



Creating custom clients for the ArcGIS Server Image extension

Ringu Nalankal & Smrithi Chandran



Introductions

- **Who are we?**
 - **ArcGIS Server Image Extension (Developers)**
- **Who are you?**
 - **Developers who customize ArcGIS Server Image extension**
 - **Developers who want their application to function as an ArcGIS Server Image extension client?**

Schedule

Please!
Turn OFF cell phones
and paging devices



- **45 minute session**
 - 30-40 minutes lecture
 - 5-15 Q & A following the lecture
- **Questions will be answered at the end of the session.**

Please complete the session survey!

Agenda

- **ArcGIS Server Image Extension: Brief Overview**
- **Image Server Client API**
- **XML Schemas**
- **Use cases for developers**
 - **Accessing image services**
 - **Displaying data from an image service**
- **Demo**

ArcGIS Server Image Extension Overview

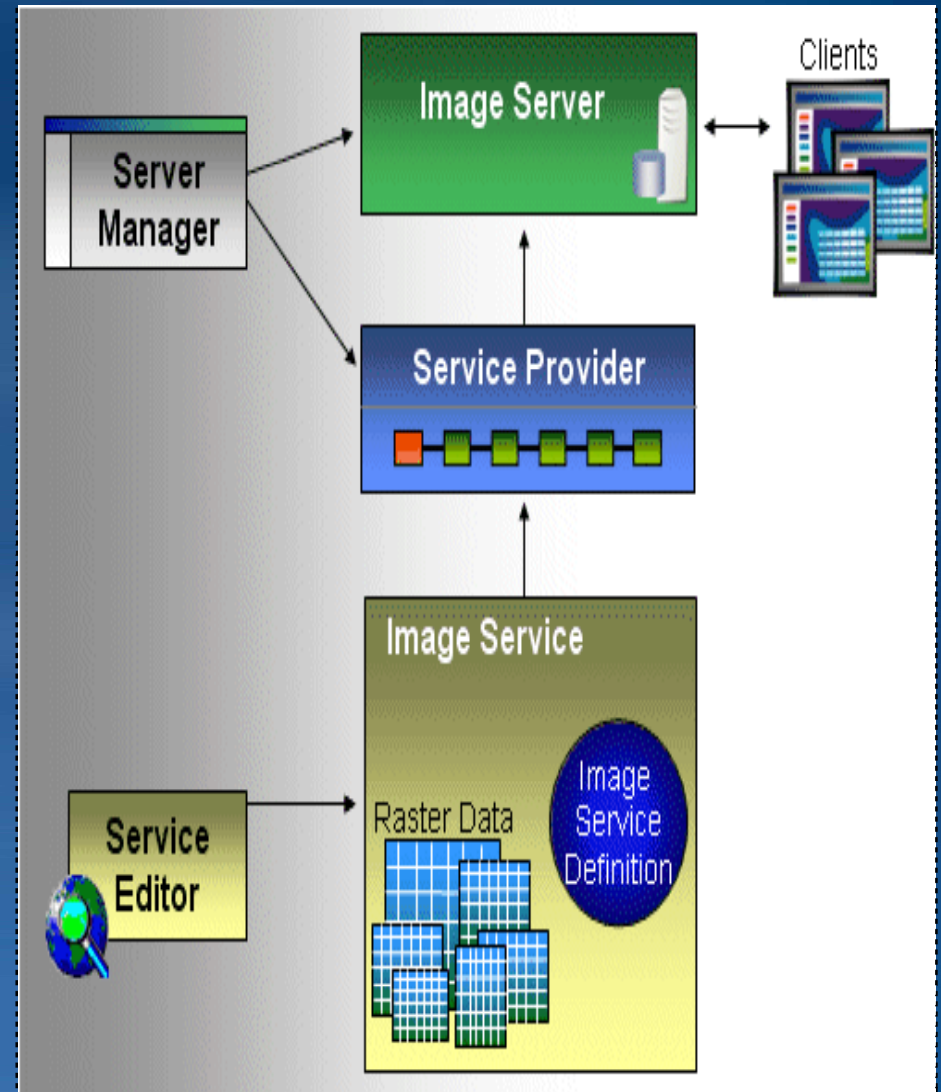
- **Very Fast Access to Imagery**
- **Dynamic Image Distribution and Processing**
- **No need to pre-process imagery**
- **On the Fly Processing**
- **On the Fly Mosaicking**
- **Create multiple imagery products**

