DAITSS 2 Project: Briefing and Milestones

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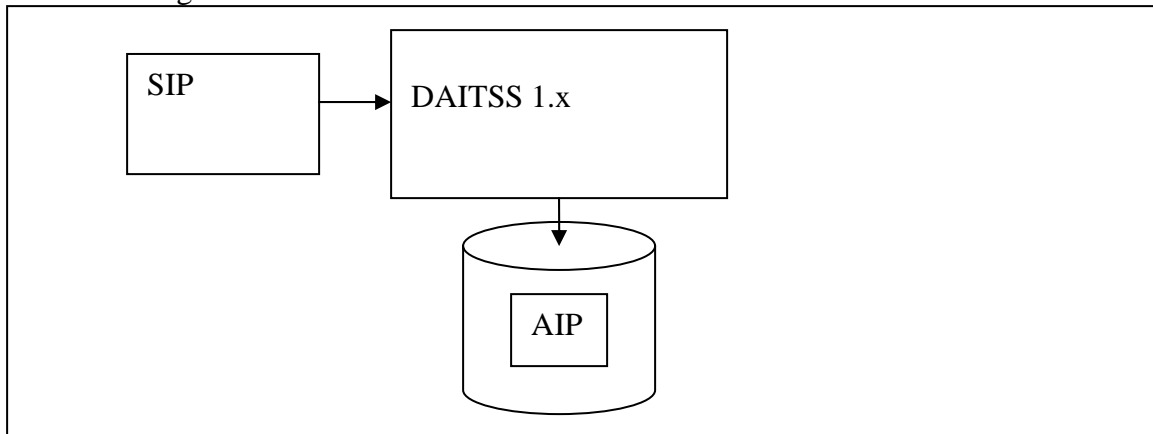
Briefing

The DAITSS 2 project is intended to re-write the DAITSS application based on a distributed, Web services model.   With a few exceptions noted below, the functionality of DAITSS 1.x will be preserved.
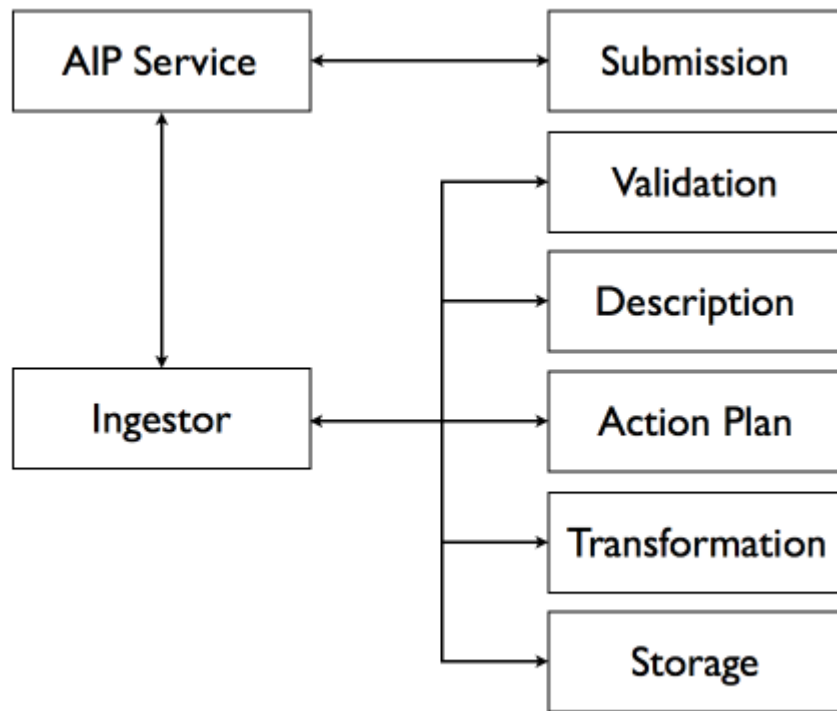
The goals of the project are:

- Compartmentalize format support so new formats can be added without affecting the rest of the application.
- Make it simpler to modify or extend existing functions and to integrate new functions.
- Make it easier for other institutions to adopt DAITSS, modify it for their own purposes, and contribute to the code base.
- Allow multiple service instances on single or multiple servers in order to improve performance and scalability.
- Improve interoperability with other preservation repository applications.
- Eliminate complexity that experience has shown to be unnecessary.

The first four goals will be accomplished by a major architectural change: moving from a monolithic application to modular RESTful services.

DAITSS 1 Ingest

DAITSS 2 Ingest

The DAITSS 2 architecture will allow new services to be developed and tested independently of any other component, and integrated into the system without impacting existing services. Similarly, modifications to existing services can be tested independently. This will improve the speed and ease with which DAITSS can be enhanced in the future. Operational throughput will be improved by running multiple instances of time-consuming functions such as virus-checking and calculation of checksums.

The fifth goal, improved interoperability with other repositories, will be accomplished by incorporating tools and standards that are now widely used in the digital preservation community, but that did not exist at the time DAITSS 1 was developed. Externally-written tools such as DROID, JHOVE and PRONOM will replace locally-written functions. The data model and preservation metadata will be brought into full conformance with PREMIS.

The final goal will be accomplished by recoding certain methods. Excessively complex methods will be eliminated (localization) or simplified (treatment of global files).

In DAITSS 2.0, functional changes will be kept to a minimum:

- Discontinue support for three preservation levels; all content will be afforded FULL preservation treatment. Any content previously ingested at BIT level will

be treated as FULL at the time of dissemination. (Approved at December 2008 FCLA Board meeting.)

- Add the ability to create Dissemination Information Packages in different formats, depending on need.

- Implement a method of detecting duplicate packages and taking action when found. The requirements document for this function will be developed in consultation with current FDA users.

- Record information about rejected packages.

- New module: Administrative interface. Provide audit trail of all changes.

Milestones

2008 3Q	Storage service in production. DONE Ingest services designed. DONE
2008 4Q	Per-file services operational in test. DONE At least 2 FDA action plans supported. DONE
2009 1Q	Dissemination services designed. Ingest services operational in test. All FDA action plans supported.
2009 2Q	Dissemination services operational in test. Export of PREMIS exchange packages supported. Administration service designed.
2009 3Q	Import of PREMIS exchange packages supported. Administration service in test. Database conversion from DAITSS 1 to DAITSS 2 in test.
2009 4Q	Database conversion in production. DAITSS 2 implemented in production.