

# Adding a Raster Dataset with ArcObjects

By Chris Long

## Steps to Add a Raster Layer

- Locate a workspace that contains the dataset you need
  - The workspace is a folder rather than a database
- Associate the dataset with a new layer
- Add the layer to the map

## Setup the Workspace

- Dim pRWFactory As IWorkspaceFactory
  - 'IWorkSpaceFactory contains the method OpenFromFile
- Set pRWFactory = New RasterWorkspaceFactory
  - 'assign the variable to establish a new RasterWorkspaceFactory
- Dim pRasterWorkspace As IRasterWorkspace  
Set pRasterWorkspace = pRWFactory.OpenFromFile \_  
("c:\GIS\_590\10ft\_01", 0)
  - 'create the variable for the workspace to add and set the variable to the file you want to add NOTE: the second argument (the '0') tells VBA to find the ArcMap window
- Dim pRDataset As IRasterDataset  
Set pRDataset = pRasterWorkspace.OpenRasterDataset \_  
("2001\_10FT\_REGION.SID")
  - 'create the raster dataset variable and use the .OpenRasterDataset method of IWorkSpaceFactory to open the file in the workspace

## Set up the Raster File and Associate it to the layer

- Dim pRLayer As IRasterLayer  
Set pRLayer = New RasterLayer
  - 'create a new raster layer to add to the map
- pRLayer.CreateFromDataset pRDataset  
pRLayer.Name = "Portland Aerial Photo"
  - 'associate the raster dataset with the raster layer and set the layer's name

## Add the Layer to the Map

- Dim pMxDoc As IMxDocument  
Set pMxDoc = ThisDocument
  - 'declare and assign the current document (map) to MxDocument
- Dim pMap As IMap  
Set pMap = pMxDoc.FocusMap  
pMap.AddLayer pRLayer
  - 'Get the active map and add the raster layer to it
- pMap.MoveLayer pRLayer, pMap.LayerCount – 1
  - 'move the layer to the bottom of the map's table of contents
- pMxDoc.ActiveView.Refresh  
pMxDoc.UpdateContents
  - 'refresh the map view and the table of contents

## References

- Burke, Robert,(2003). *Getting to Know ArcObjects: Programming ArcGIS with VBA*. Redlands: ESRI Press.