



# Operation Guide

Version 1.6

Supports Windows XP and Vista

Requires ESRI ArcMap® Software version 9.2 or greater

## Terms of Use

This manual and the software described herein are furnished under license, and are subject to a license agreement. The software may be used only in accordance with the terms and conditions of the agreement.

No part of this manual may be reproduced or transmitted in any form or by any means electronic, mechanical, or otherwise, including photocopying and recording – without prior written permission of Wind Environmental Services, LLC.

We have made every effort to ensure the accuracy of the material provided herein; however, the publishers and authors assume no responsibility whatsoever for the uses made of this material or for decisions based on its use. Further, we make no warranties, either expressed or implied, regarding the contents of this product or its fitness for any particular purpose. Neither the publisher nor anyone else who has been involved with the creation, production, or delivery of this material shall be liable for any reason.

If you have any comments or suggestions concerning this manual, please forward them to Wind Environmental Services, LLC. Information in this manual is subject to change without notice.

# Table of Contents

<b>INTRODUCTION TO WIND IMAGE™ FOR ARCMAP® .....</b>	<b>4</b>
<b>WIND IMAGE™ INSTALLATION, LICENSING AND REGISTRATION.....</b>	<b>4</b>
INSTALLING WIND IMAGE™ ON A WINDOWS® MACHINE .....	4
REGISTERING WIND IMAGE™ .....	5
<b>WIND IMAGE™ WORKFLOW OVERVIEW.....</b>	<b>7</b>
EXAMPLE WORKFLOW .....	7
<b>HOW TO USE WIND IMAGE™ .....</b>	<b>8</b>
WIND IMAGE™ APPLICATION COMPONENTS – ILLUSTRATED .....	8
<i>Wind Image Toolbar</i> .....	8
<i>The Wind Image™ Main Application Window</i> .....	8
<i>Main Application Menus</i> .....	9
<i>Create Feature Class or ESRI® shp file from Geotagged Imagery Window</i> .....	9
<i>Wind Image™ Editor</i> .....	10
<i>Editor Menus</i> .....	10
<i>Wind Image™ Editor – EXIF Data Display Panel</i> .....	11
<i>Wind Image™ EXIF Editor</i> .....	12
RECORDING GEOTAGGED IMAGERY – GUIDANCE & RECOMMENDATIONS.....	12
LOAD IMAGES INTO WIND IMAGE™ .....	13
<i>About Loading Images</i> .....	13
<i>How to Load Images into Wind Image™</i> .....	13
PREPROCESS YOUR IMAGES .....	14
<i>About Preprocessing Your Images</i> .....	14
<i>Using the Wind Image™ Editor</i> .....	14
GENERATE IMAGE-INTEGRATED FEATURE CLASSES OR ESRI® SHP FILES .....	20
<i>How to Generate an Image-Integrated Feature Class or ESRI® shp file</i> .....	20
<i>How to Append to an Existing Image Integrated Feature Class</i> .....	22
IMPORT A RICOH TRACKLOG .....	22
<i>About Importing a GPS Tracklog</i> .....	22
<i>How to Import a GPS Tracklog</i> .....	22
DYNAMICALLY VIEW IMAGES IN ARCMAP® .....	24
<i>About Dynamically Viewing Images in ArcMap®</i> .....	24
<i>How to Dynamically View Images in ArcMap®</i> .....	24
<i>How to Open Wind Image™ Editor from the ArcMap® Interface</i> .....	24
MAP YOUR IMAGES .....	25
<i>How to Convert Image Thumbnails to Graphics</i> .....	25
<b>ADDITIONAL RESOURCES .....</b>	<b>26</b>

# Introduction to Wind Image™ For ArcMap®

Thank you for purchasing a copy of Wind Image™ For ArcMap®

The Wind Image™ extension for ArcMap® provides a set of advanced tools that speed the integration of geotagged imagery within ArcGIS® by automating the conversion of raw geotagged images into **image-aware feature classes**<sup>1</sup> that display within ArcMap®. During the conversion process, Wind Image™ automatically creates a point at the geotagged location for each image and associates it its image via a hyperlink, or by embedding the image directly into the attribute table of the feature class. Wind Image™ literally allows you to put your images less than one click away within the ArcMap® environment. It has never been easier to map and visualize geotagged image location within the ArcMap® environment.

Wind Image™ also provides a number of additional functions designed to enhance your image collection, mapping, and sharing efforts. For instance, with Wind Image™ you can graphically edit each image in numerous ways, directly edit EXIF information, load track logs that record travel paths, as well as view and map images within ArcMap® once you have imported them. Wind Image™ also gives you the option to auto-imprint your images with their corresponding coordinates, date, time, and several other useful tags.

Wind Image™ can work with all the major ArcGIS® data formats including Shapefile, Personal Geodatabase®, File Geodatabase®, and ArcSDE® formats.

Wind Image™ For ArcMap® truly is the best way to integrate GPS camera technology, such as the Ricoh 500SE® GPS ready camera, with ESRI ArcGIS® software.

## Wind Image™ Installation, Licensing and Registration

Currently we offer Wind Image™ with single use licensing. This means that you must have one license for each machine on which you want to use it. You must register each copy of the Wind Image™ extension that you install using the instructions under the “Registering Wind Image” section below.

### ***Installing Wind Image™ on a Windows® Machine***

Before you can use the Wind Image™ extension for ArcMap®, you will need to install and register the software. To install the software follow these steps:

1. Insert the Wind Image™ disk media.
2. Double click the new Wind Image™ installation file.
3. Follow the prompts to install.

---

<sup>1</sup> A feature class specifically designed to map the location of images within GIS, record and make accessible information about each image, as well as set up one or more simplified methods for accessing and working with the images directly from a GIS interface.

## Registering Wind Image™

### Request Wind Image™ License File

1. Once you have installed the Wind Image™ extension open ArcMap and click on the Wind Image™ processing application “W” on the Wind Image™ toolbar.  
(Note: If you do not see the Wind Image toolbar right click in the grey area at the top of ArcMap and right click then check the box next to Wind Image.)
2. Click “Cancel” on the “Browse For Image folder” window.
3. Then click “Help” and “Enter CD key”.
4. Next Locate your CD key located inside of your CD case.

<p style="text-align: center;"><b>Wind Image CD Key</b> (Required For Registration) <b>9JWT-1234-DU1A-ABCD</b> See Registration guide for help located on the install CD</p>
--

5. Enter the CD key into the “Enter CD key” dialog box and click “OK” this will take you to the Wind Image™ registration server.
6. Your CD key will be automatically entered into the form next enter all other requested information and click “Next”.



The screenshot shows a web page titled "Purchase or Register Wind Image". It has a "Login" link at the top left. Below the title, it says "You need to login or enter details below to create account." There are input fields for "Login:" and "Password:". Below that, it says "If you have already bought the program and have a CD Key, Enter it here to Register". There are several product listings with quantity fields: "Wind Image for ArcMap (\$199/each) Qty: [ ]", "Wind Image for ArcPad (\$85/each) Qty: [ ]", "Wind Image for ArcPad Upgrade (\$47.50/each) Qty: [ ]", "Wind Image Bundle (\$281.75/each) includes Qty: [ ]", "Wind Image for ArcMap II Qty: [ ]", and "Wind Image for ArcPad Qty: [ ]". Below these are fields for "Name you want to appear in program", "Email Address", "Address", "Address Line 2", "City", "State", "Zipcode", and "Phone". There is a "Next" button at the bottom.

