

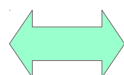
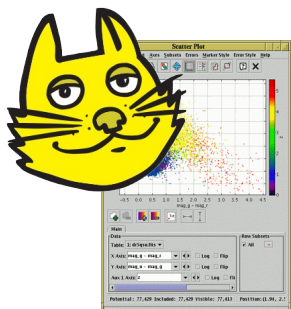


Working with ADQL

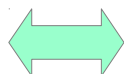
Astronomy Data Query Language



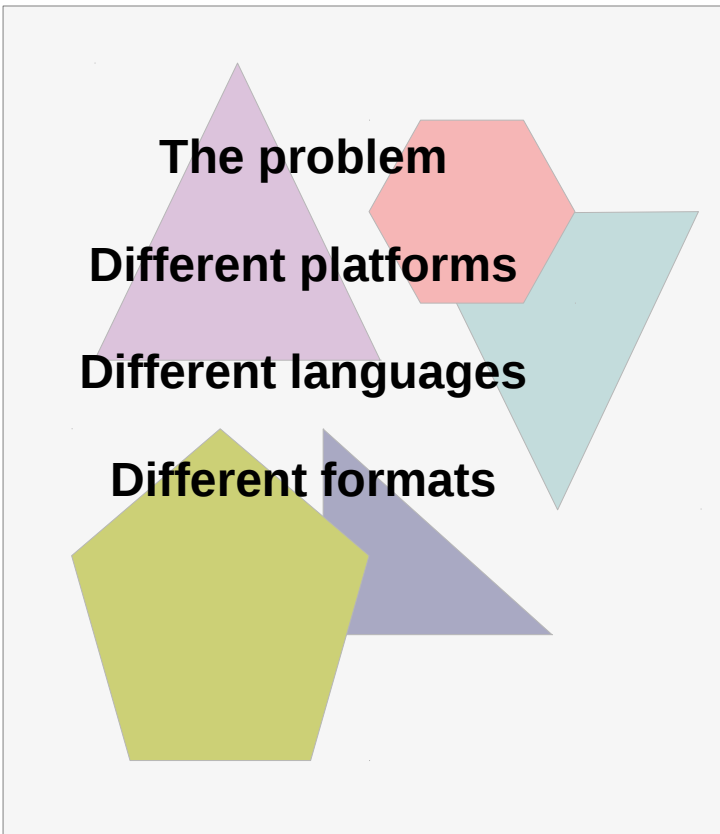
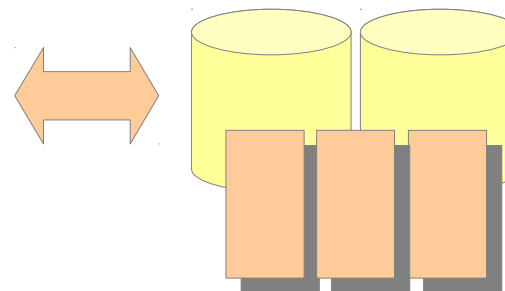
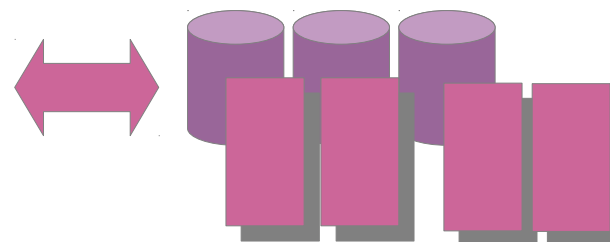
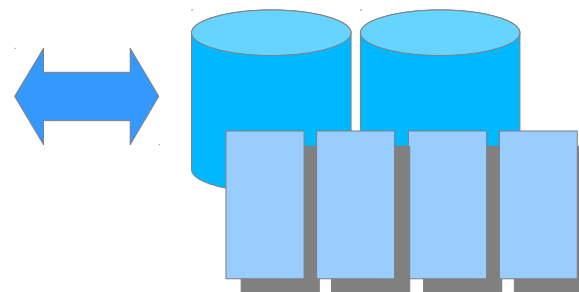
Topcat



