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PLOCAN glider portal: a gateway for useful data management and visualization system

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Nowadays monitoring ocean behavior and its characteristics involves a wide range of sources able to gather and provide a vast amount of data in spatio-temporal scales. Multiplatform infrastructures, like PLOCAN, hold a variety of autonomous Lagrangian and Eulerian devices addressed to collect information then transferred to land in near-real time. Managing all this data collection in an efficient way is a major issue. Advances in ocean observation technologies, where underwater autonomous gliders play a key role, has brought as a consequence an improvement of spatio-temporal resolution which offers a deeper understanding of the ocean but requires a bigger effort in the data management process.

There are general requirements in terms of data management in that kind of environments, such as processing raw data at different levels to obtain valuable information, storing data coherently and providing accurate products to final users according to their specific needs. Managing large amount of data can be certainly tedious and complex without having right tools and operational procedures; hence automating these tasks through software applications saves time and reduces errors. Moreover, data distribution is highly relevant since scientist tent to assimilate different sources for comparison and validation. The use of web applications has boosted the necessary scientific dissemination.

Within this argument, PLOCAN has implemented a set of independent but compatible applications to process, store and disseminate information gathered through different oceanographic platforms. These applications have been implemented using open standards, such as HTML and CSS, and open source software, like python as programming language and Django as framework web. More specifically, a glider application has been developed within the framework of FP7-GROOM project. Regarding data management, this project focuses on collecting and making available consistent and quality controlled datasets as well as fostering open access to glider data.