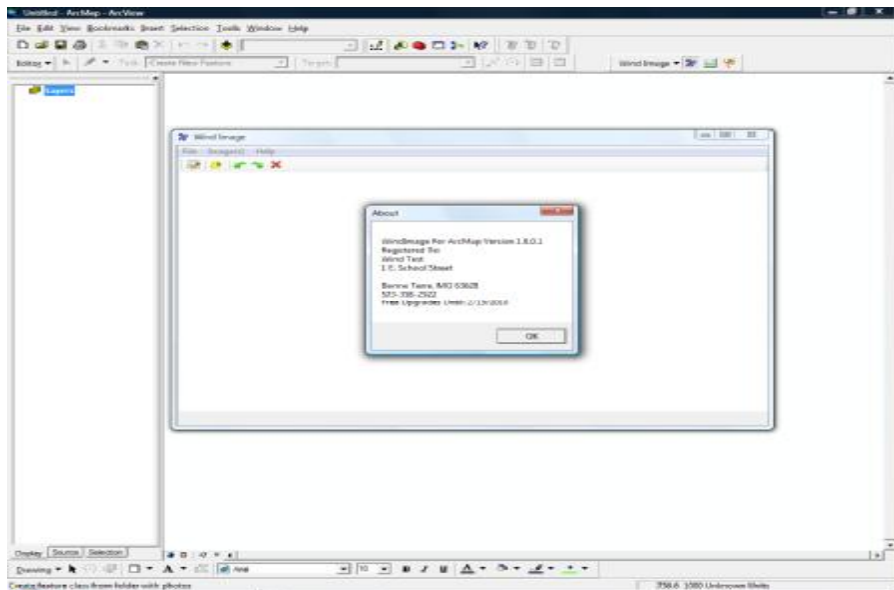
7. Verify your registration information is entered correctly and enter any comments and click “Place Order” to submit your license request.

### Saving Wind Image™ License File From Registration Server

1. To register your software click “Download ArcMap Registration File” and save the file to C:\Program Files\Wind Image
2. You will need to restart ArcMap for the license to become valid.
3. If you cannot save the license file from the server wait until you receive the license code email and follow the steps in the next section.

## Entering Wind Image™ License Code From Email

1. After you receive an email with the Wind Image™ license file continue to the next step.
2. In the email you received with the license file select the license code, then right click and select copy.
3. Open ArcMap and click on the Wind Image™ processing application “W” on the Wind Image™ toolbar.
4. Then click “Help” and “Register”.
5. Now right click in the Register dialog box and select paste. Your code should now be displayed in the “Register” window.
6. Click “OK” to register Wind Image™.
7. You can now verify you have successfully registered Wind Image™ by clicking the “Help” then “About” to view your registration information.
8. Be sure to save the email with you license code in a safe place so you will have it in the event you need to re-install the extension at a later date.



# Wind Image™ Workflow Overview

## *Example Workflow*

While each photo collection project is unique, you will find that most will follow the basic workflow outlined below.

1. **Record geotagged images** with a GPS enabled camera that records coordinate information (and optionally attribute information) in the EXIF header of the images.
2. **Load images** into Wind Image™.
3. **Preprocess your images** with the Wind Image™ Editor to -- for instance, you can add redlining, adjust contrast, apply a filter, modify information stored in the EXIF header, and much more. (Optional)
4. **Generate an image-integrated feature class** using the Wind Image™ extension and the image locations stored in each image's EXIF metadata.
5. **Import a Ricoh Tracklog** with the Wind Image™ GPS tracklog import tool.
6. **Dynamically view images** in ArcMap® using the Wind Image™ show photo tool.
7. **Map your images** with the special mapping tools available in Wind Image™ that streamline the incorporation of images within digital and paper mapping output.

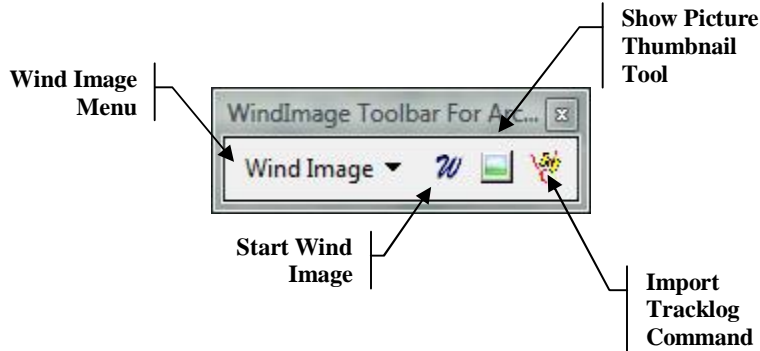
You can use the above workflow as a general guide while you work on your geophytes collection and mapping projects. The following sections will explore each of these steps in further detail. The sections include general explanation, as well as step-by-step instructions and illustrations covering the seven steps outlined above. The sections will thoroughly cover the wide array of functionality that comes with the Wind Image™ extension for ArcMap®.

# How to Use Wind Image™

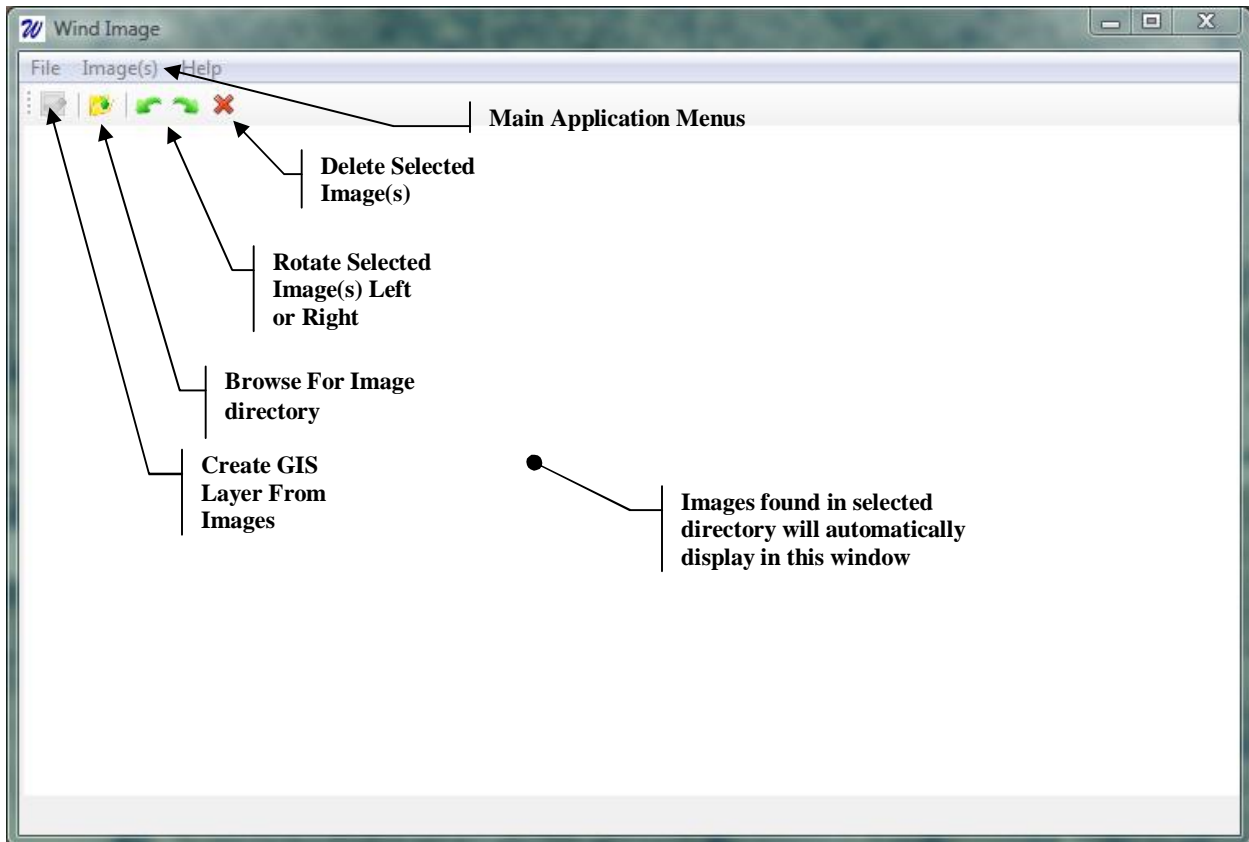
## Wind Image™ Application Components – Illustrated

The following diagrams illustrate the various application components of the Wind Image™ extension for ArcMap®. You may find it helpful to refer back to the diagrams in this section as you try to understand topics and instructions discussed elsewhere in the manual.

