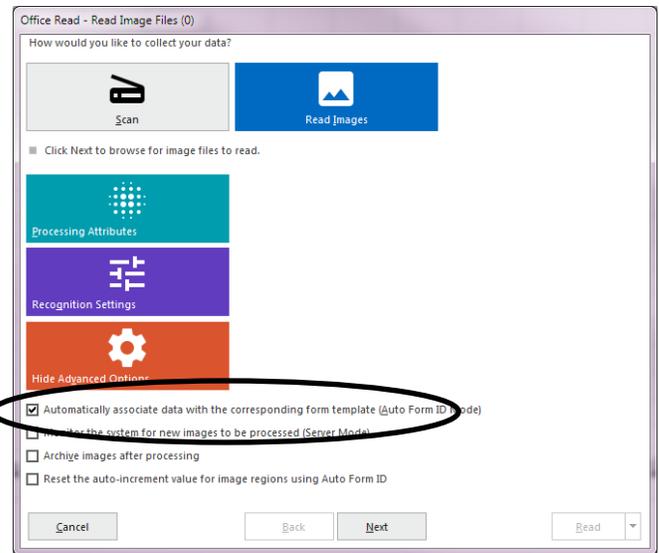
After recognizing the form type, the Data Center places the data into the appropriate data grid window. Any images that the Data Center cannot recognize enter a queue of unrecognized images. You can review these images during or after form processing.

Unrecognized Form Images

If a form is not recognized, you use the Unrecognized Images window to rectify the problem. You may be able to match the form (in the case of the ID region just not being recognizable) or you can discard the image if it truly doesn't match any open form templates. You can use the Unrecognized Images window during form processing or wait to review all unrecognized forms after the Read operation finishes, as mentioned in Step 7 above. Regardless of how you display the unrecognized images, using the window is the same process.

1. When the **Unrecognized Image** window appears for an unrecognized image, the **Form Templates** list is empty. Use the image viewer in the right portion of the screen to assist with understanding which form has been processed. Then decide whether the form matches an open template or if you want to discard it all together.

   - To keep the form image, click the drop-down list to choose the correct form template for this image.

   - To remove the form image, click the **Discard** button, which removes it from the queue. This might be appropriate if the wrong form was scanned (or the wrong image was processed). Note that if you do this during processing the image is completely deleted. If you are using the queue after processing, the image no longer appears in the queue but is not deleted.
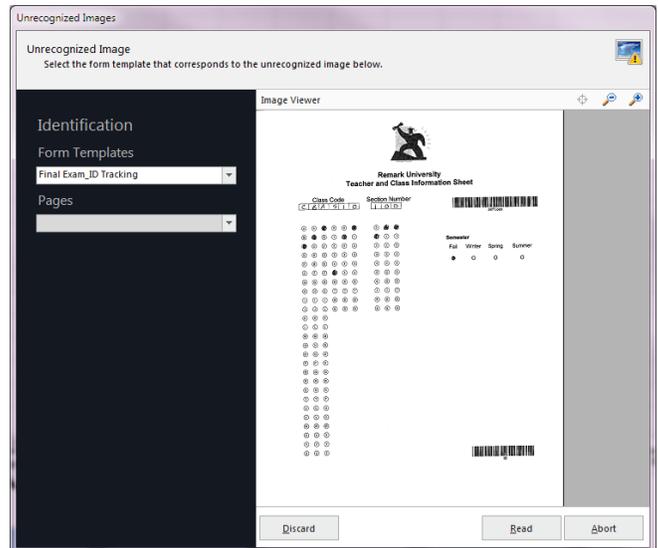
   - **Note:** You also have a **Skip** button to move to the next unrecognized image (if reviewing post-processing) and an **Abort** (stops the *read* process if reviewing during form processing) or **Cancel** (stops the *image review* process if reviewing post-processing) button to end the process.

2. Once you have matched a form to its form template or discarded it, click the **Read** button to continue processing.

3. If using the Unrecognized Image Utility during form processing, forms continue to be read until you end the read process. If reviewing unrecognized images after form processing, once all forms have been identified, the **Unrecognized Image Utility** closes automatically.

Automatic Page Identification

The Auto Page ID feature allows you to process form pages out of normal page order. The Data Center searches for the page identifier region on each page first, and places the data in the proper order. Auto Page ID can be used alone or in conjunction with Auto Form ID and/or Respondent Tracker. When used alone, you must process only those forms associated with one specific form template and be certain that all pages belonging to each respondent are grouped together for processing. Without the use of Respondent Tracker, if pages from differing respondents are mixed together, you are prompted and form processing stops. You need to re-sort your forms so that each respondent's pages are processed together; an individual respondent's pages can be out of order within the same form, but a single respondent's pages cannot be interspersed with another respondent's pages. Auto Page ID regions can be OMR, OCR or Barcode regions.

To use Auto Page ID

1. Outside of Remark Office OMR, create a form that contains a unique identifier on each page that can be captured as an OMR, OCR or Barcode region in the Remark Office OMR template.

Remember that if you are also using Auto Form ID, you need a second unique identifier to be used as the Page ID. Each Page ID must be unique from page to page.

- **Tip:** The Page ID region could be a series of bubbles that represent page numbers, such as 1-4. Or it could be an OCR area or barcode that identifies a specific page.

2. In the Remark Office OMR Template Editor, create a form template for each form you wish to process using automatic page detection. When creating the form template, set the region to be used as the **Page ID** region in the **Tracking** section of the region's properties. Mark the checkbox for **Use Region Tracking**. Then select the radio button marked **Page tracking**. Click here for further details on setting up the page ID in the template.
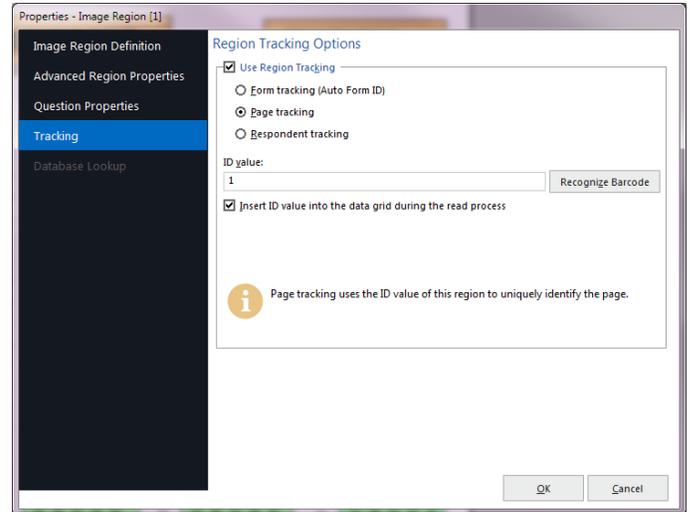
3. When you are ready to start processing forms, open the form template(s) you wish to use with Auto Page ID in the Data Center.

4. Read forms from either scanner or image file by selecting the **Tools** menu and then clicking **Read**. If you need information about how to use the Read window, click here if reading from a scanner or click here if importing image files.

5. [OPTIONAL] If you are using the Auto Form ID feature, remember to go to **Advanced Data Collection Options**, click the **Advanced Options** button and then mark the checkbox for **Automatically associate data with the corresponding form template (Auto Form ID Mode)**.
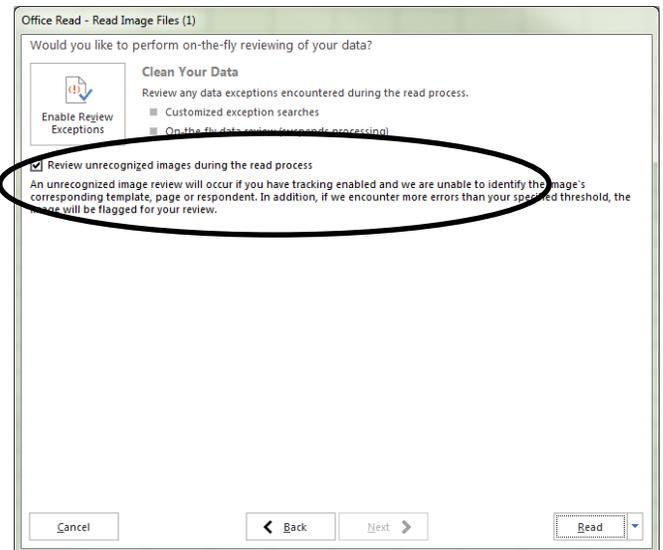
6. On the final step, you can determine whether to stop the process if a form is not recognized by marking the **Review unrecognized images during the read process**. If this checkbox is not marked, any unrecognized images are stored in the **Unrecognized Image Queue** for later review (see below).

7. Make your selections and then click the **Read** button.

8. After recognizing the page, the Data Center places the data into the appropriate template grid section. Any images that the Data Center cannot recognize enter a queue of unrecognized images. You can review these images during or after form processing.

After recognizing the form type, the Data Center places the data into the appropriate data grid window. Any images that the Data Center cannot recognize enter a queue of unrecognized images. You can review these images during or after form processing.

Unrecognized Page Images

If a page is not recognized, you use the Unrecognized Images window to rectify the problem. You may be able to match the form (in the case of the ID region just not being recognizable) or you can discard the image if it truly doesn't match any open form templates. You can use the Unrecognized Images utility during form processing or wait to review all unrecognized images after the reading process finishes, as mentioned in Step 5 above. Regardless of how you display the utility, using it is the same process.

1. [Optional] If you are using the Auto Form ID feature, when the **Unrecognized Image Utility** appears, the **Form Templates** list may be empty if the form was not recognized. If necessary, click the drop-down list to choose the correct form template for this image. Use the Image Viewer in the right portion of the screen to assist with understanding which form has been processed.

2. Once the correct form is identified (or if you are not using Auto Form ID), you may select the page being processed.

   - Click the **Pages** drop-down list and then select the correct page for the form being processed. Use the Image Viewer in the right portion of the screen to assist with understanding which form page has been processed.

   - To remove the form image, click the **Discard** button, which removes it from the queue. This might be appropriate if the wrong form was scanned (or the wrong image was processed). Note that if you do this during processing the image is completely deleted. If you are using the queue after processing, the image no longer appears in the queue but is not deleted.
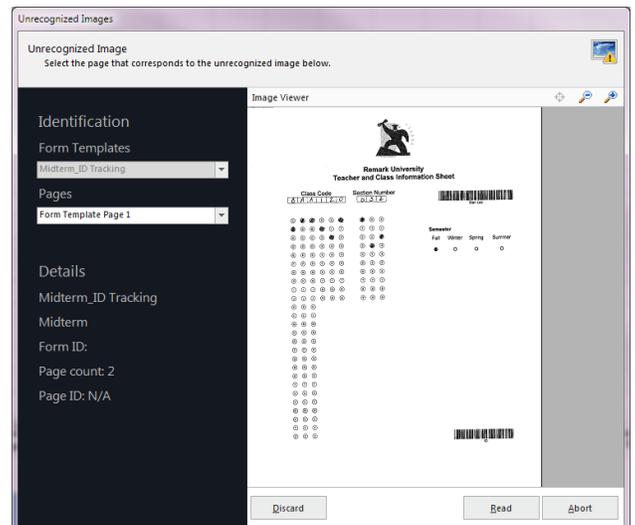
- **Note:** You also have a **Skip** button to move to the next unrecognized image (if reviewing post-processing) and an **Abort** (stops the *read* process if reviewing during form processing) or **Cancel** (stops the *image review* process if reviewing post-processing) button to end the process.

3. Once you have matched a page to its form template page, click the **Read** button to continue.

4. If using the Unrecognized Image Utility during form processing, forms continue reading until you end the read process. If reviewing unrecognized images after form processing, once all images have been identified, the **Unrecognized Image Utility** closes automatically.

Automatic Respondent Tracking

The Respondent Tracker feature allows you to scan respondents' form pages in any order. Remark Office OMR uses the respondent identifier region of the form template to determine the appropriate record for each respondent. This feature is only useful for multi-page forms. Therefore, you need to also use the Auto Page ID feature along with Respondent Tracker. Remark Office OMR first identifies the page being processed, and then the respondent. Optionally, you may use Auto Form ID as well. Using all three features allows you to process various forms, form pages and individual respondent pages in any order and still have Remark Office OMR record the data properly. Respondent Tracker ID regions can be OMR, OCR or Barcode regions.

- **Note:** If you are only processing one multi-page form, use of Auto Form ID is not necessary. If you would like to process more than one form type at once and use the Respondent Tracker feature, you need to also use Auto Form ID.

To use Respondent Tracker

1. Outside of Remark Office OMR, create a form that contains a unique identifier on each page that can be captured as an OMR, OCR or Barcode region in the Remark Office OMR form template. Remember that if you are using Auto Form ID and Auto Page ID, you need a third unique identifier to be used as the Respondent Tracker.

   - **Tip:** The Respondent Tracker region can be a bubble region where the respondent marks identifying information, such as name, ID number, etc. It can also be a Barcode or OCR region that contains similar information and is pre-printed. The information must appear on every page of the form.

2. Create a form template in the Remark Office OMR Template Editor for each form you wish to process using the Respondent Tracker feature. When creating the form template, set the region to be used as the Respondent Tracker region in the **Tracking** section of the region's properties. Mark the checkbox for **Use Region Tracking**. Then select the radio button marked **Respondent tracking**. Click here for further details on setting up the Respondent Tracker in the template.
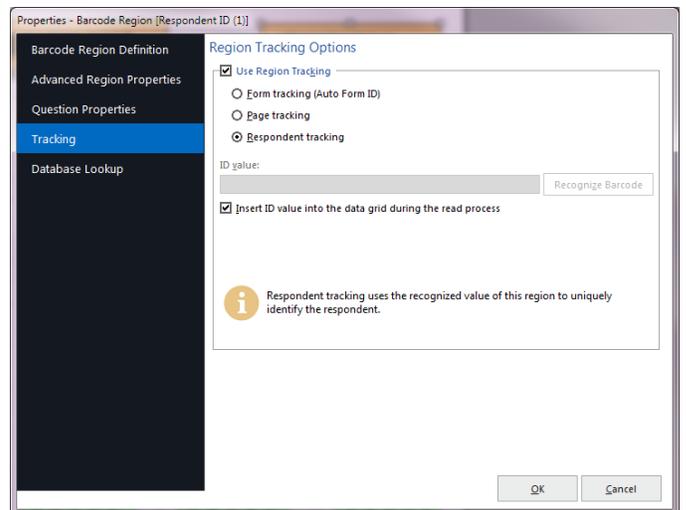
3. When you are ready to start processing forms, open the form template(s) you wish to use with Respondent Tracker mode in the Data Center.

4. Read forms from either scanner or image file by selecting the **Tools** menu and then clicking **Read**. If you need information about how to use the Read window, click here if reading from a scanner or click here if importing image files. Make your selections and then click the **Read** button.

5. On the final step, you can determine whether to stop the process if an image is not recognized by marking the **Review unrecognized images during the read process**. If this checkbox is not marked, any unrecognized images are stored in the **Unrecognized Image Queue** for later review (see below).

6. Make your selections and then click the **Read** button.
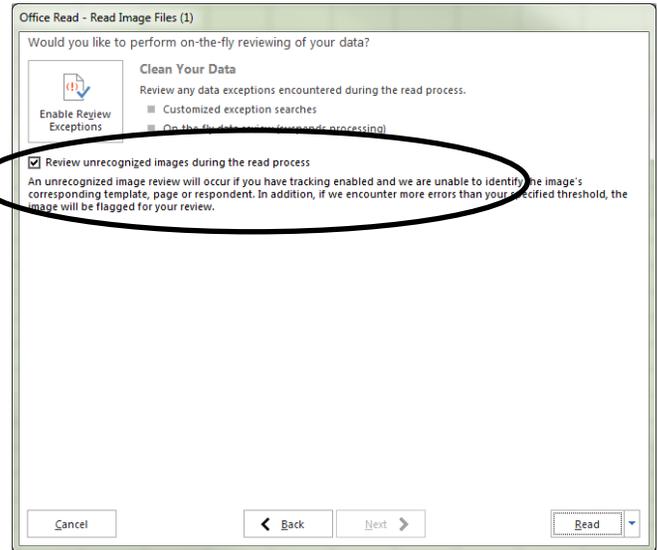
After recognizing the page and respondent, Remark Office OMR places the data into the appropriate data grid section. Each unique respondent tracker produces a new row of data in the data grid. There may be times when you are presented with overwrite options if a respondent tracker data value is already present in the data grid. The message tells you that the region's value has already been read. You may Overwrite what has been read, Ignore it (skip the page) or choose End Read to stop the read process (e.g. in the case where you think incorrect forms might be being processed).

Unrecognized Respondent Tracker Images

If the Data Center cannot automatically read a Respondent Tracker region the image is added to the Unrecognized Images queue. If you have chosen to review unrecognized images during form processing, the Unrecognized Image window appears for each unrecognized Respondent Tracker region. If you have chosen not to review unrecognized images during form processing, the images are stored in a queue so that you can review them all at once.

- **Note:** If you are using the Review Exceptions feature to correct exception cases (either during form processing or before reviewing unrecognized images), it is possible to provide a valid respondent tracker value before the image is added to the Unrecognized Images queue. Depending on the types of exceptions you are reviewing, Review Exceptions may show you exceptions in your Respondent Tracker regions (e.g. BLANK, MULT, etc.). Once corrected, the software matches data records based on the Respondent Tracker region. Exceptions that have not been corrected in Review Exceptions cause the image to be added to the Unrecognized Images queue.

1. [OPTIONAL] If you are using the Auto Form ID feature, when the **Unrecognized Image Utility** appears, the **Form Templates** list may be empty if the form was not recognized. If necessary, click the drop-down list to choose the correct form template for this image. Use the image viewer in the right portion of the screen to assist with understanding which form has been processed.

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2. [OPTIONAL] Once the correct form is identified (or if you are not using Auto Form ID), you may select the page being processed, if it is not recognized. Click the **Pages** drop-down list and then select the correct page for the form being processed. Use the image viewer in the right portion of the screen to assist with understanding which page has been processed.

- **Note:** If the page is automatically recognized, you do not see this step.

3. Once the correct page is identified, you may determine what to do with the unrecognized respondent. The **Respondent Tracker** box shows an exception color indicating why the software could not recognize the region (e.g. BLANK, MULT, etc.). Use the image viewer in the right portion of the screen to assist with understanding which form has been processed. Then decide whether the form matches an open template or if you want to discard it all together.

- To keep the page image, enter the correct response for this image in the **Respondent Tracker** box. Once the response is entered, the software either matches the record to an existing data record or begins a new record if the Respondent Tracker is unique to the existing data.

- To remove the page image, click the **Discard** button, which removes it from the queue. This might be appropriate if the wrong form was scanned (or the wrong image was processed). Note that if you do this during processing the image is completely deleted. If you are using the queue after processing, the image no longer appears in the queue but is not deleted.

- **Note:** You also have a **Skip** button to move to the next unrecognized image (if reviewing post-processing) and an **Abort** (stops the *read* process if reviewing during form processing) or **Cancel** (stops the *image review* process if reviewing post-processing) button to end the process.

4. Once you have entered the correct respondent identifier or discarded it, click the **Read** button to continue processing.

5. If using the Unrecognized Image Utility during form processing, forms continue to be read until you end the read process. If reviewing unrecognized images after form processing, once all forms and pages have been identified, the **Unrecognized Image Utility** closes automatically.
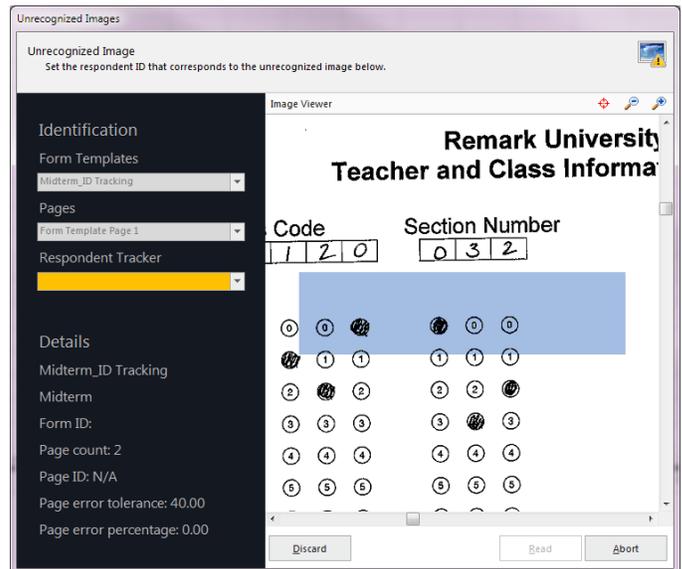
Reviewing Exceptions Overview

As forms are processed, exception cases can occur. You should edit cells containing exception cases to validate your data before performing any analysis operations or exporting the data to another application. Each exception case is assigned a specific color so that you can easily distinguish different types of exceptions. The following table summarizes the types of exception cases and their possible causes.

Error Type	Text	Color	Possible Causes
Multiple Responses (Too Many Responses)	All multiple responses or MULT (depending on your template settings)	Green	More than one answer selected when multiple responses are not permitted. Partially erased forms. Carelessly marked forms.
Blank Responses (No Response)	BLANK	Yellow	Unanswered questions. Response not completely filled.
Recognition Errors (Form Error	ERROR... (various code numbers may appear)	Red	Forms that have been enlarged, reduced, offset or skewed by more than 3/8 inch; could result from photocopying or reprinting. Improperly or carelessly placed forms in the automatic document feeder of the scanner, where they are pulled in crookedly and skewed images result. Could also be a result of a mechanical issue with the scanner, in which case you should have your scanner cleaned and serviced. Forms that have text or lines placed too close to markable areas, causing the text or lines to be interfere with the marks (bubbles, checkboxes). Images scanned with brightness setting too high or low. Carelessly marked forms. Forms processed with wrong form template file. Forms that do not follow the recommended design guidelines.
Image Regions	None	Light Blue	Signifies a data entry image region where handwriting was found. You need to type the information found in the region, or apply a code if using qualitative coding.

