

Motivations. Workflows managers are powerful tools helping non expert users to design complex application in an accessible framework and to interface to large scale distributed computing infrastructures.

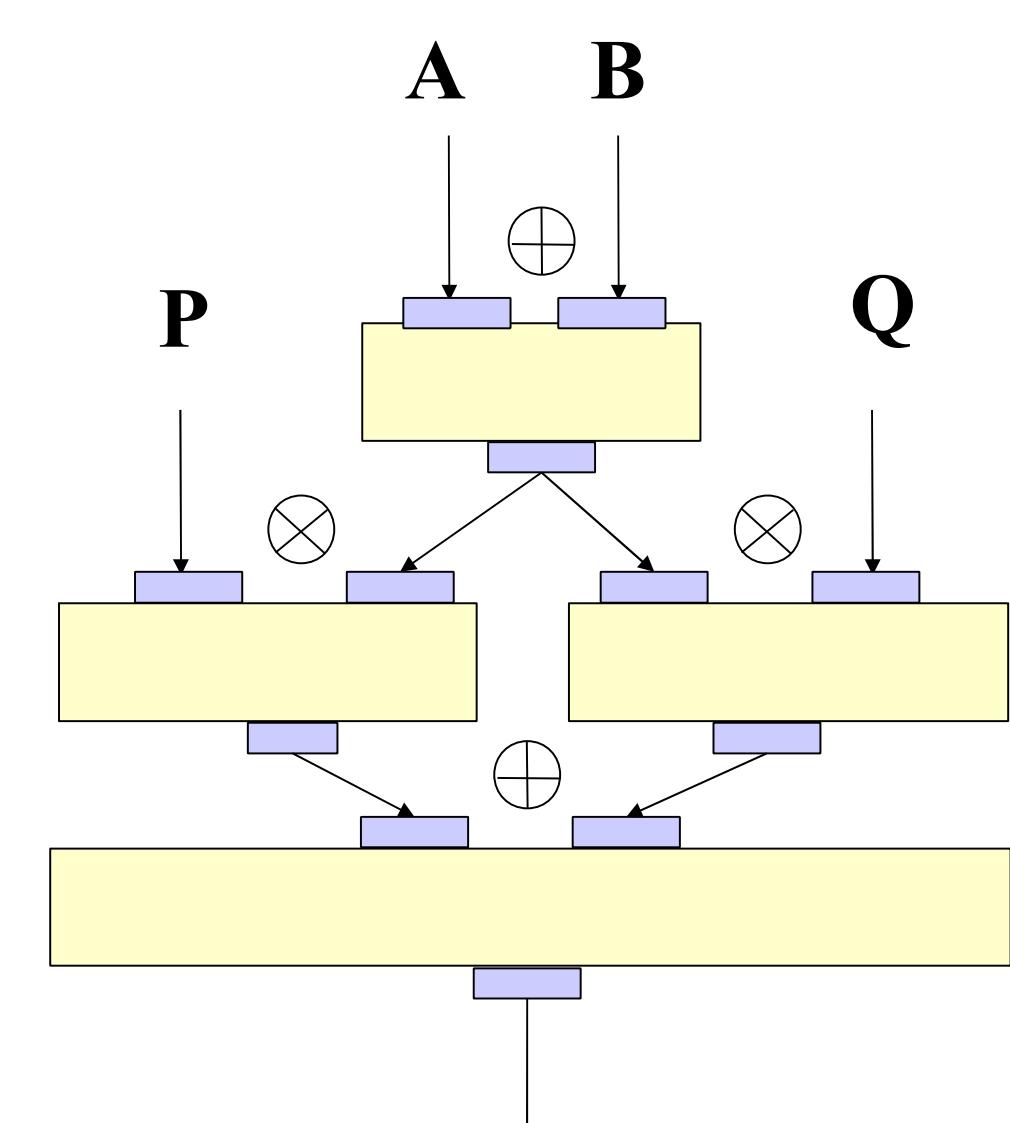
Objectives. They are twofold: in CS, GWENDIA aims at efficiently exploiting distributed grid infrastructures to deal with the huge and still increasing amount of scientific data acquired. In life sciences, GWENDIA aims at dealing with complex data analysis procedures and designing low cost challenging scientific experiments.


