The AVO Prototype

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ASTROPHYSICAL VIRTUAL OBSERVATORY

Rationale

The current Astrophysical Virtual Observatory (AVO) prototype addresses some key problems of modern Astronomy:

•browsing huge distributed sets of observations in multiple wavebands (meta data browser)
•running remote computation (ACE catalog extractor)
•collecting and structuring, analysing and displaying results

AVO Prototype Components

The AVO prototype is an extensible toolset and its Java client has got three components:

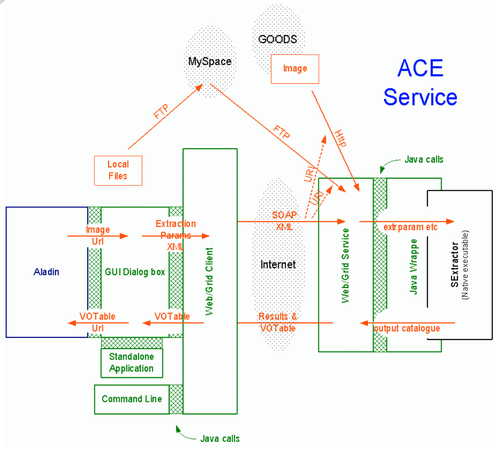
1. Aladin type of interface for meta data discovery and visualization
2. Astronomy Catalogue Extractor (ACE)
3. Spectral Energy Distribution (SED) utility
(recently an additional plugin called VOPlot was provided by VO India)

The software components were developed at CDS in Strasbourg, by the Astrogrid consortium and by ESO respectively. The three modules exchange information in VOTable format - a dialect of XML for Astronomy - and use Unified Content Descriptors (UCDs). UCDs are meta data, i.e. keywords, with a defined meaning across applications and data sets. From a VO point of view UCD tagged data wrapped in VOTable format are a major innovation.

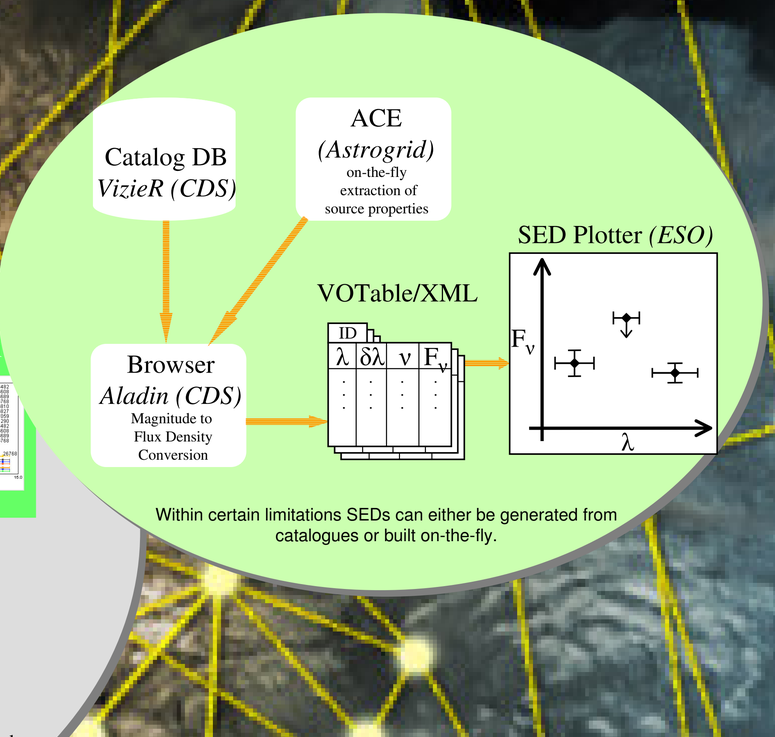
VOTable format is also used to encode a hierarchical representation of the available on-line data which is displayed in a new meta data browser. For details visit
http://ww.euro-vo.org/intranet/

S/W Demo

Visit the ESO/ST-ECF/AVO booth to see a live demo.



ACE is a Web Service and a wrapper for the Sextractor toolkit.



Within certain limitations SEDs can either be generated from catalogues or built on-the-fly.

