

Electronic Field Study™ Getting Started Guide

Version 2.7

November 2011



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Contents

Welcome.....	iv
Who should read this guide	iv
How to use this guide.....	iv
Resources.....	iv
Other Documentation.....	iv
Getting Help.....	iv
The Pictometry solution	v
What is EFS?	v
What is an Image Library?	v
The Image Warehouse	v
Image types	vi
Shot Levels	vi
Installing EFS.....	vi
 Start Here	 1
Starting EFS	1
Opening a workspace	1
Screen layouts	1
The Image View Measure Markup layout.....	2
Keyboard shortcuts	3
 Search for Images	 4
Clicking a point.....	4
Entering coordinates	4
Searching by address	4
 Quick Tool Reference.....	 6
Measuring	6
Changing units of measure and coordinate systems	6
Measuring above ground	6
Measurement tools	6
Navigating	7
Querying	8
Searching for images	8
Viewing	8
Alternate views	8
Panning	9
PentaView.....	9
The Workspace window.....	9
Zoom options	9

Welcome

Welcome to Electronic Field Study™ (EFS), the easy-to-use software system developed by Pictometry® International Corporation so you can view and work with aerial images contained in a Pictometry Image Library or purchased online.

Who should read this guide

The *EFS Getting Started Guide* was written for new users. It addresses the needs of all users, whether they've purchased one image or an entire library of images.

How to use this guide

To help you get started with EFS as quickly as possible, this book covers some of the basic features of EFS in an abbreviated format. These topics, plus others, are covered in full detail in the *EFS User Guide for Version 2.7*.

Resources

Other Documentation

Document	Description
<i>EFS User Guide for Version 2.7</i>	A comprehensive guide for using EFS.
<i>EFS Version 2.7 Release Notes</i>	A document that provides information about each revision of EFS Version 2-7. The document describes software enhancements, defects corrected, and known defects with suggested workarounds.
<i>EFS COM Interface Guide</i>	A reference guide for COM API developers. Includes information about creating plugin tools to EFS.
<i>EFS 2.7 Configuration Editor Guide</i>	For System and Data Administrators, this document describes how to use the EFS 2.7 Configuration Editor to create a common configuration for your users.

Getting Help

There are various options for getting help if you have a problem either installing or using EFS.

Try this first

Before contacting Pictometry's Customer Service, try to solve the problem by checking the following resources:

- Use the Help system that is part of EFS.
- Check the documentation provided with EFS.

- If your company has one, ask your company's "Area Expert," who has taken in-depth EFS training classes from Pictometry International.

If you still need help after consulting these resources, contact our Customer Service Department.

Contacting Customer Service

By phone: 1-888-771-9714

Or by email: customersupport@pictometry.com

Our Customer Service Department is available from 8:30 a.m. to 5:00 p.m. Monday to Friday, Eastern time.

The Pictometry solution

Pictometry has created a revolutionary digital-imaging process and software program that map each pixel of a digital land image to actual geographic coordinates. The solution consists of an Image Library and Pictometry's software program, called **Electronic Field Study (EFS)**.

What is EFS?

EFS is the Pictometry software that lets you search for, view, measure, print, and export the aerial images contained in your Pictometry® Image Library or purchased from Pictometry Online.

What is an Image Library?

An **Image Library** contains Pictometry images of a geographic area and related data for that same area. It can include maps, GIS data, workspace files, and image polygons. Some users also have elevation files.

The files are organized in a tree structure with a folder for each of the following:

- elevation files,
- maps and GIS files,
- image polygons, and
- the Image Warehouse (where the images are stored) with subfolders for clusters, sectors, and image files.

The Image Warehouse

An **Image Warehouse** is that part of the Image Library that contains your images, typically of an entire town, county, or state. An Image Warehouse contains images taken at various altitudes ("shot levels") and angles, as described next.

Image types

- Orthogonal — taken straight down. North is always the top of the image.
- Oblique — taken at an angle. Oblique images let you see the sides of the objects in an image, making them easier to identify.
- Ortho Sector Tile — taken straight down. Ortho Sector Tiles are special images manufactured from Orthogonal images. They do not overlap each other, and they each cover one square mile.

Shot Levels

- Community — typically shows an entire community and is shot from a higher altitude than that of a Neighborhood image.
- Neighborhood — shot from a lower altitude than that of a Community image and therefore shows more detail.