 Institut national
de la santé et de la recherche médicale

Project partners

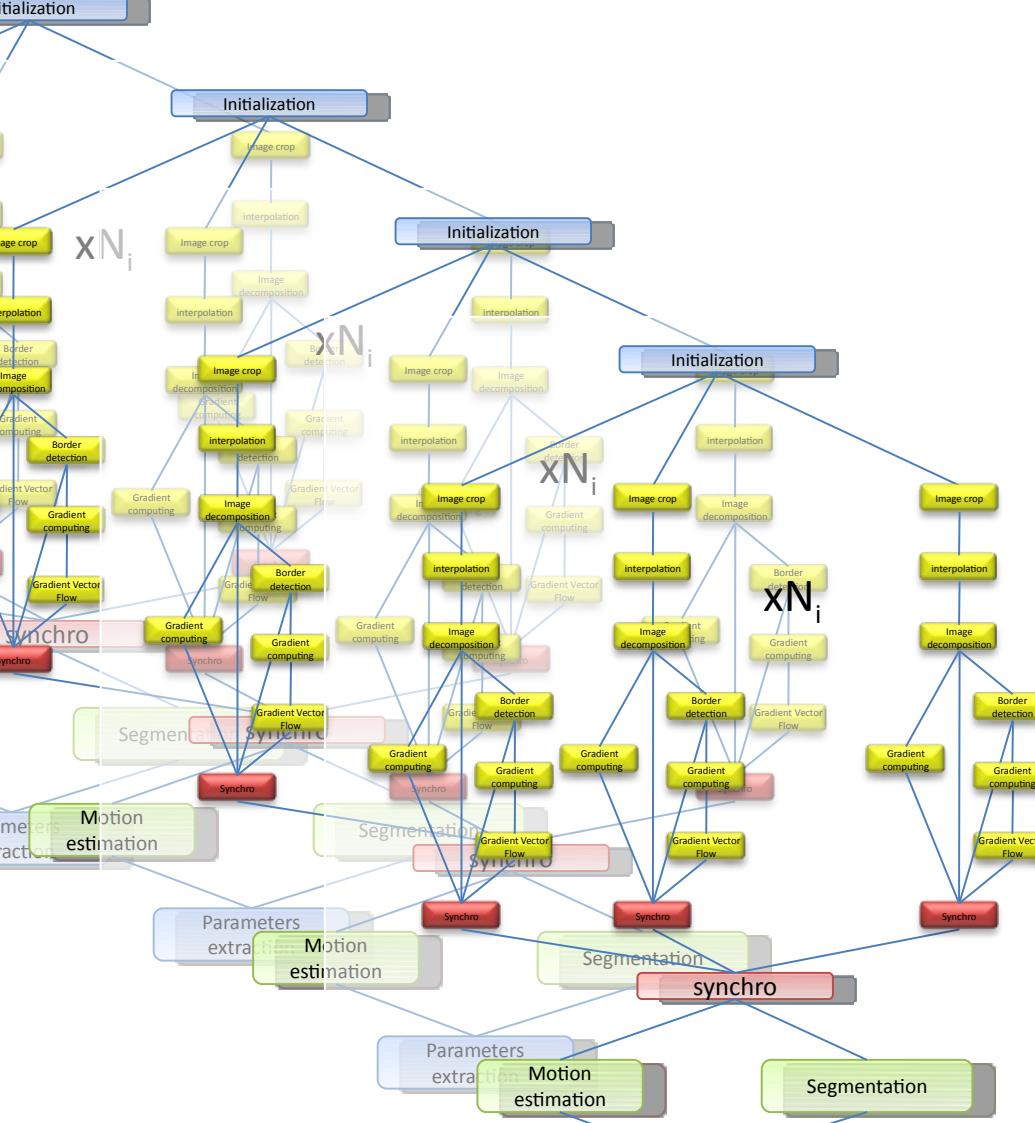
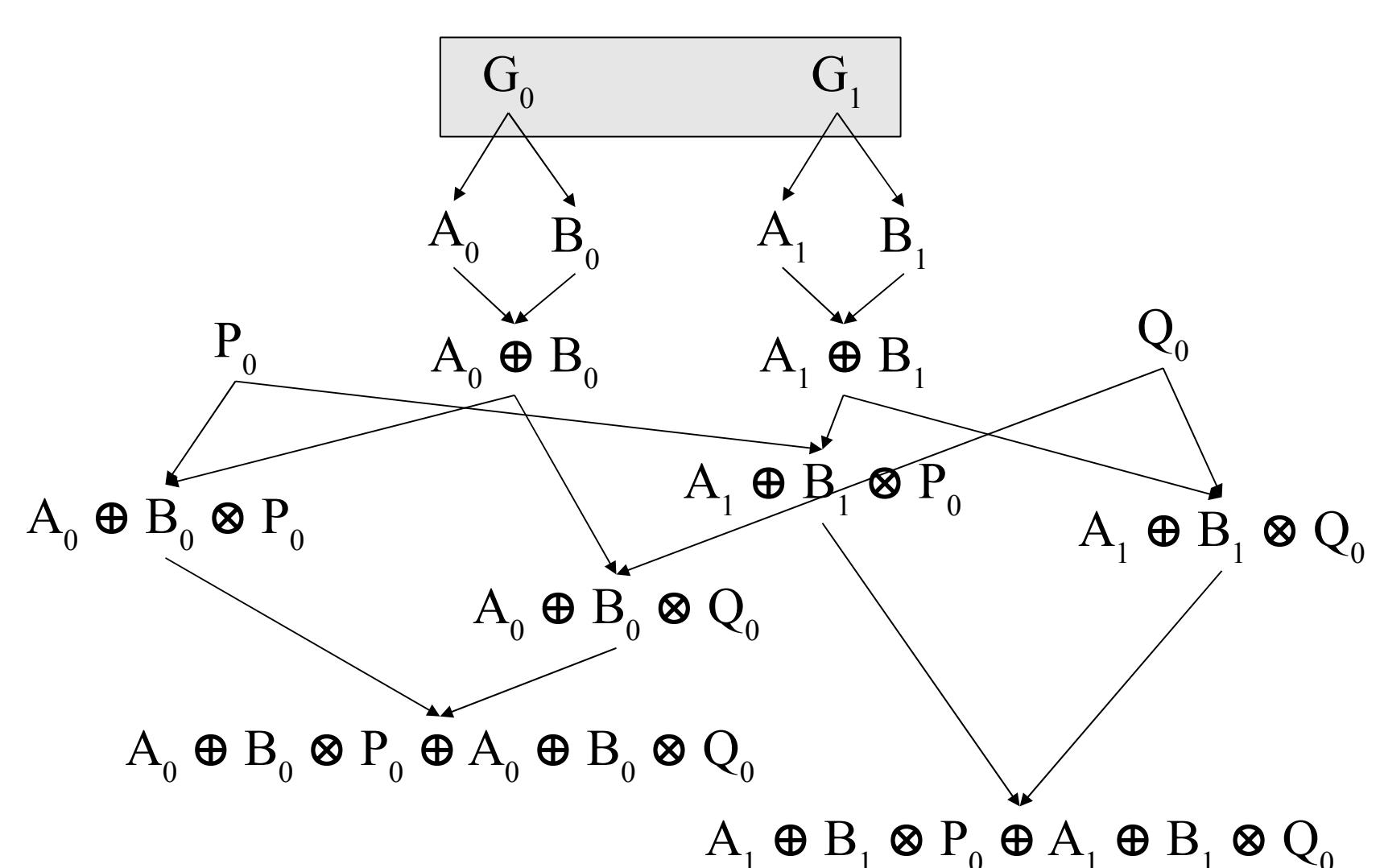

