Work around distributed image processing and workflow management

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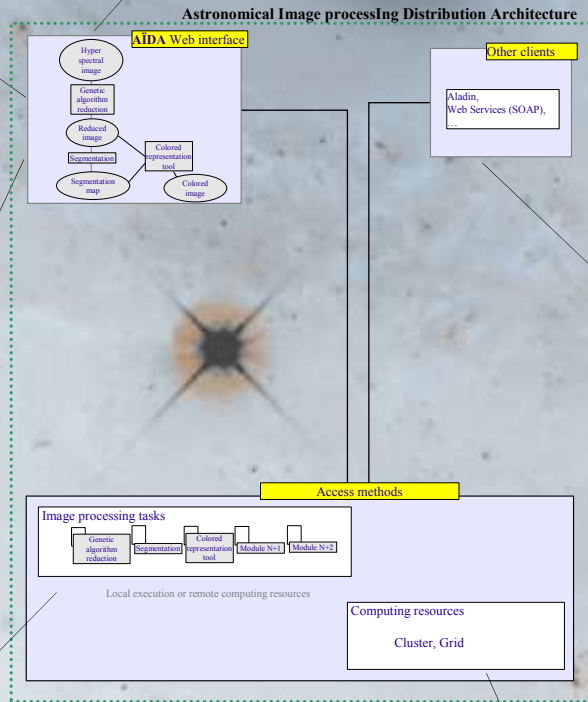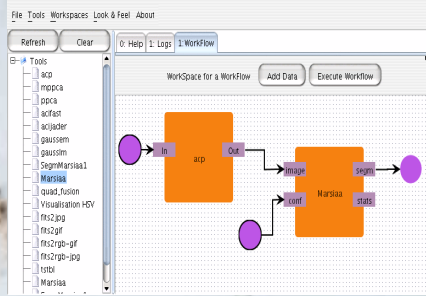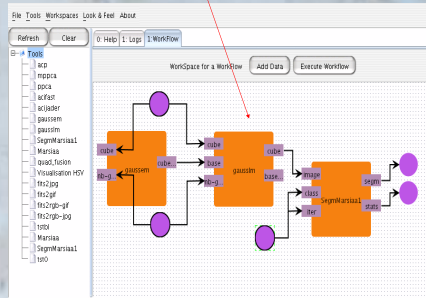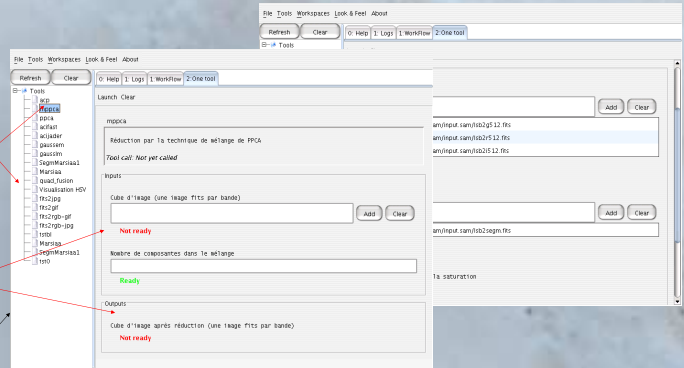[1] CDS Strasbourg, [2] ICPS Illkirch, [3] LSIIT Illkirch, [4] LIRIS Lyon

Many people develop tools for image processing in various languages (C, C++, FORTRAN, MATLAB, etc) but do not diffuse them. One of the reasons is the portability and also the difficulty to make them collaborate with other tools. We are developing AÏDA (Astronomical Image processIng Distribution Architecture), an architecture in which such tools can be wrapped and accessed through a standardized way (CGI and Web Services).

JLOW (Java Libraries fOr Workflow)

We have also developed Workflow libraries to make easier the creation and the management of more complex tasks.

http://cdsweb.u-strasbg.fr/cdsdevcorner/jlow.html

List of available image processing tasks (mppca is the current task)

Current task :
Input parameters
Kind of Outputs

Astronomical Image processIng Distribution Architecture

AÏDA Web interface

Hyper spectral image

Genetic algorithm reduction

Reduced image

Segmentation

Segmentation map

Colored representation tool

Colored image

Other clients

Aladin,
Web Services (SOAP),

Access methods

Image processing tasks

Genetic algorithm reduction | Segmentation | Colored representation tool | Module N+1 | Module N+2

Local execution or remote computing resources

Computing resources

Cluster, Grid

AIDA (MARSIAA)

Aladin accessing image processing through AÏDA

The image processing available initially in MATLAB, C-C++, Fotran, … is wrapped to CGI or Web Service Access

We are now working on the distribution of this architecture to enable the use of Clusters or Grids and the creation of image processing nodes…