Installing EFS

Instructions for installing EFS are covered in detail in the *EFS User Guide for Version 2.7*.

Start Here

Starting EFS

◆ To start EFS:

Do *one* of the following:

- From the Windows Start menu, select **Programs⇒Pictometry⇒Electronic Field Study 2.7**
- or —
- Double-click the default EFS shortcut placed on the desktop by the installer.
- or —
- Double-click any saved workspace (PWF file) or shortcut to a workspace.

Opening a workspace

◆ To open a workspace:



- 1 Do *one* of the following:
 - Click the **Open** button.
 - or —
 - Choose **File⇒Open**.

The Open dialog box opens.

- 2 Navigate to the directory that contains the workspace you wish to open, select the desired workspace, and click **Open**. (Workspace files have the extension “pwf.”)

The workspace opens and becomes the active workspace; it appears in the Workspace window (not visible by default); the Image Tool is activated, and the base map opens in the Image window.

Screen layouts

These Configurations are pictured in Chapter 1 of the EFS User Guide. See “Choices for screen layout.”

EFS provides these screen layouts:

Configuration	Description
Image View	Shows the Image window, the View toolbar, and the Navigate toolbar.
Image View Measure Markup	Shows the Image window, the View toolbar, the Navigate toolbar, and the Tools toolbar.
Power User	Shows the Image, Workspace, and Output windows, plus the View, Navigate, and Tools toolbars.
Touchscreen	Shows the Image window and makes toolbar buttons large. Toolbar buttons are arranged in a special layout for touch-screen users.

Configuration	Description
Version 2.6 Defaults	Provides the default settings and toolbar buttons that were found in EFS Version 2.6.

The Image View Measure Markup layout

Here’s what EFS might look like if you selected the Image View Measure Markup layout after installation:

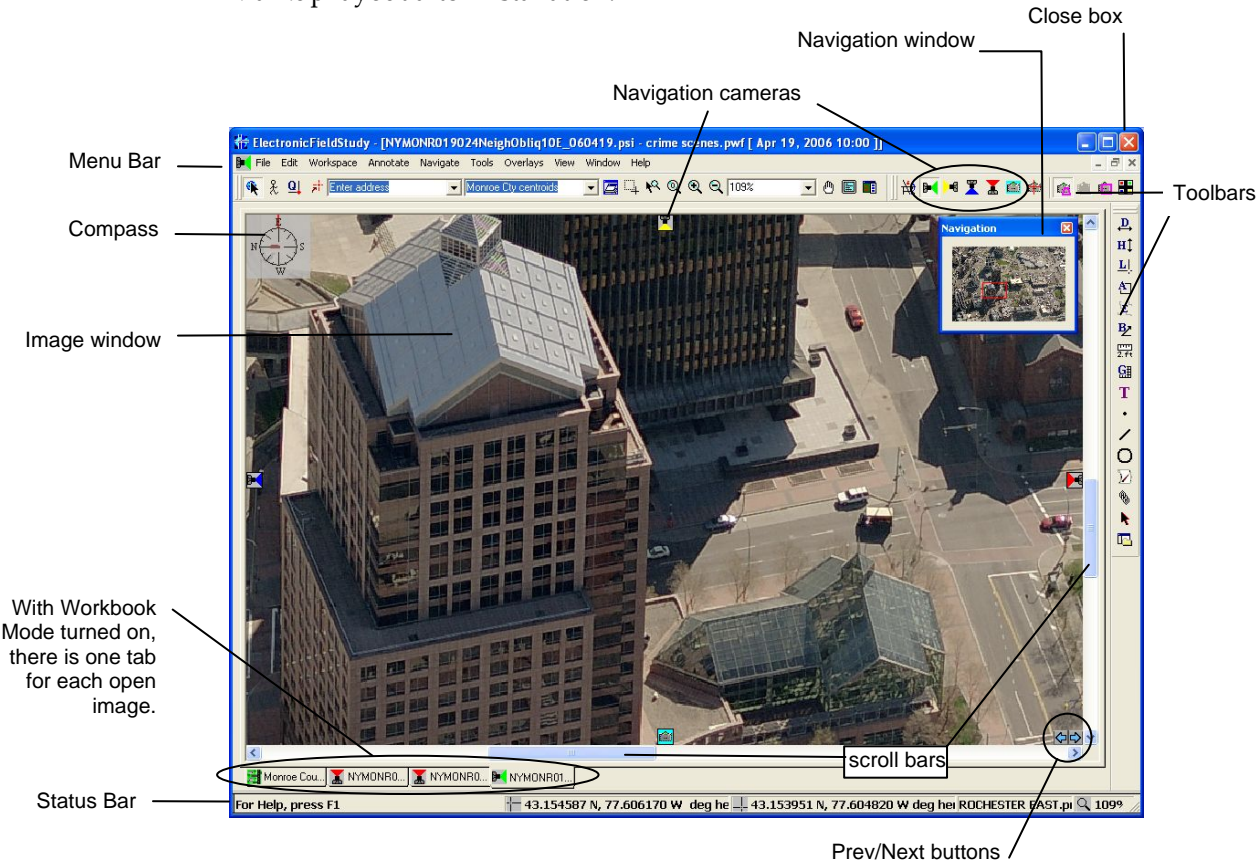


Figure 1: The Image View Measure Markup layout.

Table 1: The parts of the Electronic Field Study application.

Section	Description
Compass	Indicates the geographic orientation of the active image. The bottom of the compass is the point from which the picture was taken. It corresponds to the part of the image closest to the bottom of the Image window. The line at the top of the compass (outside the circle) indicates the direction in which you’d be looking if you took the photo. The line inside the compass always points north.
Menu Bar	Contains pull-down menus for EFS features. Menu options are dim when not applicable to the current task.
Navigation cameras	Buttons (toolbar buttons and on-image buttons) that open images (search hits) from different camera directions (N, S, E, W, and Orthogonal).
Prev/Next buttons	Buttons that open the next (or previous) search hit taken from the same direction as the active image.

Section	Description
Toolbars	Contain buttons for quick access to EFS features. Buttons are dim when not applicable.
Image window	Shows open images (up to a limit you specify). One Workbook Mode tab is visible for each open image.
Navigation window	Contains a thumbnail of the active image in the Image window. The thumbnail represents the entire active image and the red rectangle represents the visible portion of the active image. You can pan the active image by dragging the red rectangle. Note: For most maps, north is the top of the image and south is the bottom of the image.
Status Bar	Shows various measurements and locations, such as the latitude and longitude of the area pointed to by the Image Tool, the results of measurements, and the percentage of magnification of the active image.
Workbook Mode tabs	Tabs you can click to activate a different open image.

Keyboard shortcuts

EFS provides these shortcuts:

Shortcut	Description
CTRL + L	Opens the Annotation Layer Visibility dialog box so you can select layers to make visible or deselect layers to hide.
CTRL + G	Opens the Go To dialog box so you can enter the coordinates to go to or so you can search by street address.
CTRL + P	Opens the Properties dialog box for the active tool.
CTRL + W	Opens the Warehouse List tab of the Image Tool Properties dialog box. On this dialog box, you can choose image search options and link warehouses to be searched.

Search for Images

You can search for images by using any of the procedures in this section.

After searching,

- If the first search hit does not open automatically in the Image window, check your Image Tool settings. See “Options for opening images” in Chapter 6 of the *EFS User Guide*.
- If the Thumbnail window is in view, it shows thumbnails of search hits. Double-clicking a thumbnail causes its full-sized image to open in the Image window.

Clicking a point

◆ To search by clicking a point:

With a base map or image open,



- 1 Click the **Image Tool** (if not already active).
- 2 Click a point in the map or image.

The first search hit opens in the Image window and a red crosshair (Navigation Point) appears at the point clicked.

Entering coordinates

You do not have to open an image or a workspace to search for images by entering coordinates.

◆ To search by coordinates:

- 1 Do *one* of the following:
 - Press **CTRL+ G**.
 - or —
 - Choose **Navigate⇒Go to location**.
- 2 On the Go to dialog box, type the coordinates to search for, and click **OK**.

The first search hit opens in the Image window and a red crosshair indicates the location of the coordinates you entered.

Searching by address

Before you can search by street address (or Parcel ID), some setup is required. Contact your Data Administrator. Instructions for setting up address data are found in Chapter 1 of the *EFS User Guide*.