Error Type	Text	Color	Possible Causes
Database Lookup Errors	Selected Responses	Purple	Response not found within the selected database to which the region is linked.
Barcode Errors	???	Dark Orange	Used a barcode type that Remark Office OMR cannot recognize.
			Used the Code 3 of 9 barcode type without using beginning and ending asterisks (*).
			Barcode does not fit within region definition area.
			Barcode is printed too small on the form.
			Extraneous marks are located within the Barcode region.
			Scanning resolution is too low (300 DPI recommended).
OCR Region (Optical Character Recognition)	Miscellaneous characters	Dark Blue	The font used for the text does not create readable text (e.g. a handwriting style font).
			Text is too small to be read.
			Region border created in the form template does not properly encapsulate the text.
			OCR region threshold setting in the form template or program preferences is too high or too low.
			Printed text on form is in an unsupported language.
			Trying to recognize handwriting (ICR) instead of machine printed text.
			Scanning resolution is too low (300 DPI recommended).
Repeated Rank Responses	DUP	Pale Orange	A duplicate rank was given to a Ranking style question. For Ranking questions, each response can only have one rank assigned, and each rank can only be used once.

Error Type	Text	Color	Possible Causes
Required item	None	Exception Color	Signifies that a required region was not properly answered. Typically, this means that another exception occurred, such as a Blank, Mult or Error. The data grid cell takes on the color of this exception (e.g. yellow for a blank response), but there is no text, indicating that the question was required. Flagging required questions is particularly useful when you use the Review Exceptions function during form processing (meaning the processing stops so that you can review the problem). Note that you should use caution when making questions required and using the "Flag Blanks" setting. If Flag Blanks is set to Never, anything left blank does not display as a required item exception.
Multiple exceptions	None	Gray	Signifies that multiple exceptions were found in the region. For example, an OCR region that is also being used as a Database Lookup region might not be recognized properly. In this case, it is both an OCR recognition exception and a Database Lookup exception. The gray color lets you know that more than one issue was found.

Remark Office OMR offers image-assisted exception reviewing using the Image Viewer, which eliminates searching through paper forms to make corrections to the data. You can resolve exception cases in one of two ways: editing individual cells or using the Review Exceptions feature during or after form processing. Review Exceptions can be accessed on the last step of the Read window when processing forms or after forms are processed from the task pane, Tools menu, REVIEW button or toolbar.

- **Note:** The exception colors in the grid are only retained if you save data to the Remark or Remark Office Archive data formats. Once you export your data to another format, if you reopen that format, the grid colors are not present.

Using Review Exceptions

Remark Office OMR provides the Review Exceptions feature as a method to validate data. You may use the Review Exceptions feature to review the following exception cases: blank responses, multiple responses, form errors, barcode errors, database lookup errors, required items, OCR regions, repeated rank responses, multiple exceptions or data entry Image regions.

The Review Exceptions feature can be used in one of two ways:

After Form Processing: Review Exceptions can be used after the forms have been processed; therefore, you are not required to have the software stop processing forms when exceptions are encountered. When reviewing after processing, the software cycles through the data file to find exception cases and then allows you to make the appropriate changes. To use Review Exceptions after form processing, select the **REVIEW** button in the data header bar across the top of the data grid. You may also select **Review Exceptions** from the task pane, toolbar or **Tools** menu.

- **Tip:** When using Review Exceptions after form processing, you can review the entire data set or sections of the data set. To review sections of the data set, select the column or row header(s) of the area you wish to review, or highlight a group of cells. For example, if you only want to review a specific comment region (Image region) so that you can hand enter data, select the column header of the comment region so that the entire column is highlighted. Then click Review Exceptions; only the selected column is reviewed.

During Form Processing: If used during the reading process, whether scanning forms or processing saved image files, Review Exceptions provides an option to have the Data Center pause after encountering selected exception types. You can then select or enter the correct response. To use Review Exceptions during form processing, turn it on in the **Read** window and choose the exceptions you want to correct.

Regardless of how you use Review Exceptions, the software shows you the question/region containing the exception case in the Image Viewer at the bottom of your screen. You may use the image to guide you in making the appropriate updates in the data header bar. The following table details the available Review Exceptions options:

Review Option	Function
Blank Responses	Review when a respondent fails to answer a question.
Multiple Responses	Review when a respondent chooses more responses than were permitted.
Image Regions	Review when a flagged Image region is encountered. Allows the hand entry or speech recognition of information into the data grid, or the ability to choose a qualitative response code.
Region Errors	Review when a recognition error occurs and Remark Office OMR cannot properly recognize the region (e.g. image is skewed, form is poorly marked, spacing is too tight on the form).
Database Lookup Errors	Review when a database lookup error is encountered, meaning that the response is not located in the database that was specified during the form template creation process. Once you correct the Database Lookup exception, if you are returning other fields from the database, they are updated automatically.
Barcode Errors	Review when Remark Office OMR cannot read the barcode properly.
OCR Errors	Review when the text in an OCR region cannot be properly recognized.

Review Option	Function
Repeated Rank Responses	Review when a respondent chooses the same rank for different questions in the same region.
Required Items	Review when a required item has not been answered.
Multiple exceptions	Review when multiple exceptions occur. For example, an OCR region utilizing Database Lookup could be unrecognized, which would generate both an OCR exception and a Database Lookup exception.

To use Review Exceptions

1. Choose whether to review during or after processing, as outlined above.

2. Once you access Review Exceptions, use the task pane to select the exception cases you would like to review: Blank responses, Multiple Responses, Recognition Errors, Image Regions, Database Lookup Regions, Barcode Regions, OCR Regions, Repeated Rank Responses or Required Items. You can also choose whether to search by rows or columns in the data grid.

3. Click the **NEXT** button to start the review process.

   - **Note:** You can optionally use speech recognition to assist you with reviewing exceptions.

4. The Data Center searches the data for the specified exception cases. When a selected exception case is found, it appears in the data header bar at the top of the data grid. The bar is color coded to match the exception type (e.g. yellow for a BLANK response). Use this window to make changes. You can use the drop-down list if applicable, or type a response. Note if there is a list of answer choices defined, as you begin typing, Remark Office OMR will attempt to auto-fill your answer based on your possible answer choices.
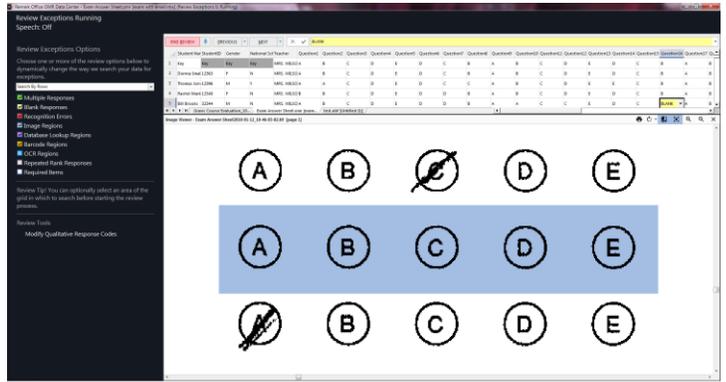
5. Once you have selected the appropriate response, press **Enter** on the keyboard or click the **NEXT** button. If you want to move to the next row of data instead, click the down arrow on the **NEXT** button and choose **Go To Next Record**. If you need to revisit the previous exception, click the **PREVIOUS** button. To go to the previous data record, click the down arrow on the **PREVIOUS** button and choose **Go To Previous Record**.

6. Continue reviewing exceptions in this manner.

7. Once you have finished reviewing, or if you click **END REVIEW**, if you made changes to the data, you are prompted to save the changes (note that if you did not make any changes, you are simply prompted to end the review process). Click the **Save Changes** button to save your changes. Click the **Discard Changes** button to undo all changes made during the Review Exceptions session. Click the **Cancel** button to return to Review Exceptions.

Additional Things to Know About Review Exceptions:

There may be times when you are reviewing exceptions and the exceptions are legitimate, e.g. a question is left blank. By default, if you leave the exception as is, it always retains the color coding and exception text. If you prefer to remove the color coding once an item has been reviewed, go to **Tools|Preferences** and mark the checkbox for **Clear exceptions after they have been reviewed** in the section called **Review Exceptions**. After a cell is reviewed using Review Exceptions, the color disappears even if you did not make a change to the cell. If Review Exceptions is run again, the cell is not flagged as an exception. Note that Review Detections will prompt you to skip review if it finds that all questions are blank after a certain point in your data set (e.g. you are using 25 questions on a 50 question test, and questions 26-50 are all blank).

If you review data and then either start a new read process or open a data file, when you run Review Exceptions again, the software prompts you to read all the exceptions or begin from the last review session. This feature can be a nice time saver if you have already reviewed the data, in which case you can choose **Yes** when the message appears to read from where you last read data.

In order to retain the link between the data and the corresponding image in the image viewer, you must save the data to the Remark (RMK/RMX) or Remark Office Archive (ROA/ROX) formats. If you plan on continuing your data review at a later point, save the data to one of these formats so that when you resume Review Exceptions, you'll still have the form images in the image viewer.

If you need to review Data Entry Image regions, you can use the speech recognition portion of Review Exceptions by clicking the microphone.

Speech Recognition

Remark Office OMR includes the ability to use speech recognition when running Review Exceptions. This feature is particularly helpful if you have Image regions on your form that have long comments. Instead of clipping or typing the comments, you can use the Image Viewer on-screen and read the comments into the data grid. You can also use speech recognition to review other data types during Review Exceptions (e.g. actual answer choices from an OMR region). Ensure that you understand how to use Review Exceptions before attempting speech recognition.

Speech recognition relies on the Microsoft Windows built-in speech technology. Gravic has no control over the effectiveness of speech recognition. We strongly suggest you train your computer to recognize your voice using the Microsoft speech training options in the Windows Control Panel. If you encounter difficulties with speech recognition, ensure you have a good quality microphone and that you have conducted the speech recognition training. For speech recognition troubleshooting, consult the Microsoft website.

You may use the following commands when using speech recognition in Review Exceptions:

Next: Moves to the next exception

Previous: Moves to the previous exception

Finish: Ends the review process

To use speech recognition

1. In the **Remark Office OMR Data Center**, [process forms](#) or [open](#) a data file.

2. To begin speech recognition, first ensure you have a microphone attached to the computer and configured in the Windows Control panel. Then click the **REVIEW** button in the data header bar.

3. Click the microphone next to the red **END REVIEW** button.

   - **Note:** If you want to enter comments into a specific Image region, highlight the column representing the Image region before starting speech.
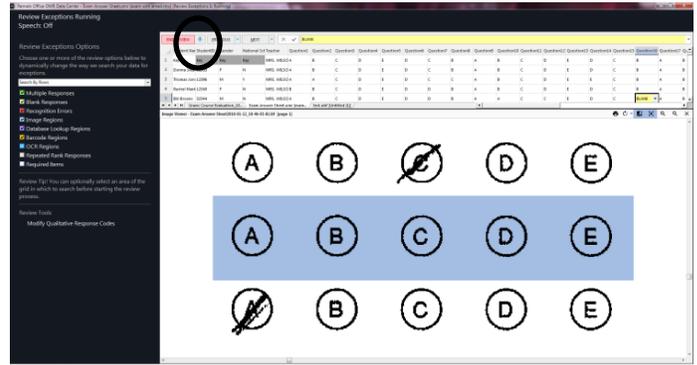
4. If necessary, choose the exception types to review in the left task pane.

5. When you are ready to start speech recognition click or say the word **NEXT.** Remark Office OMR locates the first exception based on the types of exceptions you are reviewing and any portions of the grid you have selected (if applicable).

   - If reviewing a multiple choice style question, speak the correct answer choice. You must say a valid answer choice for the question, as defined in the Labels in the template, for Remark Office OMR to record your response.

   - If reviewing an image region, use the Image Viewer to read what you see on the screen.

     - **Note:** If something is not interpreted correctly, you can place your cursor in the data header bar and re-read information.

6. Click or say **NEXT** to continue.

7. Continue in the same manner until you wish to end Review Exceptions. If you need to end reviewing early, click **END REVIEW** or say **Finish**.

8. If you made changes to the data, you are prompted to save the changes. Click the **Save Changes** button to save your changes. Click the **Discard Changes** button to undo all changes made during the Review Exceptions session. Click the **Cancel** button to return to Review Exceptions.

Saving Data

You can save the data in the data grid to dozens of different file formats. The Remark file format was specifically designed to optimize the data storage process in the Remark Office OMR software. Saving data is also sometimes referred to as exporting data.

- **Tip:** When working with data in Remark Office OMR, use the Remark file format (RMK or RMX). This is the only format that preserves the link between the data and the corresponding images, as well as exception colors. Export data to other formats after you have collected and cleaned all of your data.

When saving data, you have the option of using Save Data or Save Data As. The Save Data option can be used to save a data set for the first time or to overwrite the current data set. The Save Data As option allows you to save the current data set with new parameters (e.g. new file name, different directory, different file type, etc.).

- **Tip:** If you open a data set and add new records to it, make sure you overwrite the data file if using Save Data As (you are prompted to overwrite or append). Do not append in this case, or the old data will be repeated in the data file. Ideally once your new records are added to the old data, simply click File|Save or the Save toolbar button, which overwrites the data file with exactly what you see on the screen.

The following table lists the different save file formats, their extensions and a brief description:

File Format	Extension	Description
Remark Extended	RMX	Remark Office OMR extended format; saves grid exception colors and image links; includes information about changed responses for associated reports in Remark Quick Stats
Remark	RMK	Remark Office OMR format; saves grid exception colors and image links
Remark Extended Office Archive	ROX	Remark Office OMR Archive extended format; combines template, data and stored image files into one file; saves grid exception colors and image links; existing files may only be overwritten (there are no append options); optionally includes support information for troubleshooting; includes information about changed responses for associated reports in Remark Quick Stats
Remark Office Archive	ROA	Remark Office OMR Archive format; combines template, data and stored image files into one file; saves grid exception colors and image links; existing files may only be overwritten (there are no append options); optionally includes support information for troubleshooting
SQL Server	MDF	Microsoft SQL Server format
Oracle 7.4 and later	*.*	Oracle format
Access 2007-2016	ACCDB	Microsoft Access 2007 - 2013 format (only available if the 32-bit Access 2007, 2010 or 2013 database engine is installed)
Access 2000-2003	MDB	Microsoft Access 2000-2003 format
Access 95-97	MDB	Microsoft Access 95-97 format
Access 2.0	MDB	Microsoft Access 2.0 format

File Format	Extension	Description
Access 1.0	MDB	Microsoft Access 1.0 format
Excel 2007-2016	XLSX	Microsoft Excel 2007 through 2016 formats
Excel 97-2003	XLS	Microsoft Excel 97-2003 format
Opinionmeter	ASC	ASCII format for Opinionmeter application
Questionmark	QSF	Perception Questionmark format (save only)
SPSS	SAV	SPSS 16 format
SPSS Legacy	SAV	SPSS 6 format
Survey Pro	SRV	Survey Pro standard format (Apian Software)
Survey Pro STL	STL	Survey Pro STL format (Apian Software)
CSV	CSV	Comma separated values format
Text	TXT	Tab delimited text format
ExamSoft	CSV	Specialized CSV format for importing into ExamSoft testing software
StatPac	DAT	StatPac format for StatPac Survey Software
Survey System	DAT	The Survey System format (Creative Research Systems)
dBase V	DBF	dBase V format
dBase IV	DBF	dBase IV format
dBase III	DBF	dBase III format
Paradox 7-8	DB	Paradox 7-8 format; requires the Borland Database Engine (BDE) to be installed
Paradox 5.X	DB	Paradox 5.X format; existing files may only be overwritten (there are no append options)
Paradox 4.X	DB	Paradox 4.X format; existing files may only be overwritten (there are no append options)

File Format	Extension	Description
Paradox 3.X	DB	Paradox 3.X format; existing files may only be overwritten (there are no append options)
Lotus WK3	WK3	Lotus Works 3 format
Lotus WK1	WK1	Lotus Works 1 format
Lotus WJ3	WJ3	Lotus 1-2-3 version 3 format
Lotus WJ2	WJ2	Lotus 1-2-3 version 2 format
Lotus 1-2-3	WKS	Lotus 1-2-3 format
LXR Test	MRG	LXR Test format
Report	RPT	Fixed format ASCII, cell text padded or truncated to specified record length
Data Interchange Format	DIF	Standard format using file header and data section
CCI Assessment	DAT	CCI Assessment format; existing files may only be overwritten (there are no append options)
XML	XML	Extensible Markup Language format
HTML	HTM	Hypertext Markup Language
ODBC	*.*	Open Database Connectivity
Custom	ASC, TXT	Custom Text format
Database Update	XLS, XLSX, MDB, ACCDB	Updates an existing database with new data (e.g. adds missing information, overwrites existing information).
ODBC Database Update	*.*	Updates an existing ODBC database with new data (e.g. adds missing information, overwrites existing information).

To save data

Before saving data to another data format, we suggest saving a copy of the data to the Remark (RMK or RMX) format to preserve exception colors and links to stored images. Once your project is complete, you may delete or archive the Remark file, or save all of your files to the Remark Office Archive (ROA) format.

- **Note:** When exporting to a specific format (e.g. Access, Excel, etc.) make certain your data meets the format's specific requirements.

1. After processing forms, select the **File** menu and then click **Save Data** if saving the data set for the first time or to overwrite the data. Click **Save Data As** to save the data with new parameters.

   - **Note:** Clicking the toolbar button for **Save Data** overwrites the current data set.

2. If saving for the first time or using Save Data As, the **Save Data** window opens, allowing you to choose a file name, a file type, the folder in which you would like the file saved and **Advanced** saving options.

3. Select the desired folder location using the **Look in** drop down box.

4. Enter a name in the box titled **File name**.

5. Select the desired output format in the box titled **Save as type**.

6. If saving to a database type that supports internal table names, enter a table name in the box titled **Table name**.

   - **Note:** Each database format has different table name limitations. Refer to your database documentation for information on table name limitations. When saving to a database where one or more fields are too small to hold the data being saved, Remark Office OMR attempts to resize the database column so that it can hold the data being saved.

7. When exporting, you can save the column headers for certain formats by selecting the **Save headers** checkbox. The Save headers checkbox only displays when appropriate.

8. Click the **OK** button to save the file. The data is saved to the format and location of your choice.

   - **Tip:** If you use Google Drive or Dropbox, once you select the format and give the file a name, you can click the Google Drive or Dropbox icons in the Save window to place the file right in your Google Drive or Dropbox folder. If your computer is set up to automatically poll this folder for files, Google Drive or Dropbox will "see" the file and upload it to the cloud automatically. You must have Google Drive or Dropbox installed on your computer for this save to work.

   - **Note:** The Remark products are not affiliated with or otherwise sponsored by Dropbox, Inc.
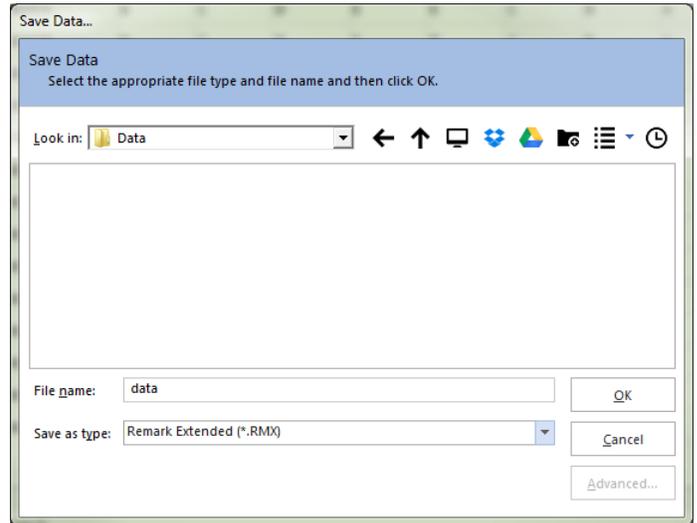
Advanced Data Saving Options

When saving data to certain formats, you have the option of setting advanced parameters. The Advanced Save window shows you each question and pertinent information about the question (region). You can then choose options about the region that you want included in your database. This feature can be useful if you are saving to a database format that has specific requirements. You can temporarily override the form template settings by using the advanced parameters. The Advanced Save window also allows you to save either the scanned form image or path to the scanned form images to your data file.

- **Note:** Setting parameters in the Advanced Save window does not make any changes to the form template.

To use advanced saving options

1. Select the **File** menu and then click **Save Data As**. The Save Data window opens, allowing you to choose a file name, a file type, the folder in which you would like the file saved and advanced saving options.

2. Select the desired folder location using the **Look in** drop down box.

3. Enter a name in the box titled **File name**.

4. Select the desired output format in the box titled **Save as type**.

5. If saving to a database type that supports internal table or sheet names, enter a table name in the box titled **Table/Sheet name**.

6. Click the **Advanced** button.

7. [OPTIONAL] If you have previously saved a definition file for this data set, click the **Load...** button to locate the appropriate INI file containing your settings. Otherwise, continue to Step 8 to build a new data file.

8. Make any desired changes in the **Include**, **Name**, **Data Type** or **Size** columns, as described here:

Option	Description
Include	Mark this checkbox to include the region (question) in the data file. Note that you may include the paths to the stored images of each processed form. The last item(s) in the Name list is the form image(s) listed by page (e.g. Page 1 Image).
Name	Use this column to enter a new field name to be used in the exported data file, if desired. Changing the field name in this window does not affect the region's name in the form template.
Data Type	Use this column to change the data type for this question.
Size	Use this column to specify a field size for the data for this question. Do not specify a size that is smaller than what is in your data.

- **Note:** You can save the path of the form images or the actual form images to the file by using the Advanced options. Scroll to the bottom of the Names list to mark the form images. If you want the actual image to be stored, change the data type to binary. If the data type is not binary, the path to the images is stored.

