Heliophysics Integrated Observatory

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Unified Observing Catalogue
User Manual
Version 0.2

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Revision History

Version	Date	Released by	Detail
0.1	28th June 2012	Alessandro Marassi	
0.2	17th July 2012	Alessandro Marassi	

Note: Any notes here.

Introduction

The Unified Observing Catalogue (UOC) was a service conceived under the EGSO (European Grid of Solar Observations) project. Its purpose was to gather a complete catalogue of all observations and express them according to a unified data model.

Under HELIO, the purpose of the UOC is slightly different. On one hand, the range of types of data is much broader and this makes it much more difficult to describe them according to a single data model. On the other hand, when trying to construct the UOC in EGSO it was found that not all providers maintained the type catalogue we needed, and of those that did, the quality and contents of the catalogues differed greatly. Hence, in the framework of HELIO the UOC handles cases that cannot easily be managed by the other services provided by HELIO.

About the UOC

The Unified Observing Catalogue (UOC) acts as a special provider to HELIO that offers a SOAP web service capable of performing SQL queries for metadata specific to selected available instruments. The instrument metadata are ingested into a RDBMS database.

Suggested Reading

Helio Interface Specification	Service Interface Specification.docx
Helio API	Helio API User Manual
Taverna 2.4 User Manual	http://dev.mygrid.org.uk/wiki/display/taverna/User+Manual
HelioQuery Interface	http://dev.mygrid.org.uk/wiki/display/taverna/User+Manual
SOAP + WSDL (web service definition)	http://www.w3.org/TR/wsdl (or use a plug-in to your development environment)
STILTS (command-line tools based on STIL, the Starlink Tables Infrastructure Library)	http://www.star.bris.ac.uk/~mbt/stilts/
Unified Observing Catalogue – Admin Guide	Helio UOC_install_v0.2

How to Access the UOC

There is no specific graphical user interface for UOC, since it is expected to answer only as a SOAP web service performing SQL queries for metadata specific to selected available instruments.
The UOC can be accessed in different ways:

1. through the **non public page** (not linked on the main web GUI) http://host/hec/helio-tester.php (provided for functionality tests only);
2. via **Taverna** workflows;
3. using **IDL**;
4. **HELIO API**.

Test GUI

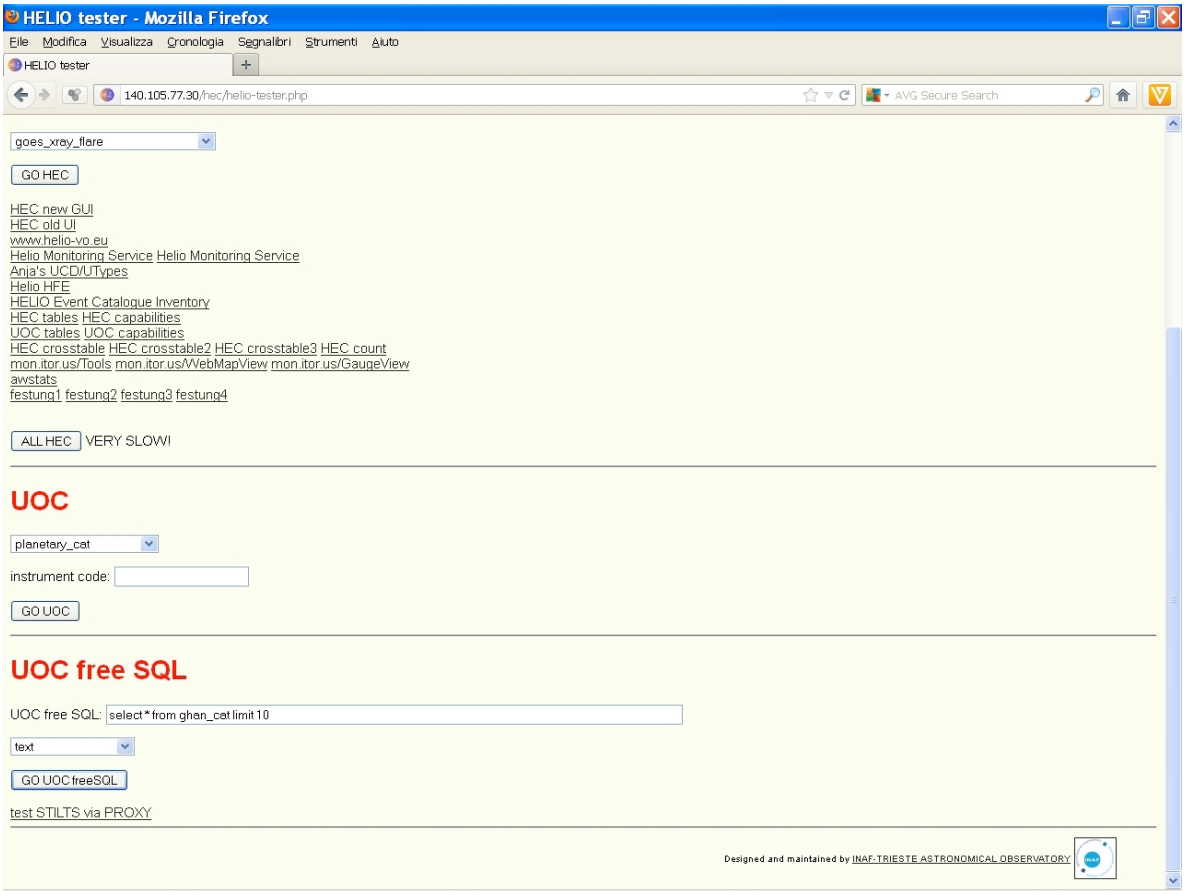
Some overall functionality tests are available through the non public page (not linked on the main web GUI) http://host/hec/helio-tester.php.

