

# A New GUI System for ASPRO

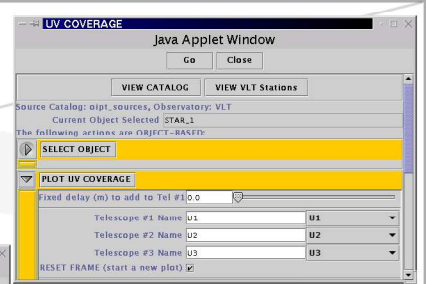
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ASPRO is A Software to PRepare Observation with long-baseline optical Interferometers like ESO's VLTI. (ASPRO is developed by the JMMC) With it's new GUI system, everyone can access ASPRO using a modern browser.

## User side

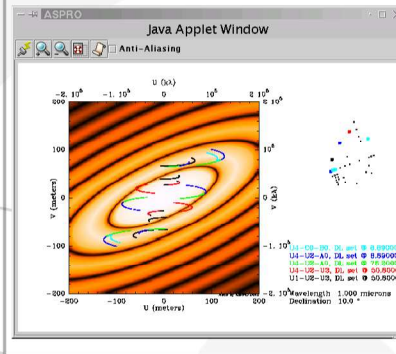
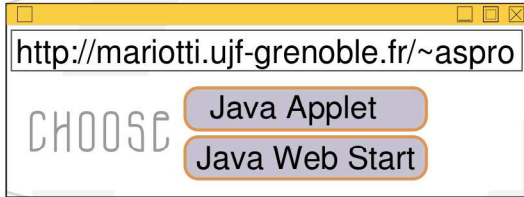
The java applet parses (DOM) incoming XML documents. XML helps the GUI building process.



Each user's event is transformed into XML document and returned back to the server.

**This remote GUI has real widgets on the user's side. However all processes are done on the server side.**

That makes a fast light solution.



**1** Connect server  
 The JMMC's webservice provides an applet which integrates a dynamic graphical engine. The applet connects the server using one TCP/IP socket. It connects on one of the dedicated ports of remote applications.

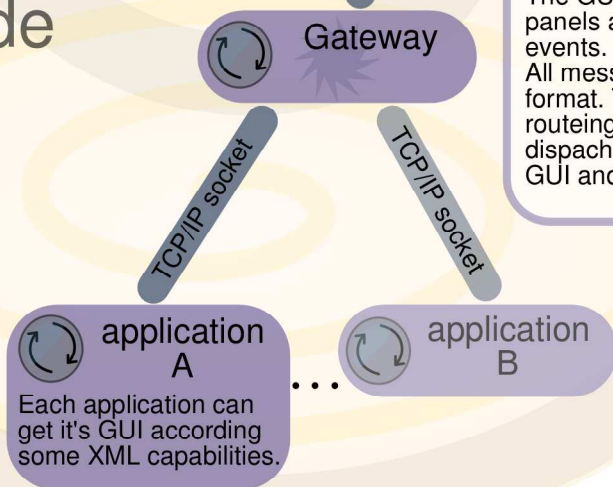
**3"** Files management  
 Apache is used to download or upload files from the user's host onto the server.

**3'** Exchange XML messages  
 In general, applications generate some panel descriptions and send them to the GUI client. The GUI builds the corresponding panels and returns back user's events. All messages follow the XML format. The Gateway uses routing attributes to dispatch messages between GUI and application.

## Server side

xinetd

**2** Start processes of a new session  
 Xinetd is an extended Internet services daemon. Our server uses it to associate some TCP/IP ports with startup scripts. Each script prepares the application environment that will deal with the user's GUI.



- ### User Prerequisites
- Network access
  - Web Browser with Java2 plug-in or Java Web Start
- ### Server Prerequisites
- Linux / Mandrake 9.2
  - Application to run / ASPRO
  - Java JRE 1.4 / java.sun.com
  - Xinetd / linux distribution
  - Apache / linux distribution

- ### Widgets
- Menu
  - Panel
  - Button
  - Chain
  - Label
  - Separator
  - Check Box
  - Choice
  - File Browser
  - Slider
  - Table
  - Help
- ### SVG
- Group
  - Text
  - Image
  - Line
  - Circle
  - Rectangle
  - Polygon
  - Polyline

- ### Benefits
- XML descriptions save network bandwidth, opposite to classical remote display.
  - GUI runs on every Java Platforms.
  - XML is a good abstraction layer (Other GUI clients can be developed with exactly the same application code).
  - No installation is required.
- ### Drawbacks
- Users require network connection.
  - File management is not as simple as local uses.
  - Servers support all user's load.