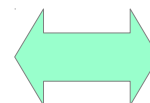
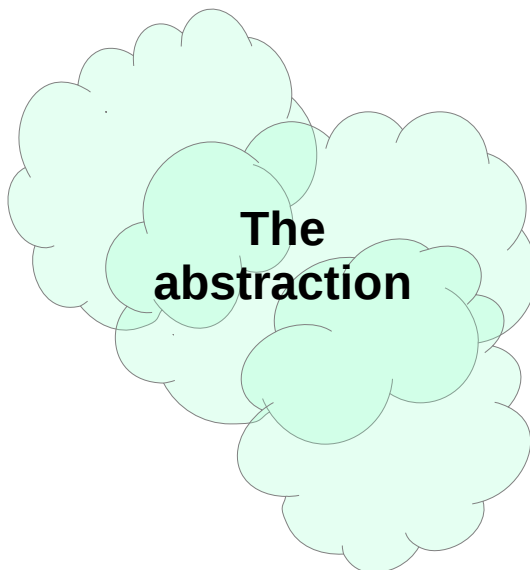
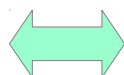
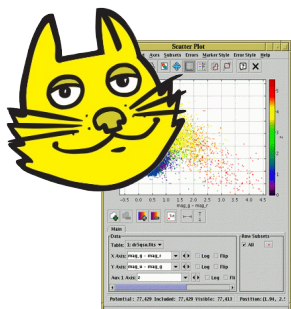
Aladin



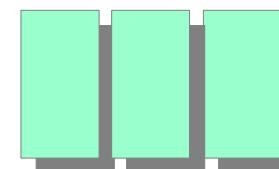
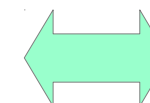
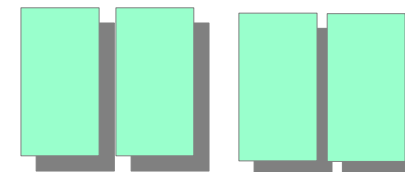
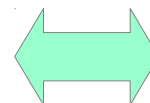
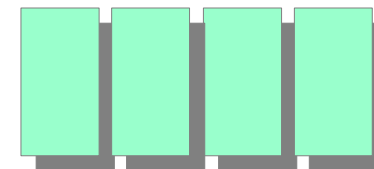
The problem
Different platforms
Different languages
Different formats

