Programming View Documents

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The View Object Model
Attributes of a View

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MapDisplay

- MapDisplay is a subclass of the Display class. You can get the MapDisplay from a view, and execute the following actions on a display (among others):
  - Zoom, pan... etc.
  - Set Resolution
  - Draw Shapes
  - Return shapes generated through user interaction
Using MapDisplay

• The following code zooms in to 200% the starting scale in a view.

```python
myDisplay = av.GetActiveDoc.GetDisplay
myDisplay.ZoomIn(200)
```

• The code above is a complete script
Refreshing A Display

- The “invalidate” request is widely used in Avenue to refresh a display.
  ```
  myDisplay.Invalidate(true)
  ```
- You can also use the “flush” request to update the display in the middle of a script.
  ```
  myDisplay.Flush
  ```
Area of Interest (AOI)

- Area of interest (AIO) is simply a rectangle that defines the region that is identified as the area that you generally want to focus on in your view. You can also set AOIs for each specific theme.

- Example:
  ```python
def myView = av.GetActiveDoc
myView.SetAOI(Rect.MakeXY(0, 0, 100, 100)
```
Projection

• In ArcView, if all the themes in a view are in geographic coordinates (decimal degrees), then a projection can be applied to the view. The projection is the projection used to convert all themes from decimal degrees to a planar screen.
Using Projections – The Prj Class

• There’s a good example of using projections in the ArcView help.
• Search for help on “Prj”, and then click the “Example” link at the top of the window.
GraphicList

• Each view has a list of graphics that it stores as an attribute. You can get the GraphicList from a view, and then add, remove, and manipulate the graphics stored there.
GraphicList Example

• Example:

  ‘* Gets the GraphicList from a View, and then
  ‘* creates an new graphic shape (a rectangle)
  ‘* and adds it to the GraphicList

myView = av.GetActiveDoc
myGList = myView.GetGraphics
myRect = GraphicShape.Make(Rect.MakeXY(1,1,2,2))
myGList.Add(myRect)
Table of Contents (TOC)

• A TOC (Table of Contents) manages the themes which are displayed in a view. It contains a collection of all of the theme legends.
TOC Example

• This code gets the TOC from a view, and sets the first legend active.

   myTOC = myView.GetTOC
   myTOC.SelectFirst
Themes

• Each view contains a collection of themes. You can find one theme by name, or get the list of all themes.
Themes Example

- This script loops through the themes from a view, and makes each theme active and visible.

  myThemes = myView.GetThemes
for each aTheme in myThemes
  aTheme.SetActive(true)
  aTheme.SetVisible(true)
end