

Adding functionalities to WMS-WCS clients: download and animation

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OGC Web Map Service (WMS) is a technology specification that allows setting maps from several WMS compliant servers in a common way. These maps are static representations (pictures) of an specific geospacial database. Most of the servers give a JPEG, PNG or GIF picture representation of the layer and most of the web clients represent these maps in a static frame where, in some cases, they are able to overlap different layers from different sources. Nevertheless, when you have the same layer in several different moments along the time, it is better to show every still (map) as a part of a movie. We present a WMS client fully developed in JavaScript that has the ability to combine maps in an animated movie. When you select a predefined movie in a particular style, every still map is queried to the server as a separated image using an standard WMS query and stored in memory as an image array and shown in a vertical subwindow simulating a camera film. Then you have the opportunity to remove some pictures or to play the animation on the main subwindow (free play, step by step, or endless). The speed of the movie can be controlled by setting a time separation between frames or a temporal scale. This solution has been successfully applied to a Landsat ETM+ and TM color composites series of 50 images from 2002 to 2004. In this case it is especially important to be able to remove images having clouds or bad reception.

On the other hand, OGC Web Coverage Service (WCS) is a technology specification that allows downloading a part of a raster layer from any WCS compliant server. There are only a few map servers that have incorporated this standard so far. Our map browser integrates a WCS client with a WMS viewer allowing users to preview layer and to graphically define the desired boundary box, saving time and network resources. Specific layer parameters can be introduced (for instance bands of a multiband layer) and layers can be served in several formats (MiraMon Compressed Maps MMZ, GeoTIFF, georeferenced JPEG, Idrisi Kilimanjaro RST, etc).

These has been done in the context of the more general MiraMon project, particularly in the integration of the WMS-WCS web client –web server solutions.