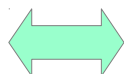
Topcat



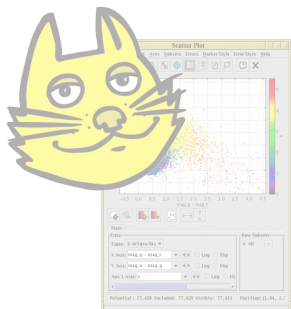
The data



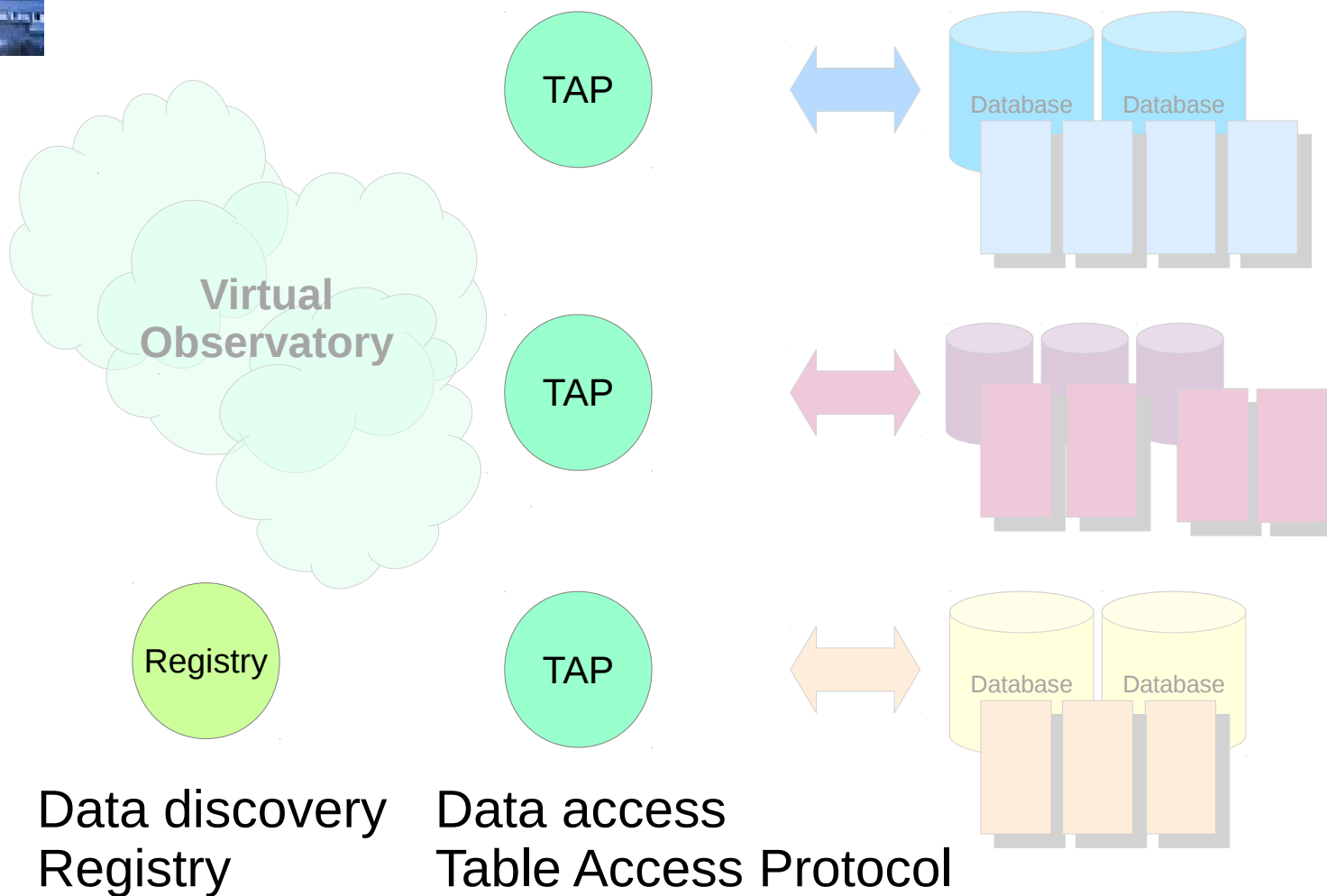
Aladin



Topcat

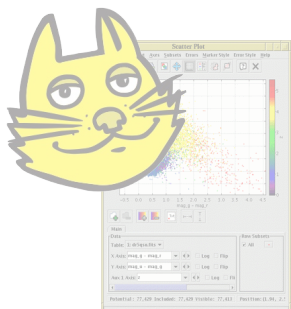


Aladin

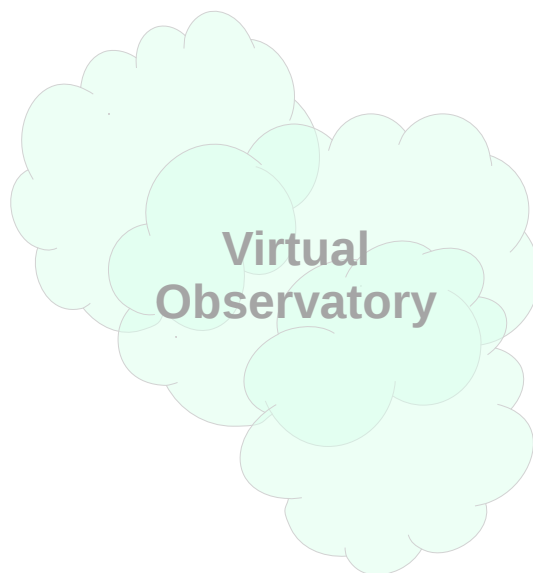




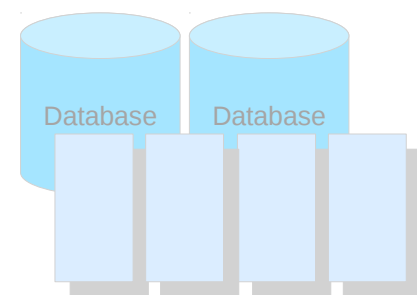
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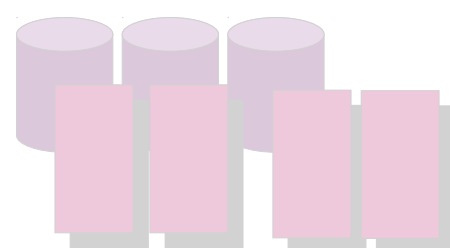
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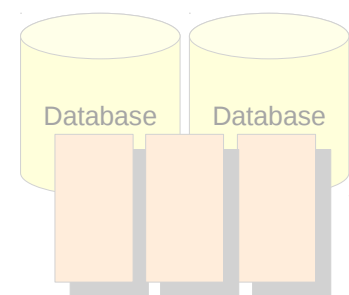
A
D
Q
L