Tips for address searching:

- Broader searches (less data in your search address) return more results. Narrower, more specific searches (more data in your search address) return fewer results.
- You can type a partial address (such as “100 Park”). EFS will find: 100 Park Ave, 100 Park Lane, 100 Park Road, 100 Parker Road for example, (if those addresses exist in your data).
- You do not have to open an image or a workspace to use this feature.

◆ To search by address or Parcel ID:

- 1 Do *one* of the following:
 - In the Address Search box on your toolbar, type the address or the Parcel ID you want to search for, then press **ENTER**.
 - or –
 - Press **CTRL+ G**, enter the address or Parcel ID, and click **OK**.
 - or –
 - Choose **Navigate⇒Go to location**, enter the address or Parcel ID, and click **OK**.

The **Address Search Results** dialog box appears, listing search hits.

- 2 Do *one* of the following:
 - If you know which hit you want, select that hit, and click **Select and Close**. (The image opens and the dialog box closes.)
 - or –
 - If you’re not sure which hit you want, select a hit, then click **Select**. (The image opens, but the dialog box remains open so you can select and view other hits.)
 - or –
 - If you *don’t* see what you want, click **Close** and try searching again. Check the spelling of the street name or expand the search by specifying less detail. (For example, just type the street name with no house number.)

Unless you chose Close, *the image that best shows the parcel* at the address (or with the Parcel ID) you entered is displayed in the Image window. A red crosshair is shown at the parcel’s centroid or at one of its corners—depending on the GIS data you are set up to search.

Quick Tool Reference

Measuring

Changing units of measure and coordinate systems



Change
Units

Opens the Units dialog box so you can change units of measure and coordinate systems.

Measuring above ground

◆ To enter Offset mode:

- 1 Activate an Oblique view of the desired location.
- 2 Activate the measurement tool you intend to use.
- 3 On your keyboard, press the “O” key. An offset indicator appears on the image and the cursor changes to the “Offset cursor.”
- 4 Click at the ground plane and drag a line up to the height of the desired ground plane offset.

You can now measure and annotate as you normally would. EFS assumes all measurements and annotations are at the height of the line you drew.

Note: To remove the offset, press the “G” key.

Measurement tools



Area Tool

Calculates the area of any part of an image.

To measure the area of a freeform shape: Click the **Area Tool**, press and hold the left mouse button, drag along the outline of the area to be measured until the mouse pointer meets the starting point, then release the mouse.

Note: Press and hold the **ALT** key to draw the free-form part; press and release the **V** key to turn a corner.

To measure the area with a parallelogram: Click the **Area Tool**, press and hold on corner 1, drag to corner 2. (*Don't release the mouse button.*) Hold down **CTRL**, and drag to corner 3. Then release.



Bearing
Tool

Measures the bearing (the orientation from True North) of an angle you outline in the active image. Also measures the angle formed by any object in an image.

To measure bearing: Click the **Bearing Tool**, press and hold the starting point, and drag the mouse to an ending point in the direction to measure the bearing of.

To measure an angle: Click the **Bearing Tool**, press and hold the mouse button on the angle's vertex. Drag a line from the vertex along one side of the angle. Hold down **CTRL**, and drag away from the first side. Then release.


Distance Tool

Measures three different things, depending on how you use the tool: 1) the distance between two points in an image, 2) the cumulative distance along a series of freeform or straight-line segments, or 3) the distance between points that are on different images.

To measure distance along a straight line: Click the **Distance Tool**, press and hold the left mouse button and drag along the line. Then release.

Note: To turn a corner, press and release the **V** key at the corner.

To measure a freeform line: Click the **Distance Tool**, press and hold the left mouse button, hold down **ALT**, and drag the mouse. Then release.

To measure the perimeter of a parallelogram: Click the **Distance Tool**, press and hold on corner 1, drag to corner 2. (*Don't release the mouse button.*) Hold down **CTRL**, and drag to corner 3. Then release.


Elevation Tool

Gives the elevation of the point (or differential elevation of the points) you click in an image after activating the Elevation Tool.

To measure elevation: Click the **Elevation Tool** and click the point to measure.