ArcGIS Image Server Architecture

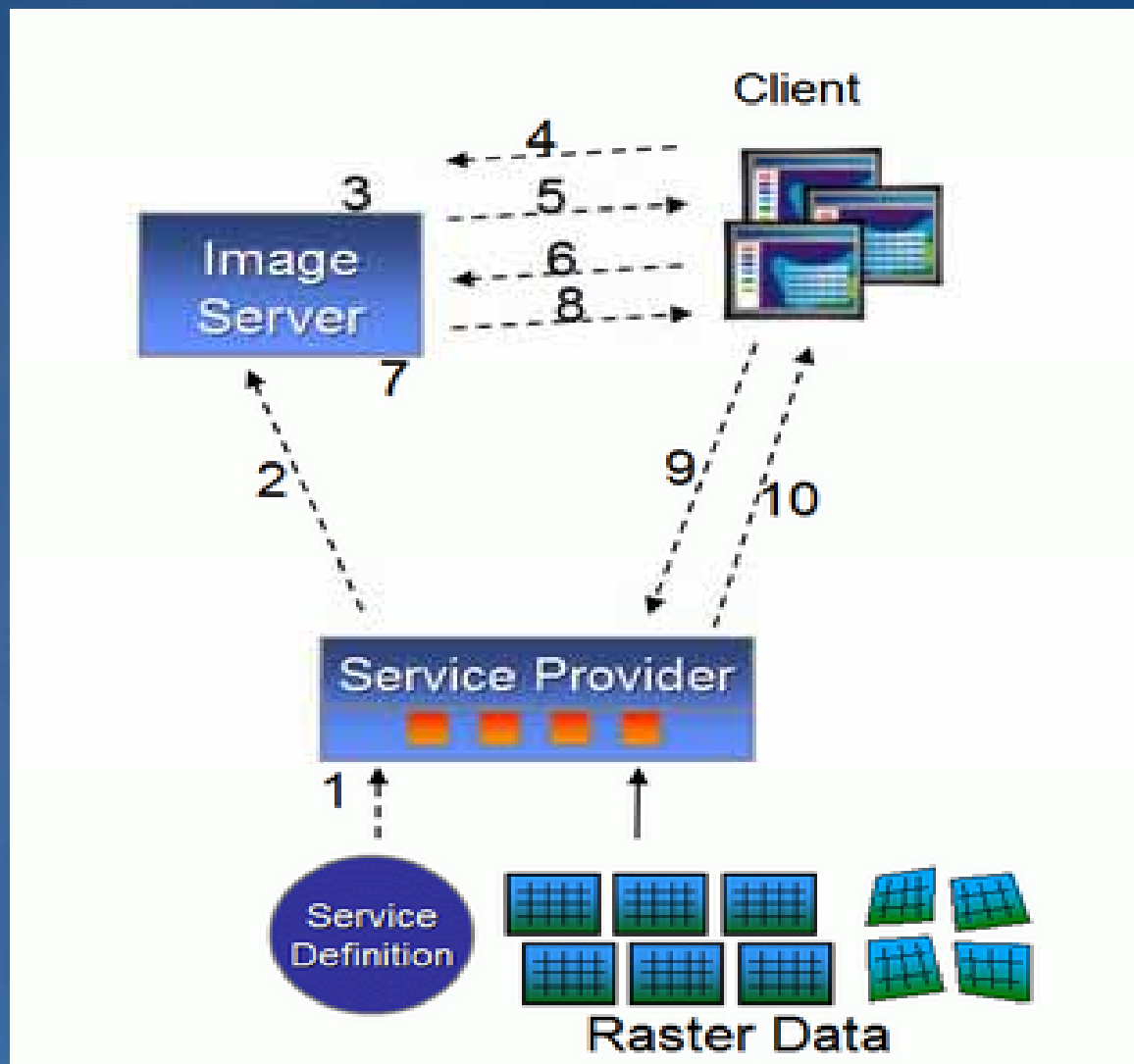
Author: Image Service Definition
Service Editor(Add Rasters, Build,
Compile ISDef)

Publish and Serve:
Server Manager
Server
Service Provider

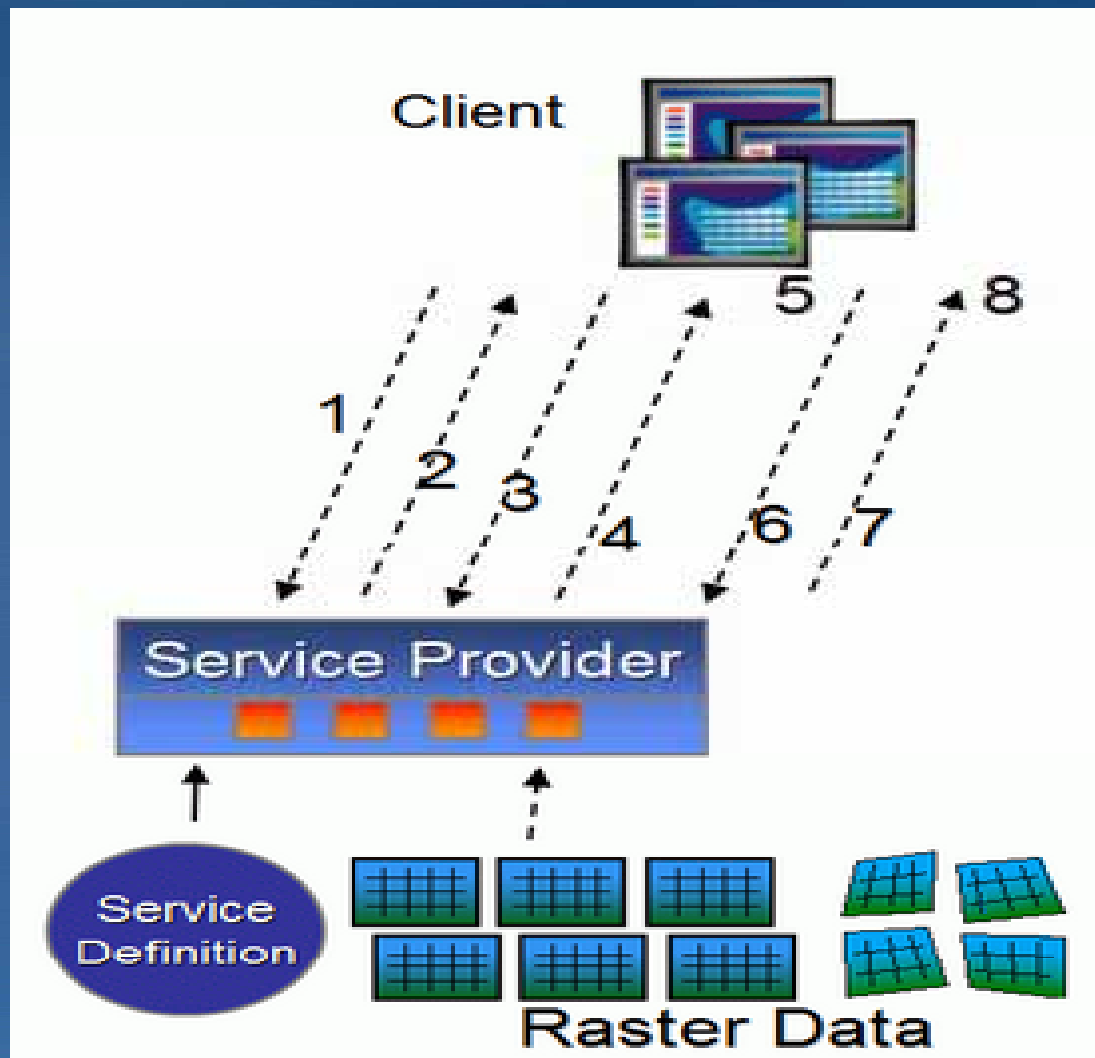
Access:
ArcGIS Desktop, 3rd party
CAD/GIS/Imaging software