A
D
Q
L



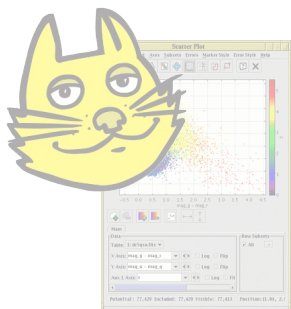
A
D
Q
L



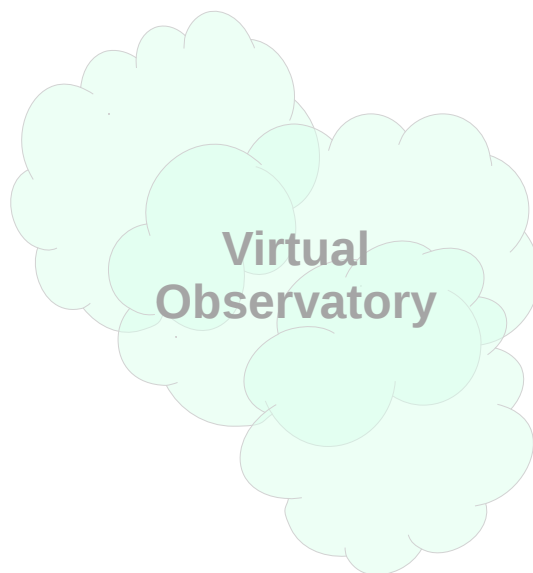
Astronomy Data Query Language
SELECT ... FROM table WHERE ...



Topcat



Aladin



TAP

A
D
Q
L

Database

Database

TAP

A
D
Q
L

TAP

A
D
Q
L

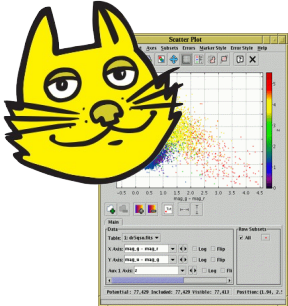
Database

Database

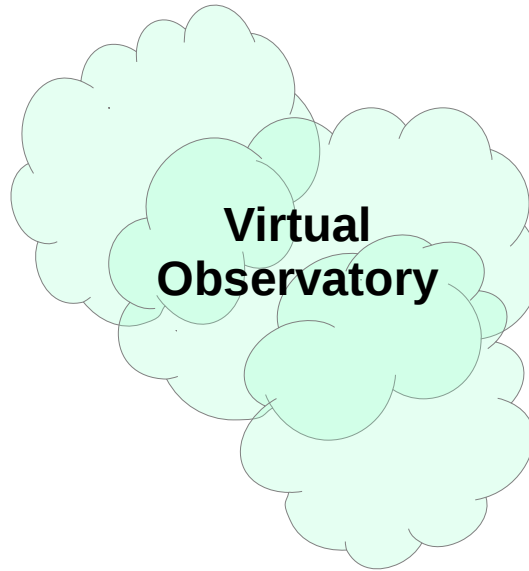
Observation Data Model

- what
- when
- where

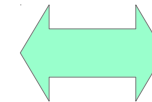
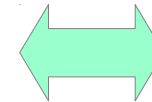
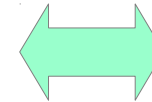
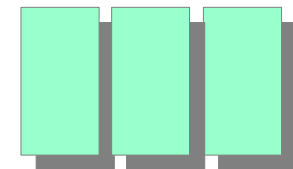
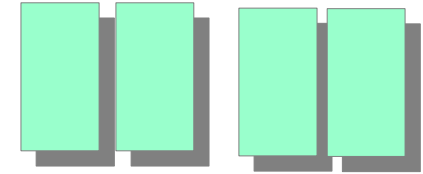
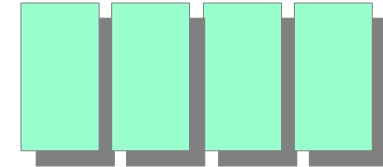
Topcat