9. [Optional] If desired, click the **Save** button to save the settings to a configuration file (.ini file). You can then open this configuration file for future save operations with this same form template. This feature can save time when saving future data sets.
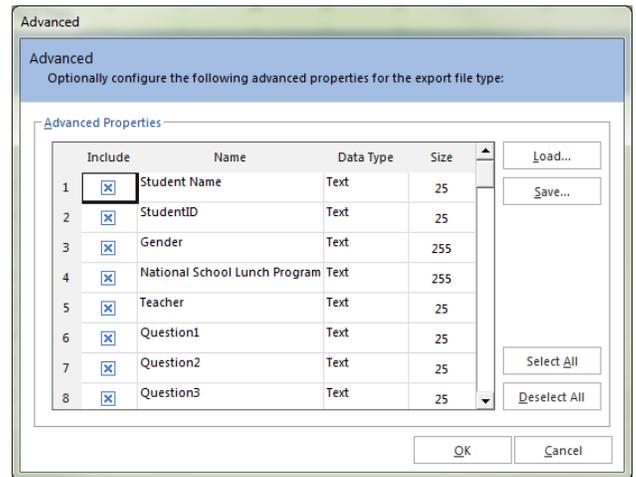
10. Click the **OK** button to save the changes.

11. In the **Save Data** window, click the **OK** button to save the data.

Save All Data

The Save All Data feature allows you to save multiple open data sets to one combined file (as long as the data sets correspond with the same Remark template). This feature is useful if you need to store and analyze data both on an aggregate and individual level. By maintaining separate files you can easily report on an individual data set. However, by combining the individual data files into one, you can also report on the data as a whole without having to open each data set individually any time you want to analyze all the data.

To use Save All Data

1. After reading forms or opening multiple data sets, select the **File** menu and then click **Save All Data**. The **Data Sets** window opens, allowing you to choose the open files you wish to include in the save operation.

2. Mark the checkboxes of all data sets you wish to include in the save operation. You may use **Select All** to select all data sets in the list. Please note that the data set must correspond to the active form template in order for it to be included in the save operation.

3. If needed, drag the row header area to move data sets into a different order. The order in which the files appear on the **Data Sets** window is the order in which they are saved.
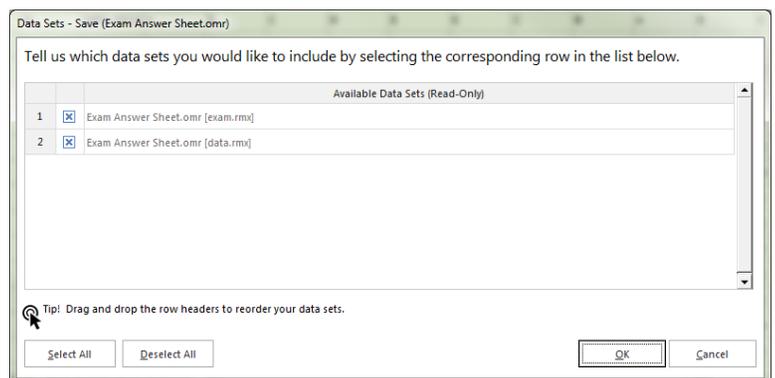
4. If any of the open data sets had changes made to them prior to the save operation and were not saved, you receive a warning. The warning lets you know that during the save operation, all of the data sets being combined are closed. Click **Yes** to continue or **No** to cancel the operation, allowing you to go back and save the individual files first.

- **Note:** If you made changes to your original data files and want those changes to be saved, save the individual files before using Save All Data. If you choose to ignore the warning, the changes to the individual data sets are not saved.

5. Click the **OK** button.

6. Select the desired folder location using the **Look in** drop down box.

7. Enter a name in the box titled **File name**.

8. Select the desired file format in the box titled **Save as type**.

9. If saving to a database type that supports internal table or sheet names, enter a table name in the box titled **Table/Sheet name**.

10. Click the **OK** button to save the file. All selected data sets are saved to the file specified and closed in the data grid. The combined data set is opened.
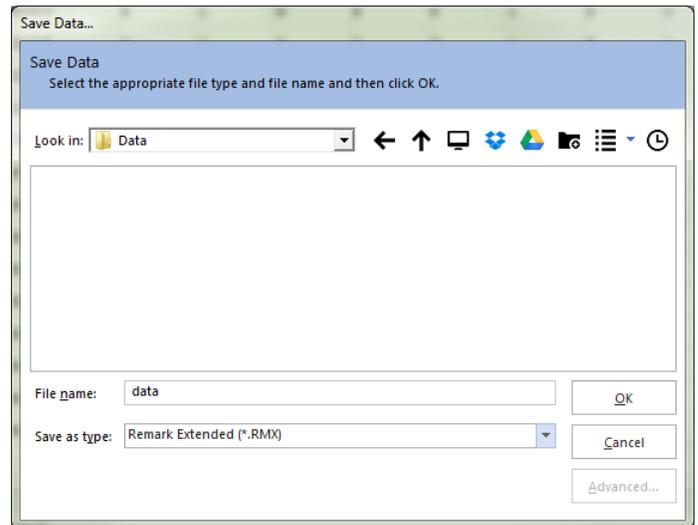
Saving Data - Organize & Save

The Organize & Save feature allows you to fine tune the data saving process by building dynamic file, folder and table names. Using the Organize & Save options, you can use information directly from your data set to name the data file, storage folder or table within the file. This functionality is similar to the Name Builder, accessed when reading forms, that is used to name scanned and archived image files.

To use Organize & Save

1. Select the **File** menu and then click **Organize & Save**. The **Organize & Save** window opens, allowing you to choose a file name, a file type, the folder in which you would like the file saved and table name saving options. The first step is to choose a file type and location for the data.

2. Under **Save File**, click the **...** (ellipsis) button to select a file name and format for your data.

3. Select the desired folder location using the **Look in** drop down box.

4. Enter a file name in the **File name** box.

5. Choose the file format in the **Save as type** box.

6. If choosing a database format, also enter a **Table/Sheet Name**.

7. Click the **OK** button.

8. In the **Build Saved Data File** area, go to the **File base name** area of the window. The name you set in the previous screen is listed as the file name. You may modify it by typing in the box. You may also use the drop-down list to add a region from the processed data to the file base name. Choose the region from the drop-down list and then click the **Insert Data Into File Name** button.

For example, if processing student test forms, you could add a student name region that is being collected from the form so that your data file name includes the name of each student (each time the student name changes, a new data file is created). Remember to place your cursor in the appropriate spot for where you want the region information to be inserted.

9. In the **Destination folder** area, you may choose to add a region from the processed data to the folder structure that holds the data file. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. Continuing with our example, if processing student test forms, you could add a teacher name or ID region that is being collected from the form so that your folder names include teacher identifiers. Each student's data from the data set would be stored in a separate folder based on teacher name or ID number.

10. If using a database format that requires a table name, go to the **Table Name** area of the window. The name you chose for Table Name when initially setting up the file in Step 6 is listed as the Table Name. You may modify it by typing in the box. You may also use the drop-down list to add a region from the processed data to the file base name. Choose the region from the drop-down list and then click the **Insert Data Into Table Name** button. Continuing with our example, if processing student test forms, you could add a teacher name region that is being collected from the form so that your data file table name includes the name of the teacher administering the test. Remember to place your cursor in the appropriate spot for where you want the region information to be inserted.

11. If desired, mark the checkbox for **Overwrite existing files or tables**, in which case anything that exists in the same location, with the same name and format, is overwritten.

12. Click the **Save** button to save the data. The data file(s) is saved based on your specifications. If you named files or folders based on data from your data set, you may see separate folders and files. For folders, there is a separate folder for each unique entry in your data set. Within each folder you find the appropriate data file. For data files, the data file names begin with the region data you chose during the set up process.

Remark Office Archive Format

The Remark Office Archive format saves the form template, data file and stored images in one zipped file. By having all items stored together, the information becomes portable. For example, this feature is useful if you own and use multiple copies of the software. One person can scan forms on one system and then save the data to the Remark Office Archive Format. Another person can then open that Remark Office Archive file, which provides the form template, data file and stored images, and run Review Exceptions to clean the data. This process makes sharing the workload easier. There is also a Remark Extended Office Archive format, which stores information about changed responses. When using this format, Remark Quick Stats can display reports related to how many times responses were changed, which can be useful when grading tests.

- **Caution!** Please read the Remark license agreement carefully before installing Remark Office OMR on multiple computers. Licensing is computer-based, meaning that one copy of the software may only be installed on one computer.

To save data to the Remark Office Archive format

1. Select the **File** menu and then click **Save Data As**. The Save Data window opens, allowing you to choose a file name, a file type and the directory in which you would like the file saved.

2. Select the desired directory location using the **Look in** drop down box.

3. Enter a name in the box titled **File name**.

4. Select the **Remark Office Archive (*.ROA)** or **Remark Extended Office Archive (*.ROX)** format in the box titled **Save as type**.

   - **Note:** If you want to store information about changed responses, choose the Remark Extended Office Archive (*.ROX) format. Remark Quick Stats can then display reports related to how many times responses were changed.

5. [OPTIONAL] If desired, mark the checkbox for **Delete original images after archiving** to delete the original images that are stored during form scanning. These images are included in the archive format in case you need to access them at a later point.

6. [OPTIONAL] If Remark Support has requested an ROA file for troubleshooting, mark the **Include support files** checkbox. This action includes additional information for support personnel to correctly troubleshoot your issue.

7. Click the **OK** button to save the file.
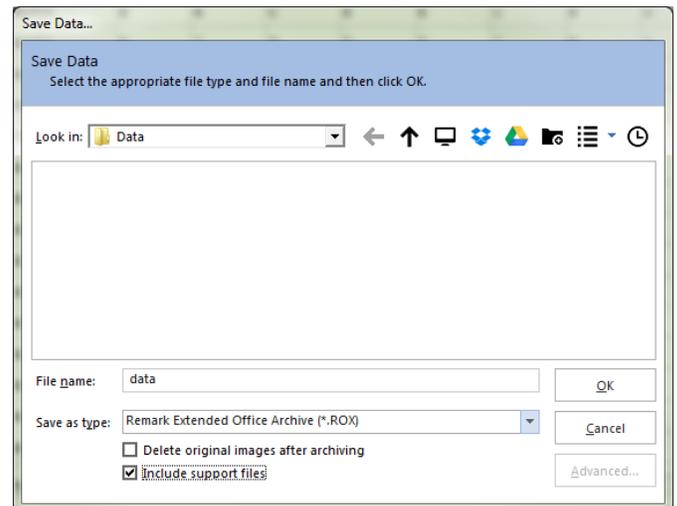
To open a saved Remark Office Archive file

1. In the **Remark Office OMR Data Center**, select the **File** menu and then select **Open Form Template**.

2. Set the Files of type to **Supported Files** or **Remark Office Archive Files** or **Remark Extended Office Archive**.

3. Highlight the ROA/ROX file you wish to open and then click the **OK** button.

4. A **Select the archive extract location...** window appears. Use this window to select a location in which to unzip the files associated with this data file (form template, data and stored images). We suggest putting them in a folder based on the form template name so that you can easily associate the files with the right form.

5. Click the **OK** button once you have selected a folder. The files are automatically be unzipped to the location specified. The form template and data load normally into the data grid. All associated image files are available so that you can click in a cell and view the corresponding image or use [Review Exceptions](#) to clean the data.
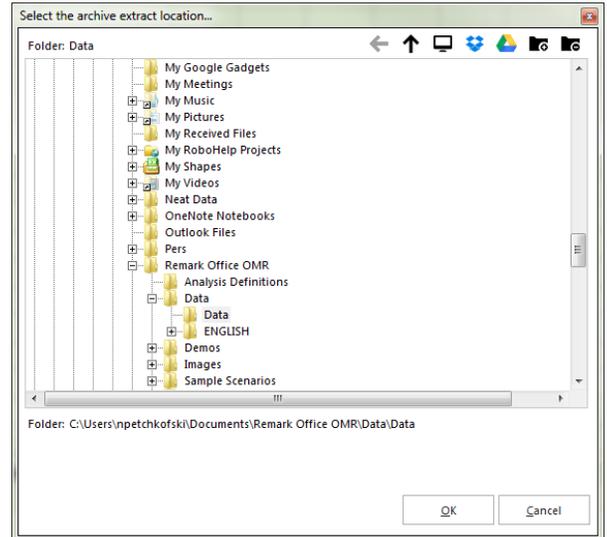
Custom Format for Saving Data

The Custom format allows you to create a customized text file. This format is useful for exporting data into a database or other program that has very specific requirements. The format can also be used to break apart rows of data into multiple records. For example, if you are processing an attendance sheet containing records for multiple students in a single row, you can use the Custom format to separate the data into one record for each student.

To use the Custom format

1. Select the **File** menu and then click **Save Data As**. The Save Data window opens, allowing you to choose a file name, a file type, the folder in which you would like the file saved and advanced saving options.

2. Select the desired folder location using the **Look in** drop down box.

3. Enter a name in the box titled **File name**.

4. Select the **Custom (*.ASC, *.TXT)** format in the box titled **Save as type**.

5. Click the **OK** button.

6. If you have used the Custom format previously and have a saved configuration file that applies to this data set, click the ellipsis (...) button to locate the configuration file. Otherwise, continue to the next step

7. Select the options you wish to use to customize your data set. Each option is described here:

Option	Description
Start export at row	Enter the row number that you want to use as the first record in the exported data file. All rows from this point forward are included in the data file. Enter 0 to include region (field) names as the first record.
File Type	Delimited: Fields are separated by a delimiter, such as a comma or tab.
	Fixed-Width: Fields are aligned at fixed character spaces.
Record Delimiter	Sets the delimiter to be used to separate records: Carriage Return/Line Feed, Carriage Return, Line Feed or any other string.
Column Delimiter	Select the character to use to separate the columns in the data file: Comma, Tab, Semi-colon, Space or any other string.
Text Qualifier	Select the character to use to qualify text. Textual responses are encapsulated within these characters. Options include: None, double quote ("), single quote (').
Multiple Response Qualifier	Select the character to use qualify multiple responses. Reponses are encapsulated within these characters. Options include: Parenthesis (( )), Curly Braces ({ }), Square Braces ([ ]), Angle Brackets (< >) or any other single character.
Multiple Response Delimiter	Select the character to use to separate multiple responses. Options include Comma (,), Hyphen ("), Colon (:), Semi-colon (;), Space or any other single character.
Fixed Width Files Only:	
Automatically format questions that allow multiple responses	Mark the Automatically format questions that allow multiple responses checkbox to automatically set formatting for questions that allow more than one answer choice (e.g. (1,2,3) becomes 123). Note that Remark looks at the longest answer choice and any answer choices that are shorter have padding added to them to make them the same length. For example, if the answers are 5, 10 and 3, it would look like 5 103. One space of padding is added after the 5 because 10 is the longest answer choice with two characters. This setting only applies to Fixed Width files.
Field Size	The maximum number of characters allowed in the field.
Start Position	The position, in characters, where the field begins. For example, if your field sizes are 25, the first field starts at position 1 and the second field starts at position 26 (25 characters later). This field is for reference only and cannot be changed.
Pad Character	Enter the character to use to pad the field (typically a space character).

Option	Description
Pad On	Select whether to pad the field on the left or right of the text that resides in the field.

8. Click the **Next** button to go to the next step.

9. Use this step if you need to break your data apart into multiple records. This option is useful for things like attendance forms, session evaluations and any other forms that evaluate more than one person on a single form. If you do not need to break apart data, simply click the **Finish** button (step 14).

10. Choose how many records you want in your data set. For example, if you are processing an attendance sheet and there are 20 students per form (row of data), you would enter 20. Click the **Update** button. The number of desired records are created on the right side of the window.

11. You have three options for formatting the file:

- **Add to Every Record:** Choose this option to add a question (or questions) to every record in the data set. In our attendance example, this might be a class name or teacher name (something that is static for everyone).
- **Add to Selected Records:** Use this option to add questions to only the records you have selected on the right side of the window. This option lets you fine tune what goes into each record.
- **Split Among Records:** Use this option to select questions and then have them equally split across all records. In our attendance example, this would be the questions that are used to track attendance (e.g. days of the week). For example, suppose you have students listed down the left side of the form and options for Monday-Friday for each student. If a student is in attendance, the corresponding bubble is filled. If the student is absent, the bubble is left

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	Student1	Student2	Student3	Student4	Student5	M1	M2	M3	M4	M5	T1	T2	T3	T4	T5	W1	W2	W3	W4	W5
	12345	57748	43637	56832	34577	0	0	1	1	1	0	0	1	0	0	1	1	1	1	1

blank (this is a Boolean region). You can split the students among all the records. Then split each day among all the records. See screen shot at right. If your data was not split, you might have something like this:

Notice how the students and attendance are listed in one long row.

However, if you split your data, you have this:

A	B	C	D	E	F
12345	0	0	1	1	1
57748	0	0	1	0	1
43637	1	1	1	0	1
56832	1	0	1	1	1
34577	1	0	1	1	1

Notice how each student is now occupying one record of data, along with his/her attendance.

12. Using the above descriptions, parse your data as needed.

13. Use the **Preview** button to preview how your data will look once exported.

14. When finished, click the **Finish** button.

15. When the **Save Configuration** window appears, click the **Yes** button to save your settings to a file that you can use later when saving data. If you do not wish to save this configuration file, click the **No** button. If you are not saving the *configuration* file for later use, the *data* file is saved when you click the No button. Continue with the next steps if you are saving the configuration file. Otherwise you are finished saving your data.

- [Optional] If saving the configuration file, in the **Save Text Export Configuration As** box, select a location in which to save the configuration file in the **Save in** box.

- Enter a name for the file in the **File name** box.

- Leave the **Save as type** box set to **Text Export Configuration Files (*.tec)**.

- Click the **Save** button to save the TEC file and create the data file.

The data is saved according to your specifications and you can reuse the TEC file in the future. The resulting text file can be taken to the application of your choice.

Creating a Data Transform

If you want to use Remark Quick Stats to analyze a subset or customized configuration of your data, you can use the Data Transform option. This option allows you to set up the same custom parameters and pass them into Remark Quick Stats so that your data can be analyzed. Normally the newly formatted file would require a new template to match, but the transform option does that for you. Note that if you want to analyze your data on multiple occasions, you will need to perform the transform option each time. You can use a saved custom text configuration file (.tec) when using the data transform option (you do not have to start from scratch). Note that the data transform option does not output a data file. If you want a saved data file you should use the Custom Format first (File|Save Data|Custom... see section above).

To create a custom transform

1. Scan forms or open a data file.
2. If analyzing a survey, click the drop-down arrow on **Advanced Survey** and choose **Create Data Transform**. If grading a test, click the drop-down arrow on **Advanced Grade** and choose **Create Data Transform**.
3. [Optional] If you previously created a transform file or saved data using the Custom Text option, you may use the ellipsis (...) to open the existing .tec file. The remainder of these instructions will focus on creating a new data transform.
4. Click the **Next** button.
5. Use this step if you need to break your data apart into multiple records. This option is useful for things like attendance forms, session evaluations and any other forms that evaluate more than one person on a single form. If you do not need to break apart data, simply click the **Finish** button (step 11).

6. Choose how many records you want in your data set. For example, if you are processing an attendance sheet and there are 20 students per form, you would enter 20. Click the **Update** button. The number of desired records are created on the right side of the window.
7. You have three options for formatting the file:
    - **Add to Every Record:** Choose this option to add a region (or regions) to every record in the data set. In our attendance example, this might be a class name or teacher name (something that is static for everyone).
    - **Add to Selected Records:** Use this option to add regions to only the records you have selected on the right side of the window. This option lets you fine tune what goes into each record.
    - **Split Among Records:** Use this option to select regions and then have them equally split across all records. In our attendance example, this would be the regions that are used to track attendance (e.g. days of the week). For example, suppose you have students listed down the left side of the form and options for Monday-Friday for each student. If a student is in attendance, the corresponding bubble is filled. If the student is absent, the bubble is left blank (this is a Boolean region). You can split the students among all the records. Then split each day among all the records. See screen shot at right. If your data wasn't split, you might have something like this:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Student1	Student2	Student3	Student4	Student5	M1	M2	M3	M4	M5	T1	T2	T3	T4	T5	W1	W2	W3	W4	W5
12345	57748	43637	56832	34577	0	0	1	1	1	0	0	1	0	0	1	1	1	1	1

Notice how the students and attendance are listed in one long row.

However, if you split your data, you have this:

A	B	C	D	E	F
12345	0	0	1	1	1
57748	0	0	1	0	1
43637	1	1	1	0	1
56832	1	0	1	1	1
34577	1	0	1	1	1

Notice how each student is now occupying one record of data, along with his/her attendance.

8. Using the above descriptions, parse your data as needed.
9. Use the **Preview** button to preview how your data will look once exported.
10. When finished, click the **Analyze** or **Grade** button.
11. When the **Save Configuration** window appears, click the **Yes** button to save your settings to a file that you can use later when saving data or creating a data transform. If you do not wish to save this configuration file, click the **No** button. Continue with the next steps if you are saving the configuration file. Otherwise you are finished creating your data transform.
    - **Note:** No data is saved. You are only saving the configuration settings to be used at another time.
        - [Optional] If saving the configuration file, in the **Save Text Export Configuration As** box, select a location in which to save the configuration file in the **Save in** box.

- Enter a name for the file in the **File name** box.

- Leave the **Save as type** box set to **Text Export Configuration Files (*.tec)**.

- Click the **Save** button to save the TEC file.

13. Depending on your operation, **Advanced Survey** or **Advanced Grade** opens. Make the desired selections to analyze your data and run Remark Quick Stats. Please see the Remark Quick Stats User's Guide PDF to learn more about these options (Start|All Programs|Remark Classic OMR 5|Documentation).

