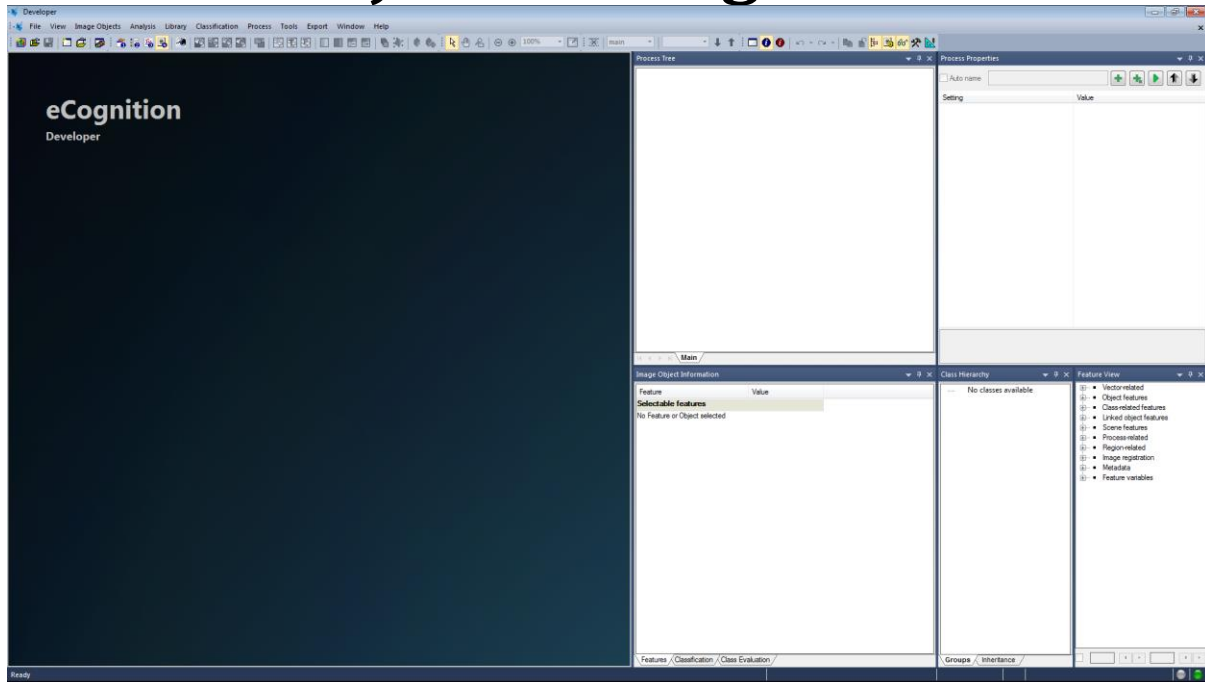


EXERCISE 2

Create Project in eCognition



Introduction

eCognition is a powerful object-based image processing software that offers the user tremendous control over the analysis options including processes like segmentation and classification. The segmentation algorithm in eCognition enables users to generate a set of polygons that represent groups of similar values from user defined raster(s). In this exercise you will learn how to set up a project, which will be used in Exercise 3 of this workflow.

Objectives

- Install eCognition 9.2.1
- Create a new project in eCognition that you will use in this and the following exercise

Required Data

- Slope_Perc.tif

Prerequisites

- Access to floating eCognition license (FS only)
- Install Esri ArcMap on computer and have basic understanding of how to use the software.