Creatis
LRMN

Workflow approaches



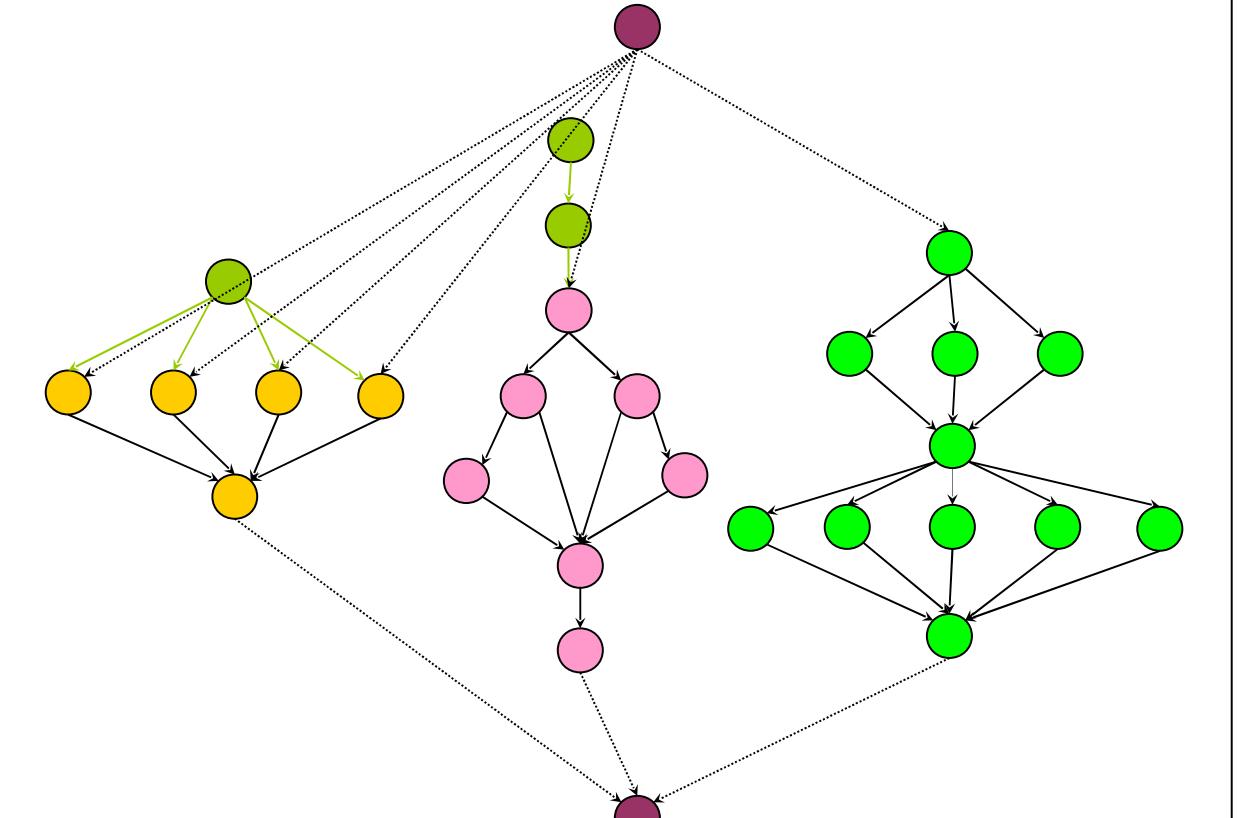
Service-oriented approach

Data composition strategies and languages expressiveness