# Database Update Format for Saving Data

The database update format allows you to update an existing database based on the data in the Remark Office OMR data grid (Access or Excel). The data are matched to the existing database by the region names and a mapping process. When saving to this format, you map the regions in the Remark Office OMR data to the fields in the existing database. You also choose a question to be the record identifier. If data corresponding to the unique record identifier exists in the database it is updated with what is in Remark Office OMR when the identifiers are matched. For example, if you are conducting a survey that collects demographic information, and include for a respondent identifier on your form, you could use the identifier as the record ID to update an external database using the Database Update format. During the save process, Remark Office OMR attempts to find the ID in the database and then updates the data fields associated with that respondent. If the ID is not found, you have the option of adding the record to the external database.

- **Note:** The ODBC Database Update format works just as described here, but you can save to a database using an ODBC connection.

To use the Database Update format

1. Select the **File** menu and then click **Save Data As**. The Save Data window opens, allowing you to choose a file name, a file type, the folder in which you would like the file saved and advanced saving options.

2. Select the desired folder location using the **Look in** drop down box.

3. Select a file to update, which fills the File name box.

4. Select the **Database Update (*.ACCDB, *.MDB, *. XLSX, *.XLS)** format in the box titled **Save as type**.

5. Click the **OK** button. A window opens to walk you through the next few steps.

6. If you have used the Database Update format previously and have a saved configuration file that applies to this data set, click the **Load...** button to locate the configuration file. Otherwise, go on to step 7.

   - **Note:** You are prompted to save a configuration file with your settings after saving the data.

7. In the **Update Options** area, select the number of records contained in each row of the data set (e.g. if multiple respondents' answers are on a single form, you would have more than one record per data row). If each record in the data set corresponds to one respondent's submission, use 1 for the value.

8. In the **Update Options** area, mark the **Add database records for missing record identifiers** checkbox if you would like to create new records in the database when an identifier is not found.

9. In the **Field Mapping** area, map the regions from Remark Office OMR to the fields in the external database. The target database fields are listed in the first column, called **Database Field**, and the Remark Office OMR regions (questions) are listed in the second column, called **Grid Column**. Use the down arrow in the Grid Column section to choose the appropriate field to map to the corresponding database field.

- **Note:** Remark Office OMR attempts to automatically map the fields based on the field/region names. Review the field mapping first and then make changes if necessary.

10. Choose a field or fields to use as an identifier by marking the appropriate checkbox next to the field name. The identifier fields are used to match data from Remark Office OMR to the external database. If a match is not found, the data is not added to the database (unless you selected this feature in step 8) and you receive a message. You may select more than one field to use as the identifier, in which case the data from all identifier fields must be a match for the record to be updated in the external database.

11. Click the **OK** button to save the data.

12. If any problems are encountered when updating the selected file, a message appears detailing the problems. If the database is updated successfully you receive a message telling you how many records were updated and asking you if you want to save the configuration file for later use (if you use this same template and external database again, you can save a configuration file and skip the mapping process). If you do wish to save the file, click the Yes button. Enter a file name and choose a location for the .ini file in the Save window that appears.
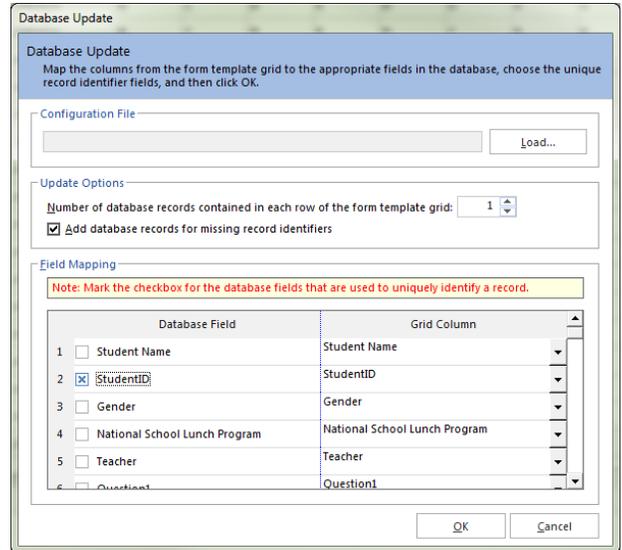
Opening Data Files

The Remark Office OMR Data Center can open data saved in dozens of different file formats. We specifically designed the Remark file format to optimize the data storage process in the Remark Office OMR software. The software is designed to work with data that is collected using a form template in Remark Office OMR. Therefore, you must first open a form template and then open the corresponding data file. Once the data file is opened, you can save it to another format or location, or use Remark Quick Stats to analyze it.

- **Tip:** When working with data in Remark Office OMR, use the Remark file format (RMK or RMX). This format saves the link to the image files and exception case colors. Only save data to other formats when exporting.

The following table lists the different file formats the Data Center can open, their extensions and a brief description:

File Format	Extension	Description
Remark Extended	RMX	Remark Office OMR format; saves grid exception colors and image links; includes information about changed responses for associated reports in Remark Quick Stats
Remark	RMK	Remark Office OMR format; saves grid exception colors and image links
Remark Extended Office Archive	ROX	Remark Office OMR Archive format; combines template, data and stored image files into one file, Saves grid exception colors and image links; optionally includes support information for troubleshooting; includes information about changed responses for associated reports in Remark Quick Stats
Remark Office Archive	ROA	Remark Office OMR Archive format; combines template, data and stored image files into one file, Saves grid exception colors and image links
SQL Server	MDF	Microsoft SQL Server format
Oracle	*.*	Oracle format
Access 2007-2016	ACCDB	Microsoft Access 2007-2013 format (only available if the 32-bit Access 2007 or greater database engine is installed)
Access 2000-2003	MDB	Microsoft Access 2000-2003 format
Access 95-97	MDB	Microsoft Access 95-97 format
Access 2.0	MDB	Microsoft Access 2.0 format
Access 1.0	MDB	Microsoft Access 1.0 format
Excel 2007-2016	XLSX	Microsoft Excel 2007-2013 format (only available if the 32-bit Access 2007 or greater database engine is installed)
Excel 97-2003	XLS	Microsoft Excel 97-2003 format
Excel 95	XLS	Microsoft Excel 95 format
Excel 4.0	XLS	Microsoft Excel 4.0 format
Excel 3.0	XLS	Microsoft Excel 3.0 format

File Format	Extension	Description
SPSS	SAV	SPSS 16 format
SPSS Legacy	SAV	SPSS 6 format
Survey Pro	SRV	Survey Pro standard format (Apian Software)
Opinionmeter	ASC	ASCII format for Opinionmeter application
CSV	CSV	Comma separated values
Text	TXT	Tab delimited text format
StatPac	DAT	StatPac format for StatPac Survey Software
dBase 5.0	DBF	dBase 5.0 format
dBase IV	DBF	dBase IV format
dBase III	DBF	dBase III format
Paradox 5.X	DB	Paradox 5.X format
Paradox 4.X	DB	Paradox 4.X format
Paradox 3.X	DB	Paradox 3.X format
Lotus WK4	WK4	Lotus Works 4 format (open only)
Lotus WK3	WK3	Lotus Works 3 format
Lotus WK1	WK1	Lotus Works 1 format
Lotus WJ3	WJ3	Lotus 1-2-3 version 3 format
Lotus WJ2	WJ2	Lotus 1-2-3 version 2 format
Lotus 1-2-3	WKS	Lotus 1-2-3 format
LXR Test	MRG	LXR Test format
Report	RPT	Fixed format ASCII, cell text padded or truncated to specified record length
Data Interchange Format	DIF	Standard format using file header and data section

File Format	Extension	Description
CCI Assessment	DAT	CCI Assessment format
XML	XML	Extensible Markup Language format
HTML	HTM	Hypertext Markup Language
ODBC	*.*	Open Database Connectivity

To open grid data

1. Open the correct form template.

2. Select the **File** menu and then click **Open Data** to display the **Open Data** window. Alternatively, use the **Open data file** link from the task pane or **Open Data** button from the toolbar.

3. Select a file from the list. Use the **Look in** box to locate saved data files. You may need to adjust the **Files of type** list to find the desired file.

   - **Note:** The data contained in the file must correspond to the currently active form template or an error may occur.

4. If opening a database file, select the appropriate table from the **Table name** drop-down list.

5. Click the **OK** button to open the data file.

   - **Caution:** When opening a database file type, the Data Center attempts to match grid column headers (region names) to the database's field names. If any column headers cannot be matched, an error occurs. Grid column headers do not need to appear in the same order as the database fields.
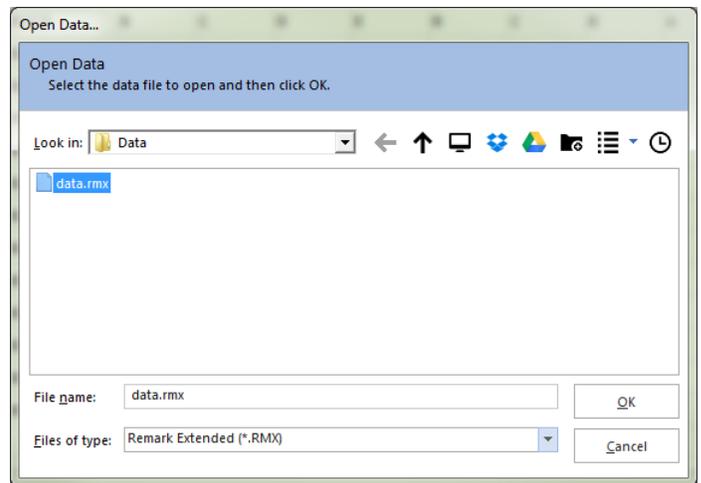
You may now read more forms, save the data to a new format or location or run Remark Quick Stats for analysis.

File Formats

The following sections contain detailed information about each file format supported in Remark Office OMR.

Remark Format (RMK, RMX)

There are two Remark formats: Remark (RMK) and Remark Extended (RMX). The Remark formats are proprietary to the Remark software and, therefore, can only be used in Remark applications. We recommend that you use the Remark file format as your default file format and only save to other file formats when exporting data to other applications. These formats save data grid exception colors and the link between the data and the corresponding image. In addition, the Remark extended format saves information about changed responses so that you can run reports in Remark Quick Stats to view how many times a response was changed or respondents who change responses frequently, which could be useful when grading tests.

- **Tip:** The Remark and Remark Office Archive formats are the only formats that preserve the link between each grid cell and the corresponding image, as well as exception case colors. If you export data to another format you are not able to click in a cell and view the corresponding image when using that format. We recommend exporting data to other formats only after you have fully cleaned your data.

Extension	• RMK, RMX
Options (automatic)	• Saving Images: The RMK and RMX formats automatically save the link between store images and the data. You may then refer to the image files to review data later.
	• Saving Grid Colors: The RMK and RMX formats automatically save the exception colors in the data, which are used in conjunction with Review Exceptions to clean your data.
	• Storing Changed Responses: The RMX format stores information about how many times a response was changed and how many times a respondents changed responses, which can be reported on Remark Quick Stats.
Limitations	• Proprietary to Remark software and cannot be used in other products.

Access Formats (ACCDB, MDB)

The Access file formats are proprietary to the Access database program by Microsoft Corporation. Remark Office OMR supports the Access version 1.0 through 2016 file formats. Column (region) names in Remark Office OMR are used as field names when saving to an Access database. Remark Office OMR can save data to a new Access database, add new tables to existing Access databases and append data to existing Access tables.

Extension	• ACCDB, MDB
Options	• Table Name: When saving to an Access database, you must select a table name to which to save the data.
Limitations	• Field (region) and table names can contain a maximum of 60 characters (including spaces). Field (region) and table names cannot include: leading spaces, periods (.), exclamation points (!), accent graves (`) and brackets ([]).
	• An Access table can hold a maximum of 255 fields.
	• All region (field) names must be unique.
	• An Access table record can hold a maximum of 2000 characters (excluding Memo and OLE object regions).
	• If saving data to an existing table, grid column headers (region names) in Remark Office OMR must match table field names.
	• When Remark Office OMR creates an Access table, textual fields can contain a maximum of 255 characters. If you would like a field to support more than 255 characters, edit the database in Microsoft Access and change the field type from a Text field to a Memo field. Alternatively, click the Advanced button in the Remark Office OMR Save Data window and change the field type to Memo.

Comma Separated Values (CSV) Format

The CSV file format is a generic textual format and can therefore be used by many different applications. Grid cells are delimited by commas. Grid rows are delimited by a carriage return line feed sequence. CSV is a good choice for importing data into other applications. It is important to know the type of CSV file your application expects before choosing the options listed below.

Extension	• CSV

Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the first record in the file.
	
	• Encoding: The Encoding lists allows you to choose the type of character encoding you want to use. You should find out the requirements of your data analysis package before choosing an encoding type. Choices include:
	
	   o System Default: Use the Windows default encoding type (if you are uncertain about encoding, we recommend you use this setting).
	
	   o ASCII: Standard encoding scheme that encodes 128 specified characters into 7-bit binary integers.
	
	   o Big Endian Unicode: UTF-16 variable-length encoding capable of encoding 1,112,064 possible characters into Unicode.
	
	   o Unicode: Consistent encoding option that encodes 110,000+ plus characters. It is especially good for international characters, such as those found in the Arabic and Hebrew languages.
	
	   o UTF32: Fixed length encoding that uses exactly 32 bits per Unicode code point.
	
	   o UTF7: Variable length encoding for representing Unicode text in a stream of ACSII characters. It was often used in email, but has lost popularity.
	
	   o UTF8: Variable length encoding capable of encoding all possible characters in Unicode. Designed for backward compatibility with ASCII.

Limitations	• When saving a CSV file, which is comma delimited, other applications may have difficulty opening the file if the data contain multiple responses. Multiple responses typically contain commas, which are also used as cell delimiters. Consider using the Custom format if you have questions that allow more than one response in the same data cell.

Data Interchange Format (DIF)

The Data Interchange file format is a "standard" method of exchanging data between non-compatible programs. By its nature DIF cannot support program-specific information, such as cell formats.

Extension	• DIF
Options	• None
Limitations	• None

dBase Format (DBF)

The dBase file formats are commonly used database file formats used to transfer information between applications. Remark Office OMR supports dBase version III, IV, and V file formats. Column (region) names in Remark Office OMR are used as field names when saving to a dBase table. A dBase database is represented by a directory. A dBase table is represented by a DBF file within a dBase database. Remark Office OMR can save data to a new dBase table and append data to existing dBase tables.

Extension	• DBF
Options	• None
Limitations	• Region (field) names can contain a maximum of 10 characters (including underscores).
	• Spaces in region (field) names will be automatically converted to underscores.
	• All region (field) names must be unique.
	• Region (field) names cannot include punctuation.
	• A dBase table can hold a maximum of 255 fields.
	• If saving data to an existing table, grid column headers (region names) in Remark Office OMR must match table region names.
	• When Remark Office OMR creates a dBase table, textual fields can contain a maximum of 255 characters. If you would like a field to support more than 255 characters, edit the database table in the dBase software program and change the region type from a Text region to a Memo region. Alternatively, click the Advanced button in the Remark Office OMR Save Data window and change the field type to Memo.

ExamSoft Format

The ExamSoft format is a specialized CSV file that imports into the ExamSoft testing software. It requires a Student ID and can optionally include a Test Version Identifier (if using multiple test versions). You should mark the Student ID as an "Analysis Respondent ID" in the form template region's properties. If you are using multiple test versions, you should also mark the appropriate region in the form template as "Designate as Key Identifier." Note that if these items are not marked in the form template, you are prompted for them when saving the data file.

Extension	• CSV
Options	• None

Limitations	• A student identifier region is required. You may designate a student ID region as the Analysis Respondent ID in the form template. This property helps match students to the ExamSoft software. If you do not designate a Student ID region, you are prompted for one when saving the data.
	• If using multiple test versions, a version region is required. You may mark the region with Designate as Key Identifier in the form template or specify one during the data saving process.

Excel Format (XLS, XLSX)

The Excel file formats are proprietary to the Excel spreadsheet program by Microsoft Corporation. When saving data, Remark Office OMR supports the Excel version 97-2016 file formats. When opening data, however, you can go back as far as Excel 3.0. Column (region) names in Remark Office OMR are used as field names when saving to an Excel spreadsheet. Remark Office OMR can save data to a new Excel spreadsheet, add new sheets to existing Excel spreadsheet and overwrite existing Excel files.

- **Note:** Older versions of the Excel formats have limitations, such as character limits and a 255 field limit. Use the 2013 format to avoid these limitations.

Extension	• XLSX, XLS
Options	• Sheet Name: When saving to an Excel spreadsheet, you must select a sheet name to which to save the data.
Limitations	• If saving data to an existing sheet, grid column headers in Remark Office OMR must match spreadsheet field names.

HTML Format (HTM, HTML)

HTML stands for Hyper Text Markup Language. Use HTML to publish data and results from Remark Office OMR to the Internet or an intranet. Remark Office OMR saves data as well as graphs (from analysis reports) for inclusion in web based documents.

Extension	• HTM, HTML
Options	• None
Limitations	• None

Lotus Format (WKS, WK1, WK3, WK4, WJ2, WJ3)

The Lotus file formats are proprietary to the Lotus 1-2-3 program by Lotus Development Corporation. Remark Office OMR supports the Lotus 1-2-3, WK1, WK3 and WK4 formats.

Extension	• WKS, WK1, WK3, WK4, WJ2, WJ3
Options	• None
Limitations	• Data saved to a Lotus 1-2-3 version 2.0 format can have a maximum of 240 characters per cell. Remark Office OMR displays an error message (listing the cell location) if any cell exceeds 240 characters when saving to a Lotus 1-2-3 file format. • If a cell contains any textual data, the entire column is saved as a string (text) rather than numeric data. • Data in the WK4 format can only be opened (not saved).

LXR Format (MRG)

The LXR Test format by Logic Extension Resources is a tab delimited ASCII file made for exporting data to LXR Test. The file contains a custom header followed by the data. Grid rows are delimited by a carriage return line feed sequence.

Extension	• MRG
Options	• None
Limitations	• None

Open Database Connectivity (ODBC)

Open Database Connectivity, or ODBC, is a standard format independent of database and operating systems. ODBC works using an ODBC driver, which must be installed and configured correctly. Consult your database documentation for configuration and installation instructions. Once the ODBC driver is configured, you can select it in the Remark Office OMR Save Data window during a regular save operation. For example, you can save to MySQL and MariaDB using the ODBC driver.

Extension	• *.*
Options	• None
Limitations	• Consult your database documentation for specific format limitations.

Opinionmeter Format (ASC)

The Opinionmeter file format creates a text file for importing into the Opinionmeter application. Grid cells are delimited by commas. Multiple responses are encapsulated in parentheses. Grid rows are delimited by a carriage return line feed sequence.

Extension	• ASC
Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the first record in the file.
Limitations	• None

SQL Server

The SQL Server driver is proprietary to the SQL Server database program by Microsoft. Remark Office OMR can add new tables to existing SQL Server databases and append data to existing SQL Server tables.

Extension	• NA
Options	• Server: The SQL Server driver saves data to the server you specify. • Table Name: The SQL Server driver saves data to the table within the database you specify. You may create new tables or save to existing tables. • Login: You may log in to the database for security purposes.
Limitations	• Consult the SQL Server database documentation for specific format limitations.

Oracle

The Oracle driver is proprietary to the Oracle database program by Oracle. Remark Office OMR can add new tables to existing Oracle databases and append data to existing Oracle tables.

Extension	• NA
Options	• Server: The Oracle driver saves data to the server you specify. • Table Name: The Oracle driver saves data to the table within the database you specify. You may create new tables or save to existing tables. • Login: You may log in to the database for security purposes.
Limitations	• Consult the Oracle database documentation for specific format limitations.

Paradox Format (DB)

The Paradox file formats are proprietary to the Paradox database program by Borland International, Inc. Remark Office OMR supports Paradox version 3.X, 4.X, and 5.X, 7 and 8 file formats. Column (region) names in Remark Office OMR are used as field names when saving to a Paradox database. Remark Office OMR can save data to a new Paradox database or overwrite existing tables.

Extension	• DB
Options	• Primary Index: When saving to a Paradox database, you must select a field to use as the primary index.
Limitations	• Primary Index: You must select a field to use as a primary index. A primary index must contain a unique value for every record. • For Remark Office OMR to save data to a Paradox table, the ParadoxNetStyle must be set to the selected Paradox save format. (See your Paradox database documentation for more information on the ParadoxNetStyle property.) • All region (field) names must be unique. • A Paradox table can hold a maximum of 255 fields (columns). • A Paradox record can hold a maximum of 10,800 bytes. • If saving data to an existing table, grid column headers (region names) in Remark Office OMR must match table field names.

	• When Remark Office OMR creates a Paradox table, textual fields can contain a maximum of 255 characters. If you would like a field to support more than 255 characters, edit the database in Paradox and change the field type from a Text region to a Memo field. Alternatively, click the Advanced button in the Remark Office OMR Save Data window and change the field type to Memo.

Questionmark Format (QSF)

The Questionmark format is proprietary to the Questionmark Perception assessment software program. This format has specific parameters that must be defined, including a Snapshot ID (the value that uniquely identifies the assessment) and the Participant (the region that identifies each respondent). Additionally, there are optional parameters you may specify, including the Group, Details, Date and Monitor. This information should closely match what was originally defined in Perception. For example, the Snapshot ID used should already be defined in Perception as the ID for this particular form, the Participant IDs should already be defined in Perception as the student identifiers, Group should already be defined, Questions should already be defined in the same order as they appear in this form, Special fields should already be defined in the appropriate order and Details should already be defined (as to what type of information the field should contain). Please see the table below for further details.

