



What is P-CUBE ?

8-12 July 2013

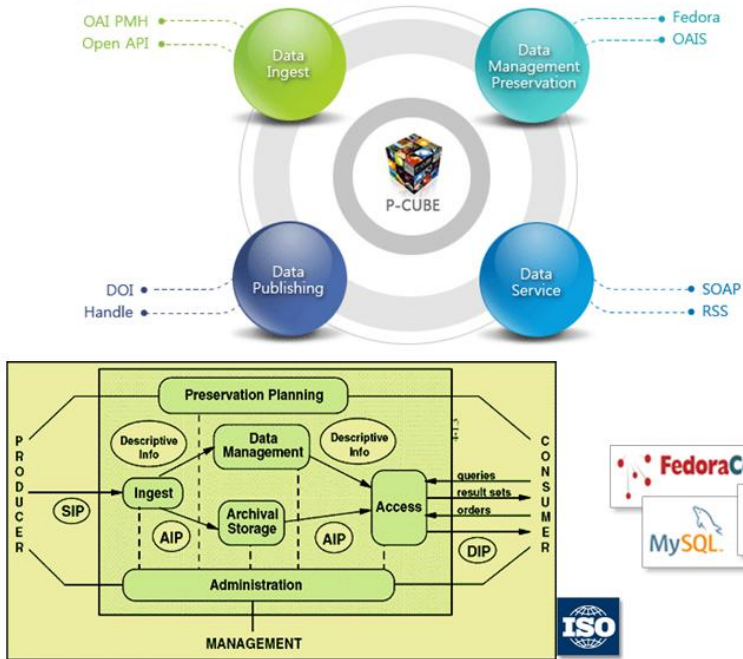
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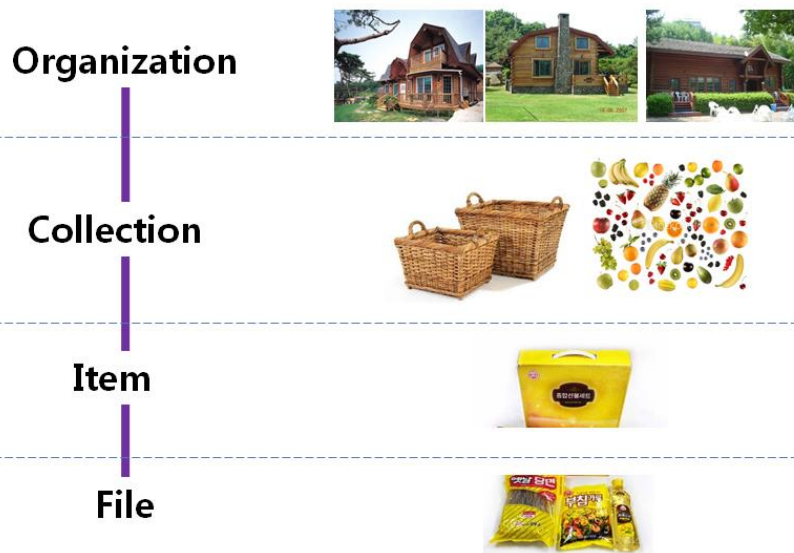
P-CUBE Major Modules & OSS (Open Source Software)



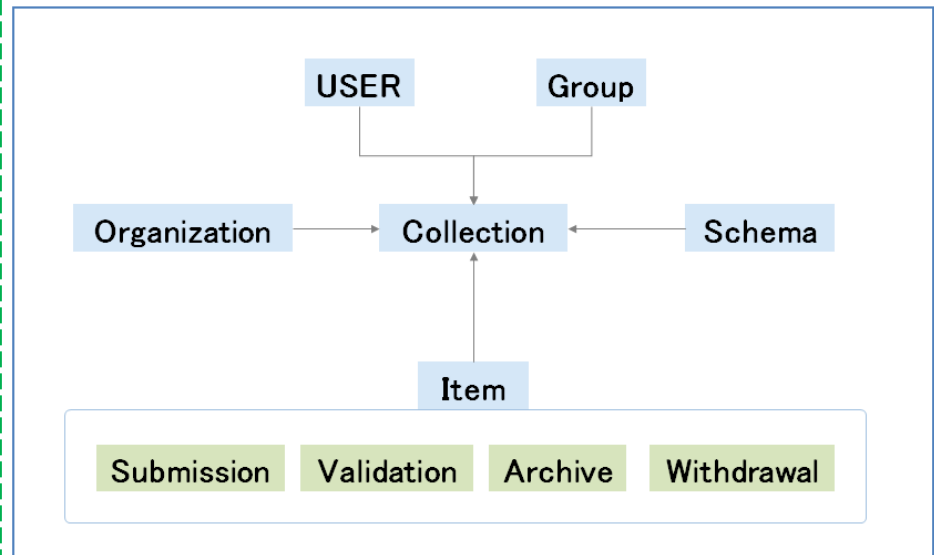
P-CUBE Life Cycle Major Actors



P-CUBE Data Model Architecture



Object Relations



Background P-CUBE was born

- P-CUBE is a platform providing easy access for safe storage and reuse of scientific data created by researchers in the course of work
- A large amount of data are produced due to development of hardware, expansion of super high speed network and development of high tech information technology. Selecting valuable data and managing them systematically are becoming very important as data centered research paradigm appears due to the advent of ubiquitous era. However, data of researchers are not used effectively and they become useless after stored in personal store such as PC, CD, or USB. For this reason, a platform that enables to manage data created by researchers easily and to reuse them is needed. P-CUBE aims for cloud environment for efficient management and use of data

Characteristics of Functions

- Systematic management of scientific data (organization, collection, item levels)
- Function enabling researchers to set up scientific data publicly on their own (default is not shared)
- Enabling to set up various management items of scientific data
- Global publication of scientific data and permanent access to data
- Automatic collection and distribution of data based on standard protocol (OAI- PMH)ta.

Solid basis of P-CUBE

- P-CUBE was developed based on open source recognized all over the world. P-CUBE uses Fedora of DURASPACE in storage structure that USA's NSF and LC (Library of Congress) sponsor and uses business logic with service and management function of DSPACE. P-CUBE uses MySql as relational database.

P-CUBE following standards

- P-CUBE follows OAIS reference model stipulated in ISO 14721:2003.
- Therefore, P-CUBE consists of system architecture for data collection, data management, archives and access.

P-CUBE Main Functions

- Function of collecting scientific data
- Collection through researcher's data upload.
- Automatic collection of data through standard protocol.

- Function of managing and preserving scientific data
- Systematic management of data by OAIS standard
- Data lifecycle management based on preservation
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- Function of publishing scientific data
- Assigning global identifier (DOI) to researcher's data
- Registering data in global data handle server

- Function of scientific data service
- Searching data according to organization, collection and researcher creation tag
- Service connecting data and scholarly journal