There are 3 possible choices:

1. functionality test predermined queries with drop-down menu which produce VOTables; example query:

http://UOCserver:8080/helio-uoc/HelioQueryService?STARTTIME=2012-05-28T00:00:00&ENDTIME=2012-06-28T23:59:59&FROM=planetary_cat

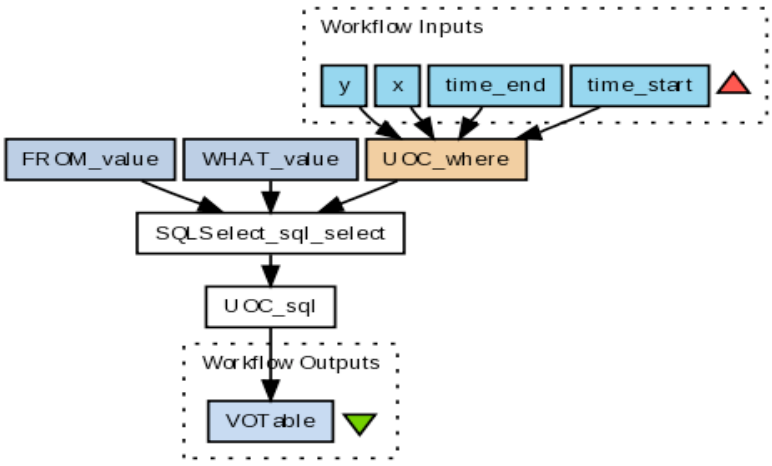
2. user interaction with UOC through free SQL queries via STILTS which produce as results in either text file or VOTable format; example query:
   http://UOCserver:8081/stilts/task/sqlclient?db=jdbc:postgresql://140.105.77.30/uoc&user=apache&sql=select%20%20from%20ghan_cat%20limit%2010&ofmt=votable-tabledata*
3. test STILTS via proxy; fixed query:
   http://festung1.oats.inaf.it/stilts8081/task/sqlclient?db=jdbc:postgresql://festung1.oats.inaf.it/uoc&user=apache&sql=select%20count%28%29%20from%20pointed_instrument%20&ofmt=text*



HEC/UOC Test GUI

TAVERNA Workflows

The UOC can also be accessed by TAVERNA workflows; one such workflow created by Anja LeBlanc of University of Manchester finds the instrument_observatory keys for instruments which were observing in a given time interval and a given location.
This example (http://www.myexperiment.org/workflows/2822.html) as well as other HELIO workflows is accessible in the MyExperiment web site and can be tested by executing it with a Taverna Workbench installed on a user's client machine.



TAVERNA workflow: Check in UOC which instruments were observing at a given time period and place

IDL

It is possible to interact with UOC also via the HELIO SolarSoft routines provided at http://helio-vo.eu/documents/help/ssw/helio_ssw_intro.html following the instructions at http://helio-vo.eu/documents/help/ssw/helio_using_services.html.
Prerequisites are a working IDL installation and the **HELIO** and **EGSO** branches within the **SolarSoft** tree as in http://helio-vo.eu/documents/help/ssw/helio_installing_software.html.

Helio API

Helio Application Programmers Interface is a full API to access many of the Helio services in both Java and IDL. See the Helio API documentation.