Extension	• QSF
Required Parameters	• Snapshot ID: A value that uniquely identifies the assessment. Each record in the data file must contain the same Snapshot ID. The Snapshot ID must be a numeric value from 1 to 99999999. Choose a field containing the Snapshot ID or enter one manually.
	• Participant: Participant, student or respondent identifier. This field uniquely identifies each respondent. Every record in the data file must contain a unique Participant identifier. Choose the field containing this information.
Optional Parameters	• Group: Group, category, course or department. This entry should match the groups defined in your Questionmark application. Choose the field containing the group or enter a group name manually.
	• Details: Optional demographic data. Choose the field containing the details or enter a value manually.
	• Date: Date the assessment took place. Choose a field containing the date or enter one manually.
	• Monitor: Monitor, teacher or instructor name. Choose the field containing the monitor name or enter one manually.
Limitations	• The Questionmark format is only available when saving data. You may create new files or overwrite existing files, but you cannot open the files in Remark Office OMR.

	• Region names cannot contain double quotes (").
	• Spaces entered before or after a region name or data label will be ignored. However, spaces in the middle of a region name or data label will be counted. "
	• Graded questions MUST use region names of "Q1, Q2, Q3..." or "Question1, Question2, Question3..."
	• You may optionally define questions called "Special1 - Special10" that can contain more optional demographic data.
	• The following fields can contain a max of 50 characters (any more will be truncated): Participant, Group, Details, Monitor, Special1 - Special10.
	• All exceptions should be corrected before exporting to this format. Any exception found in the graded questions when exporting is treated as an unanswered question.

Report Format (RPT)

The Report file format is a fixed width ASCII file. Each cell is padded, if necessary, to the specified length. Grid rows are delimited by a carriage return line feed sequence. The specified record length is written to the beginning of the file followed by the actual data.

Extension	• RPT
Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the first record in the Report data file.
	• Record Length: The Record Length option in the Save Data window allows you to choose the fixed length of each piece of data written to the file.
Limitations	• If any cells contain data longer than the specified record length, Remark Office OMR displays an error message that lists the cell location.

SPSS Format (SAV)

The SPSS file format is proprietary to the SPSS statistical software program by SPSS, Inc. The column headers (region names) in Remark Office OMR are saved as SPSS variable names. The question text, if entered, is saved as SPSS variable labels. Remark Office OMR uses the Labels and Values defined when creating the form template as SPSS value labels and value numbers, respectively. Missing, invalid or unrecognized responses in Remark Office OMR are assigned an SPSS missing value of -1 by default.

• **Note:** The SPSS file format outputs numeric data for each of your Labels. By default, Remark Office OMR uses a sequential numbering scheme, called Values, which begins with 1 for the first Label. You may change these values in the form template by selecting a question's properties.

Extension	• SAV
Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the header names in the SPSS data file. If Save Headers is not selected, default variable names are used (e.g. v1, v2, etc.).
Limitations	• Data saved to an SPSS format can have a maximum of 255 characters per cell. Remark Office OMR automatically truncates any cell text that is greater than 255 characters when saving to an SPSS file.
	• Labels (Value Labels in SPSS) can have a maximum of 60 characters.
	• Values: If custom Values are not defined during form template creation, Remark Office OMR assigns Values in sequential order to use as SPSS Values.
	• Region names (Variable Names in SPSS) can have a maximum of 60 characters. If a region name has more than 60 characters, it is truncated.
	• Region names cannot begin with a number.
	• Region names (Variable Names in SPSS) must be unique. If a region name is used more than once, SPSS converts the name to a standard naming convention (e.g. v1).
	• Question text (Variable Labels in SPSS) can have a maximum of 120 characters.
	• Questions that allow more than one response are broken into separate Boolean questions for each answer option and the answers are saved as a dichotomy of 1 representing selected and 0 representing not selected. The question is then defined as an SPSS multiple response set that can then be analyzed. (You do not have to set the question up as Boolean in the Template Editor; it is handled behind the scenes).

SPSS Legacy Format (SAV)

The SPSS file format is proprietary to the SPSS statistical software program by SPSS, Inc. We strongly recommend using the SPSS format (non-legacy) but if you require an older version of the format, you may use the legacy format. The older version does have more limitations. The column headers (region names) in Remark Office OMR are saved as SPSS variable names. The question text, if entered, is saved as SPSS variable labels. Remark Office OMR uses the Labels and Values defined when creating the form template as SPSS value labels and value numbers, respectively. Missing, invalid or unrecognized responses in Remark Office OMR are assigned an SPSS missing value of -1 by default.

• **Note:** The SPSS file format outputs numeric data for each of your Labels. By default, Remark Office OMR uses a sequential numbering scheme, called Values, which begins with 1 for the first Label. You may change these values in the form template by selecting a question's properties.

Extension	• SAV
Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the header names in the SPSS data file. If Save Headers is not selected, default variable names will be used (e.g. v1, v2, etc.).
Limitations	• Data saved to an SPSS format can have a maximum of 255 characters per cell. Remark Office OMR will automatically truncate any cell text that is greater than 255 characters when saving to an SPSS file. • Labels (Value Labels in SPSS) can have a maximum of 60 characters. • Values: If custom Values are not defined during form template creation, Remark Office OMR assigns Values in sequential order to use as SPSS Values. • Region names (Variable Names in SPSS) can have a maximum of eight characters. If a field name has more than eight characters, it will be truncated. • Region names cannot begin with a number. • Region names (Variable Names in SPSS) must be unique. If a region name is used more than once, SPSS will convert the name to a standard naming convention (e.g. v1). • Question text (Variable Labels in SPSS) can have a maximum of 120 characters. • Remark Office OMR can open and save to an uncompressed SPSS format only. Remark Office OMR cannot open compressed SPSS files. If you need to uncompress your SPSS file, first open the file in SPSS. Select the File menu and click Save As. Enter a file name and then click the Paste button. In the Syntax Editor window, change the word "COMPRESSED" to "UNCOMPRESSED". Press Ctrl+A to select the text, then select the Run menu and click Current. • SPSS cannot import multiple responses (e.g. (A,B,C)) as numeric data. Questions that allow multiple responses in Remark Office OMR will be formatted as a string when exported to the SPSS file format, which will not import properly. To import questions that allow multiple responses into SPSS as numeric data, set the questions up as Boolean OMR regions in the form template. As a result, Remark Office OMR will output the responses to separate cells (each answer choice will be treated as a individual question in the data grid). Once the data have been opened in SPSS, you can combine the data for each answer in the question back into one question. Refer to the SPSS User's Guide for more information.

StatPac Format

StatPac data files are fixed format sequential ASCII files with a carriage return and line feed at the end of each line. When saving to the StatPac format two files are created: .dat and .cod. You import the .dat file into StatPac but the .cod file is also required. Both files should have the same name up to the period before the extension. StatPac imports both Question Names and Question Text.

Extension	• DAT
Options	• None
Limitations	• You need both the .dat and .cod files when importing into StatPac. Ensure that the names up to the period are the same (Remark Office OMR does this automatically for you when saving).
	• The StatPac format imports both Question Names and Question Text (optional).

Text Format (TXT)

The Text file format is generic and can therefore be used by many different applications. The text format similar to the CSV format with one difference:

- All text files are tab delimited

Extension	• TXT
Options	• Save Headers: The Save Headers option in the Save Data window saves the grid column headers (region names) as the first record in the Spreadsheet data file.
Limitations	• All text files are tab delimited.

The Survey System (DAT, CRS)

The Survey System file format is proprietary to The Survey System survey design and analysis software program by Creative Research Systems. When saving to the Survey System file format, Remark Office OMR creates two files: a data file and a questionnaire definition file. To import the data into The Survey System, first import the questionnaire definition file (CRS extension) and then open the data file (DAT extension) within that questionnaire. Consult The Survey System user's guide for additional information. Data may only be saved to The Survey System format (not opened in Remark Office OMR).

Extensions	• DAT, CRS
Options	• None
Limitations	• You may create new data files or overwrite existing files only (not open data files in Remark Office OMR).

XML Format (XML)

The XML format is used to save data to an XML file, which stands for Extensible Markup Language and is widely used for the exchange of data on the Internet.

Extension	• XML
Options	• None
Limitations	• Region (field) names can contain a maximum of 60 characters (including spaces).
	• Region (field) names cannot include: leading spaces, periods (.), exclamation points (!), accent graves (`) and brackets ([]).
	• An XML file can hold a maximum of 255 fields.
	• All region (field) names must be unique.
	• An XML record can hold a maximum of 2000 characters (excluding Memo and OLE object regions).
	• If saving data to an existing file, grid column headers (region names) in Remark Office OMR must match field names.
	• When Remark Office OMR creates an XML file, textual fields can contain a maximum of 255 characters. If you would like a field to support more than 255 characters, edit the file and change the field type from a Text field to a Memo field. Alternatively, click the Advanced button in the Remark Office OMR Save Data window and change the field type to Memo.

Emailing Data Overview

You can email data files in their native formats or in ZIP format from the Remark Office OMR Data Center. You have a choice of using Microsoft Outlook 2007 or greater or your own SMTP server (Custom) to send the emails.

- **Note:** When emailing data, a local copy of the data is not saved. If you need to save a data file, make sure you take that step in addition to using the email function.

Microsoft Outlook:

If you plan to use Microsoft Outlook 2007 or greater, you do not need to set up anything outside of telling the software to use Outlook. When you email a data file, Outlook opens a new email with the data attached.

Your SMTP Server:

If you use your own SMTP server, you must have a valid SMTP server set up independently of Remark Office OMR. SMTP stands for Simple Mail Transfer Protocol and is the Internet standard for transmitting email across networks. It is likely your organization has a running SMTP server already set up. You just need to find out general information about the server. You will need to consult with your network/email administrator to obtain information about your SMTP server.

Click here to see how to choose your default email program.

# Using Outlook to Email Data

Once you have set up your email preferences in Tools|Preferences, you are ready to start emailing data files.

To email data files using Microsoft Outlook

1. After processing forms, saving data or opening a data file, select the **File** menu and click **Email**.

    - **Note:** If you choose the toolbar option or task pane option to send email, the file is always in zipped format.

2. Choose **Data as Attachment** to attach the native file to an outgoing email message. Choose **Data as ZIP Attachment** to first zip the native data file (compress it into a .zip file) and then attach it to an outgoing email. The **Email Data** window appears.

    - **Note:** Your organization, or the recipient's organization, may have restrictions on the types of files that can be sent via email. If the file is restricted and you do not zip it, the email may never reach the intended recipient. If you are unsure whether the selected file type is restricted, use the ZIP option. The recipient must have a Zip program to unzip the file and view it.

3. Choose the **File name**, file format using **Save as type** and if using a database format, the **Table or Sheet name**. You do not need to specify a location for the file, as it is automatically attached to an email message.

4. Click the **OK** button.

5. Outlook automatically opens a new email message with your file attached. You may now enter recipients and a message and send your file.

   - **Note:** if you chose to zip the file, it appears with a .zip extension.
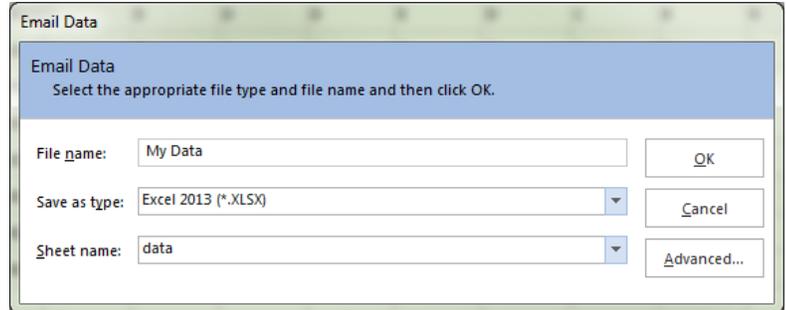
Using SMTP to Email Data

Once you have set up your email preferences in Tools|Preferences, you are ready to start emailing data files.

To email data files using your SMTP server (Custom)

1. After processing forms, saving data or opening a data file, select the **File** menu and click **Email**.

   - **Note:** If you choose the toolbar option or task pane option to send email, the file is always in zipped format.

2. Choose **Data as Attachment** to attach the native file to an outgoing email message. Choose **Data as ZIP Attachment** to first zip the native data file (compress it into a .zip file) and then attach it to an outgoing email. The Email Data window appears.

   - **Note:** Your organization, or the recipient's organization, may have restrictions on the types of files that can be sent via email. If the file is restricted and you do not zip it, the email may never reach the intended recipient. If you are unsure whether the selected file type is restricted, use the ZIP option. The recipient must have a Zip program to unzip the file and view it.

3. Choose the **File name**, file format using **Save as type** and if using a database format, the **Table** or **Sheet name**. You do not need to specify a location for the file, as it is automatically attached to an email message.

4. Click the **OK** button.

5. The **Email Message** window appears.

6. Enter the recipient(s)' email address in the **To** box. Separate multiple recipients with a semi colon (;).
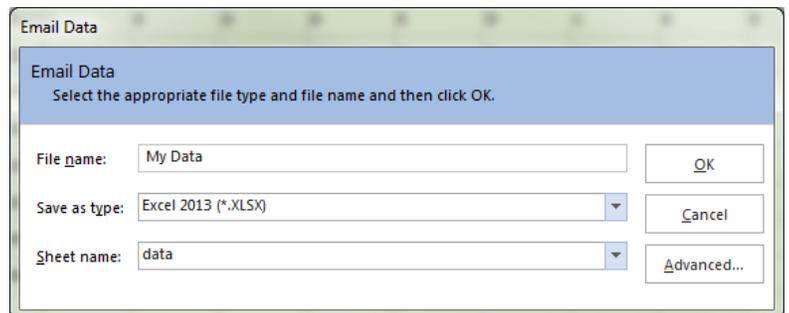
7. Enter your return email address in the **From** box.

8. Accept the default subject, which is the file name, or enter a new one in the **Subject** box.

9. In the rich text box, type your message to the recipient(s). You may use the toolbar to format your message as desired.

10. If you have already configured your SMTP settings in Remark Office OMR you do not need to click the **SMTP Settings** tab. However, if you have not entered your SMTP settings or need to modify them, click the **SMTP Settings** tab to enter the SMTP server information. You will need to obtain this information from your network/email administrator.

11. Click **Send** when you are ready to send your message.
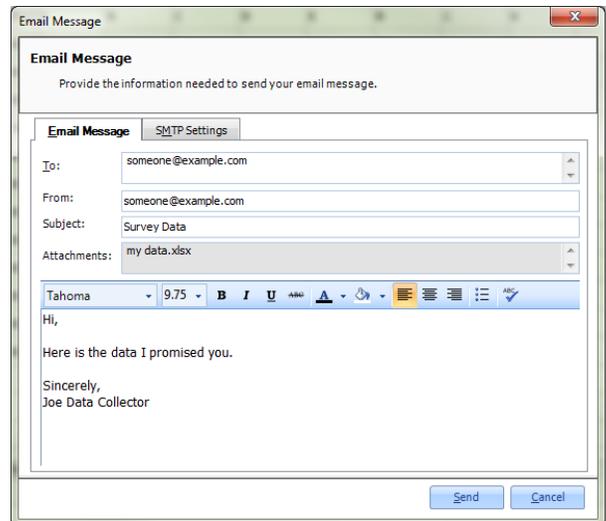
Your email message is automatically sent. The file is only saved as an email attachment; there is no permanent copy of the file saved on your computer when using the email functionality. If delivery problems occur, delivery reports are routed to the address listed in the From box of the email message (this may depend on how your SMTP server is configured to handle message failures).

Chapter 8: Software Recognition Settings

Recognition Settings Overview

Out of the box, Remark Office OMR comes with the recognition settings that are optimal for a well designed and tested scannable form. However, circumstances can introduce recognition problems. Here are few things that can potentially interfere with proper recognition of your forms:

- Respondents who do not fill bubbles completely or use light marks, cross out responses, erase responses or use white out to change responses

- Forms that are scanned upside down

- Forms that are accidentally scanned with the wrong batch, including blank forms

- Form images that are compressed or expanded as compared to the original form template image (possibly due to photocopying, using different printers, saving as PDF files or changing scanner settings)

- Forms that are much lighter or darker than the original (possibly due to photocopying)

Remark Office OMR has several recognition settings that can help you compensate for these issues. Please note that you may have to try a few adjustments to get the right settings for your particular form. Recognition Settings can be either software based or form template based.

You can access the Recognition Settings in three ways:

1. Select **Tools|Recognition Settings|Default Settings** or **Tools|Recognition Settings|Template Settings**.
2. From the **Data** tab in the left task pane, under **Advanced Recognition**.
3. From the **Read** window click the **Recognition Settings** button.

The Recognition settings apply throughout the software whether you are reading forms directly from a scanner or reading image files. The link called **Image Pre-Processing** only applies when reading image files you already scanned to a folder.

Recognition settings are stored in two places: as global software defaults and with the form template to which they were applied. Choose the option that best meets your needs. If a specific form template is causing problems, open it in the Data Center first, then adjust only its recognition settings using either the **Tools|Recognition Settings|Template Settings** option, clicking the appropriate setting in **Advanced Recognition** in the task pane or clicking the **Recognition Settings** link within the **Read** window. When recognition settings are adjusted for a particular form template, those settings override any global settings. If you wish to change recognition settings across the board for all new form templates, use the **Tools|Recognition Settings|Default Settings** option. Global settings apply to any form templates that

have never been used. The first time you use the form template, the global settings are in effect and remain in effect until you make changes while the form template is active.

- **Note:** The settings you apply to a form template are stored in each user's preferences file on the computer. Therefore, if you share form templates or have different users accessing the same form template on the same machine, the settings could vary. Be sure to coordinate any changes you make to the recognition settings on the form template level with any other Remark users if you plan to share templates.

The Recognition Settings window has a **Defaults** button. If you are in the global software defaults, clicking the Defaults button returns the software to the original installation defaults. If you have a form template open and are viewing the recognition settings for that form template, clicking the Defaults button resets the settings to the global default settings.

- **Note:** The recognition settings are not a substitute for good form design and proper procedures for processing forms. It is very important that you follow the recommended form design guidelines when creating scannable forms, as well as the best practices laid out in the user's guide (e.g. creating a form template image from the same quality form you are distributing to respondents and maintaining scanner settings from the form template to the filled in forms). These recognition settings are intended to supplement good form design and best practices.

Recognition Settings - Threshold Overrides

There are three types of threshold overrides: OMR Region, Image Region and OCR Region. Thresholds are used behind the scenes to define tolerance levels when determining if a mark is filled (OMR regions, text is recognizable (OCR regions) or if handwriting is present (Image regions). When setting thresholds in the Recognition Settings, you are setting them globally, meaning they override the form template settings you may have applied to individual regions for the same feature. Threshold Overrides are off by default. You should only change the threshold from the default setting if you encounter recognition problems, as described in the next three paragraphs.

OMR Threshold: The OMR Threshold is a value from 1 to 6, with 3 being the default. Using a lower value makes the software more sensitive. Lower values can be used to help pick up lighter markings (e.g. pencil), or when respondents do not fill a large portion of the mark. Use caution as you go lower; a value of 1 may cause erroneous marks, such as erasures, to be seen as filled marks.

Higher values for the Recognition Threshold can be used to make the software more discriminating when multiple marks are filled. For example, if two marks are filled and one is erased, leaving some marking behind, or one is partially filled, a higher Recognition Threshold can help Remark Office OMR figure out which mark is filled. Very high Recognition Thresholds cause the software to be quite discriminating, meaning that it may choose a mark that is X'd out as the most filled when that was not the intention of the respondent. (Be sure to look at the Ignore Large Marks feature if you want to avoid this problem.)

Image Threshold: The Image Threshold is a value from 1 to 6, with 3 being the default. Using a lower value makes the software more sensitive. Lower values can be used to help pick up lighter markings (e.g. pencil), or when respondents do not fill a large portion of the area in which they can hand write responses. Use caution as you go lower; a value of 1 may cause false positives during form processing.

Higher values for the Recognition Threshold can be used to make the software more discriminating when looking for handwriting in an Image region. Very high Recognition Thresholds may cause the software to not pick up some handwriting (e.g. if only a few words are written in a large space or light writing is used, such as pencil). However, it reduces the likelihood that unintended marks are picked up (e.g. stray marks and erasures).

OCR Threshold: The OCR Threshold setting ranges from 1-100% with a default setting of 70%. The threshold applies to each individual character in the text you are trying to recognize. The software returns a confidence value for each character recognized (e.g. 70% certain it is a "G"). If any character returns a confidence value lower than the specified threshold, the OCR region is flagged as an exception for your review. If you find that regions are being flagged as blue during processing, indicating an OCR exception, but the text is read correctly, you can lower the Recognition Threshold. If you find that text is not being flagged but is being incorrectly interpreted, you can raise the OCR Threshold.

Before adjusting thresholds, remember to determine whether you want to adjust them for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To change thresholds

1. Determine the threshold you wish to override.

2. Mark the appropriate checkbox for **OMR Threshold**, **Image Threshold** and/or **OCR Threshold**.

3. Choose the desired value (1-6 for OMR and Image Regions, a percentage for OCR regions, as previously described).

4. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
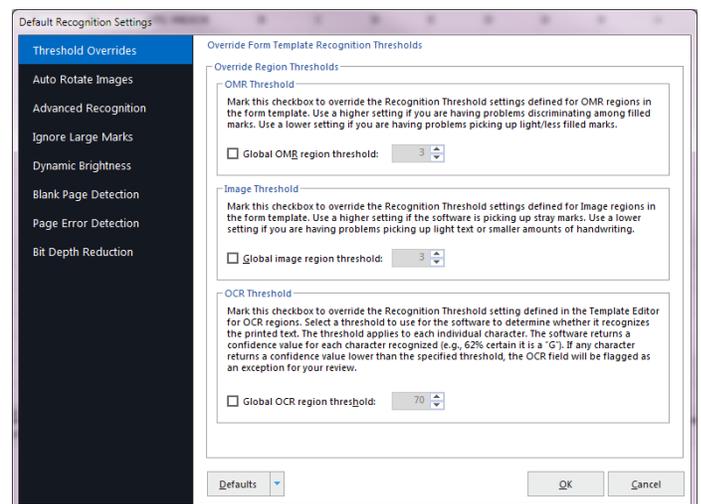
Recognition Settings - Auto Rotate

The Auto Rotate feature causes the software to try to rotate form images if it cannot properly read the form during the first pass. If a form is accidentally scanned upside down, the Auto Rotate feature flips the scanned image right side up and tries the recognition again. This feature is on by default, and it is recommended that you keep it on. The default threshold is 25%, meaning that if the percentage of questions on the page contains 25% or more errors, Remark Office OMR tries to rotate the image and re-recognize the page. If the error rate is not better than the original pass, no new results are recorded and the image is not rotated. 25% is generally a good number to use. Use a lower percentage if you want the software to find fewer errors before it tries to rotate the page (less error tolerance). Use a higher percentage if you want the software to find more errors before it tries to rotate the page (more error tolerance).

