Some computing notes

July 19, 2009

Computing environment

- Many core and contributed packages (including **spBayes**) call Basic Linear Algebra Subprograms (BLAS) and LAPACK (Linear Algebra PACKage) Fortran libraries.
- Substantial computing gains:
  - processor specific threaded BLAS/LAPACK implementation (e.g., Intel’s Math Kernel Library or AMD’s Core Math Library (ACML))
  - processor specific compilers (e.g., Intel’s *icc*/*ifort*)

Time needed to collect 100 MCMC samples using **spLM** and threaded vs. non-threaded BLAS/LAPACK on a Intel Core 2 Quad processor and Ubuntu 8.10 Linux OS. R compiled with GNU gcc and gfortran.

![Graph showing time needed for MCMC samples using threaded vs. non-threaded BLAS/LAPACK](image)