GAMS

Optimization

www.gams.com

Support

Sales

Solvers

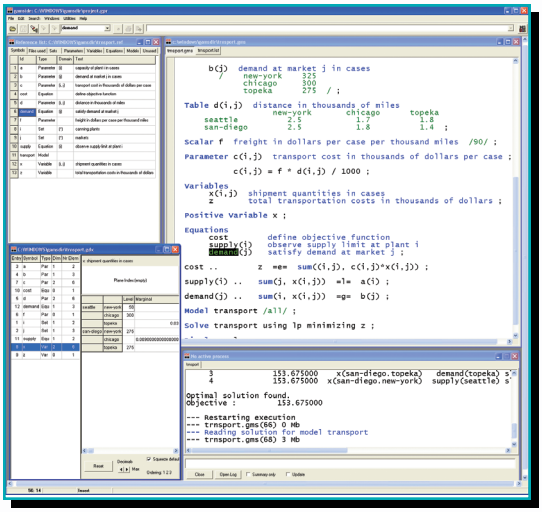
Documentation

Model Library

gamsworld.org

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.



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

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

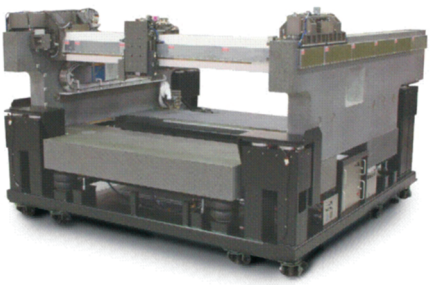
State-of-the-Art Solvers

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.

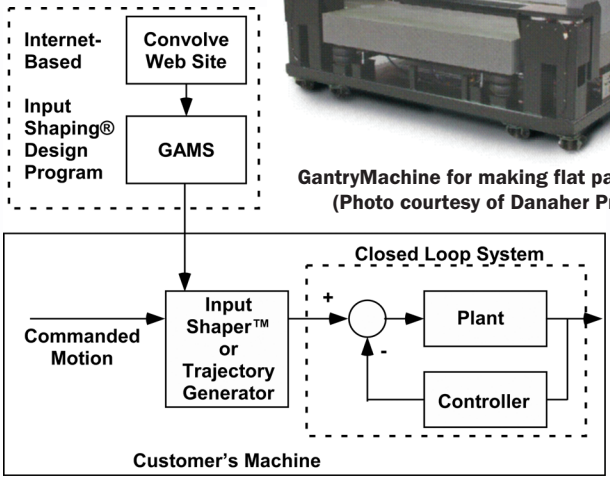
Optimizing Machine Motion Using GAMS

Convolve, Inc. licenses technology that helps its customers optimize the point-to-point motion of their machines. One application is to reduce vibrations that result from machine operation. Because the machine must wait until it is fully "settled" before it can do useful work, vibrations slow production. In an example application:

- Basic information about this gantry machine's motion is entered into Convolve's website.
- The website generates and solves a GAMS model.
- The solution is formatted for the customer's machine and sent over the internet.
- The file is loaded into the gantry machine's controller enabling it to move quickly with little or no vibration.



GantryMachine for making flat panel displays (Photo courtesy of Danaher Precision)



Convolve
Optimized Trajectories for Motion Control

Visit Convolve at www.convolve.com to test drive their trajectory optimizer.

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