Table of Contents

Part 1: Install eCognition.....	3
Part 2: Set up eCognition Project.....	5



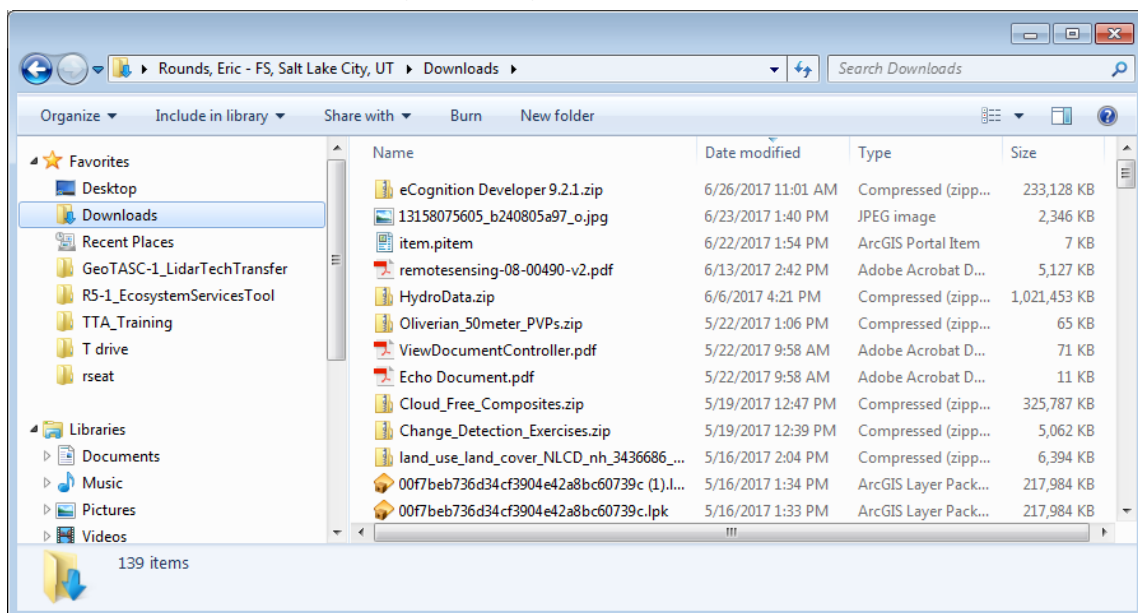
Part 1: Install eCognition

There is a license borrowing utility for version 9.2. Feel free to use it if you need to borrow for a few days (i.e., you will not be able to connect to the FS network to pull a floating license). If you have a need to borrow a license for more than a few days, please email dvanderzanden@fs.fed.us to confirm availability.

Note: If you are outside the Forest Service Network, you will need to access your own eCognition license or use the trial version. To download the trial version, refer to the eCognition website here: <http://www.ecognition.com/free-trial>. Make sure you select the eCognition Developer!

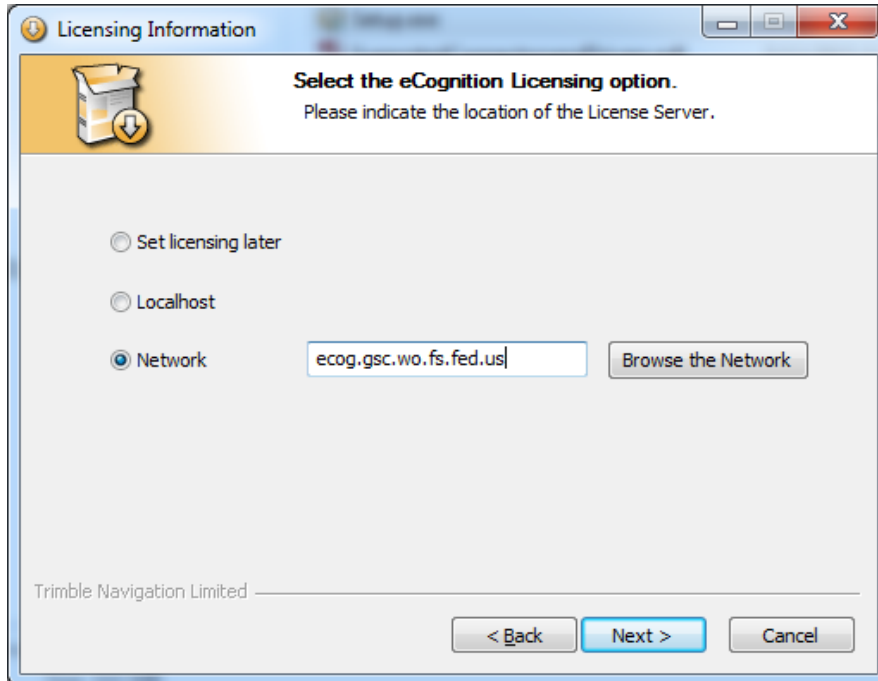
A. Install eCognition Developer 9.2.1

1. Click on the following link to download the Developer 9.2.1 zip file:
<http://fsweb.rsac.fs.fed.us/oldsite/downloads/eCognition%20Developer%209.2.1.zip>
2. Navigate to your Downloads folder by opening **Windows Explorer** and clicking on **Downloads** on the left side of the window (see below).

