



AquaUsers: Improving access to remotely sensed data for non-specialists

Oliver Clements, Peter Walker, Ben Calton, and Peter Miller
Plymouth Marine Laboratory, Plymouth, United Kingdom (olcl@pml.ac.uk)

In recent years more and more complex remotely sensed data have been made available to the public by national and international agencies. These data are also reprocessed by different organisations to produce secondary products that are of specific need to a community. For instance the production of chlorophyll concentration maps from ocean colour data provided by NASA for the marine community. Providing access to such data has normally been focused on simply making the data available with appropriate metadata so that domain specialists can make use of it.

One area that has seen significant investment, both of time and money, has been in the production of web based data portals. Primarily these have focused on spatial data. By providing a web map visualisation users are able to quickly assess both spatial coverage and data values. Data portal improvements have been possible thanks to advancements in back end data servers such as Thredds and ncWMS as well as improvements in front-end libraries for data visualisation including OpenLayers and D3.

Data portals that make use of these technological advancements have aimed at improving the access and use of data by trained scientific domain specialists. There is now a push to improve access to these systems by non-scientific domain specialists through several European Commission funded projects, including OPEC and AquaUsers. These projects have improved upon an open source web GIS portal created by Plymouth Marine Laboratory [<https://github.com/pmlrsg/GISportal>].

We will present the latest version of our GIS portal, discuss the design steps taken to achieve the latest build and share user stories as to how non-domain specialists are now able to utilise the system and get benefits from remotely sensed data.

A first version was produced and disseminated to end users for feedback. At this stage the end users included government advisors, fish farmers and scientific groups with no specific GIS training or knowledge. This iteration produced some pretty harsh responses. The product looked good, it seemed to have a large volume of data available but it was too difficult to get any added value from without specific training in its functionality.

The feedback we gathered led to the involvement of a user experience specialist. This was a first for both our development team and the specialist. Through a focused iteration process we created a design that would reduce the steps necessary to get meaningful output from the portal, we minimised the amount of information shown initially by using a keyword system similar to online shopping. The interface for analysing the data was greatly simplified as well, allowing easier and quicker access to time series or subsetting of data.