Graph of tasks approach

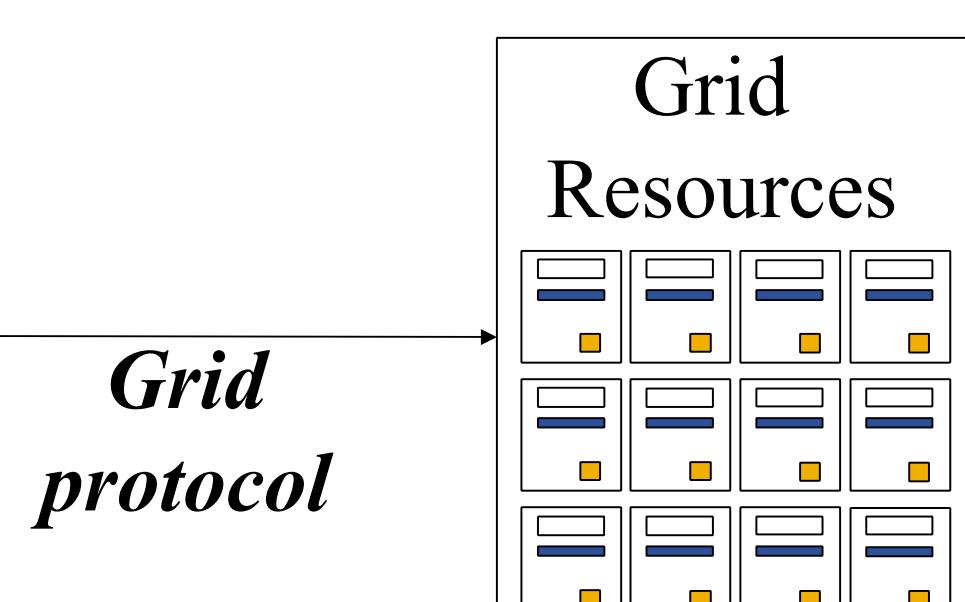
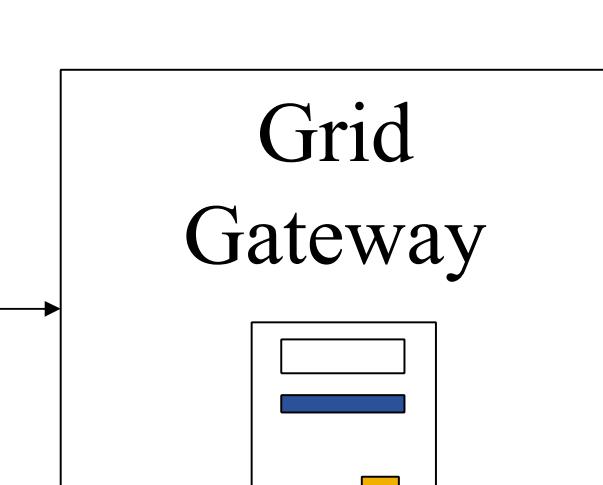
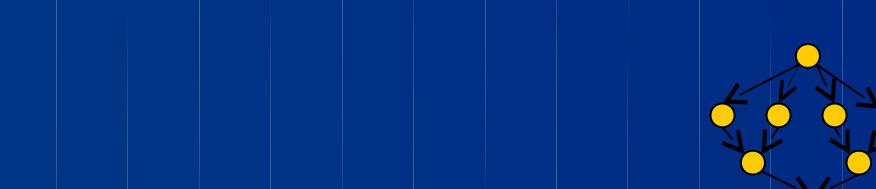
Scheduling heuristics