### Wind Image Toolbar

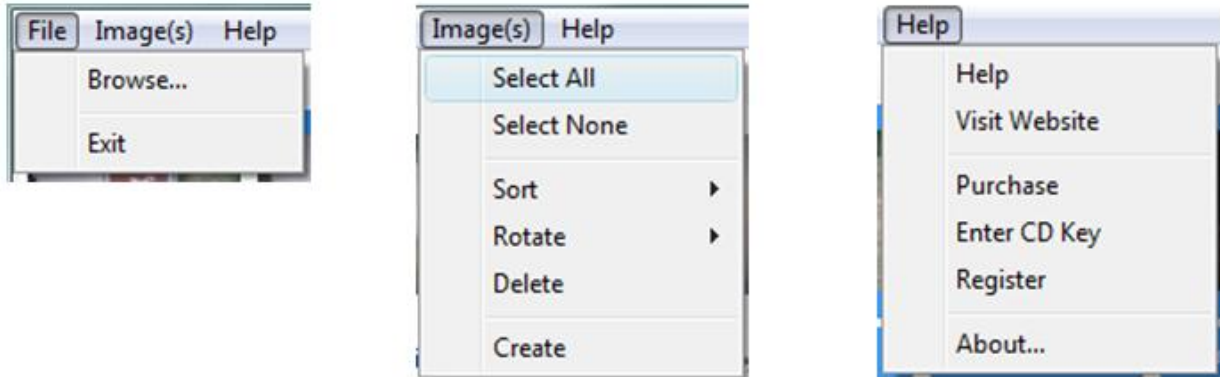


### The Wind Image™ Main Application Window



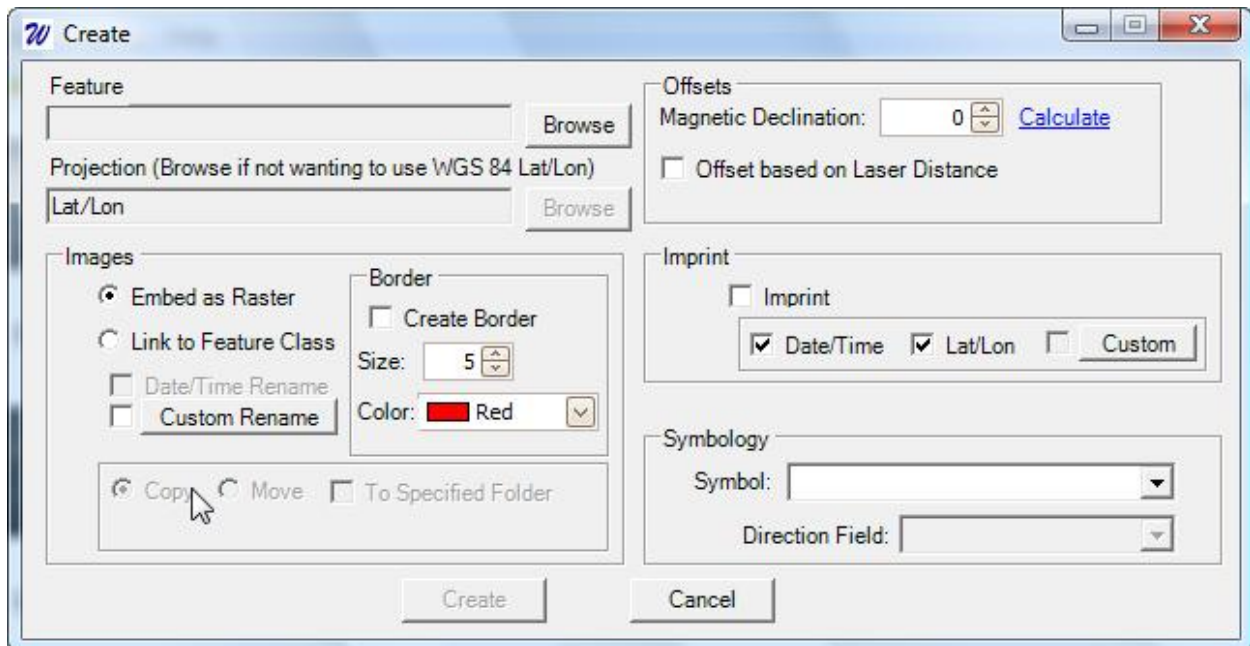


## Main Application Menus



## Create Feature Class or ESRI® shp file from Geotagged Imagery Window

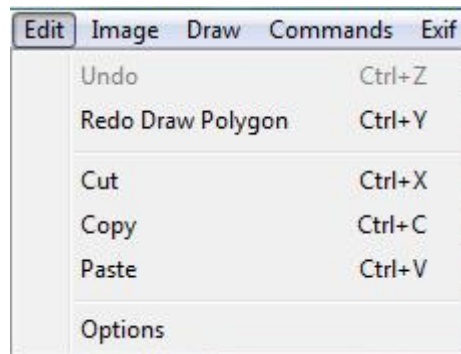
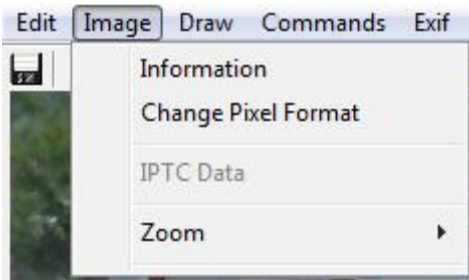
You will use this window to generate a new feature class, or to append new image point features to an existing feature class. In addition you can also generate ESRI® shp files in this window. You can launch it from the Wind Image™ main application window by clicking the create command button, or by selecting create from the “Image(s)” menu.

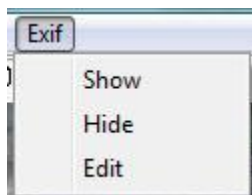
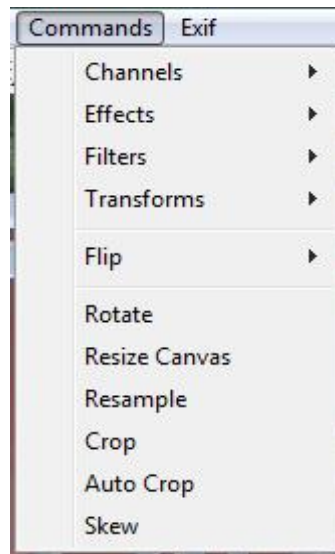
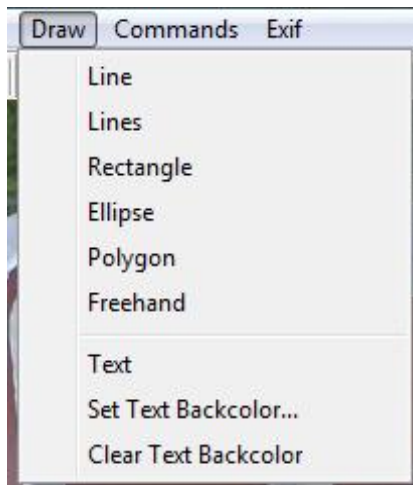