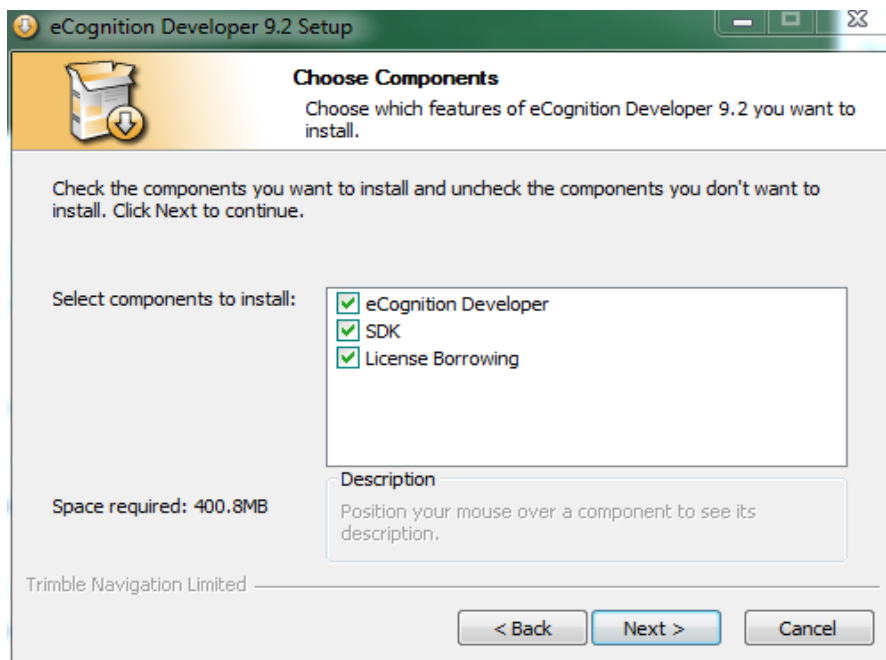


3. Right click **eCognition Developer 9.2.1.zip** and click **Extract All**.
4. In the window that pops up, click **Browse** and navigate to your workspace. Once you've identified an appropriate folder, click **OK** and then **Extract**.
5. When the zip folder is done extracting, a new Windows Explorer will open. Open the eCognition Developer folder.
6. Right click on **Setup.exe** and select **Run Elevated**.
7. If an **authorize Application** window opens, enter "eCognition is on the approved enterprise software list" in the justification window and click **OK**.
8. Select **Next** from the dialog box that opens.

9. Select the “I accept terms of License Agreement” radio button and then select **Next**.
10. Select the **Network** licensing option and enter **ecog.gsc.wo.fs.fed.us** in the box adjacent from Network. Select **Next**.

