

SOS 4.1: WMS Data

SOS Version 4.1 supports loading imagery directly from the Open GeoSpatial Consortium (OGC) Web Mapping Service (WMS). This feature requires an internet connection and will not work unless the SOS system has access to the internet and the referenced WMS Server. More information on the WMS standard is available here:

<http://www.opengeospatial.org/standards/wms>

A WMS provides a service allowing users to request data through URLs using specific key value pairs defining terms such as the width, height, image type, etc... A unique feature of the WMS standard allows users to request subsets of imagery by defining a bounding box using a lower left and upper right latitude and longitude coordinates. The combination of these features allows users to host very large high resolution imagery and users can request smaller versions or subsets of the original imagery. SOS takes advantage of this functionality through the magnifying glass, allowing users to see more detail as you increase the zoom level on the sphere.

A typical WMS URL, will look like the following:

http://neowms.sci.gsfc.nasa.gov/wms/wms?version=1.3.0&service=WMS&REQUEST=GetMap&LAYERS=MODAL2_D_CLD_CI&CRS=CRS:84&FORMAT=image/png&HEIGHT=1800&WIDTH=3600&TRANSPARENT=TRUE&BBOX=-180.0,-90.0,180.0,90.0&STYLES=rgb&STYLE=

To use this URL with SOS, you would specify data as the following (note: only the **layerdata** keyword may be used to specify WMS data):

#WMS Data Example

layerdata = //WMS//

http://neowms.sci.gsfc.nasa.gov/wms/wms?version=1.3.0&service=WMS&REQUEST=GetMap&LAYERS=MODAL2_D_CLD_CI&CRS=CRS:84&FORMAT=image/png&HEIGHT=<IMAGE_HEIGHT>&WIDTH=<IMAGE_WIDTH>&TRANSPARENT=TRUE&BBOX=<BOUNDING_BOX>&STYLES=rgb&STYLE=

Four (4) things have changed:

```
//WMS//  
HEIGHT=<IMAGE_HEIGHT>  
WIDTH=<IMAGE_WIDTH>  
BBOX=<BOUNDING_BOX>
```

All 4 items are required in order for WMS data to work correctly with SOS. The first item indicates the following path to data is a dynamic WMS URL. The last 3 are placeholders for dynamic fields that change while in use for SOS. For each WMS URL used within SOS, these

values must be replaced exactly as above. SOS will automatically replace these values when loading the data.

Special Notes

All WMS URL's are remote data and require SOS to have access to the internet to retrieve the corresponding imagery. Depending upon your network connectivity and the performance of the remote WMS server, the initial load may take some time. SOS will perform local caching of downloaded files and subsequent loading will perform faster.

**** It is strongly recommended to test WMS Playlists prior to any presentation **** to insure data is cached locally and the presentation is not delayed by waiting for remote files to be retrieved.

Technical Details

When SOS playlist references a WMS dataset, SOS will retrieve and store any temporary zoom files or cache information in the system temporary directory. The default is "/tmp" on SOS Systems.

Limitations

With the SOS magnifying glass enabled, SOS will determine a bounding box for the area currently under view and dynamically retrieve and load that image. A bounding box cannot be determined around either the North or South Pole. The nearest image that does not cross the pole will be used.