# Wind Image™ Editor



## Editor Menus





## Wind Image™ Editor – EXIF Data Display Panel

**Exif Menu**

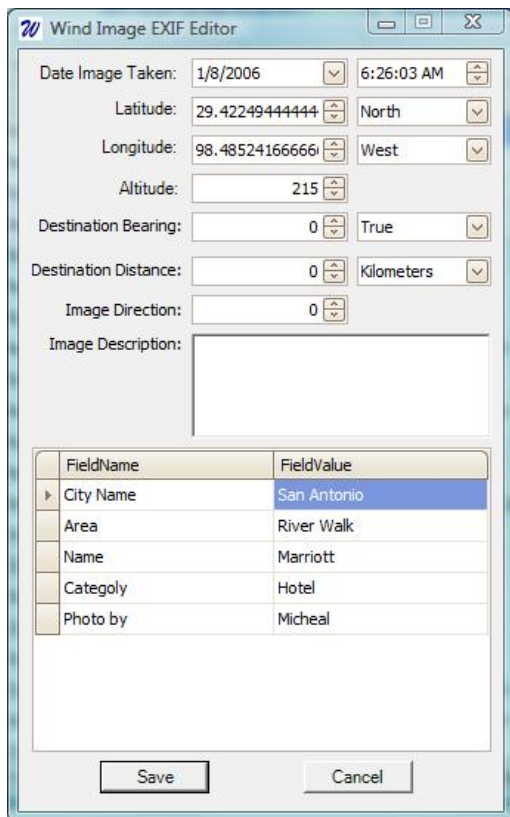
Type	ID	Description
Main	271	Make
Main	272	Model
Main	305	Software
Main	34853	Gps Info Ifd pointer
Gps	0	GPS Version ID.
Gps	1	Latitude Ref.
Gps	2	Latitude
Gps	3	Longitude Ref.
Gps	4	Longitude
Gps	5	Altitude Ref.
Gps	6	Altitude
Gps	7	Time Stamp
Gps	8	Satellites
Gps	9	Status
Gps	10	Measure Mode
Gps	11	DOP
Gps	12	Speed Ref.
Gps	13	Speed
Gps	14	Track Ref.
Gps	15	Track
Gps	17	Img. Direction

**EXIF Information Displayed after selecting "Show" in Exif Menu**

Position: 309 x 85 | 1.16 sec with JpegDecoder | {1024x768 pixels, Pixel24bppBgr}

## Wind Image™ EXIF Editor

The EXIF editor allows you to edit the EXIF information embedded in the image file.



### ***Recording Geotagged Imagery – Guidance & Recommendations***

In order to take advantage of the useful functions in the Wind Image™ Extension For ArcMap®, you must record your images with technology that can embed coordinate (and optionally attribute) information in each image's EXIF header. We recommend the Ricoh 500SE® GPS ready camera. The Ricoh 500SE® is an excellent camera that instantaneously tags pictures with a GPS location, Compass direction, and can also include multiple fields of attribute information in the image EXIF data. However, Wind Image™ can also work with any image as long as the image EXIF includes geographic location information in the proper format. In addition users can enter GPS information into any picture using the EXIF editor in Wind Image™ (See the Wind Image™ Editor section in this manual)

There are a number of ways to tag images with geolocation information, the details of which are beyond the scope of this manual. We recommend using the internet to find more detailed information on the subject.




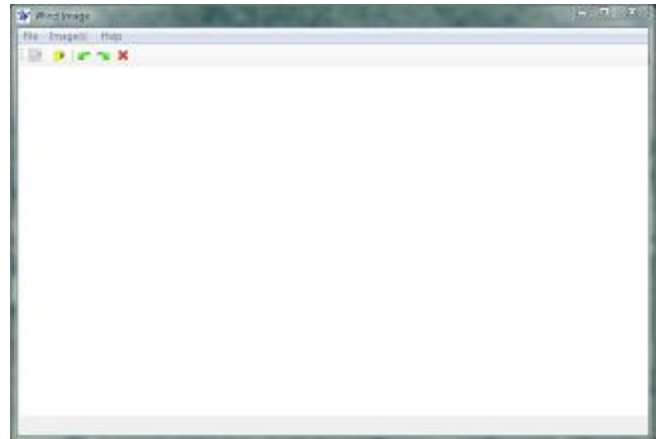
## Load Images into Wind Image™


### About Loading Images

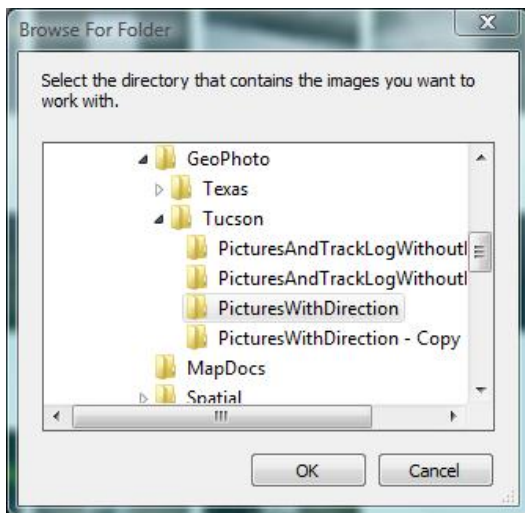
Once you have collected one or more geotagged photos in the field, you can begin using the Wind Image™ extension to bring your photos into the ESRI® GIS system.

### How to Load Images into Wind Image™

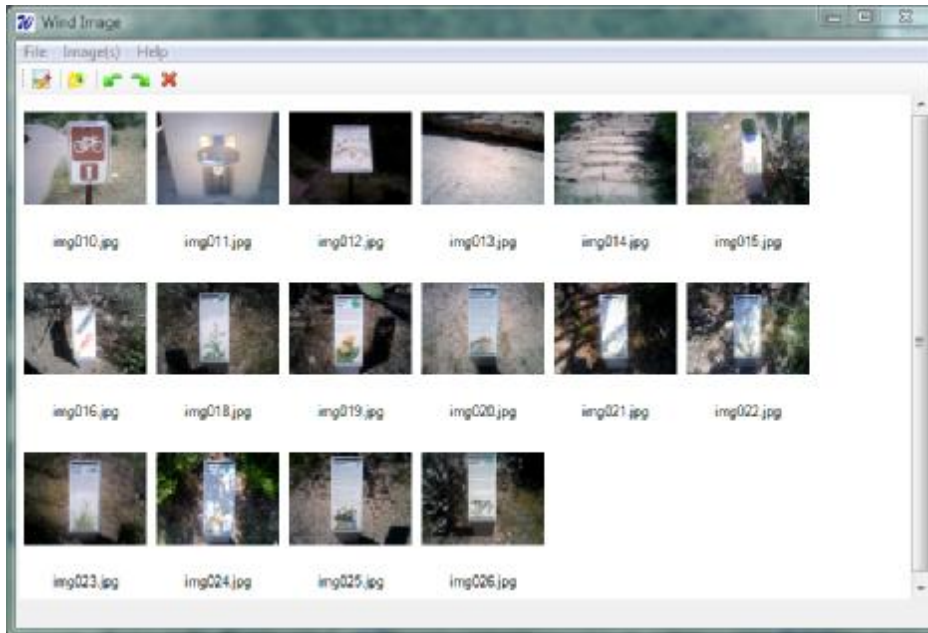
1. Start Wind Image™ by clicking the  button on the Wind Image™ toolbar, which will start the Wind Image™ main application window as shown at right.