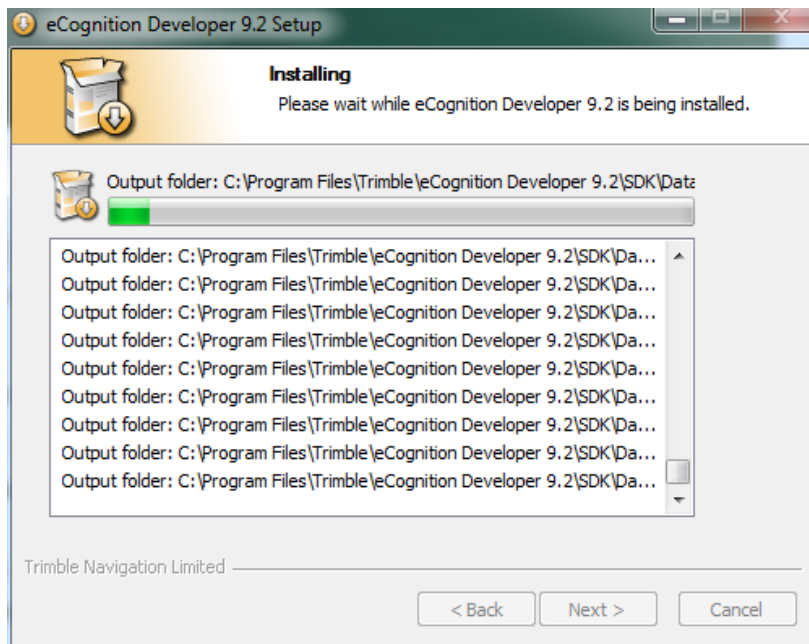


11. Ensure all components desired for installation are checked and then select **Next**.



12. Choose a start menu folder— take the default if you do not have another preference. Select **Next**.
13. Choose installation Location (default is recommended). Select **Next**.

14. Click on **Install** button and eCognition will install on your computer. It will take a few minutes to install.

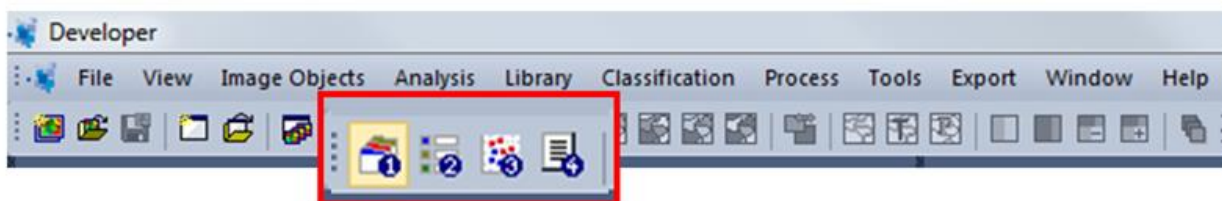


15. Select **Next** and then **Finish** and installation will be complete.

Part 2: Set up eCognition Project

A. Launch eCognition

1. From the Start Menu, navigate to **All Programs, Trimble, eCognition Developer 9.2**, and then **eCognition Developer**.
 - i. Or if you have a shortcut on your desktop, double-click the icon to open eCognition Developer.
2. From the **main toolbar** area of eCognition locate the **View Settings toolbar**. It looks like the following graphic. When eCognition opens, it loads in the **Load and Manage Data** Settings (setting 1 in image below).



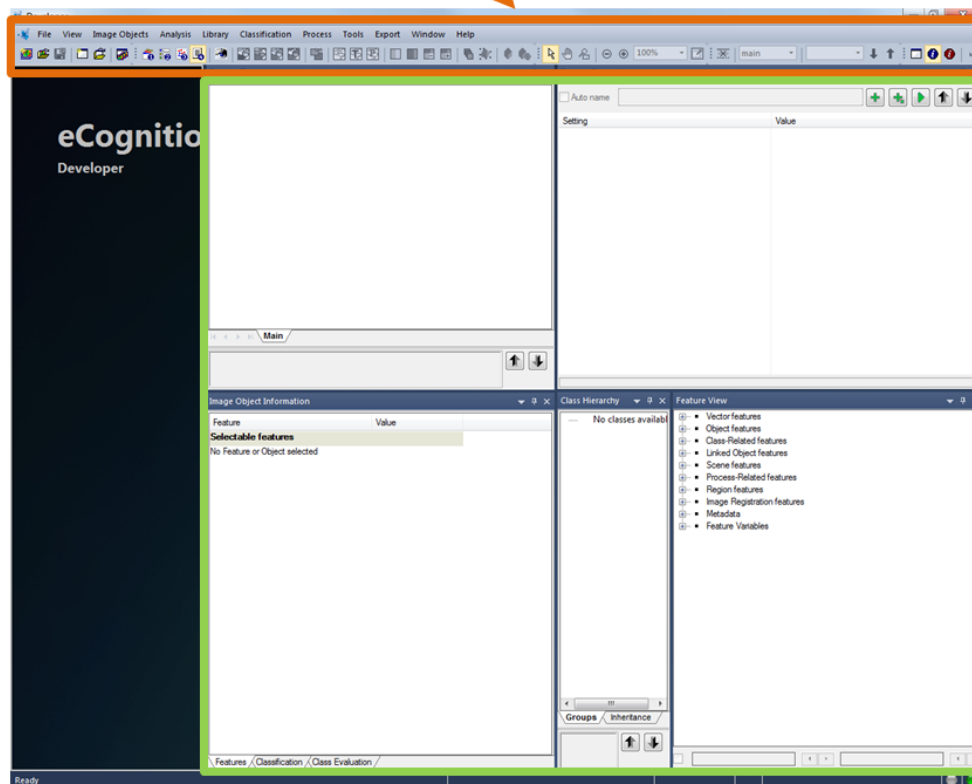
- i. Load and Manage Data (Workspace)
- ii. Configure Analysis (Analysis Builder)
- iii. Review Results
- iv. Develop Rulesets (e.g. Process Tree)

