

Virtual Observatory Query Language (VOQL) Working Group

William O'Mullane
For
Masatoshi Oishi

VOQL WG - Background

- Started Cambridge England May 2003
- Decision to concentrate on Astronomical Data Query Language (ADQL)
 - SQL based
 - Allow exposure of catalogues
 - Good step up from Cone Search
 - Should be XML for easy parsing
- Also agreed to look at WebServices to take ADQL and return VOTable (OpenSkyNode)

VOQL WG – This session

1. Make 0.8.1 or 0.9 Proposed Recommendation or must we have DML (create insert delete). AstroGrid and NVO will probably go with 0.7.4 from Jan 2005 demos .. Should that be the PR?
2. Other ADQL syntactic issues since last time
3. Integration with DAL group and further enhancements (Yugi)

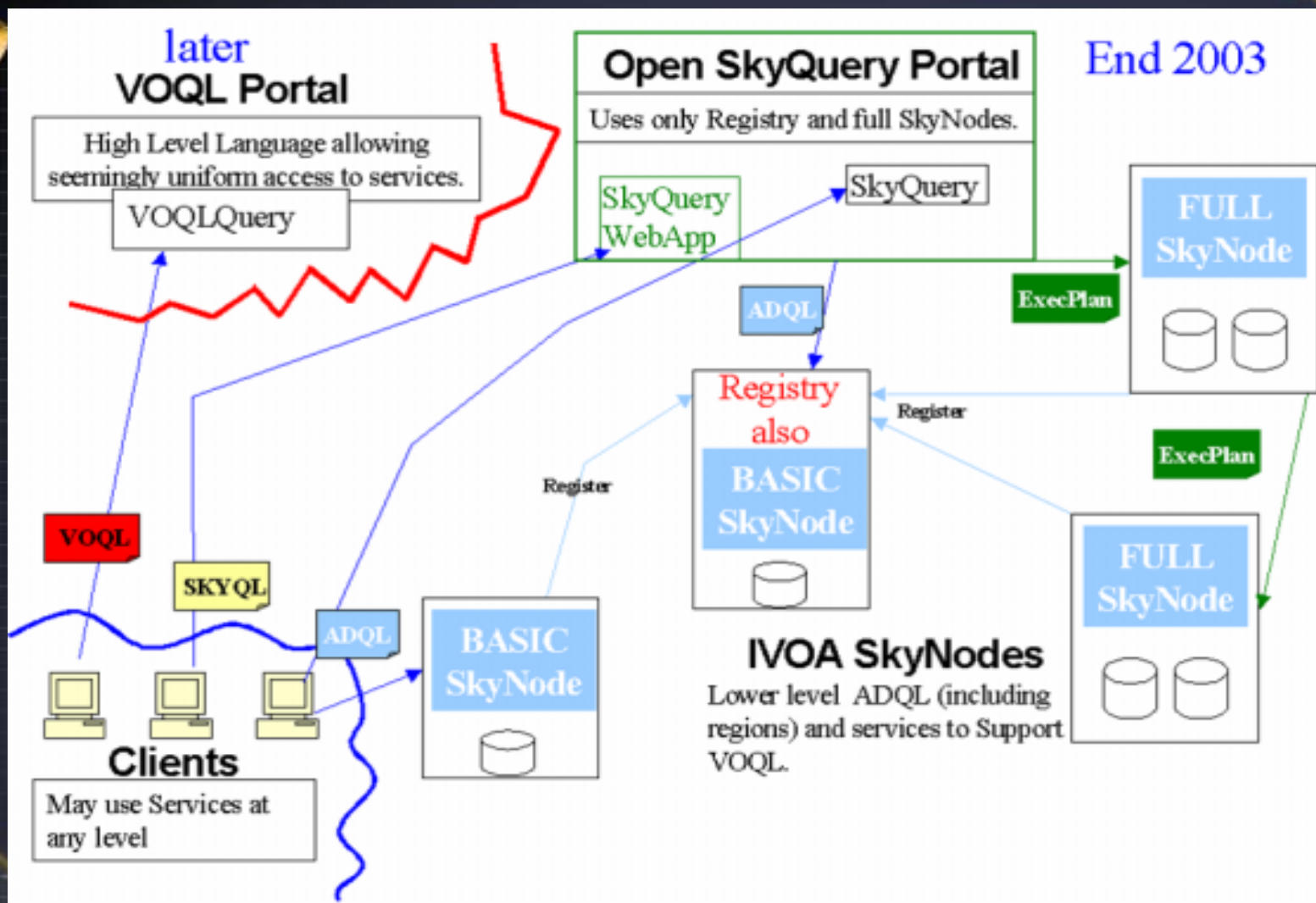
OpenSkyQuery, SkyNodes Status

William O'Mullane
Johns Hopkins University

Context

- OpenSkyNode is a SOAP interface accepting ADQL and exposing metadata
- OpenSkyQuery is a demonstration portal which uses multiple nodes to perform distributed queries
- ADQL may be used by multiple services in DAL. E.g. upgraded CONE/SIAP services.

Architecture



SkyNode

- Interface for tables, columns etc.
- Interface for PerformQuery
- Interface for ExecutePlan

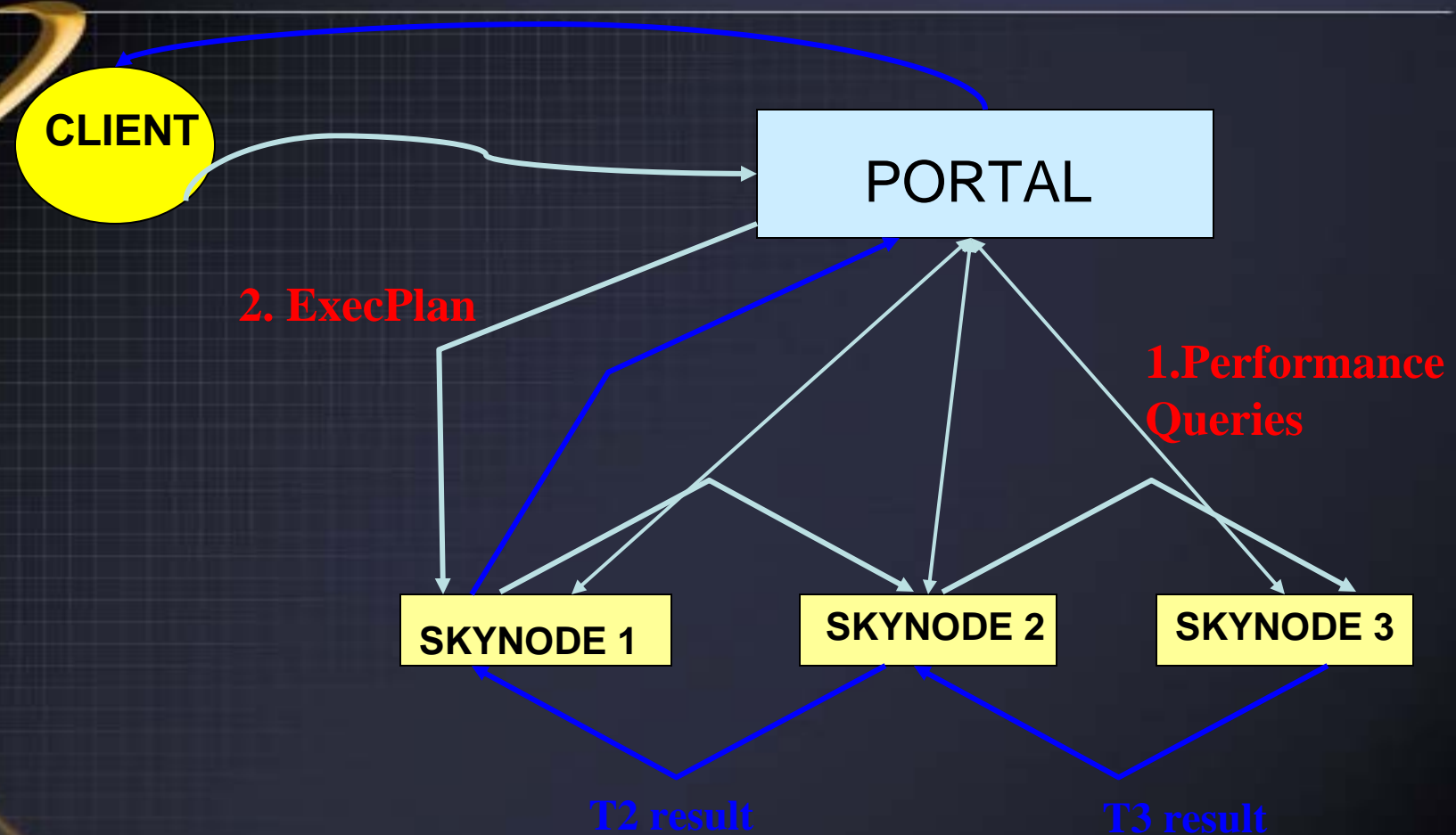
[What is the Node Interface?](#)

