

SIPAD-NG: a generic system for accessing scientific data Application to oceanography products

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ABSTRACT

SIPAD-NG ("Système d'Information, de Préservation et d'Accès aux Données – Nouvelle Génération" – "Information System for Data Preservation and Access – New Generation") is a generic software system allowing web consultation of scientific data catalogs and access to these data. SIPAD-NG is an "on the shelf" software that can be used by Data Centres from any scientific domain. Currently, SIPAD-NG is operational for accessing data from CNES/CNRS Plasma Physics Data Centre, Mercator-Ocean and soon for CNES altimetry products and CNES/IFREMER SMOS products.

The SIPAD-NG kernel is composed of "basic services" that offer the standard functions of a data management system: mechanisms for searching for relevant data, data selection and ordering, long-term archiving, etc... These "basic services" provide interfaces that allow various types of "client applications" to use them: web servers, science processing software, remote applications, etc...

This architecture provides Data Centres with a software system that can be adapted to their needs and enhanced over time by: metadata catalog parameterization, customisation of the web server, adding of client applications and specific software.

We describe SIPAD-NG characteristics in terms of functionalities, architectural design and technological choices. An example of instantiation for Oceanography applications (Mercator-Ocean and altimetry) is detailed.