2. If a browse window does not automatically open, click the browse  button to open a browse window.
3. Browse to the directory that contains the images you want to process.  
Note: This folder can be on any accessible drive connected to your computer including SD cards that are connected with a compatible SD card reader.



4. Now you will see your images in the Wind Image™ main application window as shown below.



At this point, you may select images to rotate, delete, browse to a new folder containing images, edit, create new image-integrated feature classes, etc.

## ***Preprocess Your Images***

### **About Preprocessing Your Images**

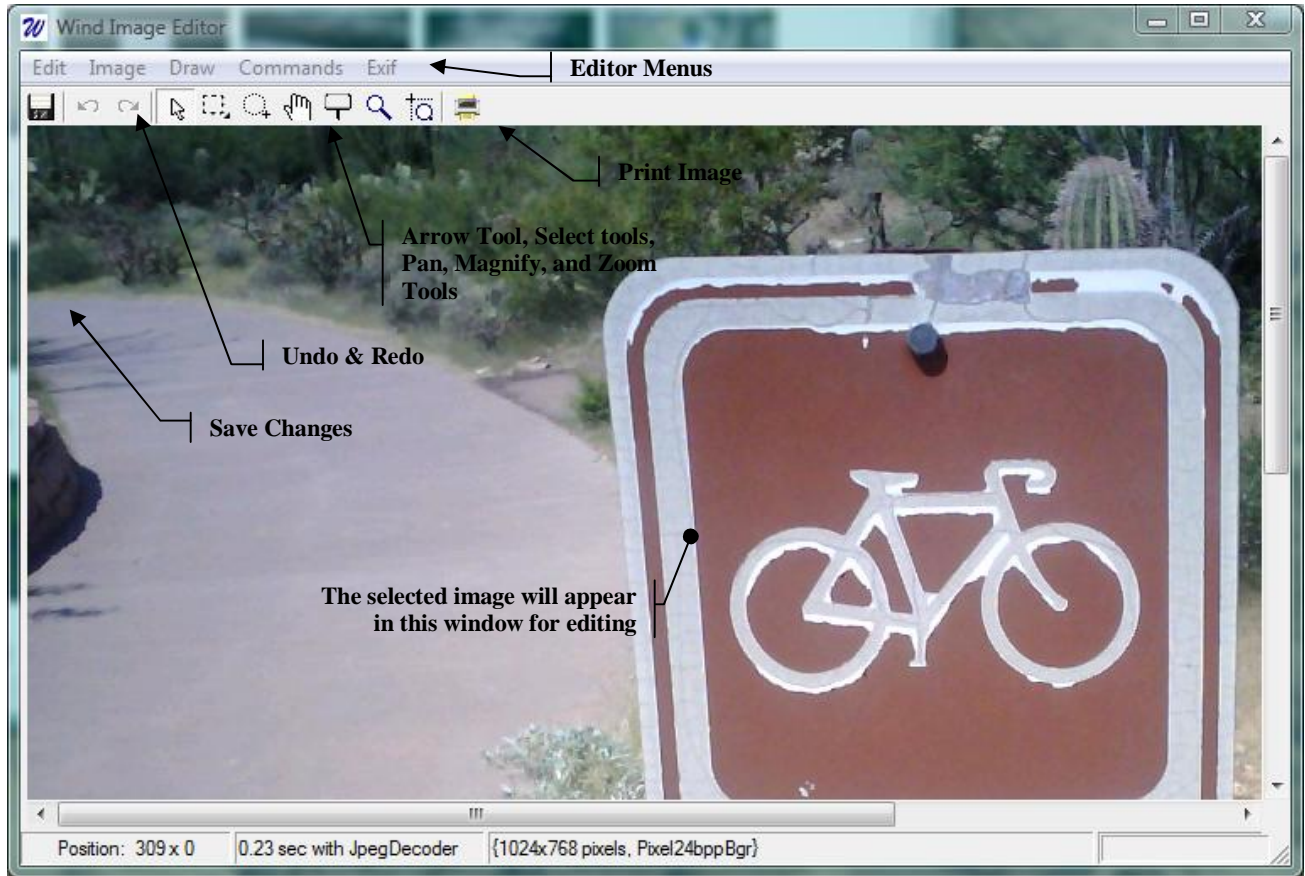
Before using Wind Image™ to create an image-integrated feature class you may want to edit your images or modify EXIF information. Wind Image™ makes it possible for you to perform a host of edits that it permanently saves within each image file and EXIF header. For instance, you may want to outline an important part of a photo, or manually adjust a geographic coordinate or attribute stored with the image. Wind Image™ makes it possible to make both these changes and more.

### **Using the Wind Image™ Editor**

The Wind Image™ editor is the tool that allows you to edit your images directly. It can edit images in three fundamental ways. These include: 1) Adding new shapes and text directly onto the image, 2) Applying global commands – such as filters and effects, rotate, and flip – that affect the entire image, 3) Show and edit the EXIF information stored with the image. The editor also has several functions that further help you explore and work with your image, such as the magnifier, pan, zoom, and print commands.

## Opening the Wind Image™ Editor

1. To open the Wind Image™ Image editor, simply double click on the image you want to edit in the Wind Image™ main application window. (See Editor example below)



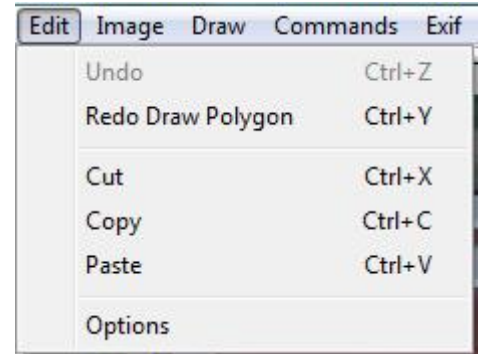
## Exploring the Wind Image™ Editor

Once the Image Editor opens, you will notice there are five command menus: **Edit**, **Image**, **Draw**, **Commands**, and **Exif**. There are also eleven tools displayed: save, undo, redo, arrow, rectangle selection, ellipse selection, pan, magnifier, zoom, zoom selection, and print.



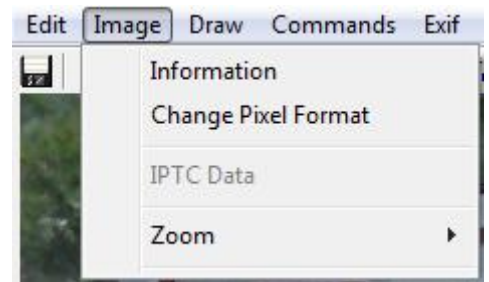
## The Edit Menu

- The **Edit** menu contains the following commands:
  - **Undo:** You may use this to undo any changes you make to an image prior to saving your changes. Once you save changes, they cannot be undone.
  - **Redo:** You may use this to redo the last item that you undid.
  - **Cut:** Cut and place things on the Windows clipboard.
  - **Copy:** Copy things onto the Windows clipboard.
  - **Paste:** Paste things onto the image from the Windows clipboard.
  - **Options:** Set basic program options. For details about each setting simply click on the field to view a description at the bottom of the form.



## The Image Menu

- The **Image** menu contains the following commands:
  - **Information:** Displays information about the image you are currently editing.
  - **Change Pixel Format:** Opens a window with several settings that allow you to adjust the pixel format of the image.
    - § *Tip: To find out more about each setting click on the setting field and additional help information will display at the bottom of the form.*
  - **IPTC Data:** Displays IPTC data.
    - § *Note: Together, the Newspaper Association of America (NAA) and the International Press Telecommunications Council (IPTC) have designed a model to store multiple types of data (metadata) in an image. This metadata is commonly known as IPTC. Adobe Photoshop, along with many members of the newspaper and press industry, use IPTC to store information in images.*
  - **Zoom:** Allows you to zoom the image to set scale ranges.