Aladin

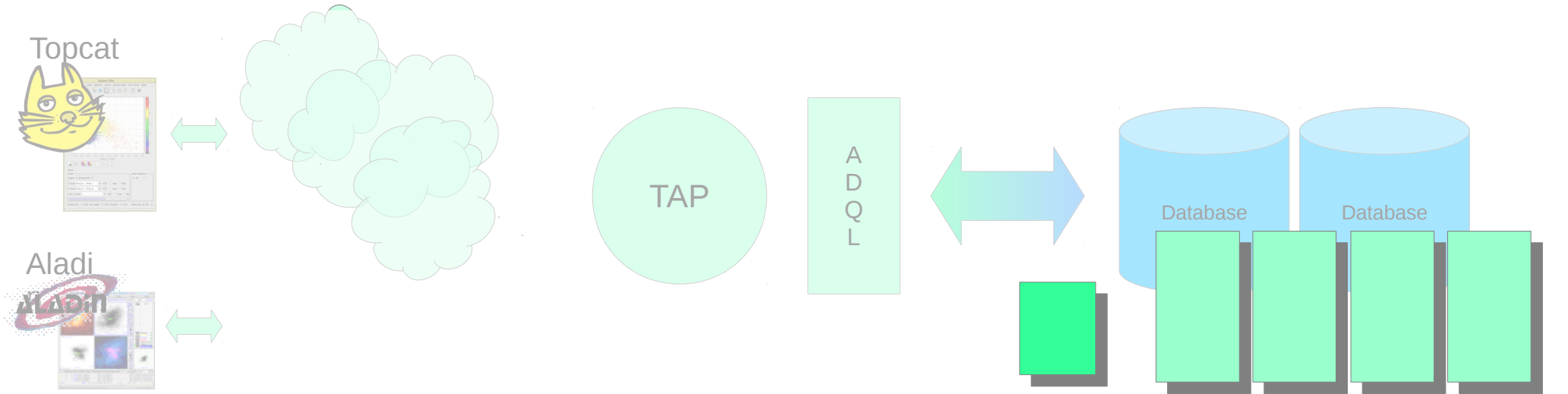


The data



Registry
Table Access Protocol
Astronomy Data Query Language
Observation Data Model

