Abstract: CNES and AKKA technology are currently developing a new Tool for Information System called SITools2. This version, with a new architecture, will succeed to the first one developed eight years ago. This new version of SITools is a JAVA-based framework, under open source license, that provides both administration and data access layer features by a set of APIS. This framework’s purpose is to provide a portable archive system, highly configurable, easy to use by laboratories, with a plug-in mechanism so that developers can add their own applications. SITools2 uses new technologies such as Rich Internet Application, REST architecture and OSGI. In addition, interoperability services (virtual observatory and OGC) are foreseen and will be developed as plug-in.

Introduction: Raw data is archived at CNES and most of processed data is stored in the scientific laboratories. In order to insure the data long time preservation and to help the scientific laboratories in the data valorization, CNES offers a generic open source development framework to customize information systems. This development is currently realized using an AGILE method. This method consists mainly in the development of functionalities based on runs during three weeks. In addition, the developers of scientific laboratories are involved in this process so that they provide their feedback each run after.

Objectives:
- Providing a development framework for data valorization and long time preservation
- Federating scientific laboratories to share developments

Functional scope
- User services
- Restlet server
- Internal services

The administration GUI
- Portal / User desktop
- Administration GUI

REST by « layers »

The portal and user GUI

Philosophy
- Open source project under GPL license
- Community via a forge

Extensibility of the system
- Extension point for the server side:
  - Adding a new application as a web service
- Extension points for the client side:
  - Administration of new applications using the administration GUI
  - Adding new component in the Portal GUI
  - Adding new applications on the user desktop

Architecture for the server extension point:
- OSGI

Supported interoperability systems for end of 2011
- Method 1: Open search
  - Make available data and datasets between archives using open search capabilities
- Method 2: Virtual Obs.
  - Supported protocols:
    - Cone search
    - Simple Image Access Protocol
  - Supported protocols:
    - WMS (Web Map Service)
    - WFS (Web Feature Service)