Publishing/Selecting an Image Service



Requesting an Image



Direct Connect Clients

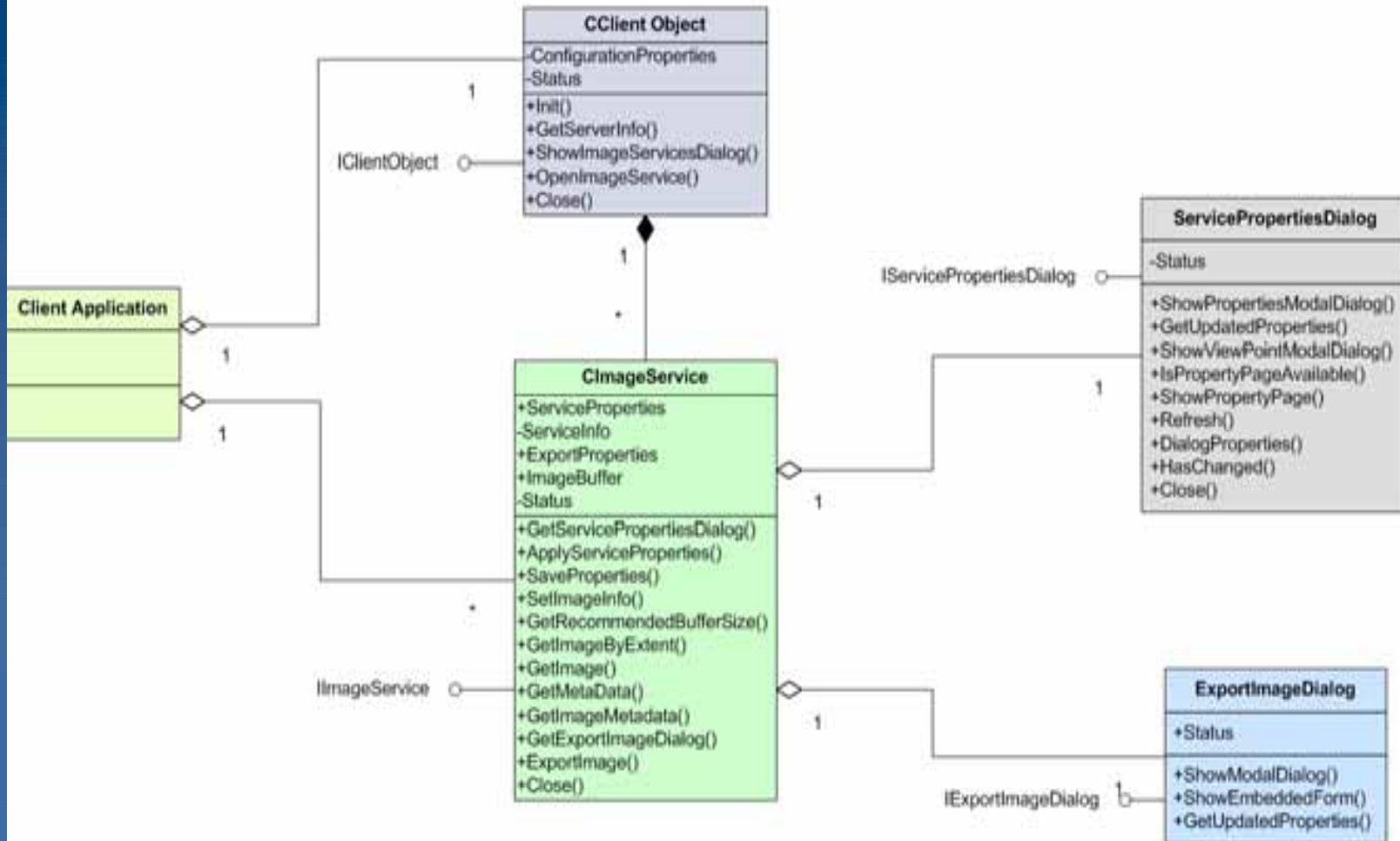
- **ESRI**
 - ArcGIS Desktop
 - ArcGIS Server
- **Other**
 - Microstation
 - AutoCAD
 - GeoMedia
 - MapInfo
- **Open API**
 - Software Developers Kit