Before adjusting auto rotate, remember to determine whether you want to adjust it for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

 To use Auto Rotate

1. Mark the checkbox for **Automatically Rotate Images**.

2. Choose the desired percentage of questions in which errors are found that should trigger the rotation (25% is recommended).

3. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
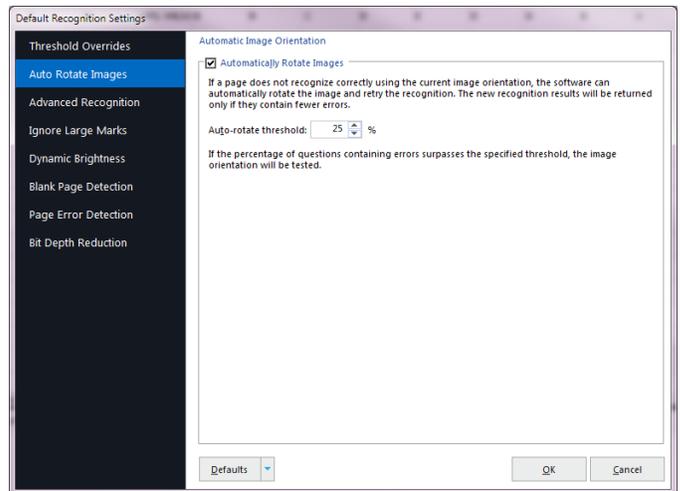
Recognition Settings – Advanced Settings

The Advanced Settings features include some behind the scenes advanced processing techniques and the ability to compensate for degraded marks. Enhanced Reading Mode, Compression Compensation and Rigorous Search are on by default, and we recommend keeping them on. Compensate for Missing and Damaged Marks is not on by default. You should turn it on when you encounter forms that have degraded images, such as optical marks (bubbles) that have been "whited" out or erased.

Enhanced Reading Mode: Enhanced Reading Mode allows the software to do more in depth recognition of uncertain regions.

Compensate for Missing and Damaged Marks: The Compensate for Missing and Damaged Marks setting allows Remark Office OMR to still recognize responses when marks (bubbles) are missing or partially missing. For example, respondents may have tried to erase an incorrect response, erasing some of the bubble along the way. Or they may have used white out to remove a bubble altogether. Without this feature, these cases would result in recognition errors.

You can set a tolerance for missing and damaged marks on a region basis and on a question basis. The default setting for regions is 30%. This setting means that if 30% or more of a single region's marks are missing or damaged, a recognition error is output. The default setting for questions is 50%. This setting means that if 50% or more of a single question's marks are missing or damaged, a recognition error is output. Once the number of errors exceeds the specified threshold, the errors are reported (e.g. as recognition errors in the data grid). If the number of errors does not exceed the threshold, then the missing or damaged marks are considered unfilled.

- **Note:** The software must be able to recognize at least one complete OMR region consisting of four or more bubbles in order for the Compensate for Missing and Damaged Marks feature to be active.

Compression Compensation: Compression compensation attempts to compensate for images that are either compressed or expanded as compared to the image that was used to create the form template. Compression can happen during printing, scanning or copying forms.

Rigorous search: Rigorous search attempts to locate OMR regions when they are not found where they are expected to be found, based on how you set up the form template. Rigorous search can help with badly skewed or offset forms, but can also greatly increase the time it takes to process each image. A timeout value is available, which tells the software how long to try to locate the regions before giving up (3 seconds is the default).

Before adjusting advanced settings, remember to determine whether you want to adjust them for the software in general or just the active template, as described in the [Recognition Settings Overview](#). Then click **Tools|Recognition Settings** and make your selection.

**To use Enhanced Reading Mode, Compression Compensation or Rigorous Search**

1. Locate the item you wish to turn on and mark the corresponding checkbox.

   - **Note:** All three of these options are on be default and we recommend leaving them on unless you encounter difficulties.

2. If using **Rigorous Search**, you may choose a **timeout** value.

3. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
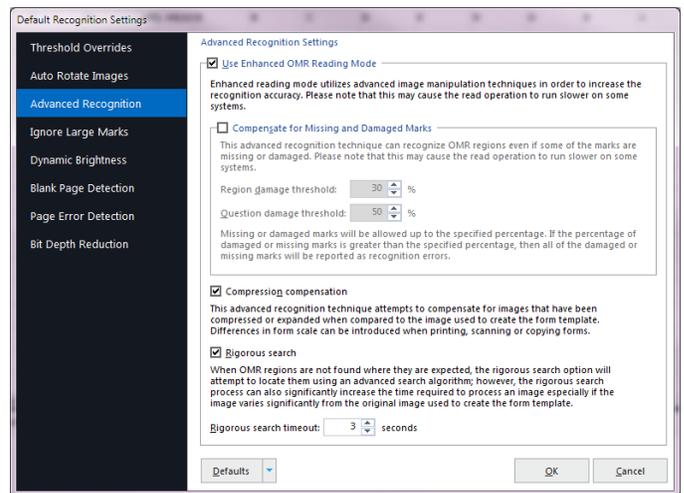
To use Compensate for Missing and Damaged Marks

1. Mark the checkbox for **Compensate for Missing and Damaged Marks**.

2. **Region damage threshold:** Choose the desired percentage of each region's marks above which recognition errors should be reported (30% is recommended as a starting point).

3. **Question damage threshold:** Choose the desired percentage of each question's marks above which recognition errors should be reported (50% is recommended as a starting point).

4. Click the **OK** button.
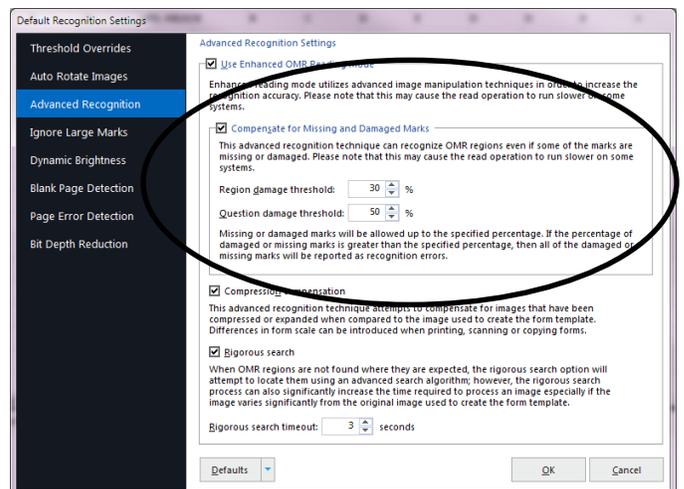
The adjusted settings apply to your next Read operation and stay in place until you change them again.

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Recognition Settings - Ignore Large Marks

The Ignore Large Marks option lets you allow respondents to put large marks, such as an X, through a response that was marked by mistake (as opposed to erasing it or trying to use white out to remove it). If the software finds a large X or slash through a bubble, it tries to ignore it. If you want to use this feature, you should tell respondents how to mark bubbles they did not mean to fill, and include a graphic representation with the X or slash through the mismarked bubble. The Ignore Large Marks feature is off by default.

Use the Large mark threshold to tell the software how to interpret the large marks. The default value is 2. Use a lower value to have the software be more likely to recognize a large X or slash and ignore the mark. Use a higher value to have the software be less likely to recognize a large X or slash and therefore include the mark in the recognition process.

Use the Only ignore large marks if the question contains multiple responses option to only turn on this feature when Remark Office OMR detects multiple responses and one or more (but not all) of the responses is a large mark. Questions that contain only large marks report all of the responses selected. Therefore if a respondent uses all X's or slashes on the form, they are not accidentally misinterpreted as large marks. This option is on by default when the Ignore Large Marks feature is turned on.

- **Note:** If you are using this feature and respondents' large X or slash go into or very close to an adjacent bubble you risk that Remark Office OMR also ignores the adjacent bubble. When designing your form, be sure to allow enough space in between bubbles, both vertically and horizontally to allow respondents to make a large mark.

There is a set of reports called Changed Answer Reports in Remark Quick Stats that reports on responses that were changed using Ignore Large Marks (along with data grid changes).

Before adjusting the ignore large marks feature, remember to determine whether you want to adjust it for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use Ignore Large Marks

1. Mark the checkbox for **Ignore Large Marks**.

2. Choose the desired **Large mark threshold** (2 is the default) as previously described.

3. If desired, mark the checkbox for **Only ignore large marks if the question contains multiple responses**, as previously described (recommended).

4. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
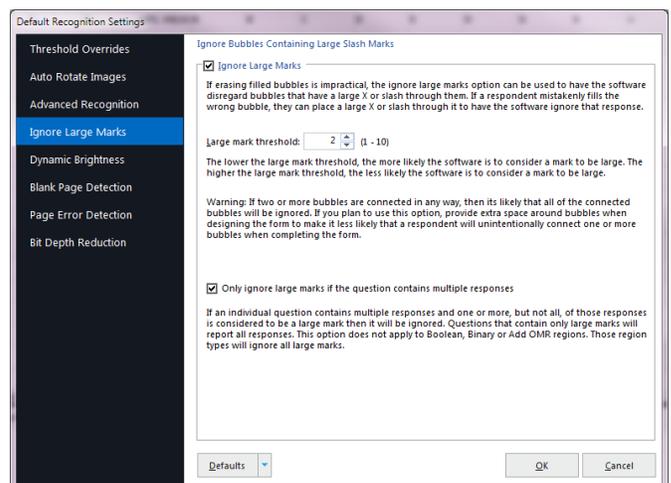
# Recognition Settings - Dynamic Brightness Compensation

The Dynamic Brightness Compensation feature automatically compensates for processed form images where the brightness of the image differs from that of the form template image. It is always recommended that you a) use the same quality form that you distribute for your form template image, and b) use the same scanner settings, such as brightness, for the form template image and the scanned forms. However, due to real world circumstances that may be beyond your control, the filled in forms returned for processing may have some differentiation in brightness. For example, they may have been photocopied or printed at a lighter density setting. Or they may have been scanned on a different scanner or with different scanner settings than those that were used for the form template. While Dynamic Brightness Compensation cannot compensate for every instance of form differences, it can help you in these situations. If the filled in form image is darker or lighter than the template image, the software tries to still recognize the regions on the form. The Brightness Compensation Threshold determines when to compensate. If the brightness of the filled in form image is more than the specified percentage lighter or darker, Remark Office OMR attempts to compensate for it when producing data. The default percentage is 5%. Use a lower percentage to make the software more sensitive to lightness/darkness changes (compensating more frequently). Use a higher percentage to make the software less sensitive to lightness/darkness changes (allowing larger differences in image brightness before compensating).

Before adjusting brightness compensation, remember to determine whether you want to adjust it for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use Dynamic Brightness Compensation

1. Mark the checkbox for **Dynamic Brightness Compensation**.

2. Choose the desired **Brightness compensation threshold** (5% is the default) as previously described.

3. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.

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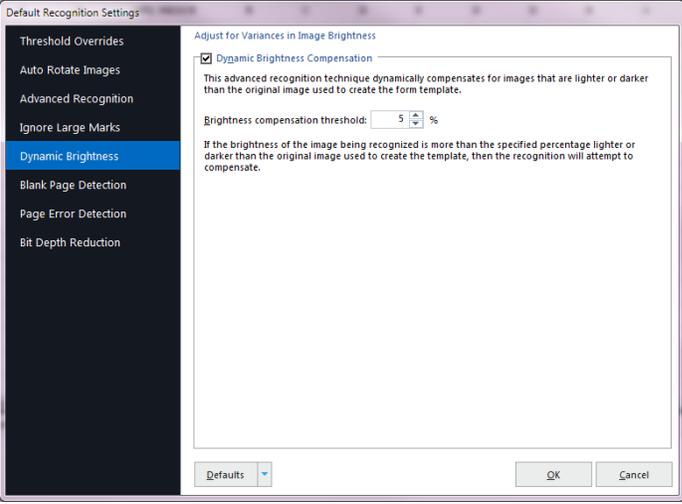
Recognition Settings - Blank Page Detection

The Blank Page Detection option allows you to automatically detect when a blank page is scanned and remove it from the recognition process. For example, suppose you have the duplex option turned on for your scanner but are scanning a single sided form. Using Blank Page Detection, the backsides that the duplex scanner picks up are ignored. Or, if a blank page is accidentally scanned with valid pages, it is ignored. This feature is also useful if your form has an odd number of pages (e.g. three double sided pages). You do not have to create a blank backside in the form template; you can simply ignore the blank pages.

The Blank Page Fill Threshold determines how much of the page must be filled in order for it to be ignored. The default setting is 10%, meaning that if the page's fill percentage is less than 10% of the template's lowest fill percentage the page is ignored. Use a lower percentage to require less fill on the page in order for the page to be considered blank (less sensitive). Use a higher percentage to require more fill on the page in order for the page to be considered blank (more sensitive).

Before adjusting blank page detection, remember to determine whether you want to adjust it for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use Blank Page Detection

1. Mark the checkbox for **Ignore Blank Pages**.

2. Choose the desired **Blank page fill threshold** (10% is the default) as previously described.

3. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
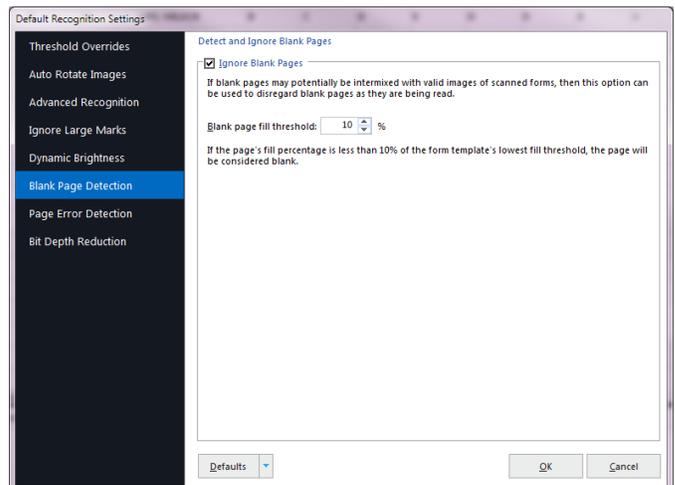
Recognition Settings - Page Error Detection

The Page Error Detection option allows you to queue pages that contain many errors for later review. If a page contains more OMR or barcode errors than the threshold you have set, the page's image is placed in the Unrecognized Images Queue. You can then review all of the images in the queue and decide whether to keep or discard them.

- **Note:** Multiple response (green cells) and blank response (yellow BLANK cells) errors are not part of the error percentage used for detecting page errors. Page errors are recognition errors where the OMR region or barcode simply could not be read.

Use the Page Error Threshold to set how much of the page must contain errors before it is put in the unrecognized images queue. The default setting is 40%. Use a lower percentage to require fewer errors on the page before the image is sent to the unrecognized images queue. Use a higher percentage to require more errors on the page before the image is sent to the unrecognized images queue.

Before adjusting page error detection, remember to determine whether you want to adjust it for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use Page Error Detection

1. Mark the checkbox for **Page Error Detection**.

2. Choose the desired **Page error threshold** (40% is the default) as previously described.

3. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
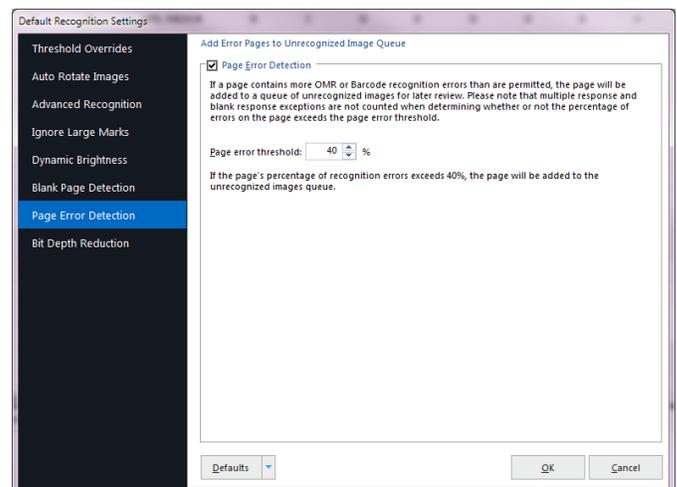
Recognition Settings - Bit Depth Reduction

When using color or grayscale images with Remark Office OMR, they must first be converted to black and white behind the scenes before they can be properly recognized. The software has to figure out which pixels are black and which are white.

- **Tip:** A pixel is the smallest single component of a digital image. Therefore a single image is made up of many pixels.

Remember that if you use black and white native images, this conversion does not need to happen; this is why we recommend using black and white images to reduce the processing load whenever possible.

Generally the software can do this conversion automatically. However, if the standard conversion produces images that are too light or too dark, you can use the Bit Depth Reduction settings to fine tune the conversion process. There are individual settings for black and white conversions.

Use the Black Bit Depth Conversion Threshold to adjust the thresholds for converting pixels to black. The default setting is 175. Use a lower number to make the image lighter. Use a higher number to make the image darker. For example, using a higher number could help light pencil marks appear darker and aid with recognition of those lighter marks.

Use the White Bit Depth Conversion Threshold to adjust the thresholds for converting pixels to white. The default setting is 225. Use a lower number to make the image lighter. Use a higher number to make the image darker. For example, using a lower number could help erasures become less visible during processing.

Before adjusting thresholds, remember to determine whether you want to adjust them for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use Bit Depth Reduction

1. Mark the **Enable Black Bit Depth Conversion Threshold** checkbox to adjust the black threshold.

2. Choose the desired threshold, as described previously (175 is the default). You may need to try a few different thresholds before you get it just right for your form.

3. Mark the **Enable White Bit Depth Conversion Threshold** checkbox to adjust the white threshold.

4. Choose the desired threshold, as described previously (225 is the default). You may need to try a few different thresholds before you get it just right for your form.
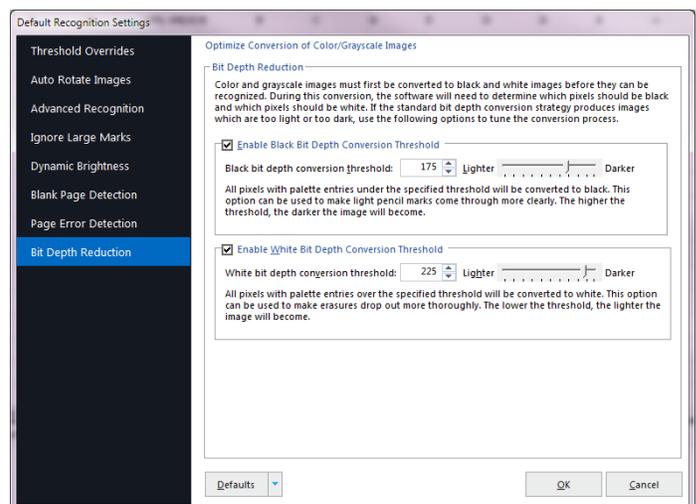
5. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.

Recognition Settings – Image Processing Options

When importing images into Remark Office OMR, there are recognition settings you can adjust should certain problems occur.

Invert: Use the Invert option to correct an image that appears in reverse: black background with white text. The default setting is No. You only need to adjust this setting if your image comes in reversed.

Deskew: Use the Deskew option to correct an image that is crooked. The default setting is off. You only need to adjust this setting if your image comes in crooked.

Despeckle: Use the Despeckle option to correct an image that has specks on it. Specks are typically caused by colored paper, shading on the form, using a dark brightness setting on your scanner or a dirty scanner. You can also specify the pixel size to despeckle. The higher the number, the more despeckling is applied (e.g. for large specks). The default setting is off. You only need to adjust this setting if your image comes in with speckles.

Flatten: If you are reading digitally filled PDF files, you must turn on this checkbox. Flattening the PDF forces the data from the fillable items, such as bubbles and checkboxes, to be included in the PDF file.

Before adjusting image options, remember to determine whether you want to adjust them for the software in general or just the active template, as described in the Recognition Settings Overview. Then click **Tools|Recognition Settings** and make your selection.

To use the image processing options

1. Under **Tools|Recognition Settings|Image Pre-Processing**, mark the checkboxes for the items you wish to use, based on the descriptions above. You may also access these settings from the Read window when processing images.

2. Click the **OK** button.

The adjusted settings apply to your next Read operation and stay in place until you change them again.
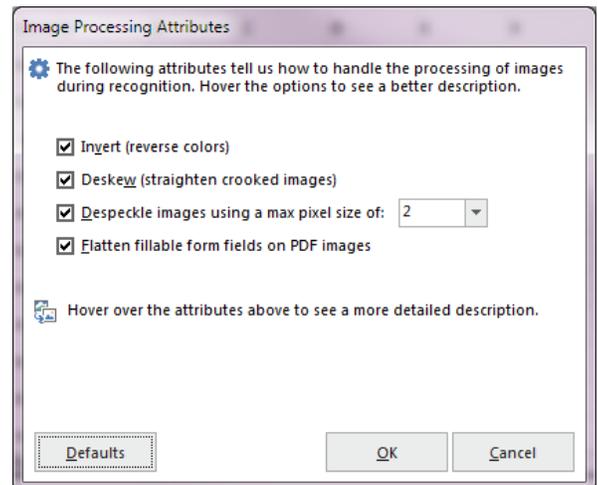
Chapter 9: Remark Office OMR Preferences

Preferences Overview

This section details how to customize the Remark Office OMR software by setting up preferences. Preferences allow you to set the way the software functions by default, which can facilitate your use of the software. Please note that there are also preferences for the Template Editor and Remark Quick Stats.

