

# **Optimization**

## www.gams.com

Support

Sales

Solvers

**Documentation** 

**Model Library** 

gamsworld.org

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### **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.

### **Wide Range of Model Types**

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

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

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GAMS Integrated Developer Environment for editing, debugging and solving models and viewing data.

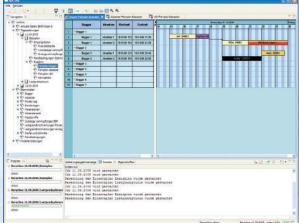
### State-of-the-Art Solvers

GAMS incorporates all major commercial and academic state-of-the-art solution technologies for a broad range of problem types, including global nonlinear optimization solvers.

### **ProCom® Optimization Suite**

ProCom is a leading OR solution provider for the energy and raw material processing industries specializing in integrated planning of power generation and trading.

The ProCom® Optimization Suite is powered by GAMS, enhancing its applicability for a variety of optimization tasks. For example, ProCom developed a decision-support system for



operational and strategic planning in surface coal mining with significant attention to detail. Operational considerations, e.g. assignment of tilting and production sides of the excavators and variation in material properties, are included in the optimization of the schedule.

The Optimization Suite enables ProCom

The Optimization Suite enables ProCom to provide the following services :

- · Feasibility studies and analyses
- · OR consulting and strategic planning
- Development of customized operational planning and control systems