

# The CDS portal

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# Why a portal ?

- Facts
  - CDS users don't know well the differences between CDS services
    - They even sometimes mix up Simbad and VizieR
    - They might ignore some services/tools of interest for their search
    - Each service has different interfaces, different options, different layouts → might be scary for beginners
  - Not easy to reuse output from a service as input to another service



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# Goals

- Develop a simple interface (Web based)
  - Uniform access point to CDS services
- Data-centric (versus Service-centric)
- Facilitate workflow between services (*eg: use Simbad output as Vizier input*)
- Reuse or adapt existing services/interfaces as much as possible
  - No duplication of existing features



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# First steps

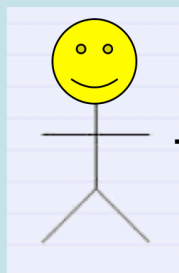
- Focus on ConeSearch-like queries
  - Positions
  - Object names
- Provide
  - Summary of information/available data
  - Links to existing services/tools



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CDS Portal



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# Testing Javascript toolkits

- Very first prototype built separately with 3 different AJAX toolkits :
  - Prototype + DWR
  - Dojo
  - GWT



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# Testing Javascript toolkits

- Very first prototype built separately with 3 different AJAX toolkits :
  - Prototype + DWR
  - Dojo
  - GWT (+ Ext-GWT for widgets)



# Google Web Toolkit

- Java toolkit to develop AJAX applications
- Open source (Apache 2.0)
- **Develop in Java, compile to Javascript**
  - *Javascript as an assembly language*



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# GWT pros

- Use your favorite Java tools (Eclipse, debugger)
  - Develop and test in hosted mode (Java)
  - Deploy to Javascript
- Simple RPC to communicate with server
  - Serialization of Java objects
- Cross-browser (true most of the time)
- Optimization of compiled Javascript
  - Speed
  - Size



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# Bridging the gap between services (1/2)

- Use case
  - Query 2MASS catalogue in **VizieR** to retrieve red objects ( $J-K > 2.0$ ) around NGC 1333
  - Save this list
  - Reuse it to query **Simbad** and merge the result with the input
  - Save the result





# Bridging the gap between services (2/2)

- Portal as a gateway to connect CDS services
- *Saving to portal* as a new output format
  - Redirect to a dedicated URL on the portal
    - Allows user authentication
    - URL to be saved passed as a parameter
  - Actual saving performed asynchronously server-side
  - Currently tested on VizieR
- Retrieve positions of saved tables to query Simbad



