

# Test for Large Systems of Equations: a Grid project

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At the heart of most large scale computations lies the solution of a large sparse set of linear equations. A sparse matrix is a matrix that has enough zero entries that is worth using algorithms that avoid storing or operating on the zero entries. Choosing the best sparse solver and understanding how to use it properly requires substantial knowledge about matrices and about sparse methods. The objectives of the project are

1. Design an expert web site for sparse matrices which help users in choosing the right solvers and its parameters for a given problem.
2. Disseminate our expertise in sparse linear algebra.
3. Easy access and experimentation with software and tools: only statistics are provided, not computing resources.
4. Exploitation of computing power of the grid.

Why using the GRID ?

Each request may give rise to a large number of computations(e.g. as many simultaneous executions of a sparse package as available orderings or more generally appropriate values of input parameters).

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