



VizieR in the context of SkyNode...



VizieR

- VizieR offers an access to a large and growing number of catalogues (> 5000)
- 4 ways to access VizieR
 - Main access through cgi
 - <http://vizier.u-strasbg.fr>
 - vizquery client
 - <http://vizier.u-strasbg.fr/doc/vizquery.htx>
 - Simple access through soap
 - See Developer's corner (<http://cdsweb.u-strasbg.fr/devcorner.gml>)
 - (very) Partial access via SkyNode (~0.2% of the catalogues)
 - See Developer's corner (<http://cdsweb.u-strasbg.fr/devcorner.gml>)

SkyNode side

■ VizieR is not a relational database !

- VizieR uses relational database for metadata and binary storage (very large catalogs) with dedicated access programs for the data
 - Binary data is distributed on a cluster
- VizieR supports interrogations through ASU

■ How to implement it as a SkyNode ?

- Use an existing kit
 - Done with JVO (thanks to Yuji) and ESAC (thanks to Aurélien, Inaki and Pedro) toolkits
- Choose a solution to access VizieR through ADQL
 - Less intrusive solution : ADQL to ASU mapping using XSLT (thanks to Inaki and Aurélien who done it)

But...

- **Implementation must be done for each catalogue**
 - Tycho2
 - USNO-B1
 - 2MASS
 - IRAS
 - UCAC2
 - ...

- **For each catalogue :**
 - Creation of the different parameter files
 - ...
 - Deployment in Tomcat, one access point per catalogue

... more than 5000 times

But... (2)

- Done in a first time for 9 catalogues (previous catalogues + All-Sky Compiled Catalogue, DENIS3, MSX and GOODS)
- Would be easier to create just one access point
 - Overloading of the SkyNode interfaces to take into account the catalogue name
 - Adding of a few interfaces to provide information about the catalogues
 - Relation with metadata available in the Registry ?
 - => a SkyNodeCluster (a SkyNode grid can be composed with SkyNodes and SkyNodeClusters)
- Alternative proposal
 - Split the VizieR catalogues in a few SkyNodeClusters (criteria to define...)



Remarks

- **Saying that it is not a good thing to implement (too many catalogues, too difficult to use, etc.) all the Vizier catalogues as SkyNode(s) (for example in a way as proposed in the previous slide) means that SkyNode is not able to support the scale change**
- **The fact that it could be “User (human or service) friendly” depends on the quality of the metadata and the information available about the catalogues**
- ...

All VizieR catalogues implementation “collateral” good effect...

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■ Interesting in case of XMatch

■ The large number of catalogues

- minimize (long distance) network transfers

■ Catalogues are distributed on a cluster

- quick cross match between the “local” catalogues

■ ...



Roadmap

- Exhaustive test of the existing toolkits
 - JVO
 - ESAC
 - NVO

- ... with also a comparison (overhead, etc.) with a common access like CGI

- SkyNodeCluster prototype with interfaces extended to take into account a catalogue parameter