Data provider role



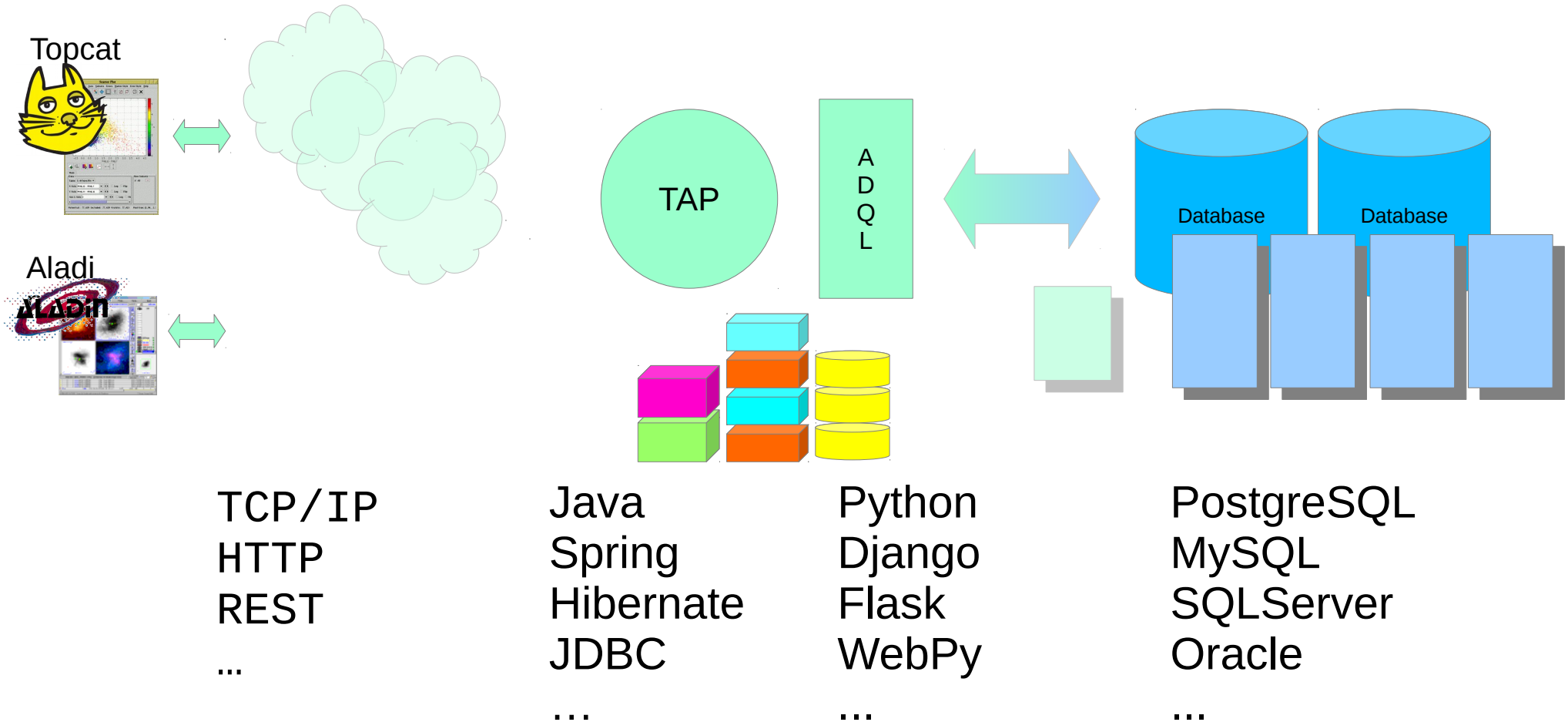
TAP_SCHEMA

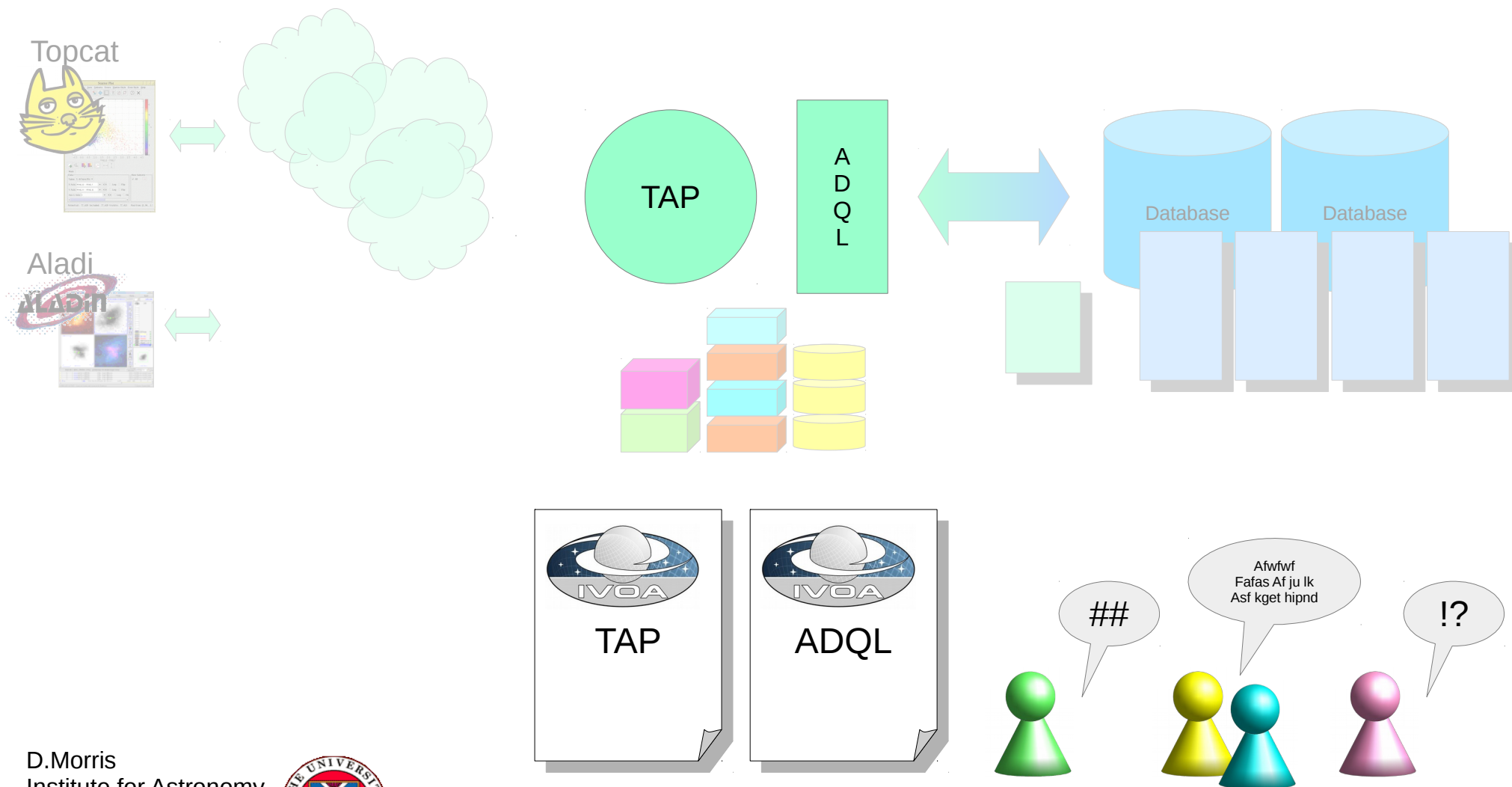
Observation Data Model

- tables
 - columns
 - name
 - type
 - units

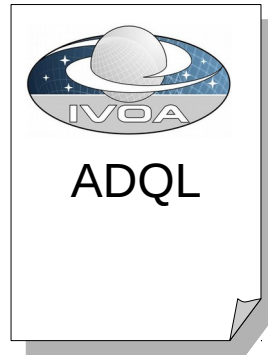
CREATE VIEW
() ;

Software developer





Initial proposal and group discussion



OFFSET ?

SELECT

...

FROM

...

WHERE

...

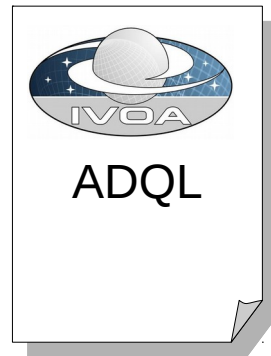
OFFSET n

OFFSET

Afwtwf
Fafas Af ju lk
Asf kget hipnd

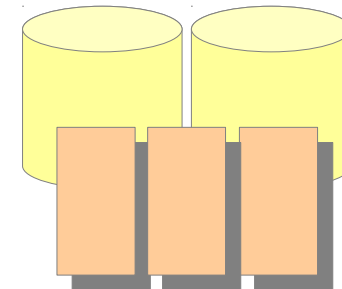
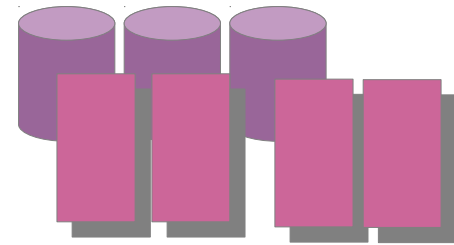
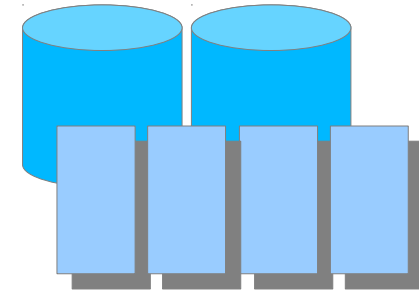
!!

Sometimes
the complicated ones are easy,
and sometimes
the simple ones are hard.



SELECT
...
FROM
...
WHERE
...
OFFSET n

Consensus and
updated specification ☺



Balance between
complexity of optional features
vs
excluding implementations

Oracle does not support OFFSET



Cosmopterix

Docker containers, providing basic install of each database platform.

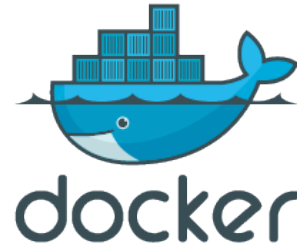
A simple platform for experimenting with ADQL syntax.