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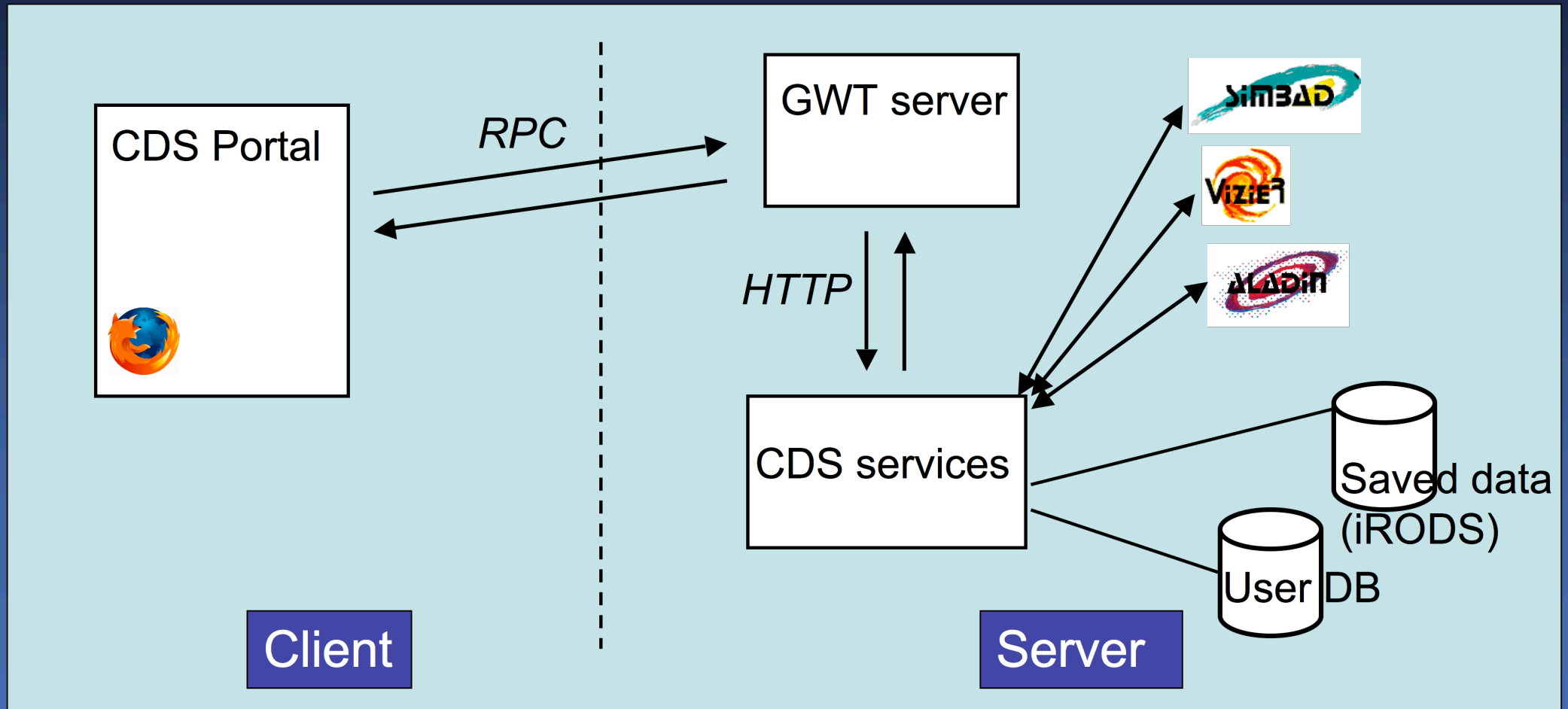


# Dealing with users

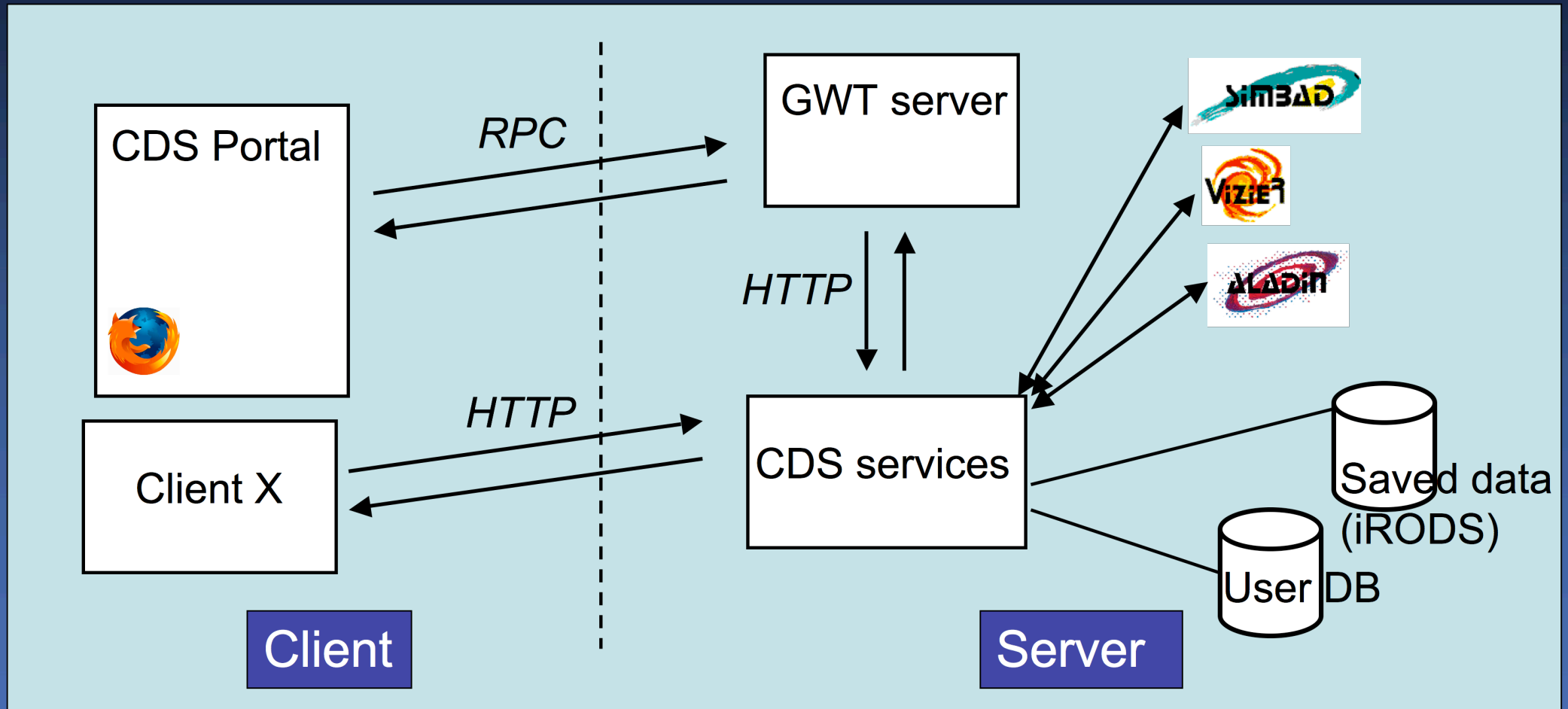
- Identify users
  - HTTP cookie
- Anonymous users are first-class users
  - Can set preferences
  - Can save data
- Why register ?
  - If cookie is lost, everything is lost
  - Retrieve your data/settings on different computers