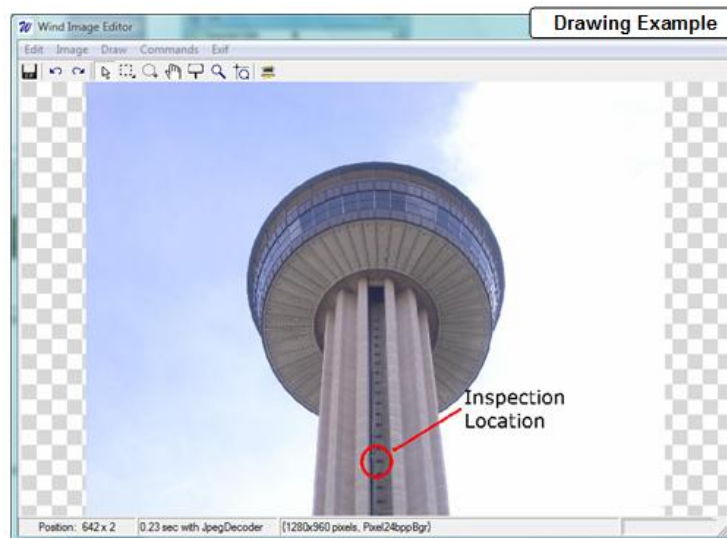
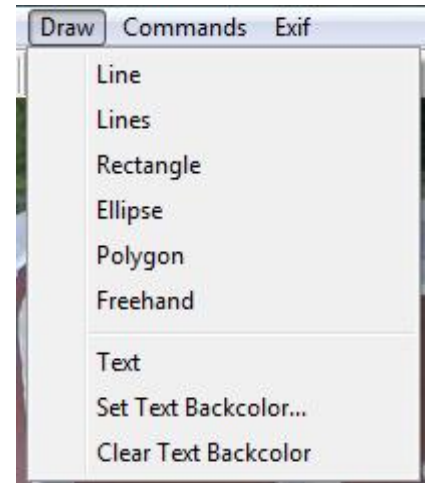




## The Draw Menu

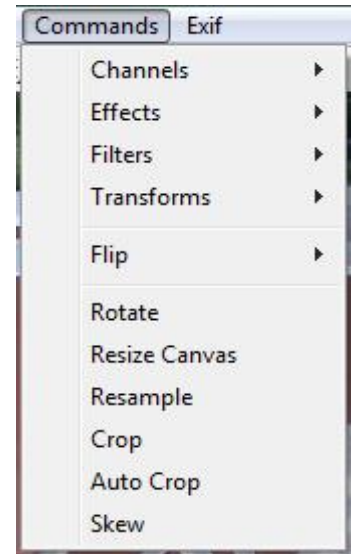
The draw menu contains commands that allow you to draw shapes and add text directly onto the image. This can be particularly useful if you want to highlight something about the image or provide explanatory text that will show up every time someone views your image.

- The **Draw** menu contains the following commands:
  - **Line**: Draw a line.
  - **Lines**: Draw multiple lines at once.
  - **Rectangle**: Draw a rectangle.
  - **Ellipse**: Draw an ellipse.
  - **Polygon**: Draw a polygon.
  - **Freehand**: Draw freehand lines.
  - **Text**: Add text.
  - **Set Text Back Color**: Sets the color that will show up behind any text placed on the image using the add text command.
    - § *Tip: By default, the text will show up in the upper left hand corner of the image. However, if you use the selection tools to select an area of the image prior to activating the text command, the text will appear within the selected area.*
  - **Clear Text Back Color**: Clears any previously set text backing color.

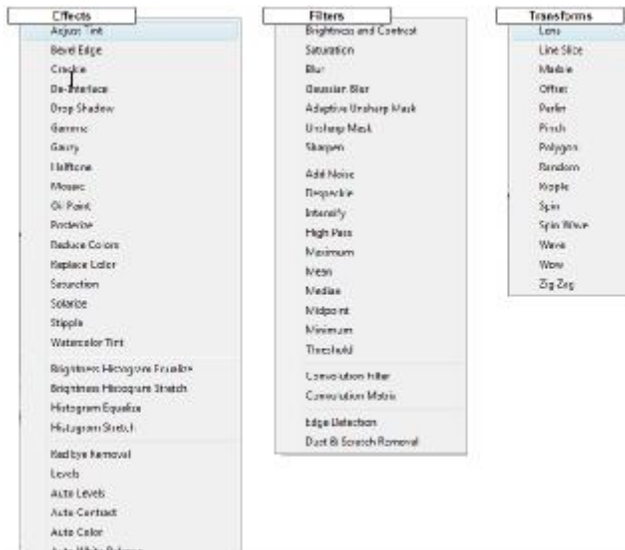


## The Commands Menu

The Commands menu contains functions that apply a wide range of image modifications and manipulations. Typically, these functions apply to the entire image, but you can also apply them to portions of the image by applying a selection to the image prior to using one of the commands functions. The Commands menu functions provide you with a great deal of flexibility in the way you prepare your images.



- The **Commands** menu contains the following commands:
  - **Channels:** Groups the following color space commands together:
    - § **Adjust:** Adjust RGB values
      - *Note: RGB color space defines colors three individual grayscale channels: one each for red, green, and blue. Each of these defines the brightness value for their particular color for each pixel, and the three values combine to determine the actual color of each pixel.*
    - § **Adjust HSL:** You may want to change the color of something that is widely dispersed throughout your image. For example, grass, leaves of trees or shrubs, sand etc. Since objects like grass or leaves typically contain a range of similar color, using the Hue/Saturation/Adjustment Layer is an ideal tool for selecting these objects and then applying your color correction.
    - § **Invert:** Allows you to invert one or more color channels.
    - § **Shift:** Allows you to shift one or more color channels
    - § **Swap:** This function allows you to swap color channels within the image.
  - **Effects, Filters, Transforms:** Three group menus that group together the commands depicted in the graphics below. There are many commands to choose from to suit just about any image manipulation need. The best way to learn them is to experiment with them to see what ones will work best for purposes.

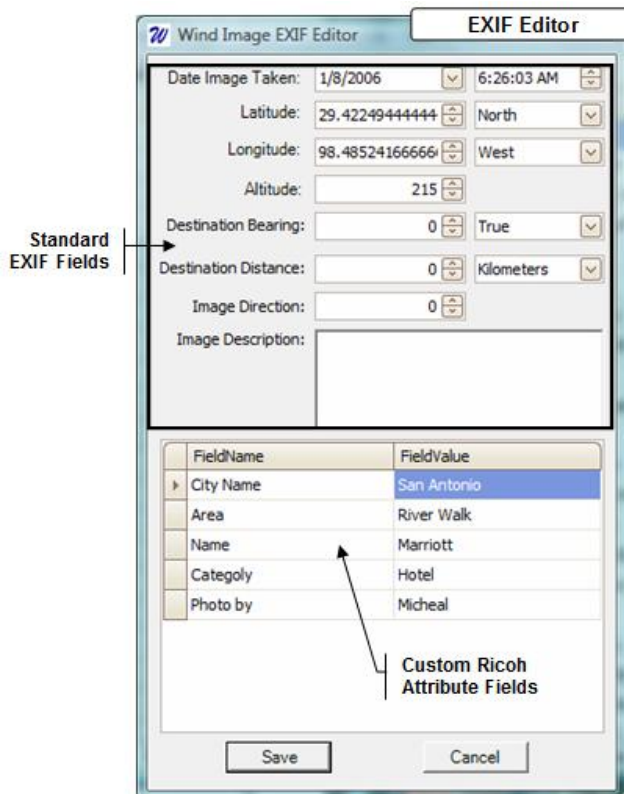
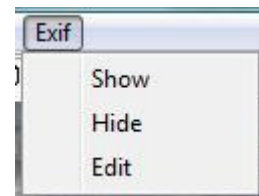


- **Flip:** This command will allow you to flip the image in any direction then create a mirror image of the original.
- **Rotate:** This command will allow you to rotate the image.
- **Resize Canvas:** This command will allow you to change the size of the image.
- **Resample:** This will allow you to refresh the image.
- **Crop / Auto Crop:** Using the rectangle selection or the ellipse selection this command will allow you to crop your images by using one of the selection tools and drawing a cutting fence and selecting Crop. Or, you can set it to auto crop so when you finish the selection area it will automatically crop the image.
- **Skew:** This will allow you to skew an image offsetting the top of the image from the bottom of the image.