NOTE: This training is centered on writing rule sets—which organize and modify image analysis algorithms—**View 4 is where you will spend 95% of your time.** This is where you will build the rule set for your various analyses.

3. Click on each of the four views to see how it changes the eCognition interface. Leave the interface set to the **Develop Rulesets** view; it looks like the following graphic:

This is the main toolbar and main menu area of the Developer interface.

In this first exercise this is where we will focus most of our attention.

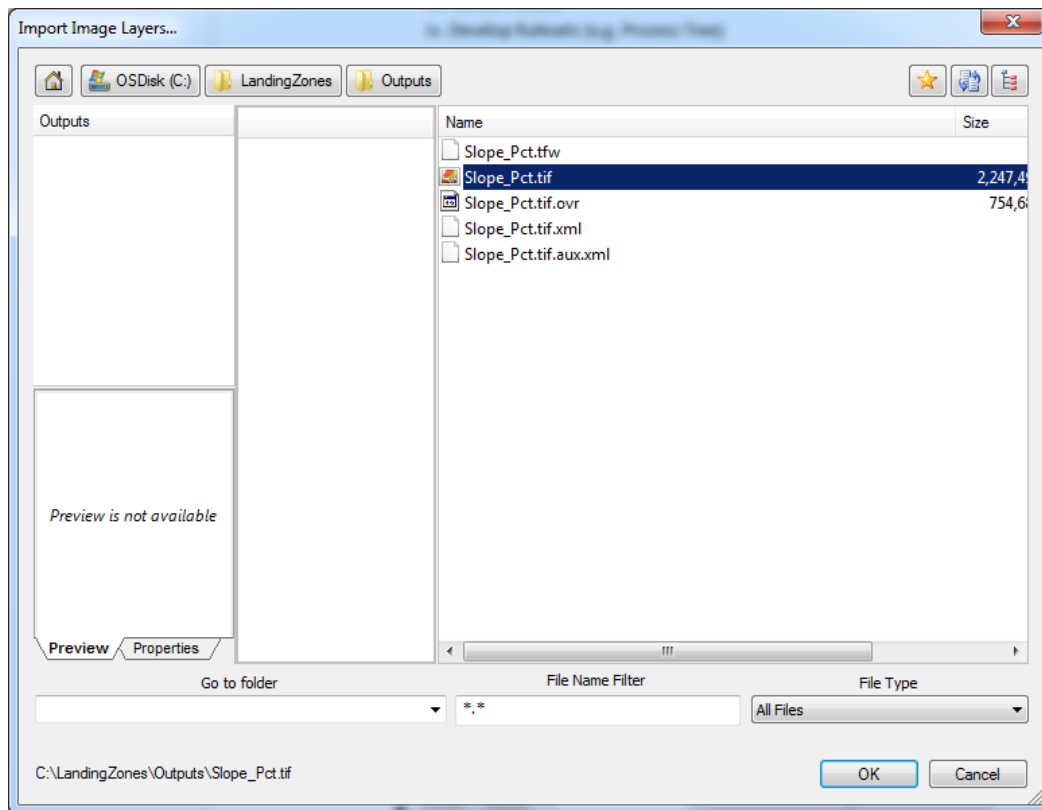


This area is where the development of Rulesets and other advanced processes are formed.