- Important Note: The Preferences are global software settings. When you make a change to the Preferences, it affects all actions from that point forward. It does not affect anything you have already completed.

To access the Preferences

1. In the **Remark Office OMR Data Center**, select the **Tools** menu and then click **Preferences**.

2. Use the links in the left task pane to access all of the available preferences. Each item is described below and using the links to the left.

3. Once you make a change, click the **Apply** button.

4. When you are finished working with the **Preferences**, click the **OK** button to close the window.

From this point forward, any changes you made take effect. Note that you may click the **Defaults** button at any time to return the settings back to their originally installed state.

Remark Office OMR Preferences – General

General preferences allow you to setup defaults for basic software functions. The following options are available:

| Preference Option	Description
Review Exceptions: Attempt to match typed response to the list	Mark this checkbox so that you can type the first letter(s) of a response into the Response box of Review Exceptions and the software automatically selects the response that begins with those characters. This option applies to questions that employ list box style cells only (Multiple, List, Rank and Boolean OMR regions and Image regions that utilize Database Lookup or qualitative response coding).
Review Exceptions: Play a sound when the review process begins	Mark this checkbox to play a sound when Review Exceptions first starts. This feature is useful as an alert if you are processing forms in an unattended manner.
Review Exceptions: Play this sound when an exception is located	Mark this checkbox to play a sound every time an exception case is located in Review Exceptions. Click the ... button to select a .wav sound file. You may also click the ... button to preview the sound.

Preference Option	Description
Review Exceptions: Clear exceptions after they have been reviewed	Mark this checkbox to remove the color coding for an exception after it has been reviewed. This setting applies when you review grid cells but do not make changes that would automatically remove the exception color (e.g. if a question is legitimately blank, you might leave it as BLANK with the yellow colored cell). By clearing the exceptions, Review Exceptions does not stop on them the next time it is run.
Maximum length for a value in a data grid cell	Enter the maximum number of characters allowed in a data grid cell. You are not able to enter more characters than allowed (e.g. when entering text using a Data Entry Image region). Note that performance may be affected by data grid cells that contain very large amounts of text.
System poll interval during Server Mode (secs.)	Enter the number of seconds in between polls for Server Mode. The software searches for image files in a directory or pages in the scanner's sheetfeeder based on this time interval.
Numeric data value used to represent invalid responses	Enter the value to be used when invalid data are encountered during a data file export. Invalid data is anything that does not match the labels you defined in the template, such as error codes. If you typed a response in a list cell in the grid but it did not match the labels defined, this data would also be considered missing (e.g. "A" is defined in the form template, but you type "a"). The Missing Value is also used when running reports in Remark Quick Stats. The default value is -1.
Numeric data value used to represent blank responses	Enter the value to be used when blank data cells are encountered during a data file export. The Missing Value is also used when running reports in Remark Quick Stats. The default value is -2.
Numeric data value used to represent multiple responses	Enter the value to be used when multiple responses in data cells are encountered during a data file export (and are not allowed). The Missing Value is also used when running reports in Remark Quick Stats. The default value is -3.
Database lookup & replace record limit	The limit on the number of records loaded into the data grid's list when using Database Lookup. If the limit is lower than the number of records in the database no data is loaded. The larger the limit the longer it takes to load the list.

Remark Office OMR Preferences - Folders

Folder preferences allow you to setup the default folders that are used to store image files. If you prefer to store files on a network drive, you can enter that location here (ensure that you have permission to fully access that drive). When you import images using the Read option, Remark Office OMR remembers that location. However, it's still helpful for the software to know where to expect to find stored images. Note that Remark Office OMR uses a 'follow me' folder structure, meaning that it uses the last location you selected when saving and opening files in general (e.g. templates, data). The following options are available:

Preference Option	Description
Image Search Folders	Sets the locations(s) in which images are stored for processed forms and Image region Image Clips. When a cell in the data grid is clicked, the stored image file is displayed in the Image Viewer. The Image Viewer can be used for image-assisted data entry, Review Exceptions and in-cell editing. Use the **Add Folder...** button to add any folders in which you plan to store image files for processed forms. Remark Office OMR searches for these images in the order in which the folders are specified. Use the **Move Up** or **Move Down** buttons to change the search order, and the **Remove Folder** button to remove a folder from the search list. Note that you can store images in any folder when processing forms. However, providing frequently used folders in the Image Search Folders List aids the Remark software in finding images to display whenever a data set is opened.
Active Dictionary	Sets the active dictionary to be used for Spell Checker. Click the down arrow to view any dictionaries that are currently installed on your computer.

Remark Office OMR Preferences - Display

Display preferences allow you to set up aspects of how Remark Office OMR looks. The following options are available:

Preference Option	Description
Shade alternating grid rows	Mark this checkbox and choose a color to shade every other Data Center grid row.
Default row height	Sets the height of the row based on font and screen resolution. 18 is the default but you may set the number larger or smaller according to your preference.
Update the Image Viewer after each image is processed	Mark this checkbox to have the Image Viewer update with a new form image each time a form is processed. The Image Viewer is located beneath the data grid window. Using this option could alert you to issues such as skewed forms and is highly recommended.
Update the Graph Viewer after each image is processed	Mark this checkbox to have the Graph Viewer update with a new graph per question each time a form is processed. The Graph Viewer is located beneath the data grid window. It provides a quick glimpse into your data by graphing the active question.
Use a Custom Font	Custom Font preferences allow you to set up the default fonts to use throughout the application. Mark the Use a Custom Font checkbox to choose a font to use throughout the application, allowing you to customize the software's look. You may choose a character set, font name and font size. You should choose a font that is supported by your operating system. Please note that not all fonts look optimal in the software. You should restart the application after making any font changes.

Remark Office OMR Preferences - Email

Email preferences allow you to set your internal SMTP server or Outlook as your default email program when emailing data and report files out of Remark Office OMR (File|Email). When using Outlook, Outlook opens with your file(s) as an attachment. When using Custom (SMTP), a Remark Office OMR email window opens that utilizes your SMTP server.

SMTP stands for Simple Mail Transfer Protocol and is the Internet standard for transmitting email across networks. It is likely your organization has a running SMTP server already set up. You just need to find out general information about the server. You will need to consult with your network/email administrator to obtain information about your SMTP server.
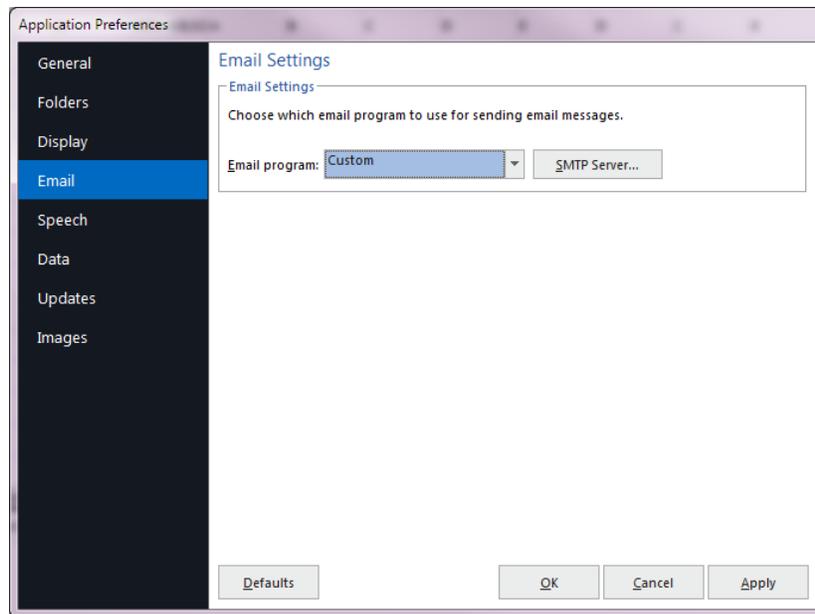
To choose your default email program

1. Select the **Tools** menu, then click **Preferences**, then **Email.**

2. In the **Email** drop-down list, choose **Custom** to use your SMTP server or **Outlook** to use Microsoft Outlook 2007 or greater.

3. If using your SMTP server, click the **SMTP Server** button and put in the settings as described in the table below for your SMTP server.

4. Click the **OK** button to close the **Preferences**.

To set up an SMTP server, please use the following table as a guide to have your administrator provide the proper settings:

Option	Description
SMTP server	This is the name, address or IP address of the mail server.
SMTP port	The SMTP port is usually 25 but may vary with your email server.
Enable a secured (SSL) connection	If desired, use a secure connection by marking the checkbox for Enable a secured (SSL) connection. SSL encrypts data as it is transmitted. Your SMTP server must be configured to use SSL in order for this feature to work.
Use the default credentials of the currently logged in user	If you need to use authentication for your SMTP server, you can enter credentials or use those of the user logged in to the computer. Mark the Use the default credentials of the currently logged in user checkbox to utilize the user's credentials (e.g. the person logged in when sending the emails from Remark Office OMR). Otherwise, continue to the next step to enter specific credentials.
Username and Password	If authentication is required, and you are not using the credentials of the currently logged in user, enter the Username and Password, as supplied by your network/email administrator.
Throttle rate	The throttle rate adds a delay while sending emails. The default setting is 500ms, meaning that one email is sent every 500 ms (in other words, two emails are sent per second). Throttling emails keeps the SMTP server from being overloaded when sending large numbers of emails. Unless you plan on sending hundreds of emails at one time, the default setting of 500 is likely fine.

Remark Office OMR Preferences - Speech

Remark Office OMR includes the ability to use speech recognition when running Review Exceptions. This feature is particularly helpful if you have Image regions on your form that have long comments. Instead of clipping or typing the comments, you can use the Image Viewer on-screen and read the comments into the data grid. You can also use speech recognition to review other data types during Review Exceptions (e.g. actual answer choices from an OMR region).

Speech recognition relies on the Microsoft Windows built-in speech technology. Gravic has no control over the effectiveness of speech recognition. We strongly suggest you train your computer to recognize your voice using the Microsoft speech training options in the Windows Control Panel. If you encounter difficulties with speech recognition, ensure you have a good quality microphone and that you have conducted the speech recognition training. For speech recognition troubleshooting, consult the Microsoft website.

The Speech preference in Remark Office OMR allows tells you the commands you can use when using speech recognition in Review Exceptions:

Next: Moves to the next exception

Previous: Moves to the previous exception

Finish: Ends the review process

You can also click the **Speech Recognition** button to run through Microsoft's training process.
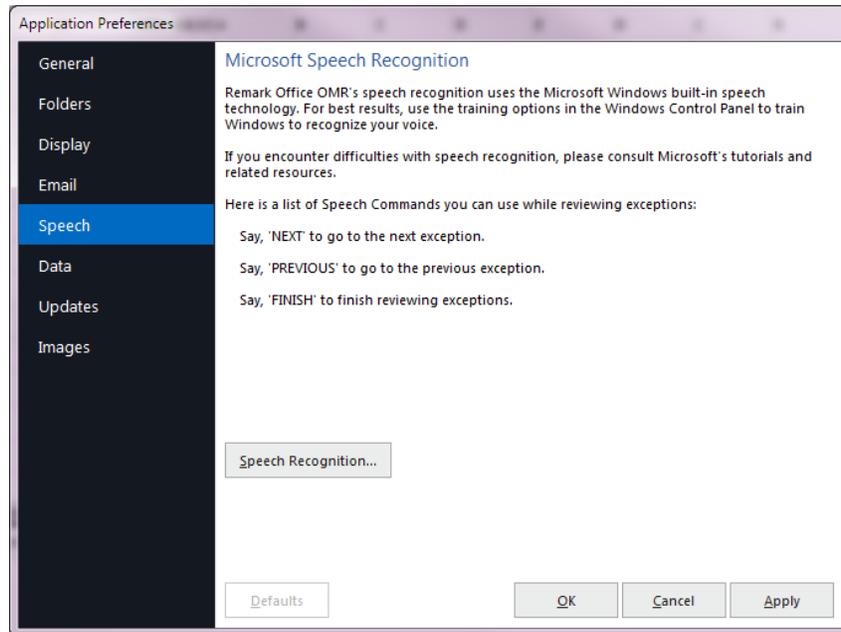
Remark Office OMR Preferences - Data

As changes are made to data in the Remark Office OMR Data Center, they can optionally be logged, allowing you to see what changes were made and who made them. Logging is turned on and off in the Remark Office OMR Preferences. It can only be turned off if you know the password used when turning on the feature. Changes made to the data grid (edits, review exceptions, review duplicates, clipboard, open, save, etc.) are logged in a password protected Access database in the following location:

C:\ProgramData\Gravic\Remark Office OMR\Change logs (note you must have the option to show hidden folders and files on to see this location).

When the database is initially created, it uses the date of creation as the filename. From that point forward, all changes to all data files are stored in that Access file as long as the feature is turned on. Data file types, exception flags and actions are all listed with a numeric equivalent in the database. The additional tables in the database explain each of the numeric values. Once a database reaches 10MB in size, a new database is created the next time Remark Office OMR is opened.

In addition, you can use this area to control whether to enable recovery logging (highly recommended). When enabled, Remark Office OMR will recover any open data in the event of a sudden, unplanned exit of the software (e.g. a power failure).

To turn on logging

1. From the Remark Office OMR Data Center, select the **Tools** menu, then click **Preferences**, then **Data**.

2. Mark the checkbox for **Maintain Data Modification Log**.

3. Enter a password in the **Password** box.

4. Click the **OK** button to close the **Preferences**.

From this point forward, all changes to the data grid are logged.
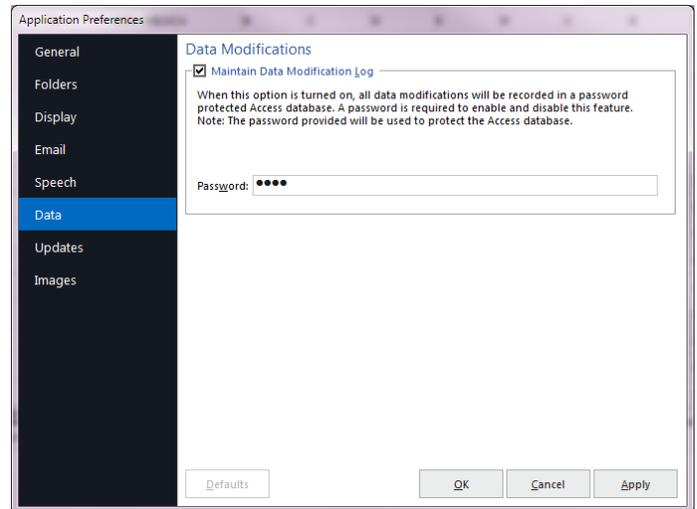
To turn off logging

1. From the Remark Office OMR Data Center, select the **Tools** menu, then click **Preferences**, then **Data**.

2. Enter the password that was set when turning on logging in the **Password** box.

3. Click the **Disable** button.

4. Click the **OK** button to close the Preferences.

From this point forward, all changes to the data grid are not logged. If changes have been logged previously, the Access database still exists.

You can also restrict changes that are made to the data grid. Similar to the "Maintain Data Modification Log" feature, you turn on the data restriction feature by setting a password and turn off the feature by re-entering the same password. If this option is turned on, users will not be able to review data or edit data in the grid.

To restrict data modifications

1. From the Remark Office OMR Data Center, select the **Tools** menu, then click **Preferences**, then **Data**.

2. Mark the checkbox for **Restrict Data Modifications**.

3. Enter a password in the **Password** box.

4. Click the **OK** button to close the **Preferences**.

From this point forward, no changes to the data grid are allowed.
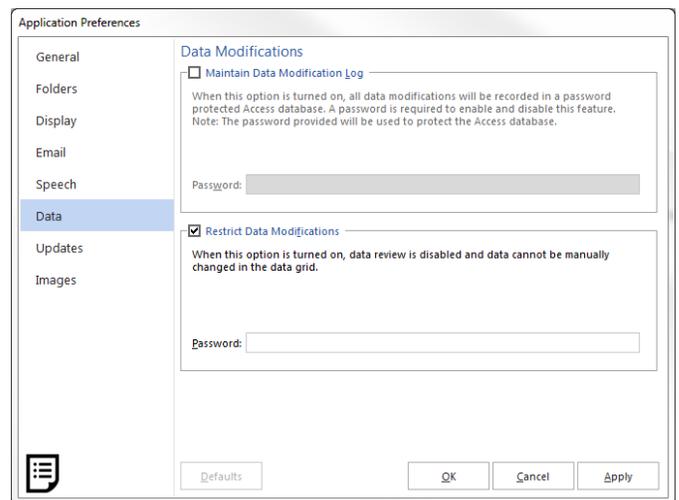
To turn off data modification restrictions

1. From the Remark Office OMR Data Center, select the **Tools** menu, then click **Preferences**, then **Data**.

2. Enter the password that was set when turning on logging in the **Password** box.

3. Click the **Disable** button.

4. Click the **OK** button to close the Preferences.

From this point forward, changes are allowed in the data grid.

To turn off data recovery

1. If you do not want to have Remark Office OMR automatically recover from any sudden closures, deselect the checkbox for Enable recovery logging.

- **Note:** We highly recommend leaving data recovery on so you do not lose any data.

Remark Office OMR Preferences - Updates

Remark Office OMR has the ability to automatically check for software updates. You can check at any time by clicking the Help menu and then choosing Check for Updates. You can also have the software check for an update every time it starts up. When this option is turned on, every time you start the software, it sends information about your current version to the update website and lets you know if there is a newer version of the software available. If an update is available, you are prompted to install it. The Check for Updates window also has the ability to do an immediate check for updates.

- **Note:** Updates are only available to customers with an active Technical Support and Maintenance agreement. If a new update is available but you have not purchased maintenance, you are not prompted to install it. If you are interested in Technical Support and Maintenance, please contact our [sales](#) department.

To automatically check for updates

1. Select the **Tools** menu, then click **Preferences**, then **Updates**.

2. Mark the checkbox for **Check for updates when program starts** to turn on the automatic check for updates.

3. [Optional] If you would like to see if an update is available immediately, click the **Check for Updates Now** link.

4. Click the **OK** button to close the **Preferences**.

The next time the software is started, it automatically checks for an update. If an update is found, and you would like to install it, follow the on-screen prompts. You must have an Internet connection to download the update. If no updates are available you receive a message indicating that your software is up to date.

Please note that in order for the update to install, you need to close Remark Office OMR. You can either install the update as soon as it is downloaded, or continue working and when you close the software, the update will install itself. If the Remark Office OMR Data Center or Template Editor are open, you are prompted to close them. Please save all work before allowing the install to continue.

The Remark Office OMR Automatic Update collects some system configuration data in order to provide you with updates that apply to your installation. This information includes:

- Product Name
- License Key
- Remark Serial Number
- Remark Authentication Code
- Software Version and Build Number
- System Finger Print (same as activation)

Gravic, Inc. is committed to helping protect your privacy. Using the automatic update feature does not collect your name, address, email address, or any other form of personally identifiable information. Your Internet Protocol (IP) address is logged when you connect to the Gravic website, but this address is only used to generate aggregate statistics.
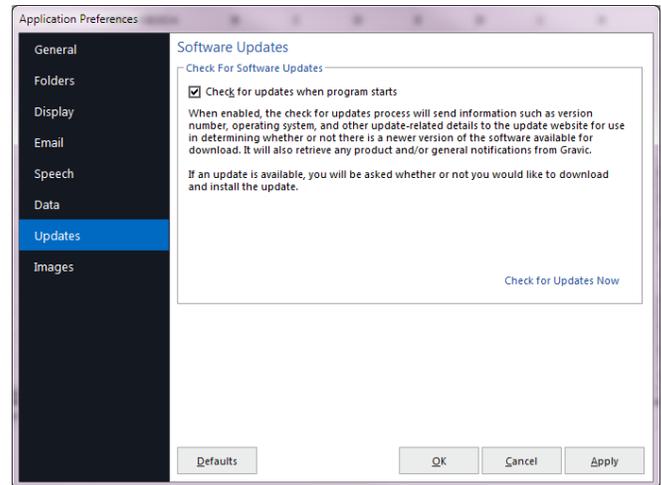
Remark Office OMR Preferences - Images

PDF images are not native image files. However, they can be converted to an image format in order to read scanned forms. The Images settings are used to determine how best to convert these files to the most usable image format so that they both read well and display well (e.g. in Response reports).

To set Image Handling

1. Choose the **Bit Depth**: Bit Depth is the color information stored in an image. The higher the bit depth, the more colors stored. For example, a 1 bit image only shows black and white. Choose whether your image is **Color** or **Grayscale** bit depth.
2. Choose the **Compression**: Compression is used to minimize the size of an image without degrading its quality. Choose from the following options: **None**, **CCITT Group 3**, **CCITT Group 4**, **Run-length encoding**, **JPG**, **LZW** and **Packed bits**. Group 4 creates the most compressed image (smallest file size that take up less space on your computer).
3. Choose the **Resolution**: Resolution is the detail an image holds and is measured in dots per inch (DPI). Higher resolution means more detail (and a larger file size). Choose from the following options: **150 DPI**, **200 DPI** or **300 DPI**.
4. Click the **OK** button to close the **Preferences**.

Application Preferences

Image Handling

Pdf Import Settings

PDF files are not a native image file type; however, they can be converted into an image format for use throughout the application. The settings below will be used to determine the target bit depth, compression, and resolution for converted PDF files.