Also have

- Portal Interface for tracking

[Lets see the PORTAL](#)

Exec plan



What to do with an ExecPlan

ExecPlan List of nodes + Queries, sent from portal

- If I am the last node – run query return result.
 1. If not pass on to the next node in the list and await response.
 2. Upload response table
 3. Perform Xmatch
 4. Join result of Xmatch to the original query
 5. Return the result

Status

- [Portal working well](#)
- Skynode fairly stable
- Need better docs on Xmatch
- Need better docs in general
- Need Full Node in Java (have basic)
- Still problems with VOTable XSD in portal and C# Nodes – have workarounds

Future

- MYDB- ala CasJobs does all of this
 - <http://casjobs.fnal.gov>
- Identification across nodes – federated trust. WS-Security/ Now will be in line with WS-REF for grid. Single Sign On on the table !

ADQL 0.8.1 status , Issues

William O'Mullane
Johns Hopkins University

ADQL/x ADQL/s

- Same semantics different syntax
- ADQL/x - parse tree easy for SkyNodes
- ADQL/s - textual easy for humans
- ADQL Includes, regions, Xmatch (parser only for circle now), math functions

Some people still want one or the other

- Simple parser working both ways

[ADQLtoSkyQL](#)

[SkyQLtoADQL](#)

ADQL/s and ADQL/x

ADQL/s

Select a.* from Tab a

ADQL/x

This would be the
same in 0.8

```
<Select xmlns:xsd...ADQL/v0.7.4">  
  <SelectionList>  
    <Item xsi:type="columnReferenceType" Table="a" Name="*" />  
  </SelectionList>  
  <From>  
    <Table xsi:type="tableType" Name="Tab" Alias="a" />  
  </From>  
</Select>
```

ADQL0.8.1

- **INTO** : MyDb, MySpace for both SELECT
- **TOP** : tie down semantics
- **JOIN** : Use Explicit JOIN syntax
- **Add units** : to ADQL/s, ADQL/x (need more metadata on table in SkyNode)
Web services conversion tool is available in Oz
- **Improve XMATCH** : Move sigma inside the bracket Add '+' for outer join and '?' for uncovered areas

ADQL0.8.1 NOT DONE

- No Data Manipulation Language e.g no
 - Insert
 - Create
 - Update
 - Delete
- GCDIST put off to have full list of Astronomy functions
- C# Translator not updated
 - Problems integrating new Space Time Coordinate Schema
- NCSA (Ray Plante) working on java translator

New issues

- Funny table names e.g DEC
 - [DEC] in sqlServer `DEC` in mySql
 - OK in ADQL/x not in ADQL/s(need to check)

Proposed Recommendation