ArcGIS Image Server Client

- Core client component of ArcGIS Image Server
- Uses Remote Procedure Call (RPC)
- Compact
- Easy to integrate
- Quicker to implement
- Out of the box GUI support

Client Library

Static Structure



ArcGIS Image Server Client Interfaces and Classes

- **IClientObject**

- Establish connection with ArcGIS Image Server
- Access a list of Image Services on the server.
- Open any selected Image Service

- **IImageService**

- Access a published image service
- Access service information/service properties
- Get image for an Area of Interest
- Optionally access service metadata and metadata for the image returned

Accessing Out of the Box UI

- **IServicePropertiesDialog**
 - View/Modify service properties.
- **IExportImageDialog**
 - View/Modify properties of an image to be exported.

Initializing the Client Object

```
/// Create the client object and initialize it
string m_clientConfigFile = @"C:\ArcGIS\bin\ISClientApplication.ISCConfig";

ImageServerClient.IClientObject m_clientObject =
    new ImageServerClient.CClientObjectClass();
if (m_clientObject != null)
    m_clientObject.Init(m_clientConfigFile);
```

Client Configuration

- XML Based
- Properties
 - Bands
 - Pixel Type
 - MaxNCols
 - MaxNRows
 -

```
<ImageServer>  
  <Client>  
    <Init>  
      <Info>  
        <PixelTypes>Byte</PixelTypes>  
        <MaxNBands>1</MaxNBands>  
        <MaxNCols>3000</MaxNCols>  
        <MaxNRows>3000</MaxNRows>  
      </Info>  
    </Init>  
  </Client>  
</ImageServer>
```

Finding published services

```
/// Shows the image services dialog  
string selectedServices = m_clientObject.ShowImageServicesDialog("");
```

OR

```
/// Get the server info  
string serverID = "istest1";  
string requestXml = string.Format(  
"<ImageServer><Client><ServerInfo><Request><Server>{0}</Server><MetadataLevel>1</  
MetadataLevel></Request></ServerInfo></Client></ImageServer>", serverID);  
string serverInfoXml = m_clientObject.GetServerInfo(serverInfoRequest);
```


Selected Services

- XML Based
- List of Service URLs

```
<SelectedImageServices>  
  <Name>ImageService://myServer:10000/30_nov_s357_uln</Name>  
  <Name>ImageService://myServer:10000/Amberg_GeoTiffs</Name>  
  <Name>ImageService://myServer:10000/Amberg_TFW_10</Name>  
</SelectedImageServices>
```

Finding published services

```
/// Shows the image services dialog  
string selectedServices = m_clientObject.ShowImageServicesDialog("");
```

OR

```
/// Get the server info  
string serverID = "istest1";  
string requestXml = string.Format(  
"<ImageServer><Client><ServerInfo><Request><Server>{0}</Server><MetadataLevel>1</  
MetadataLevel></Request></ServerInfo></Client></ImageServer>", serverID);  
string serverInfoXml = m_clientObject.GetServerInfo(serverInfoRequest);
```

Server Info

- XML Based
- List of Services

```
<ImageServer>
  <Server>
    <Info>
      <Basic>
        <StartedAt>2009-03-15T01:23:58.803</StartedAt>
        <ISSConfigFile>C:\Documents and Settings\All
          Users\Application Data\ESRI\Image
          Server\Server\ImageServer.ISSConfig</ISSConfigFile>
        <HostMachine />
        <Endpoint>3982</Endpoint>
        <Version>9.3.3000</Version>
        <LogsFolder>C:/Documents and Settings/All Users/Application
          Data/ESRI/Image Server/Logs/Server/</LogsFolder>
        <ServerType>undefined</ServerType>
        <CpuLicenses />
        <NumServiceProviders>1</NumServiceProviders>
        <NumServices>102</NumServices>
      </Basic>
      <Detailed>
        <ServiceProviders>
          <ServiceProvider>
            <ServiceProvider>
              <Name>ISTEST1_ISTEST1_3983</Name>
              <Endpoint>3983</Endpoint>
              <HostMachine>ISTEST1</HostMachine>
              <Services>
                <Service>
                  <Name>AIS1/AGS_IS_Test/AIS_Socall_TIFFS</Name>
                  <Source>\\istest1\services\EarthSat.iscdef</Source>
                  ± <ImageServiceInfo>
                    </Service>
                </Service>
              </Services>
            </ServiceProvider>
          </ServiceProviders>
        </Detailed>
      </Info>
    </Server>
  </ImageServer>
```