# Architecture



# Architecture



# Demo

The screenshot shows the CDS Portal interface. At the top, there is a navigation bar with logos for SIMBAD, VizieR, Aladin, Catalogs, Dictionary, Biblio, Tutorials, and Developers. Below this, the main content area displays search results for the target 'NGC 7331'. The J2000 position is given as 22 37 04.29 +34 24 58.4. A section titled 'Object identifiers, measurements and bibliography for NGC 7331' lists details such as 'Object type: LINER-type Active Galaxy Nucleus' and 'Morphological type: Sb'. It also includes links for 'More SIMBAD data for NGC 7331', '693 bibliographic references', '133 objects within 2'', and 'Display map around NGC 7331'. To the right of this text is a bar chart showing the 'Number of bibliographic references for NGC 7331' from 1950 to 2008. Below this, the 'Images for NGC 7331' section provides a link to 'Display region in Aladin (Web Start)' and a table of 'Aladin images' with columns for Survey, Band, and Size. A small image of the galaxy NGC 7331 is shown on the right side of the page.

Target:  GO  
J2000 position for NGC 7331: 22 37 04.29 +34 24 58.4

**Object identifiers, measurements and bibliography for NGC 7331**

- Object type: LINER-type Active Galaxy Nucleus
- Morphological type: Sb
- [More SIMBAD data for NGC 7331](#)
- [693 bibliographic references](#)
- [133 objects within 2'](#)
- [Display map around NGC 7331](#)

Number of bibliographic references for NGC 7331

**Images for NGC 7331**  
[Display region in Aladin \(Web Start\)](#)

Survey	Band	Size
2MASS	H	STANDALONE
2MASS	J	STANDALONE
2MASS	K	STANDALONE
IRAS-IRIS	100MU	STANDALONE
IRAS-IRIS	12MU	STANDALONE
IRAS-IRIS	25MU	STANDALONE
IRAS-IRIS	60MU	STANDALONE
POSSI	E	FULL
POSSI	E	LOW
POSSI	E	PLATE
POSSI	O	FULL
POSSI	O	PLATE
POSSI	F	FULL
POSSI	F	PLATE



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# Future developments

- Public release early 2009
- Links to VO services:
  - Expose the iRODS user-storage as a VOSpace visible from VO applications
  - Upload VOTables
  - Query DAL services with list of positions
  - Access to UWS processing services (eg: cross-matching tables)
  - Explore non-positional queries
    - Need Semantics, ontologies, UCDs



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