General
Folders
Display
Email
Speech
Data
Updates
Images

Bit Depth: `Color ▾`

Compression: `LZW ▾`

Resolution: `200 dpi ▾`

`Defaults` `OK` `Cancel` `Apply`

Chapter 10: Automation Control Center

Automation Control Center Overview

Remark Office OMR includes an Automation Control Center that allows you to automate some of the functionality of the software. The Automation Control Center allows you to setup automation files that can be run by another user by simply double clicking a file. You can automate functions such as opening the software, opening a form template, processing forms, saving data, running reports and closing the software. This feature is useful for simplifying tasks for your users.

The Automation Control Center is accessed from the Tools menu in the Remark Office OMR Data Center. It walks you through the steps to set up a REZ file. Once that file is created, it can be double clicked to launch the associated actions on a computer running Remark Office OMR. You can also call this file from other applications (this is outside the scope of Remark Office OMR). Ensure that the folders and files you set up in the REZ file are universally accessible to your Remark users.

- **Tip:** The Automation Control Center allows you to automate basic features of the software. These features are described in the main Remark Office OMR user's guide and elsewhere in this file. Therefore, each feature will not be presented in detail here. You can learn about specific software features by locating them in the table of contents of this file.

To create/modify a REZ file

1. Select the **Tools** menu and then click **Automation Control Center**.

2. Use the sections below to set up your REZ file.

3. Once everything is set up, save the file. You have the following options:

    - Click the **Save** button to save the REZ file, but the Automation Control Center remains open for further modifications.

    - Click the drop-down arrow on the **Save** button and choose **Execute**. The REZ operation executes in a new instance of Remark Office OMR. The Automation Control Center remains open for you to make further modifications or save your REZ file. Nothing is saved.

    - Click the drop-down arrow on the **Save** button and choose **Save and Execute**. You are prompted to save the REZ file first, and then the operation executes in a new instance of Remark Office OMR.

Once the REZ file is created, provide it to Remark users by placing it on the computer or embedding it into your own application.

Automation Control Center - General

The first step in the Automation Control Center allows you to setup general software options. Once you make your selections, click the **Open** link in the left task pane to continue.


Option	Description
Load	The Load button provides two options: **Load:** Loads a previously saved Automation file so that you can make changes or execute it. **New:** Allows you to begin building a new Automation file (resets the Automation Control Center and all changes made previously are lost).
Window State	Configures how the main Remark Office OMR window appears when the software is launched: *Normal:* Displays the software in its default state. *Minimized:* Leaves the software minimized on the desktop so that the user can easily continue doing other things while processes are being executed. *Maximized:* Displays the software full screen. *Hidden:* Runs the software in a hidden state so that the user does not see the software running. Most prompts are suppressed.
Hide the splash screen	Mark this checkbox to hide the splash screen that displays when the software is first launched.

Option	Description
Use default folders when saving	Mark this checkbox to have stored images saved to the folders specified in the software preferences.
Display the image scanner configuration on startup	Mark this checkbox to show the scanner properties window when the software is launched so that the user can configure the scanner.
Automatically exit after completing execution	Mark this checkbox to have Remark Office OMR automatically close once it has executed all of the parameters in the automation file.
Launch another automation file upon completion	Mark this checkbox to launch another automation (REZ) file after this one completes. Use the ellipse (...) to choose that file. This feature allows you to chain automation files together to run multiple operations automatically.

Automation Control Center - Open

The Open window allows you to select which templates, data files and analysis definition files to open automatically. In addition, you can set up data saving options here. Once you make your selections, click the **Scan** or **Read Images** links (depending on whether you will be using a directly connect TWAIN scanner or importing images into the software) in the left task pane to continue.

Option	Description
Template	Click the folder to select a form template to open automatically. You may open form templates (OMR), batch files (OBF), Remark Office Archive files (ROA/ROX) or Remark (RMK/RMX) data files. When opening ROA/ROX and RMK/RMX files, the associated form template file opens with the data file automatically (note that the files must be in the same location as specified when saving the data in order for this to work).
Analysis File	Optionally, click the folder to open an existing answer key or survey definition file. This file is executed after forms are processed. Grading and Tabulation parameters are specified in the last step of the Automation Control Center. You have several options for the use of this file:

1) If using Quick Grade or Quick Survey, the file selected in this step is used to produce the results.
2) If using Advanced Grade, do not specify grading options in the last step of the Automation Control Center. Instead, if an answer key file is specified here in the automation file, you can run Advanced Grade manually (e.g. click the toolbar button, task pane option or menu option) and the specified answer key file is opened automatically. You may click Grade to grade the data or further configure the selected answer key file.
3) If using Advanced Survey you need to run it manually (e.g. click the toolbar button, task pane option or menu option) and then the file specified here is automatically loaded into Advanced Survey. You may click Analyze to tabulate the data or further configure the selected survey definition file. |
| Open Data | Click the folder to select a data file to open automatically. You may open any one of the supported file formats. When opening ROA/ROX and RMK/RMX files, the associated form template file opens with the data file automatically (note that the files must be in the same location as specified when saving the data in order for this to work). When opening data prior to processing forms, the newly processed data is added onto the end of the data file. You most likely want to overwrite the entire data file once you process additional forms in this case. |
| Save Data (on Exit) | Click the folder to select a data file for saving the data after forms are processed. You may choose an existing file or enter a new file name and format. Data from any open form templates is saved when the software is closed. This is the most common way to save data using an automation file. |

| Option	Description
Overwrite	Mark this checkbox to overwrite the data file(s) specified each time the automation file is run.
Add	Click the **Add** button to add another row where you may make further selections (e.g. open another form template, save to another data file, etc.).
Delete Row	Click the **Delete Row** button to remove the currently selected line of parameters.
Show Organize & Save when saving data on exit	Mark this checkbox to show the Organize & Save window if saving data when exiting the software. This feature allows you to customize the names used for data files and storage folders by utilizing data values from the active data set.

Automation Control Center - Scan

The Scan window allows you to select the parameters to use for scanning forms with a TWAIN scanner directly connected to the computer running Remark Office OMR. Once you make your selections, click the **Image Archiving** link in the left task pane to continue.
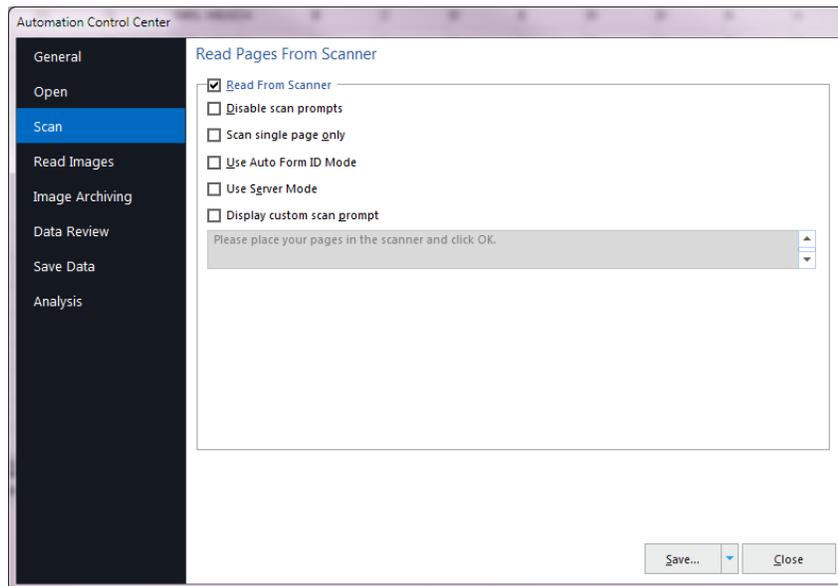
Option	Description
Read from Scanner	Mark this checkbox to use the scanner to scan forms once a form template is opened.
Disable scan prompts	Mark this checkbox to disable any scanning prompts. Scanning begins without any interaction from the user. When the ADF is empty, scanning simply stops with no additional prompts.
Scan single page only	Mark this checkbox to only scan a single page placed in the scanner.
Use Auto Form ID Mode	Mark this checkbox to scan in Auto Form ID mode. This feature only applies to form templates that have Auto Form ID regions on each page, allowing you to scan multiple forms at one time. Remark Office OMR automatically matches the scanned form to the appropriate form template based on the form ID it reads.
Use Server Mode	Mark this checkbox to scan in Server Mode. Server Mode provides unattended scanning where the scanner is polled for forms at user-specified intervals. Any forms found in the scanner are then scanned and data produced.
Display custom scan prompt	Mark this checkbox to enter your own customized scanning prompt. Enter the text you wish to display when scanning begins in the box below the checkbox.

Automation Control Center - Read Images

The Read Images window allows you to specify parameters for processing stored image files (e.g. if you scan forms on a multi-function peripheral and then save them as image files for Remark Office OMR to process). Once you make your selections, if you chose the option to 'Archive images after processing', click the Image Archiving link in the left task pane to continue. Otherwise, click the Data Review link in the left task pane to continue.
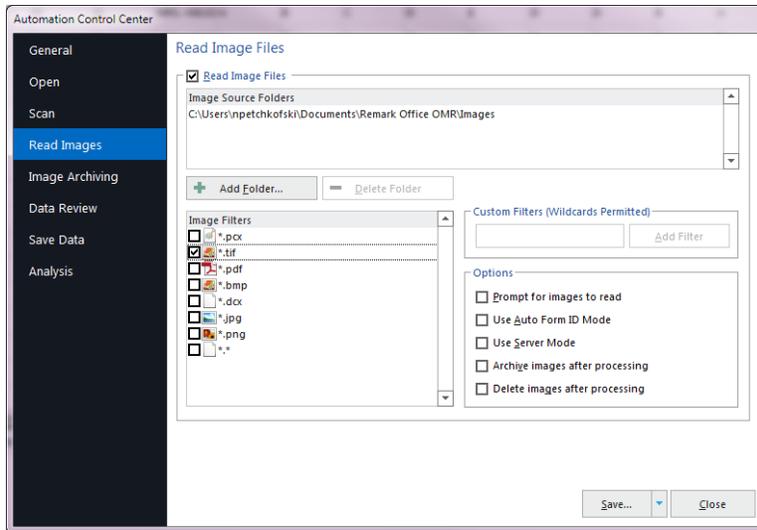
Option	Description
Read Image Files	Mark this checkbox to process images that you have already scanned and saved as image files on your computer or network.
Add Folder	Click the **Add Folder...** button to add a search folder to the Image Source Folders box. Any folders listed in this box are used to find image files to process.
Delete Folder	Click the **Delete Folder** button after selecting a folder in the Image Source Folders box to remove it from the search when processing image files.
Image filters	Mark the checkboxes corresponding to the types of images that you wish to process. Only images corresponding to these file types are read; all others are ignored (TIF and PDF are most common). If you select *.* any supported images found in the search folders are processed.

Option	Description
Custom filters	Use the **Custom Filters** box to refine your Image Filters list. Image filters represent the types of image files you wish to process. You can specify specific cases here by using wildcards. For example, if you wanted to process all images that start with "English 101" you could enter "English 101*.*" as a custom filter. Only images that start with this text are processed. Type the custom filter into the **Custom Filter** box and then click the **Add** button. The filter is added to the **Image Filters** list and automatically selected. Note that when specifying image types, an asterisk (*) can be used to indicate any number of characters (e.g. .jp* would allow any number of characters after the "jp" such as .jpg and .jpeg), and the question mark (?) can be used to indicate any single character in addition to the specified file extension (e.g. .jp? would only allow three character extensions such as .jpg). When using a custom filter, it is executed separately from any other filters you may have applied, so make sure you include the extension type if needed. For example, do not turn on the generic PDF filter and add a wildcard such as "English101" or else you will get all PDFs *and* all files beginning with "English101. Instead, if you want English101 PDF files, specify "English101.pdf".
Prompt for images to read	Mark this checkbox to pause automation and allow the user to choose the images they want processed. This allows for more flexibility in the images chosen, as opposed to simply picking a type and location and processing all images found.
Use Auto Form ID Mode	Mark this checkbox to process images in Auto Form ID mode. This feature only applies to form templates that have Auto Form ID regions on each page, allowing you to scan multiple form types at one time. Remark Office OMR automatically matches the scanned form to the appropriate form template based on the form ID it reads. Remark Office OMR automatically matches the scanned form to the appropriate form template based on the form ID it reads.
Use Server Mode	Mark this checkbox to process images in Server Mode. Server Mode provides unattended image processing where the specified folders are polled for images at user-specified intervals. Any images found are then processed and data produced.
Archive images after processing	Mark this option to archive the images in a different format and/or location after they have been read. This option allows you move the images to a more permanent folder for storage and/or change formats. Configure the archive options in the Image Archiving window.

Option	Description
Delete images after processing	Mark this checkbox to delete the images once they are processed. Note that using this feature will permanently delete the images from your computer. This features is particularly important if you use Server Mode. If the images remain and you stop and start Server Mode, the images will be processed again. You may wish to write a batch file that moves the images to another location once they are processed or use the archive option to move them elsewhere after processing.

Automation Control Center - Image Archiving

The Image Archiving window allows you to select the parameters to use when saving images, either from the scanner or when archiving images that are imported. Once you make your selections, click the **Data Review** link in the left task pane to continue.

Option	Description
Begin image names with	Enter a file base name that the software can use to name the images stored for this form template as forms are scanned. You may use any name you like. We suggest using something that identifies to you that the images belong to a certain form (e.g. form template name). The images that are stored all begin with this base name and then have the page number (if larger than a one page form template), date and time appended to them to keep track of the various images. If you leave the Begin image names with option blank, your images only have the page number (if applicable), date and time as the name of each image.
Target folder	Click the ellipsis (...) to select a location in which to store the images for this form. You may use the default folder for images (stored in the software's preferences) or select a different folder.
Name Builder	The Name Builder button allows you to customize the image base names and storage folders for the scanned image files by pulling in data values from the active data set. In the **Image Base Name** area, you may choose to add a region from the processed data to the image base name. Choose the region from the drop-down list and then click the **Insert Data into Base Name** button. If you already added a region on the previous screen, the Name Builder allows you to add additional regions. For example, if processing tests, you could add a Student ID that is being collected from the form so that your processed images all have the Student ID number in them. In the **Destination Folder** area, you may choose to add a region from the processed data to the folder structure that holds the processed images. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. For example, if processing tests, you could add a Test ID that is being collected from the form so that each student's form images are stored in a folder containing the Test ID. In the Name Builder box, click the **OK** button to return to the Automation Control Center.
Save image as	Select an image type to use for storing images. The choices are: PCX/DCX, PDF, TIF or JPG.
Compression level	When saving to the PDF or TIF formats, you can choose the compression rate: Uncompressed, Group 3, Group 3 2d, Group 4 and LZW. Group 4 creates the most compressed (smallest file size) image.

| Option	Description
Save images in a subfolder based on the form template's name	Mark this checkbox to have Remark Office OMR automatically create a folder in which to store these images. The folder name will be the name of the form template and the folder will be created in the folder you have selected in the Image target folder box.
Save multi-page form templates as multi-page images files	Mark this checkbox if you are scanning with a multi-page form template and would like all of the images for one complete form saved as one image file.

Automation Control Center – Data Review

The Data Review window allows you to specify whether to review exception cases during form processing and which cases to review. Once you make your selections, click the **Save Data** or **Analysis** links in the left task pane to continue.

Option	Description
Review Exceptions	Mark this checkbox to activate the [Review Exceptions](#) feature during form processing (scanning or reading image files). When selected exception cases are found, processing stops and you are required to take action (either correct the exception or continue the processing without correction). It is not common to stop the process to review exceptions. The Review Exceptions process can also be launched after forms are processed. The following exceptions are available: • Multiple Responses • Blank Responses • Recognition Errors • Image Regions • Database Lookup Regions • Barcode Regions • OCR Regions • Repeated Rank Responses • Required items
Review after processing forms	Mark this checkbox to have Review Exceptions start after all of the images are processed. Using Review Exceptions after processing images means that the processing does not stop for any exceptions. Instead you use Review Exceptions post-processing to clean the data.
Review unrecognized images as they occur	Mark this checkbox if processing forms with Form, Page or Respondent Tracker IDs. If an image cannot be matched to its form template, form template page or respondent, processing stops and you are able to identify the form, page or respondent and then resume processing.
Review unrecognized images after processing	Mark this checkbox if processing forms with Form, Page or Respondent Tracker IDs. If an image cannot be matched to its form template, form template page or respondent, you are able to identify the form, page or respondent after all of the forms have been processed.

Automation Control Center – Save Data

The Save Data Options window allows you to specify saving options while forms are being processed. As each page is processed, the data is written directly to the file specified (as opposed to saving after all forms are processed). This feature allows you to send data to an external file right as the forms are processed so that some other action can be taken on the data. Any changes made after processing the forms are not written to this file. Use of this saving option is not common. You typically want to use the Save Data options in the Open window of the Automation Control Center. Once you make your selections, click the **Analysis** link in the left task pane to continue.
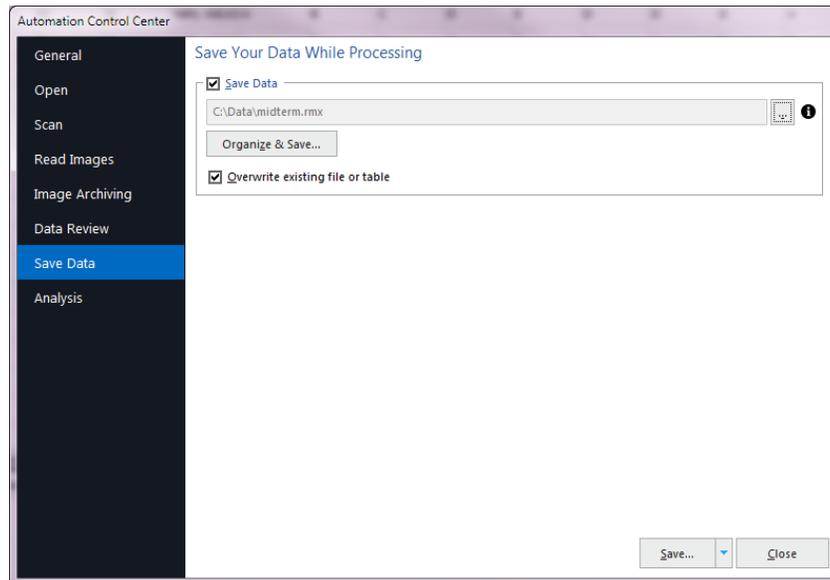

Option	Description
Save Data	Mark this checkbox to save all data collected to one data file. Click the ellipsis (...) to select an existing data file or enter a new file name. If you choose an existing file, you are prompted to overwrite or append to the file each time.

Option	Description
Organize & Save	The Organize & Save button allows you to further customize how data files are named and stored. In the **File base name** area, you may choose to add a region from the processed data to the file base name. Choose the region from the drop-down list and then click the **Insert Data into File Name** button. For example, if processing tests, you could add a Student Name field that is being collected from the form so that data file names all begin with the students' names.

In the **Destination folder** area, you may choose to add a region from the processed data to the folder structure that will hold the data files. Choose the region from the drop-down list and then click the **Append Data Onto Folder Path** button. For example, if processing tests, you could add teacher name and student name fields that are being collected from the form so that each student's data is stored in a folder containing the teacher's name and then a subfolder containing the student's name.

In the Table name area, you may choose to add a region from the processed data to the table base name if using a database or spreadsheet format. Choose the region from the drop-down list and then click the **Insert Data into Table Name** button. For example, if processing tests, you could add a Test Name field that is being collected from the form so that the table name contains the test name. |
| Overwrite existing file or table | Mark this checkbox to overwrite the selected data file each time the Automation Control Center file is executed. |

Automation Control Center - Analysis

The Automation Control Center can produce reports using Remark Quick Stats. You may run grade or survey operations, as well as save and export reports. Once you have configured your analysis options, you can [save](#) the REZ file.

- **Note:** To learn more about Remark Quick Stats in general, please see the Remark Quick Stats user's guide installed with your software.

Option	Description
Analyze Data	Mark this checkbox to run analysis on your data.
Analysis type	Choose Quick Grade, Quick Survey, Advanced Grade or Advanced Survey from the list to automatically launch this type of analysis.
Load Report Preferences	Allows you to select a set of Remark Quick Stats preferences that you want to use for this operation. These preferences may be exported from a copy of Remark Quick Stats so that they may be used here. If your copy of Remark Quick Stats is already using the preferences you desire for this report, you may skip this option.
Save data	Mark this checkbox to save the Remark Quick Stats data as an RQS file for reuse within Remark Quick Stats. Then click the ellipsis (...) to choose a location in which to save the file.
Export Excel reports	Mark this checkbox to export the entire set of reports to the Excel format.
Export gradebook	Mark this checkbox to export the grade results to a gradebook file. Then click the ellipsis (...) to choose the gradebook type and a location in which to save the file.

Option	Description
Export test item data	Mark this checkbox to export the grade results to a test item data file. Then click the ellipsis (...) to choose the file type and a location in which to save the file.
Export data & grade results	Mark this checkbox to export the data and grade results to a file. Then click the ellipsis (...) to choose a file type and a location in which to save the file. If you wish to overwrite an existing file, mark the checkbox for **Overwrite existing file or table**. If you wish to save the numeric equivalents for the data set, mark the checkbox for **Save numeric equivalent**. If you wish to save the learning objectives in a row based file (each learning objective per student is a data record), mark the checkbox for **Save row-based learning objectives**.
Gradebook Options	Click the **Gradebook Options** button to set parameters specific to the gradebook export you have chosen.
Generate Report / Batch	Click the ellipsis (...) to choose the individual report (.rpx) or report batch file (.rbwx) you wish to generate. Report batches are created in Remark Quick Stats using the Report Batch feature. This feature allows you to generate, print and/or export multiple reports without having to select each one individually. Note: If you select a report batch, the exporting and printing options are disabled, as these options are setup in the batch file.
Export Report	Click the ellipsis (...) to choose a file type and location to which to export the report for individual reports.
Print	Mark this checkbox to print the report once it is generated.
Add/Delete Row	Click the **Add** button to add another row where you may make further selections (e.g. run another report). Click the **Delete Row** button to remove the currently selected line of parameters.