Server Info

- XML Based
- List of Services

```
<ImageServer>  
  <Server>  
    <Info>  
      <Basic>  
        <StartedAt>2009-03-15T01:23:58.803</StartedAt>  
        <ISSConfigFile>C:\Documents and Settings\All  
          Users\Application Data\ESRI\Image  
          Server\Server/ImageServer.ISSConfig</ISSConfigFile>
```

```
<Services>  
  <Service>  
    <Name>AIS1/AGS_IS_Test/AIS_Socal_TIFFS</Name>  
    <Source>\\istest1\services\EarthSat.iscdef</Source>  
    + <ImageServiceInfo>  
      </Service>  
</Services>
```

```
    <Name>ISTEST1_ISTEST1_3983</Name>  
    <Endpoint>3983</Endpoint>  
    <HostMachine>ISTEST1</HostMachine>  
    <Services>  
      <Service>  
        <Name>AIS1/AGS_IS_Test/AIS_Socal_TIFFS</Name>  
        <Source>\\istest1\services\EarthSat.iscdef</Source>  
        + <ImageServiceInfo>  
          </Service>  
      </Services>  
    </ServiceProvider>  
  </ServiceProviders>  
</Detailed>  
</Info>  
</Server>  
</ImageServer>
```

Opening an Image Service

```
/// Get the service name from the server info and create the connection string
string imageUrl = "ImageService://" + serverID + "/" + imageName;
ImageServerClient.IImageService m_imageService =
    = m_clientObject.OpenImageService(imageUrl , string.Empty);
```

Accessing Service Info

```
/// Get the service info
string serviceInfo = m_ImageService.ServiceInfo;
```

Service Info

- XML Based
- Extents
- Properties
 - Bit Depth
 - Bands
 - Pixel Type
 - Pixel Size

.....

```
<ImageServer>
  <ImageServiceInfo>
    <BitDepth>8</BitDepth>
    <ClientEnvelope>
      <XMin>-179.999899836257</XMin>
      <YMin>44.982107046501</YMin>
      <ZMin>0.000000000000</ZMin>
      <XMax>-20.970204967498</XMax>
      <YMax>85.017892930216</YMax>
      <ZMax>0.000000000000</ZMax>
    </ClientEnvelope>
    <ColorSpace>1</ColorSpace>
    <GeographicEnvelope>
      <XMin>-179.999899836257</XMin>
      <YMin>44.982107046501</YMin>
      <ZMin>0.000000000000</ZMin>
      <XMax>-20.970204967498</XMax>
      <YMax>85.017892930216</YMax>
      <ZMax>0.000000000000</ZMax>
    </GeographicEnvelope>
    ± <KeyDetails>
      <MaxNCols>15000</MaxNCols>
      <MaxNRows>4100</MaxNRows>
      <MaxPixelSize>5624964.000</MaxPixelSize>
      <MinPixelSize>0.000</MinPixelSize>
      <Name>AIS1/AGS_IS_Test/AIS_Soccal_TIFFS</Name>
      <NBands>3</NBands>
      <PixelSize>154.320</PixelSize>
      <PixelType>Byte</PixelType>
      <ProcessWeight />
      <ProviderVersion>9.3.0.264</ProviderVersion>
    ± <Srs>
  </ImageServiceInfo>
</ImageServer>
```

Service Info

- XML Based
- Extents
- Properties
 - Bit Depth
 - Bands
 - Pixel Type
 - Pixel Size
 -

```
<ImageServer>
  <ImageServiceInfo>
    <BitDepth>8</BitDepth>
    <ClientEnvelope>
      <XMin>-179.999899836257</XMin>
      <YMin>44.982107046501</YMin>
      <ZMin>0.000000000000</ZMin>
      <XMax>-20.970204967498</XMax>
      <YMax>85.017892930216</YMax>
      <ZMax>0.000000000000</ZMax>
    </ClientEnvelope>
    <ColorSpace>1</ColorSpace>
    <GeographicEnvelope>
      <XMin>-179.999899836257</XMin>
      <YMin>44.982107046501</YMin>
      <ZMin>0.000000000000</ZMin>
    </GeographicEnvelope>
  </ImageServiceInfo>
</ImageServer>
```

ix>
>
,
>
xPixelSize>
>
_Social_TIFFS</Name>

```
<ClientEnvelope>
  <XMin>-179.999899836257</XMin>
  <YMin>44.982107046501</YMin>
  <ZMin>0.000000000000</ZMin>
  <XMax>-20.970204967498</XMax>
  <YMax>85.017892930216</YMax>
  <ZMax>0.000000000000</ZMax>
</ClientEnvelope>
  <PixelType>byte</PixelType>
  <ProcessWeight />
  <ProviderVersion>9.3.0.264</ProviderVersion>
  ± <Srs>
</ImageServiceInfo>
</ImageServer>
```

Service Info

- XML Based
- Extents
- **Properties**
 - Bit Depth
 - Bands
 - Pixel Type
 - Pixel Size