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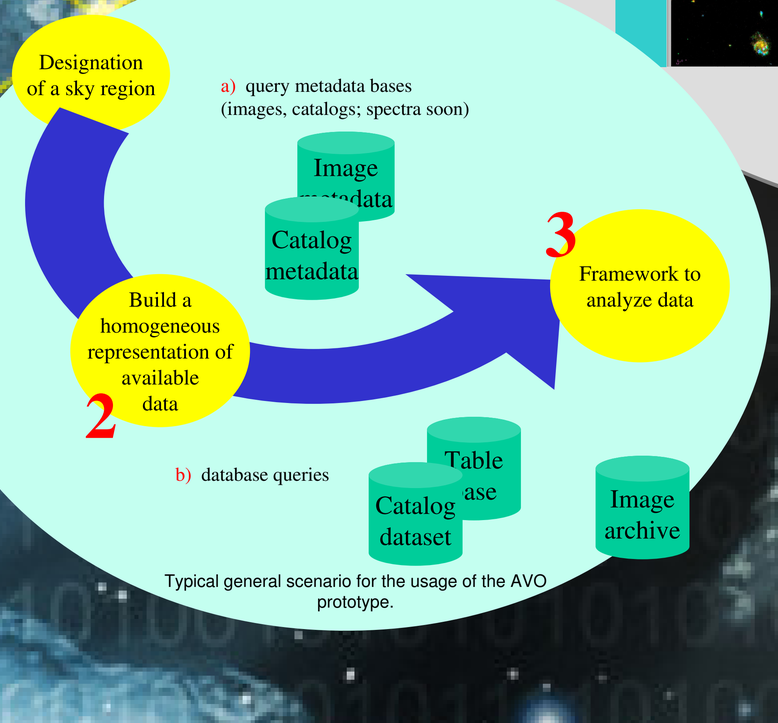
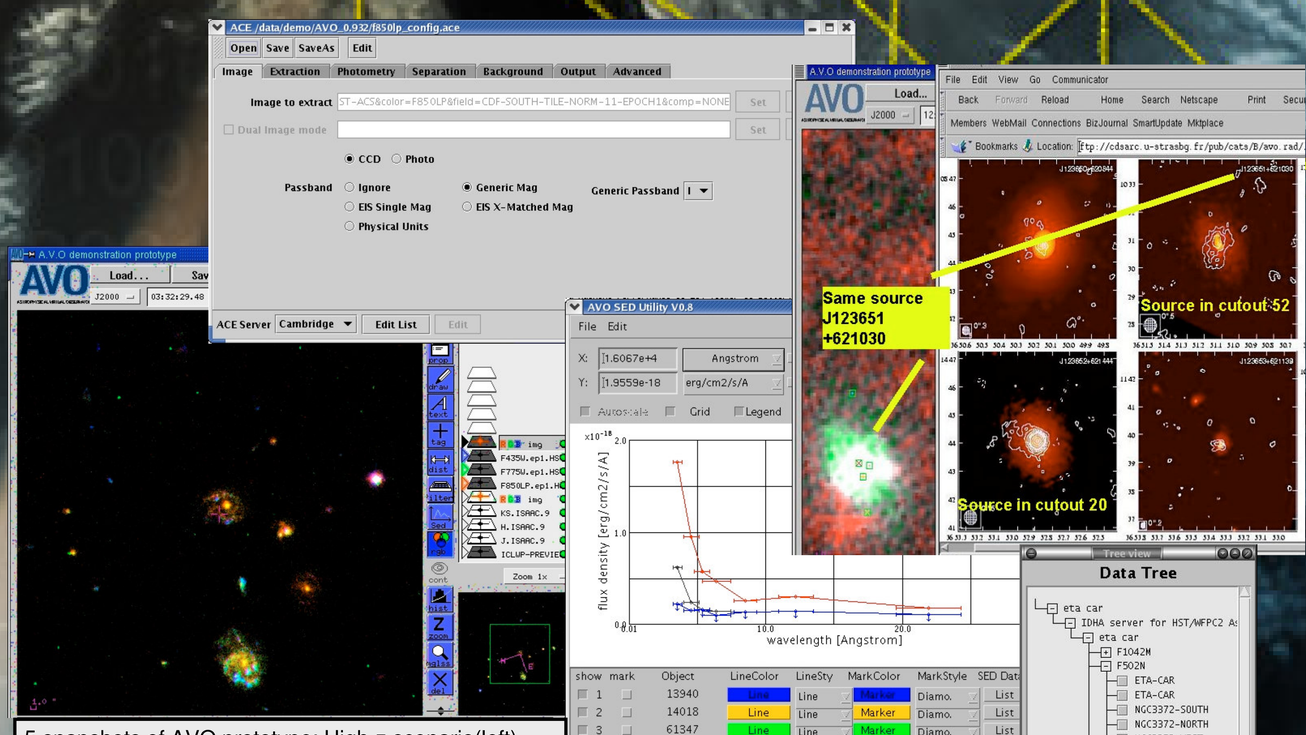
http://www.euro-vo.org/twiki/bin/view/Avo/SwgDownload



Typical general scenario for the usage of the AVO prototype.



5 snapshots of AVO prototype: High-z scenario(left), object catalog extraction interface (top), SED plot (middle), multi-waveband analysis of starburst galaxy (top right), hierarchical view on associated WFPC2 observations around Eta Carinae (bottom right).

Credits

The Astrophysical Virtual Observatory was selected for funding by the 5th Framework Programme of the European Community for research, technological development and demonstration activities, contract HPRI-CT-2001-50030.

ESO
SPACE TELESCOPE European Coordinating Facility
Astro Grid
CDS Centre de Données Astronomiques de Strasbourg
TERAPIX
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