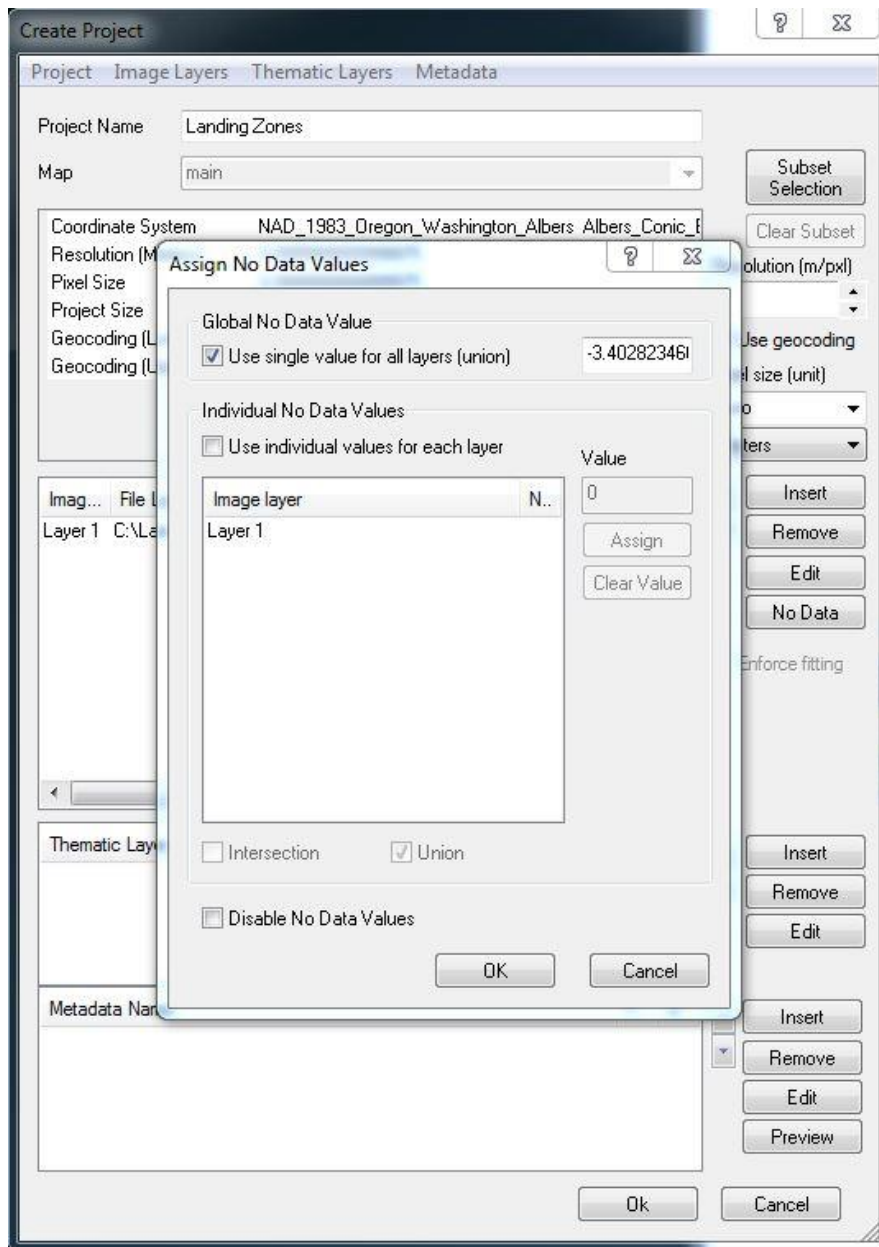
Note: Workspaces are at the top of the “hierarchical tree” in eCognition and are essentially containers for projects (*.dpr files). We will not be creating workspaces in this exercise; rather we will just be creating projects.

