



Project no. 033572

## CASPAR

Cultural, Artistic and Scientific knowledge for Preservation, Access and Retrieval

**Instrument:** Information Society Technologies

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# ACCOMPANYING DOCUMENT OF PROTOTYPE OF OAIS-BASED ACCESS, ONTOLOGY-BASED DRM SERVICES AND DAMS SERVICES



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### Project information

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## **1 EXECUTIVE SUMMARY**

This document accompanies the new release of three key CASPAR components:

1. the Finding Aids
2. the Ontology-based DRM Services
3. the DAMS Services.

The next sections provide basic information about each one of these components, including links to the software and the corresponding documentation.



## 2 CASPAR FINDING AIDS

### Description

The FINDING AIDS (FA) is a module that assists the consumer in locating information of interest.

In order to achieve its goal, the FA is based on two basic components:

1. Finding Registry, and
2. Finding Manager.

Finding Registry supports the publication and discovery of Finding Managers. Each Finding Manager registers to a Registry by providing a description of itself, including basic information such as the language spoken by the Finding Manager and the query language to which the Finding Manager is able to answer.

The role of the Registry is to publish interesting information for the registered Finding Managers, such as how to get a reference to the services exposed by a Finding Manager. The information maintained by the Registry is expressed in RDFS and can be visualized in HTML upon request. The HTML document is a different web representation of the Registry database, obtained by transforming the data from RDF to HTML via a stylesheet.

An important service offered by the Registry to the external users is the discovery of Description Information in a web search engine style, i.e. by stating a query in terms of natural language words. In response to such a query, the Registry returns a ranked list of the Description Information held by the Managers registered with the queried Registry.

On the other hand, a Finding Manager supports the management of Descriptive Information (DescInfo), and is bound to a Data Definition Language for defining Descriptive Information and to a Query Language for querying. By relying on the free-text discovery of the Registry, also a Finding Manager allows this type of access, limited to the Description Information held by the Finding Manager itself.

### Release Notes – Lion Release (July 2008)

- Documentation:
  - Finding Manager architectural specification completed. UML class and sequence diagrams completed on EA.
- Software (server side)
  - Finding Manager fully implemented using Web services, Postgres, and SWKM.
- Software (client side)
  - Finding Manager client examples and GUI fully available.

### Release Notes – Tiger Release (November 2008)

- Documentation:
  - Finding Registry architecture completed as well as UML class diagrams.
- Software (server side):
  - Added H2 support to Finding Manager in order to simplify deployment. GUI bug fixing. Committed Finding Registry interface.
- Software (client side):
  - Restored the functionality for creating the association between Descriptive



## Information and AIP into CASPAR GUI.

### Links

- FIND home page:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-FIND/>
- FIND web application:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-FIND/ws/implementation/findingaids/dist/FIND.war>
- Javadoc:  
<http://caspar-nas.esrin.esa.int:8080/hudson/job/CASPAR-FIND/javadoc/>
- Web services wsdl:  
<http://developers.casparpreserves.eu:8083/FIND/FindingManager?wsdl>
- Client stub (generated from the WSDL):  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-FIND/ws/implementation/findingaids/dist/FIND-stub.jar>
- Example of client which uses FIND services:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-FIND/ws/implementation/findingaids/test/src/eu/casparpreserves/test/findingaids/FINDTestCase1.java>



### 3 ONTOLOGY-BASED DRM SERVICES

#### Description

The role of DRM module inside the CASPAR Architecture is basically that of defining and registering provenance information on a digital work to derive and retrieve right holding information and intellectual property rights. Such rights are interpreted differently depending on the country and on the legal framework, i.e. the set of laws and regulations which refer to digital rights. Changes in the legal framework can occur, so CASPAR system provides services to keep up-to-dated laws and regulations and to handle the consequences of such changes in order to guarantee the preservation of IPR information and of the way to interpret it.

#### Release Notes – Lion Release (July 2008)

- Documentation:
  - added specification refinement, implementation approach and implementation plan.
- Ontology:
  - added draft version of the Rights Ontology.