GitHub project
- contributions welcome

<https://github.com/ivoa/cosmopterix>

D.Morris
Institute for Astronomy,
Edinburgh University
June 2016

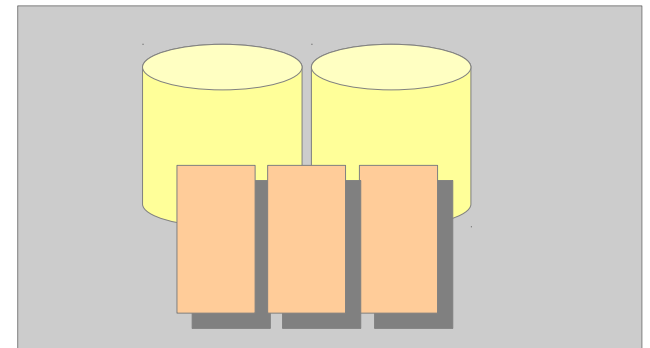
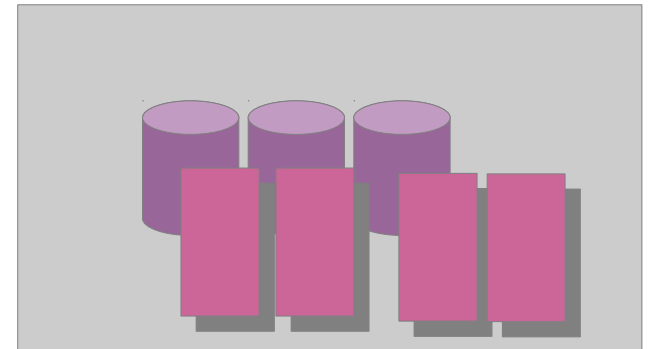
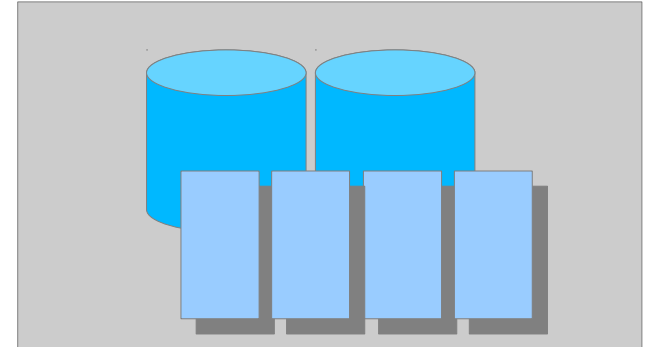


Working

- PostgreSQL
- MySQL
- MariaDB
- HSQLDB
- Apache Derby
- Oracle (*)

Future

- H2
- SQLite
- SQLServer
- Qserv
- SpiderEngine
- Hadoop



Lyonetia

A place to share example ADQL and SQL queries.

Initial goals

- Provide source material for ADQL parser tests
- Provide source material for ADQL query tests

Medium term goals

- Provide reference material for science use cases

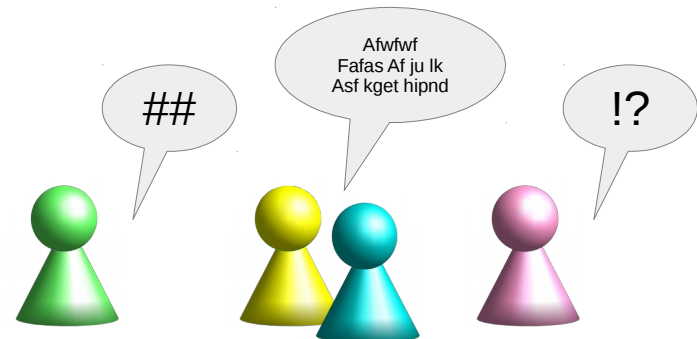
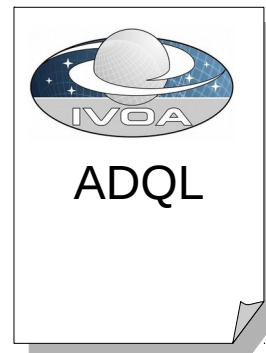
Long term goal

- Future work on validating the BNF grammar



GitHub project
- contributions welcome

<https://github.com/ivoa/lyonetia>



Open to collaboration



Public GitHub projects.

Make a clone, add your changes and send me a pull request.

Lyonetia – ADQL queries

<https://github.com/ivoa/lyonetia>

Cosmopterix- Docker containers

<https://github.com/ivoa/cosmopterix>

ADQL-2.1 working draft

<http://www.ivoa.net/documents/ADQL/20160502/index.html>

ADQL document - LaTeX source

<https://volute.g-vo.org/viewvc/volute/trunk/projects/dal/ADQL/>