B. Create a New Project

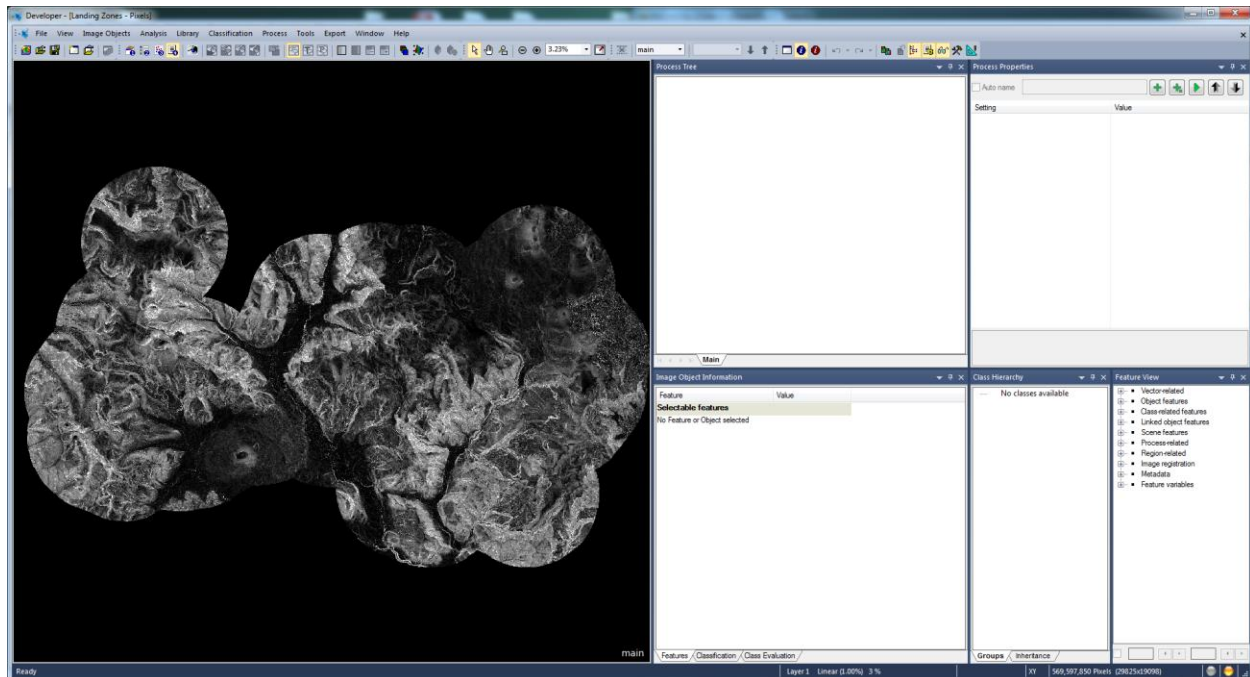
1. From the eCognition Developer main menu, locate the **Create New Project** button or from the **File** menu select **New Project...** The **Create Project** dialog will open, and on top of it the **Import Image Layers** dialog.
2. In the **Import Image Layers...** dialog, navigate to the **Outputs** folder (C:\LandingZones\Outputs) using the folder structure window in the upper left of the dialog, and select **Slope_Pct.tif**.
3. Click **OK** (see below).



4. In the Create Project dialog you will see the information about your image —the coordinate system, resolution, pixel size, and the individual bands are listed. In this case we only have one band. Change the **Project Name** to **Landing Zones**.
5. In the middle right side of the **Create Project** dialog, click the **No Data** button.
6. In the **Assign No Data Values** window that opens up, click the check box next to **Use single value for all layers (union)**.
7. Next, insert the following number in the **Value** field: **-3.40282346639e+038** (see below).
 - i. This is the NoData Value for the Slope raster that you can find by looking at the Layer Properties of this raster in ArcMap or ArcCatalog.
 - ii. If you do not manually set the No Data value, there will be segments generated outside of the study area and the segmentation process will take longer.



8. Once you enter the No Data Value, click **OK**.
9. Click **OK** in the Modify Project dialog to apply the setup. This will return you to the main Developer window.
10. Your eCognition interface should now look similar to the below image.



11. Zoom into the image by using the scroll wheel on your mouse.

C. Save the Project

1. Save your new project to the **LandingZones** folder (**C:\LandingZones**) by selecting **File, Save Project**.
2. Name your project **LandingZones**. The **Save as type** should be set to ***.dpr** by default.
3. Click **Save**.

Congratulations! You have successfully completed this exercise. You are now familiar with how to install eCognition and how to create a new project. In the next exercise you will build upon this eCognition project and create segments for potential suitable landing zones.