The Virtual Observatory Query Language

VOQL is currently under discussion in the IVOA forum. See http://www.ivoa.net/twiki/bin/view/IVOA/IVoYQOL

Current thinking is – VOQL has 3 layers as depicted below. ADQL and SkyNode constitute layer 1.

The main element of ADQL - SELECT

Table part of the select statement

SkyNode Interface

There are the Broads of the SkyNode Interface.

BASIC SkyNode

* Functionality based on XML (e.g., SEDS)

* No Web Services available

* Subscription to be set up in the future

FULL SkyNode

* Full functionality as a Web Service

* Multiple query languages supported

* Subscription to be set up in the future

The diagrams with pale yellow background are part of Schema diagrams for ADQL. These may be helpful to understand the ADQL structure. See the XSD (http://skyserver.pha.jhu.edu/devel/AdqlTranslator/ADQLSchema.xsd) for complete structure of ADQL. The XML document in the center of the popped is a valid ADQL document with relevant parts linked to the schema diagrams to aid understanding.

From this document it is clear why we might like a human readable SkyQL (top of poster) as well as the machine readable ADQL.

The following is an example of simple SkyQL and its ADQL (XML) representation. A converter exists to exchange these formats (see listed below). Further tools and information may be found at http://skyserver.pha.jhu.edu/devel/vo/adql/

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The Astronomical Data Query Language (ADQL) is a proposed standard query language for the interoperability of the International Virtual Observatory. The data servers in the International Virtual Observatory could be searched using an ADQL query. The services would return as a minimum VOTables as a result of the query (other formats may be supported by some nodes).

ADQL is passed as an XML document to the Query Interface. ADQL is based on a subset of SQL plus Region and XMatch. The only SQL command allowed in ADQL is a "select".

SkyQL is a string like representation of ADQL. Semantically SkyQL and ADQL are identical. Syntactically ADQL is XML and SkyQL is more human readable.

SkyNode is a service of the IVOA SkyNode which is available as a Web Service. See http://www.ivoa.net/internal/IVOA/skyXmlNodeInterface-0.5.doc

The mission of IVOA is to facilitate the international coordination and collaboration necessary for the development and deployment of the tools, systems and organizational structures necessary to enable the international utilization of astronomical archives as an integrated and interoperating virtual observatory.