



Oceanographic data at your fingertips: the SOCIB App for smartphones

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The Balearic Islands Coastal Ocean Observing and Forecasting System (SOCIB, <http://www.socib.es>), is a multi-platform Marine Research Infrastructure that generates data from nearshore to the open sea in the Western Mediterranean Sea.

In line with SOCIB principles of discoverable, freely available and standardized data, an application (App) for smartphones has been designed, with the objective of providing an easy access to all the data managed by SOCIB in real-time: underwater gliders, drifters, profiling buoys, research vessel, HF Radar and numerical model outputs (hydrodynamics and waves).

The Data Centre, responsible for the acquisition, processing and visualisation of all SOCIB data, developed a REpresentational State Transfer (REST) application programming interface (API) called "*DataDiscovery*" (<http://apps.socib.es/DataDiscovery/>). This API is made up of RESTful web services that provide information on :

1. platforms,
2. instruments,
3. deployments of instruments.

It also provides the data themselves. In this way, it is possible to integrate SOCIB data in third-party applications, developed either by the Data Center or externally. The existence of a single point for the data distribution not only allows for an efficient management but also makes easier the concepts and data access for external developers, who are not necessarily familiar with the concepts and tools related to oceanographic or atmospheric data.

The SOCIB App for Android (<https://play.google.com/store/apps/details?id=com.socib>) uses that API as a "*data backend*", in such a way that it is straightforward to manage which information is shown by the application, without having to modify and upload it again. The only pieces of information that do not depend on the services are the App "Sections" and "Screens", but the content displayed in each of them is obtained through requests to the web services.

The API is not used only for the smartphone app: presently, most of SOCIB applications for data visualisation and access rely on the API, for instance:

- corporative web,
- deployment Application (Dapp, <http://apps.socib.es/dapp/>),
- Sea Boards (<http://seaboard.socib.es/>).