### The EXIF Menu

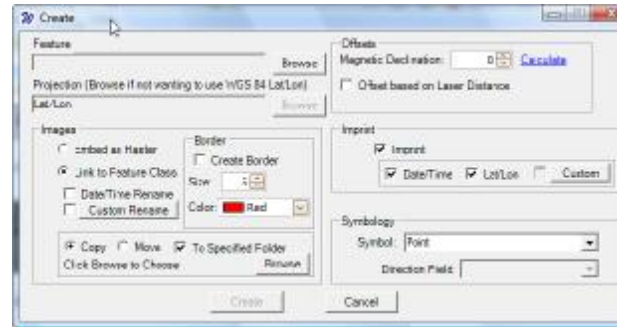
The EXIF menu contains commands that you can use to view or modify the EXIF data embedded with the image. This includes any special attributes stored in the EXIF, as well as the image's geotagged coordinate information.

- The **EXIF** menu contains the following commands:
  - **Show:** By selecting this command, it will display the entire image EXIF data for you to view.
  - **Hide:** This will hide the EXIF data from view giving you more room to view the image.
  - **Edit:** This will display the EXIF Editor that allows you to edit data fields within the EXIF header.




## Generate Image-Integrated Feature Classes or ESRI® shp files

Once you have loaded your images and preprocessed them as needed, you are ready to create a feature class or ESRI® shp file directly from these images. With Wind Image™ you can generate a feature class or ESRI® shp file that will incorporate and integrate your images into the ESRI® GIS system for viewing, mapping, and even analysis purposes.



### How to Generate an Image-Integrated Feature Class or ESRI® shp file

1. Select the images you wish to include in the feature class
2. Click on the **Create** button 
3. Browse to the location where you wish to store the new feature class and enter a name for the new file.
  - *Note: If you choose a folder for the destination, Wind Image™ will create a Shapefile. If you choose a Geodatabase, Wind Image™ will create a Geodatabase feature class.*
  - *Note: Shapefiles only allow you to link to images via a file path. Geodatabases allow you to embed the images inside the attribute table of the feature class (Recommended).*

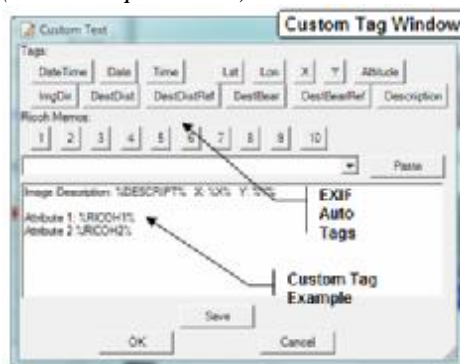


Save As type

4. Set the output projection by clicking the browse button or leaving the default WGS 84 Lat/Lon projection.
5. Select the type of image integration you want, either Embedded (recommended) or Linked.
  - Note: Embedded is only available when creating Feature classes.
6. If you choose to link your images, and you want Wind Image™ to automatically rename them with a date and time identifier, or a custom identifier then check the corresponding check box.
  - Custom – You may only check this box after clicking the “Custom Rename” button and assigning the custom tag you want Wind Image™ to generate. (See Example right)
  - When using the “Custom Rename” option as shown in the example to the right you will enter the EXIF tags in the order you want the image renamed.  
(Example: %DATETIME%%RICOH%)
  - Note: Doing this ensures that images copied into a common workspace do not overwrite each other.




7. If you choose to link your images, you must also select the radio button that indicates whether you want to *copy* or *move* the linked images.
  - *By default Wind Image™ always places the images in the directory wherein the new or appended feature class or shp file exists. You may select another location to store the images by checking the box next to “To Specified Folder”.*
8. Check the **Create Border** box if you want your images to have a border around them when displayed in your maps as a thumbnail.
9. Set the thickness and color of the border if you decide to include them.
10. In the **Offsets** box you will set the magnetic declination for your project area. The declination is the difference between magnetic and true north. This is important as most devices that give a compass direction give the direction as a magnetic measurement. And mapping programs use true north. To determine your declination click the calculate link.
11. If you are using a laser device such as a LaserTechnology® TruePulse™ Laser and want to have the point locations set to your image target location check the “Offset based on Laser Device” box.
12. Check the **Imprint** checkbox if you want to imprint information on top of the images, and then check the boxes that indicate the type of information you would like Wind Image™ to imprint. The options are:
  - Date and time the photo was taken
  - The image geotagged coordinates
  - Custom – You may only check this box after clicking the “Custom” button and assigning the custom tag you want Wind Image™ to generate. (See Example below)

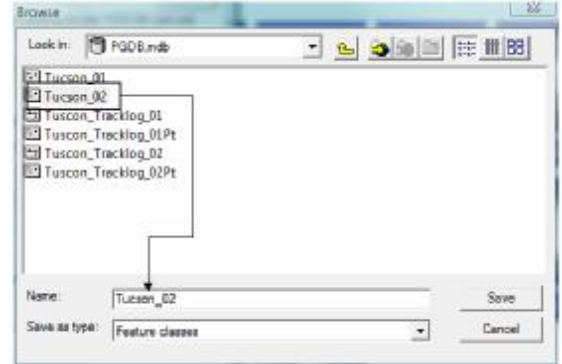


- When using the “Custom” option as shown in the example above you will first enter the text you wish to see imprinted followed by the operator. (EXIF Tags or Ricoh Memos)
13. Choose the type of symbology you want Wind Image™ to assign when it loads the new or appended feature class as a layer in ArcMap®.
  14. Optionally, choose the field you want ArcMap® to rotate the layer symbols based on.
  15. Once you have made all of your selections, click on the create button to create or append to an Image Integrated feature class.
  16. Click **OK** if you would like to add the layer to your map.



## How to Append to an Existing Image Integrated Feature Class

1. To append to an existing Feature Class follow the “**How to Generate an Image-Integrated Feature Class**” instructions with the following exception.
2. After you click on the **Create**  button found in the Main Application window, browse to the feature class onto which you want to append new image records. (See example)
3. Click save.
4. Configure the rest of the settings in the **Create** dialog box.
5. Click **Create** to append the image feature records to the existing Feature Class.



## Import a Ricoh Tracklog

### About Importing a GPS Tracklog


If you recorded a GPS tracklog while taking your photos, you can use Wind Image™ to quickly convert the tracklog into a feature class and load it into ArcMap®. The layer will then visually show you the path that you or others traveled while recording imagery in the field.