Grid enactment

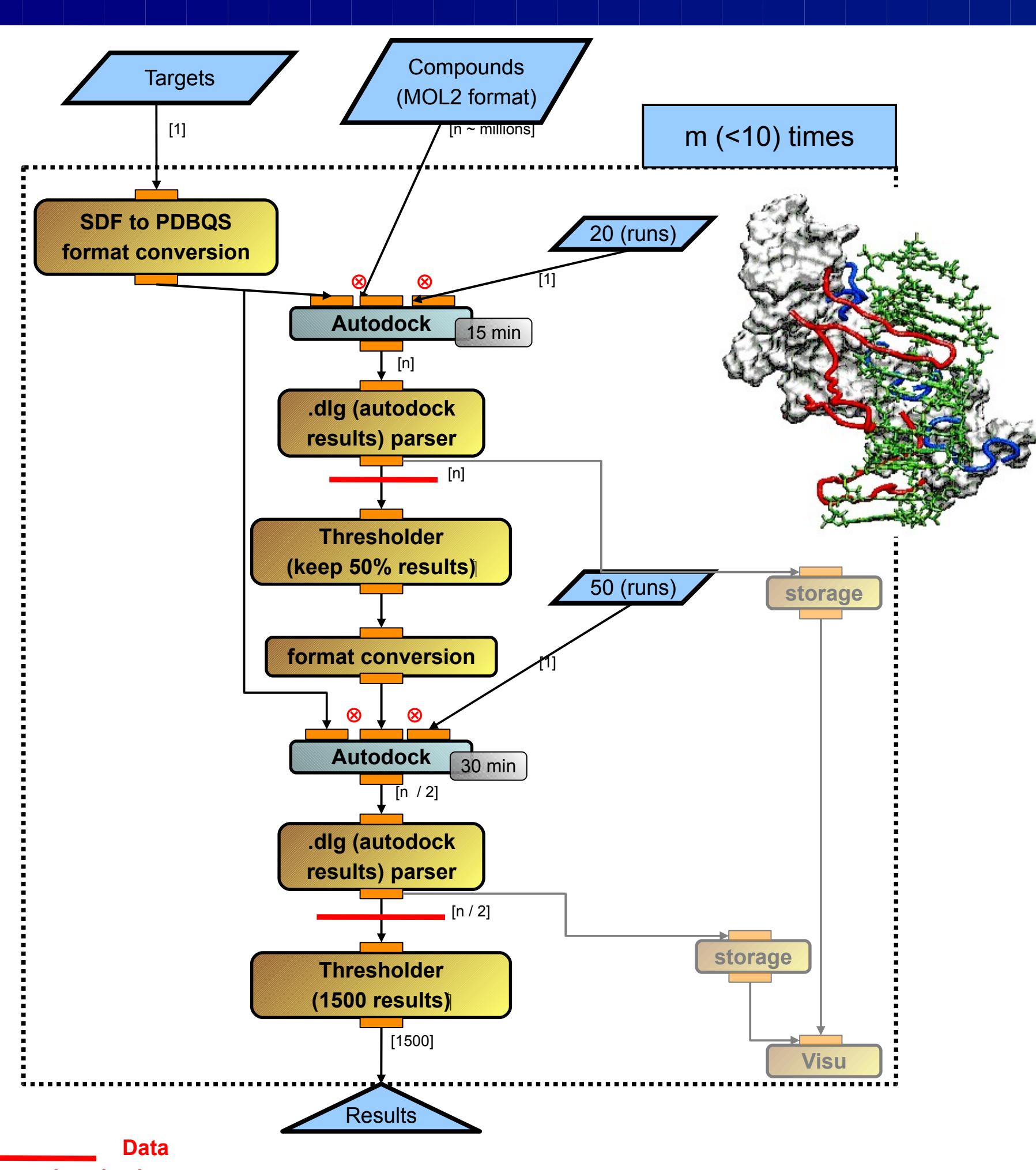


<http://modalis.polytech.unice.fr/software/MOTEUR/start>
<http://graal.ens-lyon.fr/~diet>