.....

```
<ImageServer>
  <BitDepth>8</BitDepth>
  <MaxNCols>15000</MaxNCols>
  <MaxNRows>4100</MaxNRows>
  <MaxPixelSize>5624964.000</MaxPixelSize>
  <MinPixelSize>0.000</MinPixelSize>
  <Name>AIS1/AGS_IS_Test/AIS_Socal_TIFFS</Name>
  <NBands>3</NBands>
  <PixelSize>154.320</PixelSize>
  <PixelType>Byte</PixelType>
  <ProcessWeight />
  <ProviderVersion>9.3.0.264</ProviderVersion>
  <Srs>
    <Prj>GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]]
  </Prj>
</Srs>
```

```
  <MinPixelSize>0.000</MinPixelSize>
  <Name>AIS1/AGS_IS_Test/AIS_Socal_TIFFS</Name>
  <NBands>3</NBands>
  <PixelSize>154.320</PixelSize>
  <PixelType>Byte</PixelType>
  <ProcessWeight />
  <ProviderVersion>9.3.0.264</ProviderVersion>
  ± <Srs>
</ImageServiceInfo>
</ImageServer>
```


Requesting an Image

```
/// Extract the extents from the service info xml.
if (!m_imageService.SetImageInfo(xMin, yMin, xMax, yMax, nCols, nRows))
    return;

/// Get the buffer size.
int bufferSize = m_imageService.GetRecommendedBufferSize();

/// Create the buffer
byte[] imageBuffer = new byte[bufferSize];
GCHandle gchImageBuffer = GCHandle.Alloc(imageBuffer, GCHandleType.Pinned);
IntPtr iPtrImageBuffer = gchImageBuffer.AddrOfPinnedObject();

/// Set the buffer on the image service
m_imageService.ImageBuffer = iPtrImageBuffer.ToInt32();

/// Get the image in buffer
if (!m_imageService.GetImageByExtent())
    return;

if (gchImageBuffer.IsAllocated)
    gchImageBuffer.Free();
```

Accessing and Modifying Service Properties

```
/// Show the service properties dialog to view/edit service properties
ImageServerClient.IServicePropertiesDialog
    servicePropsDlg = m_imageService.GetServicePropertiesDialog();

if (servicePropsDlg.ShowPropertiesModalDialog() > 0)
{
    m_imageService.serviceProperties = servicePropsDlg.GetUpdatedProperties();
    m_imageService.ApplyServiceProperties();
}
```

Service Properties

- **XML Based**
- **Service Name**
- **Properties**
 - **Mosaic Method**
 - **Sampling Method**
 - **Background color**
 - **Srs**
 - **Compression method**
 - **Compression quality**
 -

```
<ImageServer>
  <ImageServiceProperties>
    <AvgImageSpacingX>0</AvgImageSpacingX>
    <AvgImageSpacingY>0</AvgImageSpacingY>
    <BackgroundColor>16777215</BackgroundColor>
    <CompressionMethod>None</CompressionMethod>
    <CompressionQuality>100.0</CompressionQuality>
    <LockImageID />
    <MosaicMethod>Center</MosaicMethod>
    <RequestId>58d54b3e-d267-4526-b550-ebf368a4fd16</RequestId>
    <SamplingMethod>Bilinear</SamplingMethod>
    <ServiceKey />

    <ServiceName>ImageService://istest1/AIS1/AGS_IS_Test/AIS_
      Social_TIFFS</ServiceName>
    <SimulateMosaic>False</SimulateMosaic>
    <Srs>

      <Prj>GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHER
        OID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Green
        wich",0.0],UNIT["Degree",0.0174532925199433]]</Prj>
    </Srs>
    <TileOrderBase />
    <TileOrderField />
    <UnrestrictedApplication />
    <ViewPointDefShiftX>0</ViewPointDefShiftX>
    <ViewPointDefShiftY>0</ViewPointDefShiftY>
  </ImageServiceProperties>
</ImageServer>
```

Service Properties

- XML Based
- **Service Name**
- **Properties**
 - Mosaic Method
 - Sampling Method
 - Background color
 - Srs
 - Compression method
 - Compression quality
 -

```
<ImageServer>
  <ImageServiceProperties>
    <AvgImageSpacingX>0</AvgImageSpacingX>
    <AvgImageSpacingY>0</AvgImageSpacingY>
    <BackgroundColor>16777215</BackgroundColor>
    <CompressionMethod>None</CompressionMethod>
    <CompressionQuality>100.0</CompressionQuality>
    <LockImageID />
    <MosaicMethod>Center</MosaicMethod>
    <RequestId>58d54b3e-d267-4526-b550-ebf368a4fd16</RequestId>
    <SamplingMethod>Bilinear</SamplingMethod>
    <ServiceKey />
    <ServiceName>ImageService://istest1/AIS1/AGS_IS_Test/AIS_Social_TIFFS</ServiceName>
    <SimulateMosaic>False</SimulateMosaic>
    <Srs>
      <Proj>GEOGCS["GCS_WGS_1984", DATUM["D_WGS_1984", SPHER
    <ServiceName>ImageService://istest1/AIS1/AGS_IS_Test/AIS_Social_TIFFS</ServiceName>
    <TileOrderField />
    <UnrestrictedApplication />
    <ViewPointDefShiftX>0</ViewPointDefShiftX>
    <ViewPointDefShiftY>0</ViewPointDefShiftY>
  </ImageServiceProperties>
</ImageServer>
```

