EuroVO-AIDA

Euro-VO Astronomical Infrastructure for Data Access

D3.3

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Release of VO-developers-oriented on-line tutorials

Final Version

Grant agreement no: 212104

Combination of Collaborative Projects & Coordination and Support Actions

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1. INTRODUCTION

SIAP (Simple Image Access Protocol), SSAP (Simple Spectrum Access Protocol) and CS (Cone Search to access catalogues) are widely used protocols in the Virtual Observatory context.

Detailed specifications of these protocols can be found at http://www.ivoa.net/Documents/.

Due to the simplicity and flexibility of these simple protocols, it is easy to adapt existing archives to be VO compliant. It is also easy to make use of the available protocols to consume images and spectra in the VO context with appropriate clients and tools.

Hence, EuroVO-AIDA partners have developed tools which help data providers and astronomers to publish their data holdings into the VO through these protocols. Dedicated tutorials have been built accordingly, published on-line and given during the "EuroVO-AIDA Workshop on how to publish data in the VO" that took place at ESAC on 22nd -26th June 2009.

These tutorials will remain on-line for general use and the tools will be updated when new IVOA protocols become available (in particular TAP - Table Access Protocol - that will supersede CS).

2. DALTOOLKIT

The DALToolkit tool has been developed by ESA to enable data providers to easily publish their data holdings through the SIAP and SSAP IVOA protocols.

The goal of this tutorial is to ingest and publish spectra / images according to the SSAP / SIAP standards. Users will be able to locally create their own database, ingest test FITS files and publish them making use of the software. Later on, people who wish to work with their own data will be able to perform the necessary tasks to achieve such result.

The full DALToolkit tutorial description can be found at: http://cds.u-strasbg.fr/twikiAIDA/bin/view/EuroVOAIDA/AidaVOWS2009/AidaVOWS2009EsaDALToolKit.

The DALToolkit web page can be found at: http://www.sciops.esa.int/index.php?project=ESAVO&page=dal_proj.

3. DSA

The DSA tool has been developed by AstroGrid to enable data providers and astronomers to publish tabular data as a VO service. The AstroGrid DSA provides access to the data using the CS protocol; it also provides an asynchronous query interface that enables users to run arbitrarily complex queries using the ADQL query language.

During the tutorial, sample data are made available, but users are also encouraged to try publishing some of their own data. This may be installed on the participant's laptop, or, firewall issues permitting and subject to appropriate JDBC access, on a remote RDBMS.

The full DSA tutorial description can be found at: http://cds.u-strasbg.fr/twikiAIDA/bin/view/EuroVOAIDA/AidaVOWS2009/AidaVOWS2009AstrogridDsa.

The DSA web page can be found at: http://deployer.astrogrid.org/software/dsa-catalog-2008.2/index.html.

4. SAADA

The SAADA has been developed by XMM-Newton SSC team of Strasbourg Observatory to help astronomers to build local archives as simply as possible. A database created by SAADA, a SaadaDB, can host multiple collections populated with heterogeneous data (spectra, images, tables, flat files...). Data collection can be linked each to other with persistent relationships.

A SaadaDB can be accessed by a Web interface:

- It comes with VO services (SSAP, SIAP and CS)

- It allows tagging metadata with UCD, Utypes or Units

- A powerful query language allows to make data-mining oriented searches especially by using metadata or relationships

The full SAADA tutorial description can be found at: http://cds.u-strasbg.fr/twikiAIDA /bin/view/EuroVOAIDA/AidaVOWS2009/AidaVOWS2009CdsSaada.

The SAADA web page can be found at: http://amwdb.u-strasbg.fr/saada/.

ACRONYM LIST

ADQL	Astronomical Data Query Language
AIDA	Astronomical Infrastructure for Data Access
AstroGrid	UK VO project
CS	Cone Search
D#	Deliverable number
DAL	Data Access Layer
DB	Data Base
DSA	Data Set Access
ESA	European Space Agency
ESAC	European Space Astronomy Centre, Villafranca del Castillo
EuroVO-AIDA	European Virtual Observatory - Astronomical Infrastructure for Data Access
Euro-VO	European Virtual Observatory
FITS	Flexible Image Transport System (the most used standard in Astronomy)
IVOA	International Virtual Observatory Alliance
JDBC	Java DataBase Connectivity
PU	Public
RDBMS	Relational database management system
SA	Service Activity
SAADA	Système d'Archivage Automatique des Données Astronomiques
SIAP	Simple Image Access Protocol
SSAP	Simple Spectra Access Protocol
SSC	Survey Science Centre
TAP	Table Access Protocol
UCD	Unified Content Descriptor
VO or Vobs	Virtual Observatory
UK	United Kingdom
WP	Work Package
XMM	X-ray Multi-Mirror