Layer Symbology

Basic Classes

Abstract Classes
- Renderer
- Symbol
- Color
Dim pColor As IRgbColor
Set pColor = New RgbColor

'interface inheritance, IRgbColor inherits IColor
pColor.RGB = RGB(255, 127, 0) 'RGB is a VB function
pColor.Red = 255
pColor.Green = 127
pColor.Blue = 0

Symbol
Add Layer with User-Defined Color

Dim pColor As IRgbColor
Set pColor = New RgbColor
pColor.RGB = RGB(255, 127, 0) 'orange

Dim pLineSym As ISimpleLineSymbol
Set pLineSym = New SimpleLineSymbol
pLineSym.Color = pColor

Dim pRenderer As ISimpleRenderer
Set pRenderer = New SimpleRenderer
Set pRenderer.Symbol = pLineSym

Dim pGFLayer As IGeoFeatureLayer
'Renderer is access through IGeoFeatureLayer interface of a FeatureLayer
Set pGFLayer = pFLayer 'QI
Set pGFLayer.Renderer = pRenderer

pMxDoc.FocusMap.AddLayer pFLayer
Change Layer Color

Dim pColor As IColor
Set pColor = New RgbColor
pColor.RGB = RGB(255, 0, 0)

Dim pSymbol As ILineSymbol
Set pSymbol = New SimpleLineSymbol
pSymbol.Color = pColor

Dim pRenderer As ISimpleRenderer
Set pRenderer = New SimpleRenderer
Set pRenderer.Symbol = pSymbol

Dim pGFLayer As IGeoFeatureLayer
Set pGFLayer = pMxDoc.FocusMap.Layer(0)
Set pGFLayer.Renderer = pRenderer
pMxDoc.UpdateContents
pMxDoc.ActivatedView.Refresh
Dim pMxDoc As IMxDocument
Set pMxDoc = ThisDocument

Dim pStyleG As IStyleGallery
Set pStyleG = pMxDoc.StyleGallery

Dim pEnumStyleG As IEnumStyleGalleryItem
Set pEnumStyleG = pStyleG.Items("Line Symbols", "ESRI.style", "Dashed")

' Items Arguments: Class Name, StyleSet, and Category

Dim pStyleItem As IStyleGalleryItem
Set pStyleItem = pEnumStyleG.Next
If pStyleItem.Name = "Dash 4:4" then
    Dim pLineSym As ILineSymbol
    Set pLineSym = pStyleItem.Item
End If

pEnumStyleG.Reset

pStyleG.Items("Line Symbols", "ESRI.style", "Dashed")
**IFeatureClass.ShapeType**

### esriGeometryType Constants

<table>
<thead>
<tr>
<th>Constant</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>esriGeometryNull</td>
<td>0</td>
<td>A geometry of unknown type.</td>
</tr>
<tr>
<td>esriGeometryPoint</td>
<td>1</td>
<td>A single zero dimensional geometry.</td>
</tr>
<tr>
<td>esriGeometryMultipoint</td>
<td>2</td>
<td>An ordered collection of points.</td>
</tr>
<tr>
<td>esriGeometryLine</td>
<td>13</td>
<td>A straight line segment between two points.</td>
</tr>
<tr>
<td>esriGeometryCircularArc</td>
<td>14</td>
<td>A portion of the boundary of a circle.</td>
</tr>
<tr>
<td>esriGeometryEllipticArc</td>
<td>16</td>
<td>A portion of the boundary of an ellipse.</td>
</tr>
<tr>
<td>esriGeometryBezier</td>
<td>3</td>
<td>Curve15A third degree bezier curve (four control points).</td>
</tr>
<tr>
<td>esriGeometryPath</td>
<td>6</td>
<td>A connected sequence of segments.</td>
</tr>
<tr>
<td>esriGeometryPolyline</td>
<td>3</td>
<td>An ordered collection of paths.</td>
</tr>
<tr>
<td>esriGeometryRing</td>
<td>11</td>
<td>An area bounded by one closed path.</td>
</tr>
<tr>
<td>esriGeometryPolygon</td>
<td>4</td>
<td>A connected sequence of segments.</td>
</tr>
<tr>
<td>esriGeometryEnvelope</td>
<td>5</td>
<td>A rectangle indicating the spatial extent of another geometry.</td>
</tr>
<tr>
<td>esriGeometryAny</td>
<td>7</td>
<td>Any of the geometry coclass types.</td>
</tr>
<tr>
<td>esriGeometryBag</td>
<td>17</td>
<td>A collection of geometries of arbitrary type.</td>
</tr>
<tr>
<td>esriGeometryMultiPatch</td>
<td>9</td>
<td>A collection of surface patches.</td>
</tr>
<tr>
<td>esriGeometryTriangleStrip</td>
<td>18</td>
<td>A surface patch of triangles defined by three consecutive points.</td>
</tr>
<tr>
<td>esriGeometryTriangleFan</td>
<td>19</td>
<td>A surface patch of triangles defined by the first point and two consecutive points.</td>
</tr>
<tr>
<td>esriGeometryRay</td>
<td>20</td>
<td>An infinite, one-directional line extending from an origin point.</td>
</tr>
<tr>
<td>esriGeometrySphere</td>
<td>21</td>
<td>A complete 3 dimensional sphere.</td>
</tr>
<tr>
<td>esriGeometryTriangles</td>
<td>22</td>
<td>A surface patch of triangles defined by non-overlapping sets of 3 consecutive points each.</td>
</tr>
</tbody>
</table>

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**SelectionSet**

```vba
Dim pFLayer As IFeatureLayer
Dim pFSele As IFeatureSelection
Set pFLayer = pMap.Layer(0)
Set pFSele = pFLayer 'QI

' define selection queryfilter by attribute
Dim pQFilter As IQueryFilter
Set pQFilter = New QueryFilter
pQFilter.WhereClause = "TOTPOP < 200"
pFSele.SelectFeatures pQFilter, esriSelectionResultNew, False
pMxDoc.ActivatedView.Refresh 'refresh the view to see the selected features

' retrieve selected features using a FeatureCursor
Dim pSeleSet As ISelectionSet
Set pSeleSet = pFSele.SelectionSet
Dim pFCursor As IFeatureCursor
pSeleSet.Search Nothing, False, pFCursor

nf = pSeleSet.Count
Dim pFeature As IFeature

'display the TOTPOP value in each polygon
For i = 1 To nf
    Set pFeature = pFCursor.NextFeature
    Debug.Print pFeature.Value(10)
Next
```