Service Properties

- XML Based
- Service Name
- **Properties**
 - Mosaic Method
 - Sampling Method
 - Background color
 - Srs
 - Compression method
 - Compression quality

.....

```
<ImageServer>
  <ImageServiceProperties>
    <AvgImageSpacingX>0</AvgImageSpacingX>
    <AvgImageSpacingY>0</AvgImageSpacingY>
    <BackgroundColor>16777215</BackgroundColor>
    <AvgImageSpacingX>0</AvgImageSpacingX>
    <AvgImageSpacingY>0</AvgImageSpacingY>
    <BackgroundColor>16777215</BackgroundColor>
    <CompressionMethod>None</CompressionMethod>
    <CompressionQuality>100.0</CompressionQuality>
    <LockImageID />
    <MosaicMethod>Center</MosaicMethod>
    <RequestID>58d54b3e-d267-4526-b550-ebf368a4fd16</RequestID>
    <SamplingMethod>Bilinear</SamplingMethod>
    <ServiceKey />
    <ServiceName>ImageService://istest1/AIS1/AGS_IS_Test/AIS_
      Social_TIFFS</ServiceName>
    <SimulateMosaic>False</SimulateMosaic>
    <Srs>
      <Prj>GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHER
        OID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Green
        wich",0.0],UNIT["Degree",0.0174532925199433]]</Prj>
    </Srs>
  </ImageServiceProperties>
</ImageServer>
```

Using Export Dialog to Write Images

```
ImageServerClient.IExportImageDialog
```

```
    exportImageDlg = m_imageService.GetExportImageDialog();  
exportImageDlg.ShowModalDialog();
```

OR

```
/// To write out image to a file with the desired properties.
```

```
string outputType = "File";
```

```
string fileName = "c:\\Default.tif";
```

```
string tileSize = "256";
```

```
string compression = "JPEG";
```

```
string format = "TIFF";
```

```
string getImageXml = string.Format(  
    "<ImageServer><Client><GetImage>" +
```

```
        "<OutputType>{0}</OutputType>" +
```

```
        "<FileName>{1}</FileName>" +
```

```
        "<TileSize>{2}</TileSize>" +
```

```
        "<CompressionMethod>{3}</CompressionMethod>" +
```

```
        "<Format>{4}</Format>" +
```

```
        "</GetImage></Client></ImageServer>", outputType,
```

```
    fileName, tileSize, compression, format);
```

```
string getImage = m_imageService.GetImage(getImageXml);
```

```
string getImage = m_imageService.GetImage(getImageXml);
```

Export Image

- XML Based
- Properties
 - Output format
 - Output file location
 - Write world file
 - Write geo-tiff
 - Compression method
 - Compression Quality
 - Output tile size

```
<ImageServer>  
  <Client>  
    <GetImage>  
      <OutputType />  
      <FileName />  
      <Format />  
      <CreateWorldFile/>  
      <Top/>  
      <Left/>  
      <Right/>  
      <Bottom/>  
      <Cols/>  
      <Rows/>  
      <CompressionMethod/>  
      <TileSize/>  
      <CreateWorldFile/>  
    </GetImage>  
  </Client>  
</ImageServer>
```

Service Metadata

```
/// Get the service level metadata
string serviceMetadata =
    m_ImageService.GetMetadata("");
```

```
<Metadata>
  <Title />
  <Edition />
  <Identifier />
  <GeoRegion />
  <PixelUnit />
  <PixelSource />
  <ProcessSum />
  <Abstract />
  <Purpose />
  <Originator />
  <Publisher />
  <Rights />
  <ContactOrg />
  <ContactPer />
  <TimePeriodBegin />
  <TimePeriodEnd />
  <ServiceCreationDate>20080305</ServiceCreationDate>
  <ServiceCreationTime>151553</ServiceCreationTime>
</Metadata>
```


Image Metadata

```
/// Get the image level metadata
```

```
string basicImageMetadata = m_ImageService.GetImageMetadata("Basic");
```

```
string detailedImageMetadata = m_ImageService.GetImageMetadata("Detailed");
```

```
string fullImageMetadata = m_ImageService.GetImageMetadata("Full");
```

Image Metadata

- XML Based
- Basic
- Detailed
- Full

```
<ImageServer>
  <Client>
    <ImageMetadata>
      <Basic>
        <BitDepth>8</BitDepth>
        <BufferSize>270000</BufferSize>
        <ColorSpace>1</ColorSpace>
        <CompressionFactor>1.00</CompressionFactor>
        <NBands>3</NBands>
        <NCols>300</NCols>
        <NRows>300</NRows>
        <PixelType>Byte</PixelType>
        ± <Status>
          .
        <XMax>-20.970</XMax>
        <XMin>-180.000</XMin>
        <YMax>85.018</YMax>
        <YMin>44.982</YMin>
      </Basic>
      <Detailed>
        <AverageImageSpacingX>0</AverageImageSpacingX>
        <AverageImageSpacingY>0</AverageImageSpacingY>
        <BackgroundColor>16777215</BackgroundColor>
        <CompressionMethod>None</CompressionMethod>
        <CompressionQuality>100.0</CompressionQuality>
        <LockRasterId />
        <MosaicMethod>Center</MosaicMethod>
        <RasterFootprintsAvailable>true</RasterFootprintsAvailable>
        <RasterInfoAvailable>true</RasterInfoAvailable>
        <Rasters>
          <Raster>
            ± <Info>
          </Raster>
        </Rasters>
        <SamplingMethod>Bilinear</SamplingMethod>
        ± <Srs>
          <TileOrderBase />
          <TileOrderField />
          <ViewPointDefaultShiftX>0</ViewPointDefaultShiftX>
          <ViewPointDefaultShiftY>0</ViewPointDefaultShiftY>
        </Detailed>
      </ImageMetadata>
    </Client>
  </ImageServer>
```