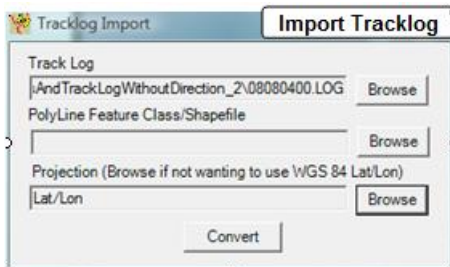
(Note: Tracklog files from the Ricoh camera are stored on the SD card under the folder TRKLOG)

Wind Image™ creates one polyline and one point feature class for each tracklog it processes.

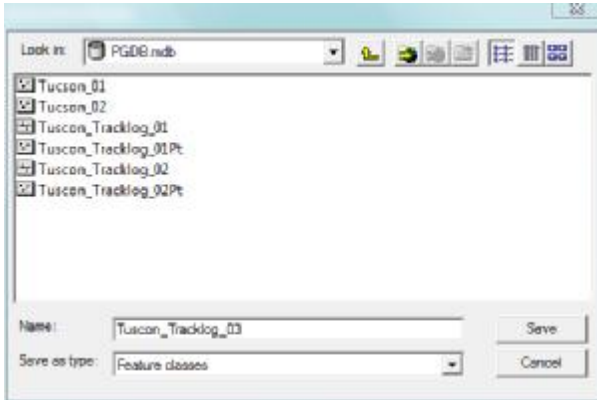
By doing so, it gives you the options to view your path as a series of points, as a line, or as both.

### How to Import a GPS Tracklog

1. Click the import tracklog button 
2. Browse to the tracklog you want to import.



- Browse to the workspace where you want to save the new feature classes and give them a root name.



- Optionally, browse to change the output projection.
- Click **Convert**.



*Note: You cannot append to an existing feature class. You must create a new one when importing a new GPS tracklog.*

*Tip: You can use the “DtTime” (Date/Time) field produced inside the output feature class table with ArcMap® Tracking Analyst to animate your tracklog path.*

*Requires the tracking analyst extension. See ArcMap® help system for Tracking Analyst.*

OID	SHAPE	DtTime	Line	X	Y	Z
1	Point	8/3/2008 10:20:13 PM	1	-111.197547	32.254261	770.
2	Point	8/3/2008 10:20:15 PM	2	-111.197544	32.254264	770.
3	Point	8/3/2008 10:20:16 PM	3	-111.197544	32.254264	770.
4	Point	8/3/2008 10:20:18 PM	4	-111.197544	32.254261	770.
5	Point	8/3/2008 10:20:21 PM	5	-111.197547	32.254264	770.
6	Point	8/3/2008 10:20:23 PM	6	-111.197544	32.254261	771.
7	Point	8/3/2008 10:20:25 PM	7	-111.197536	32.254275	772.
8	Point	8/3/2008 10:20:26 PM	8	-111.197531	32.254283	772.
9	Point	8/3/2008 10:20:33 PM	9	-111.197517	32.254278	771.
10	Point	8/3/2008 10:20:35 PM	10	-111.197517	32.254286	771.
11	Point	8/3/2008 10:20:36 PM	11	-111.197509	32.254293	771.
12	Point	8/3/2008 10:20:39 PM	12	-111.197509	32.254293	771.
13	Point	8/3/2008 10:20:41 PM	13	-111.197509	32.254293	771.
14	Point	8/3/2008 10:20:43 PM	14	-111.197509	32.254293	771.
15	Point	8/3/2008 10:20:45 PM	15	-111.197509	32.254293	771.
16	Point	8/3/2008 10:20:46 PM	16	-111.197509	32.254293	771.
17	Point	8/3/2008 10:20:49 PM	17	-111.197509	32.254293	771.
18	Point	8/3/2008 10:20:51 PM	18	-111.197509	32.254293	771.
19	Point	8/3/2008 10:20:53 PM	19	-111.197509	32.254293	771.
20	Point	8/3/2008 10:20:55 PM	20	-111.197509	32.254293	771.
21	Point	8/3/2008 10:20:56 PM	21	-111.197509	32.254293	771.


## Dynamically View Images in ArcMap®

### About Dynamically Viewing Images in ArcMap®

A key feature offered by Wind Image™ is an enhanced ability to dynamically view and map geotagged imagery. The main way it does this is with the **Show Photo** tool. The **Show Photo** tool can automatically display image thumbnails when you let your mouse pointer hover over an image feature point in ArcMap®. This means that you can conveniently see the image associated with an image point without a single mouse click.

As an added advantage, Wind Image™ also lets you access the Wind Image™ editor window so that you may continue to edit your images right from the ArcMap® map interface.

### How to Dynamically View Images in ArcMap®


1. Click the **Show Photo** button 
2. Hover your mouse cursor over an image point. After a short time, an image thumbnail will appear.
3. Hover over another image point, and another thumbnail will appear

*Tip: You can change the size at which thumbnails display by the “Thumbnail Preview” settings under Wind Image™ settings found on the Wind Image™ menu located on the Wind Image™ toolbar.*



### How to Open Wind Image™ Editor from the ArcMap® Interface

If you want to edit an image after processing, you can open the Wind Image™ Editor window from a thumbnail view of an image.


1. Click the **Show Photo** button 
2. Hover your mouse over an image point and wait for the thumbnail to appear.
3. Double click the thumbnail image.
4. The Wind Image™ Editor window will appear with the current image loaded and ready for you to edit.
  1. *Note: Wind Image™ will save all edits to the **linked images only**; Wind Image will not modify the original image that existed in a different directory before processing. Images embedded in a feature class must be edited and saved prior to generating the feature class. Any edits made after processing will not be saved.*



## Map Your Images

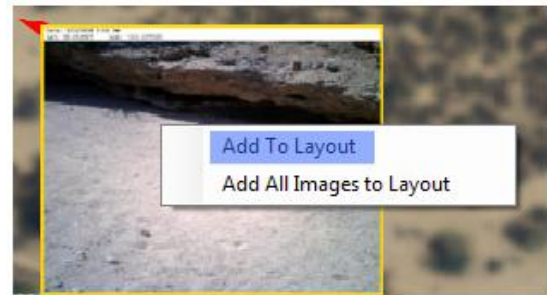
Wind Image™ can automatically place the dynamic thumbnails in a layer onto the map as graphics. Once placed, you can move, resize and further modify the thumbnails just like any other graphic in ArcMap®. You can use the graphic thumbnails to produce hardcopy and dynamic maps that highlight or otherwise take advantage of your field recorded imagery.

### How to Convert Image Thumbnails to Graphics

1. Click the **Show Photo** button 
2. Hover your mouse over an image point and wait for the thumbnail to appear.
3. Right click on the thumbnail image
4. Choose to **Add to Layout** and Wind Image™ will add the current thumbnail to the map.

OR

5. Choose to **Add All Images to Layout** and Wind Image™ will add all thumbnails in the layer to the map.



*Tip: The graphic thumbnails will appear on the currently active annotation layer in ArcMap®. Make sure you choose or create the annotation layer you want the thumbnails to appear on before using Wind Image™ to add them to the map.*

*Tip: Once you have add the thumbnails to the map as graphics, you can move, rotate, resize, and modify them the same way you can modify any graphic in ArcMap®. The example shows a thumbnail graphic with a shadow effect applied in ArcMap®.*



## **Additional Resources**

For additional information on Wind Image™ visit  
[www.windenvironmental.com/windimage](http://www.windenvironmental.com/windimage)

For additional information on ArcMap® visit  
[www.esri.com](http://www.esri.com)  
or  
[support.esri.com](http://support.esri.com)

For additional information on the Ricoh 500SE Camera visit  
[www.windenvironmental.com/GPS-Camera](http://www.windenvironmental.com/GPS-Camera)