To measure differential elevation: Click the **Elevation Tool**, press **CTRL + P**, click the desired calculation on the Properties dialog box, click OK, press and hold the starting point. (*Don't release the mouse button.*) Hold down **CTRL**, and drag to the ending point. Then release.


Height Tool

Measures two different things, depending on how you use the tool: 1) the height of an object, or 2) the square footage of the facade of a building in an image.

- 1 Click the **Height Tool**.
- 2 Press and hold the left mouse button at the base of the object to measure or at the starting point of the ground plane offset.
- 3 Drag the mouse upwards and release it at the ending point.


Location Tool

Gives the geographic coordinates for a point you click in an image.

Navigating


Navigate Tool

Lets you "walk" around in one or more images to locate a point of interest or plan a route. Maintains the same perspective and calculates the distance of the route. (Is not the same as "Walk the Earth.")

- 1 Click the **Navigate Tool**.
- 2 Click on the image in the direction you wish to move. Continue clicking points until the route is complete. EFS switches to adjacent images automatically (except for Ortho sector Tiles).

Note: For Ortho Sector Tiles, when you get to the edge, drag the mouse button from inside the current image to the area outside the edge of the current image and release the mouse button.

- 3 To finish the route, double-click anywhere in the image.

Querying



GIS Query Tool

Lets you query GIS data in an image by clicking a point in the image (if the GIS data in the active workspace covers the same geographic area). *You must set up the GIS layer and the Query Tool before querying the layer. See Chapter 17 of the EFS User Guide.*

- 1 Make sure the active workspace contains the GIS annotation layer to be queried.
 - 2 Click the **GIS Query Tool**.
- Note:** Skip the next step if you set up the Query Tool to automatically select the layer closest to your click.
- 3 Click an Image window scroll bar and press **PAGE UP** or **PAGE DOWN** repeatedly, until the name of the layer to be queried appears in the Status Bar's leftmost pane.
 - 4 Click the location to query.

Searching for images



Image Tool

Searches for images containing the geographic point you clicked or the coordinates you entered. You can search Image Warehouses, the current workspace, or both. Also used to select a point in an image to be magnified with the Zoom In or Zoom Out buttons. (See also "Search for Images" on page 4.)

Viewing

Alternate views



View From West

Displays an image captured from the west showing the same geographic area as the image currently in the Image window.



View From East

Displays an image captured from the east showing the same geographic area as the image currently in the Image window.



View From North

Displays an image captured from the north showing the same geographic area as the image currently in the Image window.



View From South

Displays an image captured from the south showing the same geographic area as the image currently in the Image window.



View From Ortho

Displays an Orthogonal (straight down) image that most closely covers the same geographic area as the Oblique image currently in the Image window.



View Map

Opens either a high-detail map or a base map depending on the button's position and the available maps.



View Neighborhood

Displays a Neighborhood shot level image of the same geographic area as the image currently in the Image window.



View Community

Displays a Community shot level image of the same geographic area as the image currently in the Image window.



View Ortho
Sector Tile

Displays the Ortho Sector Tile of the same geographic area as the image currently in the Image window.

Panning



Pan Tool

Scrolls the image around in the Image window.

- 1 Click the **Pan Tool**.
- 2 Press and hold the left mouse button.
- 3 Drag the image up, down, left, or right within the window.

PentaView



PentaView

Opens a second copy of the active image in PentaView “mode” and opens up to five scenes of the same location—each from a different angle or direction (N, S, E, W, Orthogonal)—in a “view scenes at corners” arrangement. The active image is placed in the main PentaView window (in the center of the Image window).

- 1 Activate the search hit you wish to view in PentaView.
- 2 Click the **PentaView** button.
- 3 Close any image to close PentaView.

The Workspace window



View
Pictometry
Workspace

Shows or hides the Workspace window. Does not open or close a workspace.

Zoom options



Zoom
Tool

If you click a point, doubles in size and repositions the active image so that the point is at or closer to the center of the Image window. If you drag a rectangle, magnifies and repositions that area to fill the Image window.

- 1 Click the **Zoom Tool**.
- 2 Do *one* of the following:
 - Click the point or drag a rectangle around the area you want magnified.
 - or –
 - Roll the mouse wheel *away from you to zoom in* to the location at the center of the image.



Zoom In

Doubles the magnification of the active image.



Zoom Out

Reduces the magnification of the active image by half.