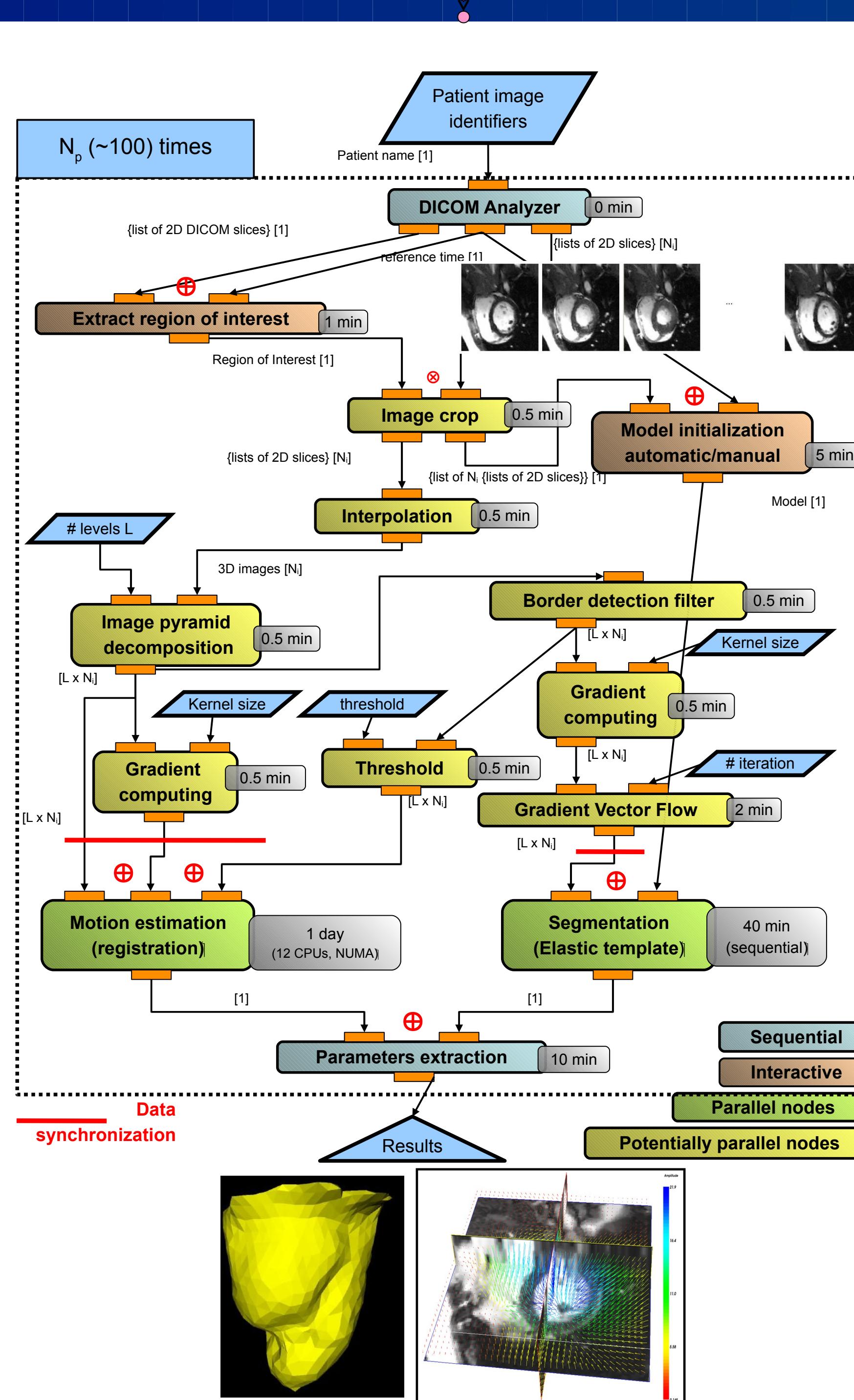
eGee
Enabling Grids
for E-sciencE

Applications to Life Sciences



Drug Discovery aims at studying the docking capabilities of known molecules on selected genes of viruses through static and dynamic molecular simulation.

This application is extremely data-parallel and compute intensive.



Cardiac analysis aims at reconstructing patients' heart 3D geometry and motion from heart MR image sequences to provide quantitative information on the heart function.

This application is exhibiting complex data flows and stringent requirements regarding the manipulation of data and the computational aspects.