Image Metadata

- XML Based
- **Basic**
- Detailed
- Full

```
<ImageServer>  
  <Client>  
    <ImageMetadata>  
      <Basic>  
        <BitDepth>8</BitDepth>  
        <BufferSize>270000</BufferSize>  
        <ColorSpace>1</ColorSpace>  
        <CompressionFactor>1.00</CompressionFactor>  
        <NBands>3</NBands>  
        <NCols>300</NCols>  
        <NRows>300</NRows>  
        <PixelType>Byte</PixelType>
```

```
<Basic>  
  <BitDepth>8</BitDepth>  
  <BufferSize>270000</BufferSize>  
  <ColorSpace>1</ColorSpace>  
  <CompressionFactor>1.00</CompressionFactor>  
  <NBands>3</NBands>  
  <NCols>300</NCols>  
  <NRows>300</NRows>  
  <PixelType>Byte</PixelType>  
  + <Status>  
    .  
  <XMax>-20.970</XMax>  
  <XMin>-180.000</XMin>  
  <YMax>85.018</YMax>  
  <YMin>44.982</YMin>  
</Basic>
```

```
<ViewPointDefaultShiftY>0</ViewPointDefaultShiftY>  
</Detailed>  
</ImageMetadata>  
</Client>  
</ImageServer>
```

```
ingX>  
ingY>  
r>  
sd>  
ty>  
tsAvailable>  
ftx>
```

Image Metadata

- XML Based
- Basic
- Detailed
 - Basic metadata
 - Raster Info
 - Process metadata
- Full
 - Basic metadata
 - Detailed metadata
 - Raster Footprints
 - Mosaic line
 - Service Info

```
<Rasters>
  <Raster>
    <Info>
      <BitDepth>8</BitDepth>
      <ColorSpace>1</ColorSpace>
      <CompressionFactor />
      <CompressionMethod>JPEG</CompressionMethod>
      <FeatherWidth>0</FeatherWidth>
      <FeatherWidthUnit>Pixel</FeatherWidthUnit>
      <FormatName>TIFF</FormatName>
      <HiPixelSize>12499.920</HiPixelSize>
      <LoPixelSize>12499.920</LoPixelSize>
      <NadirX>-100.484526607207</NadirX>
      <NadirY>65.008802616735</NadirY>
      <NadirZ>0.000000000000</NadirZ>
      <NBands>3</NBands>
      <NoData>0</NoData>
      <PixelSize>12499.92</PixelSize>
      <RasterId>08030514464201800000.1</RasterId>
      <RasterItemId>1</RasterItemId>
      <RasterName>ServiceOverview</RasterName>
      <SeamlineType>Around</SeamlineType>

      <Source>D:\Services\EarthSat.DerivedImages\SO\08030514464
        186200000.tif</Source>
      <SourceIndex />
      <TileHeight>256</TileHeight>
      <TileWidth>256</TileWidth>
      <Time>2008-03-05T15:16:37</Time>
      <Transparency>False</Transparency>
      <Visible>True</Visible>
    </Info>
  </Raster>
</Rasters>
```

Display Viewpoint Control

```
/// Show viewpoint control
ImageServerClient.IServicePropertiesDialog
    servicePropsDlg = m_imageService.GetServicePropertiesDialog();
if (!servicePropsDlg.ShowViewPointModalDialog())
    return;

/// Update the new viewpoint properties
m_imageService.serviceProperties =
    servicePropsDlg.GetUpdatedProperties();
m_imageService.ApplyServiceProperties();
```

Saving an ISRef file

```
bool saveProperties = m_imageService.SaveProperties("c:\\temp\\test.isref");
```

Demo

Opening an image service and requesting an image for a specified area of interest.

Summary

- **ArcGIS Server Image Extension**
 - Brief Overview
- **Direct Connection Workflow**
- **Image Server Client library**
 - Interfaces and Classes
 - Different methods and properties of the classes
 - XMLs involved
- **How to write a sample client application**

Still have questions?

Additional Resources

Questions, answers and information...

- ***Meet the Team***

- ***Wednesday 4:00pm (Oasis 1, Palm Springs Convention Center)***

- ***Other sessions***

- ***Customization with the ArcGIS Server Image Extension***

- 1st offering - ***Wednesday, March 25, 2009, 10:30am-11:45am, Catalina/Madera (Wyndham)***

- 2nd offering - ***Thursday, March 26, 2009, 1:30pm-2:45pm, Mesquite C (PSCC)***

- ***All sessions are recorded and available on EDN***

- ***Resources***

- ***<http://resources.esri.com/raster/arcgisimageserver/>***

- ***ArcGIS Server Image Extension Developer kit***

Questions/Comments?