High-Level Modeling

The General Algebraic Modeling System (GAMS) is a high-level modeling system for mathematical programming problems. GAMS is tailored for complex, large-scale modeling applications, and allows you to build large maintainable models that can be adapted quickly to new situations. Models are fully portable from one computer platform to another.

Multiple Model Types

GAMS allows the formulation of models in many different problem classes, including

- Linear (LP) and Mixed Integer Linear (MIP)
- Nonlinear (NLP) and Mixed Integer Nonlinear (MINLP)
- Mixed Complementary (MCP)
- Programs with Equilibrium Constraints (MPEC)
- Stochastic Linear Problems
- Constrained Nonlinear Systems (CNS)
- Conic Programming Problems

GAMS/COIN-OR Link

Recently, GAMS has added a link to the Computational Infrastructure Operations Research (COIN-OR). The COIN-OR project is an initiative to spur the development of open-source software for the operations research community.

The GAMS/COIN-OR link allows GAMS users to connect their customized solution approaches using the COIN-OR Open Solver Infrastructure (OSI) in a seamless manner.

The GAMS/COIN-OR Link for LP and MIP problems is available in source and free of charge with any licensed GAMS system.

COIN-OR Solvers

Potentially, all solvers connected to COIN-OR/OSI can be made available through the GAMS/COIN-OR link. Currently

- CoinGlpk: Gnu Linear Programming Kit
- CoinSbb: Simple branch and bound, a branch and cut code

are included in the latest Windows and Linux distributions. Please visit the GAMS/COIN web page at http://www.gams.com/gamscoin for details.