#### Release Notes – Tiger Release (November 2008)

- Documentation:
  - updated specification refinement and implementation plan;
  - added sample client usage scenarios.
- Ontology:
  - updated Rights Ontology.
- Software (server side):
  - added Rights Definition Manager for defining and registering provenance information on a digital work and for deriving and retrieving right holding information and intellectual property rights.
- Software (client side):
  - added client scenario to show how to build applications using Rights Definition Manager web services;

#### Links

- DRM home page:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DRM/>
- DRM web application:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DRM/ws/implementation/drm/dist/DRM.war>
- Javadoc:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DRM/javadoc/>
- Web services wsdl:  
<http://developers.casparpreserves.eu:8083/DRM/RightsDefinitionManager?wsdl>



- Client stub (generated from the WSDL):  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DRM/ws/implementation/drm/dist/DRM-stub.jar>
- Example of client which uses DRM services:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DRM/ws/implementation/drm/test/src/eu/casparpreserves/test/drm/DRMTestScenario1.java>



## 4 DAMS SERVICES

### Description

The CASPAR access control model is an extension of the Role Based Access Control (RBAC) and realises the Access Control List (ACL)-based model. For each resource an access control policy can be declared by binding users to permissions. The information about policies, bindings and permissions must be preserved to guarantee that policies which are defined today can apply to the possible users of tomorrow. The DAMS includes to this purpose the novel concept of Authorised Community, which does not need to refer to the already registered system users: it can be defined extensionally, namely by listing explicitly the members (e.g. a list of full names) or intentionally, by specifying the membership criteria (e.g. to be a member of an association, relatives of a certain person, citizens of a precise country that have reached a certain age, etc.). Implementation of DAMS will address its main challenge by introducing proper mechanisms to define Authorised Communities, policies and authorisation verification processes.

### Release Notes – Lion Release (July 2008)

- Documentation:
  - added specification refinement, implementation approach and implementation plan.
- Software (server side):
  - added User Manager for managing user registration and user profile accounts;
  - added Authentication Manager for managing user authentication.
- Software (client side):
  - added client scenario to show how to build applications using User Manager and Authentication Manager web services;
  - added GUI (developed using Google Web Toolkit) with three features: user registration, user authentication and user profile management.

### Release Notes – Tiger Release (November 2008)

- Documentation:
  - updated specification refinement and implementation plan;
  - added sample client usage scenarios.
- Software (server side):
  - refactoring of the User Manager and Authentication Manager improving DB configurations and connections to fix bug DAMS-1 (see below);
  - added Authorized Community management;
  - added Authorization Manager for defining, registering and checking access control policies.
- Software (client side):
  - added client scenario to show how to build applications using Authentication Manager web services;



- added three new features to the GWT GUI: authorized community management, access control policies management and access control check.

## Links

- DAMS home page:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/>
- DAMS web application:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/ws/implementation/dataaccess/dist/DAMS.war>
- Javadoc:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/javadoc/>
- Web services wsdl:  
<http://developers.casparpreserves.eu:8083/DAMS/UserManager?wsdl>  
<http://developers.casparpreserves.eu:8083/DAMS/AuthenticationManager?wsdl>  
<http://developers.casparpreserves.eu:8083/DAMS/AuthorizationManager?wsdl>
- Client stub (generated from the WSDL):  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/ws/implementation/dataaccess/dist/DAMS-stub.jar>
- Example of clients which use DAMS services:  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/ws/implementation/dataaccess/test/src/eu/casparpreserves/test/dataaccess/DAMSTestScenario1.java>  
<http://developers.casparpreserves.eu:8080/hudson/job/CASPAR-DAMS/ws/implementation/dataaccess/test/src/eu/casparpreserves/test/dataaccess/DAMSTestScenario2.java>
- Google WebToolkit based GUI which use DAMS services:  
<http://developers.casparpreserves.eu:8083/CasparGui/>