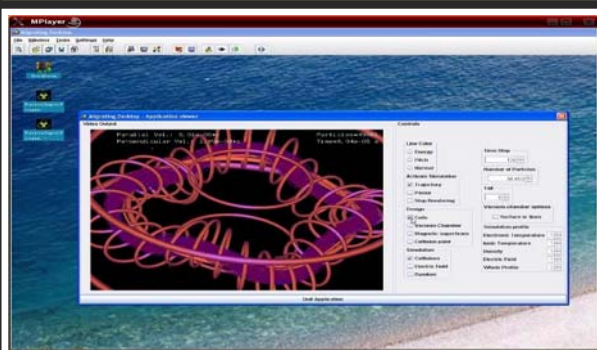


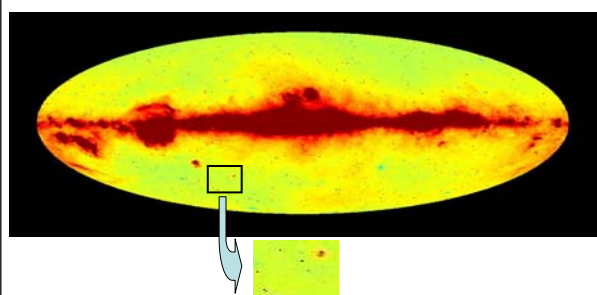
PUSHING THE FRONTIERS OF COMPUTING TECHNOLOGY TO SUPPORT RESEARCHERS: INTERACTIVE EUROPEAN GRID

For scientific applications requiring advanced visualization, interactive steering in real time, and supercomputing parallel power but as simple as using a workstation.



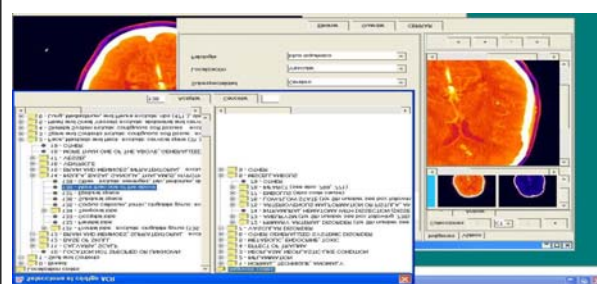
PLASMA VISUALIZATION

To design new fusion devices, like **ITER**, researchers need to understand the trajectories of plasma particles, and how they evolve when design parameters are modified. A single computer is limited to simulate and visualize thousands of particles, while the Interactive Grid can handle millions, providing researchers a realistic answer.



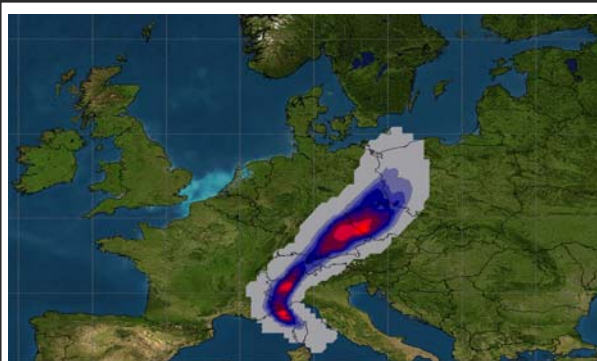
FIRST IMAGES OF THE UNIVERSE

ESA will launch the Planck mission in 2008 and astrophysics researchers are getting ready now by simulating the measurements of the **Planck satellite**. The large images require new powerful tools and filters that will be used interactively thanks to the Interactive Grid.



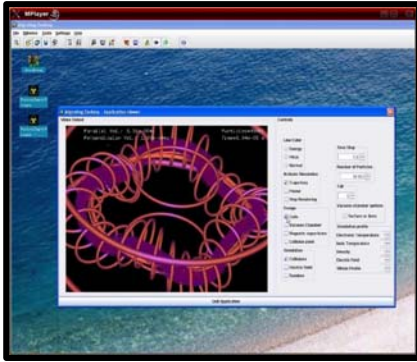
BRAIN DIAGNOSTIC

Doctors at HUMV Hospital in Spain need to develop more complex and precise techniques for diagnostic on brain images and to conduct testing of new algorithms by fast processing over large volumes of data. The Interactive Grid offers the computing power for this application that can visualise and annotate DICOM images.



CONTROL OF POLLUTION

An SME company in Slovakia is developing a complete model suite to analyze the **evolution of pollution clouds**. The simulation allows visualizing the behaviour of the pollutant clouds for a whole week using weather and meteorological data as input, and requires the Interactive Grid power to execute in minutes, not in days!

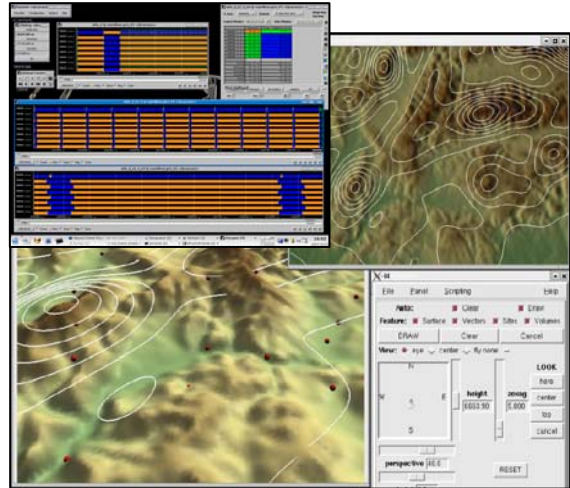


JAVA PLUGIN DEVELOPMENT FOR USE WITH MIGRATING DESKTOP

```
pn=new MyPanel();
pn.setBorder(new MyTitledBorder("Sim profile"));
GridConstraints gbc1=new GridConstraints();
gbc1.insets=new Insets(2,2,2,2);
```

FULL MPI SUPPORT

- Open MPI flavor
- Parallel capabilities at the intra- and inter-cluster level
- Inteoperability with EGEE-like infrastructures



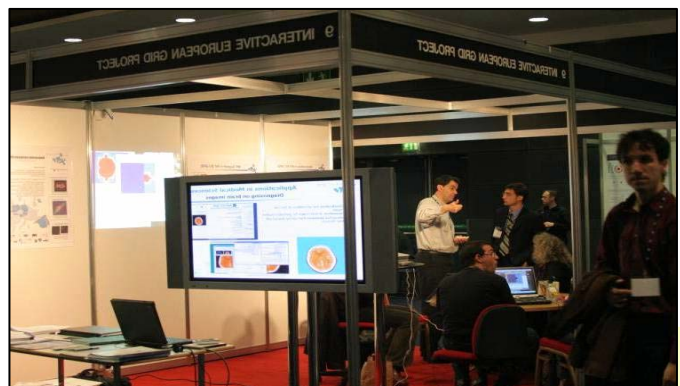
Interactivity

- Visualization
- Application steering
- Migrating Desktop
- GVis
- glogin

Parallel processing

- Flexible MPI environment support
- OpenMPI
- PACXMPI
- Advanced scheduling for the grid

Interoperability: gLite middleware



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