

GAMS

# Optimization

www.gams.com

Support

Sales

Solvers

Documentation

Model Library

[gamsworld.org](http://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

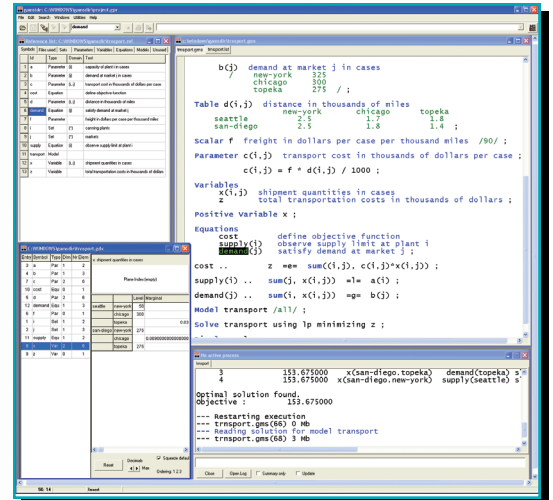
- Linear (LP) and Mixed Integer Linear (MIP)
- Quadratic Programming (QCP) and Mixed Integer QCP (MIQCP)
- Nonlinear (NLP) and Mixed Integer NLP (MINLP)
- Constrained Nonlinear Systems (CNS)
- Mixed Complementary (MCP)
- Programs with Equilibrium Constraints (MPEC)
- Conic Programming Problems
- Stochastic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

## Data and Result Visualization

The GAMS IDE has been extended with a proven and well-established charting engine.

Using the IDE data browser, charts can be produced quickly with just a few mouse clicks. Many of the standard charting types such as line, bar, pie, grid and surface are available. Charts can be designed and edited in an interactive environment with immediate visual feedback. They can also be reproduced using scripting technology.

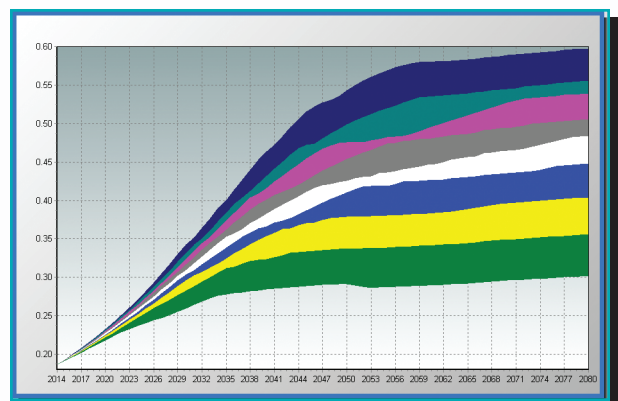
In addition to the standard charts, charts specific to optimization are available to visualize large amounts of data resulting from stochastic optimization, Monte-Carlo and general scenario generation.



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.



Output of a stochastic model with an event tree of several thousand scenarios. Results are aggregated using probability ranges for a single variable over time.