



Hyperlink Small-Format Aerial Imagery in ArcMap

Remote Sensing For Ranger Districts Using Image Analysis For ArcGIS



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Assumptions of this technique:

• **Image/Feature Relationship.** We assume you know which image belongs to which feature. This relationship should already be documented in the feature's attribute table. That is, there should be a field in the feature's attribute table that lists each image file name associated to each feature you wish to hyperlink. In this tutorial, the images have already been referenced to features in the feature attribute table—only the hyperlinks have not been established.

• **Other information.** You can hyperlink any type of information such as text, audio, and video files using the procedure describe in this tutorial.



Note: It is recommended that you set hyperlinks using **relative pathnames** (although sometimes it is not required). See the ArcGIS Desktop Help to determine if setting hyperlinks using relative pathnames is necessary for your project.



Note: if the size of the Attribute Table dialog is too small, the **Options** button may be hidden from view. If necessary, increase the size of the Attribute Table to reveal the **Options** button.



Click in the field next to **Length** and input a value large enough to include all the characters in the pathname (including the image filename and extension).

Objective

- To hyperlink small-format aerial imagery to features in ArcMap

Required Data

- Spatial Data.** At least one of several types of spatial data (e.g., shapefile, coverage, etc...)
- Small-Format Aerial Imagery.** Imagery that you can hyperlink to features in your spatial data.

Introduction and Overview of Procedure Steps

Hyperlinking small-format aerial imagery to spatial data provides an extra level of visual information about features of interest in a map. The focus of this tutorial is to describe how to hyperlink small-format aerial imagery to features on a map in ArcMap. The major topics are:

- Add Hyperlink Field in the Feature Layer's Attribute Table
- Establish Hyperlinks
- Test Hyperlinks

I. Add Hyperlink Field in the Feature Layer's Attribute Table (Note: Please read assumptions before starting)

- Start ArcMap from the **Start** menu: **Start | Programs | ArcGIS | ArcMap.**
- Enable **A New Empty Map.**
- Click **OK.**
- Navigate to and single-click the **Feature Layer** that you will create hyperlinks for.
- Click the **Add** button.
- Ensure the **Feature Layer** is checked in the **Table of Contents** (it should be visible in the Data View).
- Right-click the **Feature Layer** in the **Table of Contents.**
- Select **Open Attribute Table.**
- Resize and reposition the **Attribute Table** dialog if necessary.
- Click the **Options** button (see note at left).
- Select **Add Field.**
- Set the following in the **Add Field** dialog:
 - Name:** *HYPER_PATH*
 - Type:** *Text*
 - Field Properties | Length:** *<user specified>* (see note at left)
 - Click **OK.**
- Locate the new **HYPER_PATH** field in the Attribute Table.



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 *Setting hyperlinks can sometimes be a tedious process, especially if your images are located in different directories. If your images are located in different directories, select (highlight) a group of features from the feature's attribute table that contain hyperlinked images from the same directory. Set hyperlinks only for the selected features. Continue this process—selecting features whose hyperlinks share the same directory and subsequently setting the hyperlinks—until all images have been hyperlinked appropriately.*

 *To enable the Editor Toolbar in ArcMap click **View | Toolbars** and place a check next to **Editor**. A more efficient alternative is to simply click the **Editor Toolbar** button in the **Standard** toolbar*

 *Syntax is important when you input an expression in the Field Calculator. In this example, we have created an expression which will:*

- *Populate the HYPHER_LINK field with a relative pathname. Note: include double quotes at each end of the pathname (e.g., "\pathname\").*
- *Concatenate the HYPHER_LINK field with the pathname and (&) the filenames from the image filename field*

Please refer to the ArcGIS online help for more information.

18. If necessary, click-hold-and-drag the HYPHER_LINK field heading next to the field that contains the image filenames.
19. If necessary, resize the field headings so both HYPHER_LINK and "images" fields are visible.
20. Resize and reposition ArcMap and the Attribute Table so they are both visible.

II. Establish Hyperlinks (see notes at left)

1. If necessary, enable the **Editor** toolbar (see note at left).
2. Click **Editor | Start Editing**.
3. Set (if necessary) the following in the **Editor** toolbar:
 - **Task: Modify Feature**
 - **Target: <name of your feature layer>**
4. Right-click the **HYPHER_LINK** field heading in the Attribute Table.
5. Select **Calculate Values**.
6. Set the following in the **Field Calculator** (see figure 1):
 - **In the Expression Field type:** *The "pathname" to your image directory (enclose the pathname with double quotes)*
 - *After the pathname, type: &*
 - **In Fields:** *double-click the field name that contains the filenames for your images*
 - *Your expression should resemble: "\pathname\" & [IMAGE_FILE]*
7. Click **OK**.
8. If you receive an error message, check the syntax in the Field Calculator and re-run the process (see note at left).
9. Click **Editor | Stop Editing**.
10. Click **Yes** when prompted to save edits.

III. Test Hyperlinks

1. Right-click the hyperlink layer in the **Table of Contents**.
2. Select **Properties**.
3. Click the **Display** tab.
4. Place a check next to **Support Hyperlinks using field**.
5. Select the **HYPHER_LINK** field in the **Hyperlinks** pull-down menu.
6. Click **Apply | OK**.
7. Click the **Hyperlink** tool on the **Tools** toolbar (page 3).

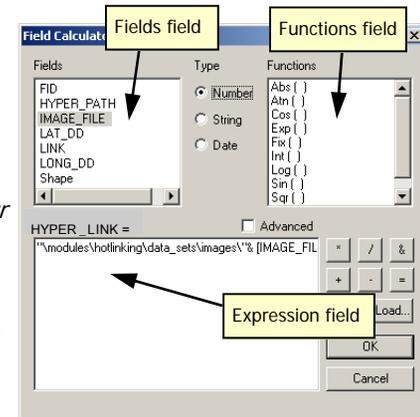


Figure 1: The Field Calculator



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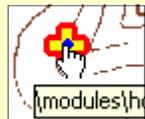


Hyperlink tool. Note: if the tool is grayed-out, hyperlinks are not enabled.



Tip: you will need to position your cursor directly over the feature to call a hyperlink.

When you position your cursor, pause for a moment until the cursor changes to the pointer icon (see graphic) and shows the path to the linked file—click and the link should open.



8. Hyperlinked features will change to blue in the Data View.
9. Float your cursor over one of the hyperlinked features (see note at left).
10. Click on the feature.
11. The linked image should open in its default application (i.e., a hyperlinked digital photo may open in Microsoft Paint).
12. Save the ArcMap project.