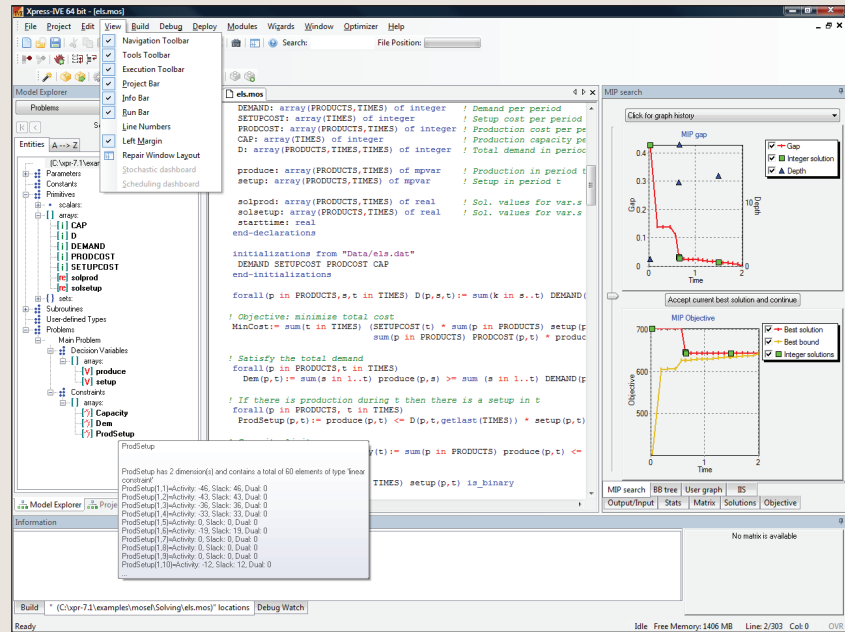


decision management tools

**FICO™ Xpress Optimization Suite is the premier mathematical modeling and optimization software suite in the world, with the best tools available to aid in the development and deployment of optimization applications that solve complex, real-world challenges.**

The Xpress Optimization Suite helps organizations solve bigger problems, design applications faster and make even better decisions in virtually any business scenario.

## IVE Development Environment



FICO™ Xpress Optimization Suite enables operations research professionals, analysts and consultants to quickly find the mathematically best solution for a wide range of industry problems.

**F**ICO™ Xpress Optimization Suite is a set of mathematical modeling and optimization tools used to solve linear, integer, quadratic and non-linear problems. The Xpress Optimization Suite includes two sets of tools: model building and development tools, and solver engines.

### » Model building and development tools

Xpress-Mosel is an algebraic modeling and procedural programming language specifically designed to be an easy-to-learn, robust way to interact with Xpress solver engines. It is a fully functional, compiled programming language that lets users formulate and solve problems using one or several of the Xpress solver engines, and analyze solutions. Xpress-Mosel now features support for parallel and distributed modeling and optimization to facilitate multiple cores and computers across

the network. It also features multiple problems within one model file for easier implementation of more advanced solution algorithms.

Xpress-Mosel models can be developed within IVE, our visual development studio for Xpress-Mosel using Windows. IVE is a complete visual development environment for Xpress-Mosel which incorporates a Mosel program editor, compiler and execution environment, debugger and profiler. It features development and deployment wizards, visualizations of the solve progress and results, and a full drag-and-drop editor for authorizing XAD GUI interfaces. With IVE and XAD, developers have the tools for complete optimization application development from the mathematical representation of the problem to development of the graphical user interface. This complete tool set provides faster prototyping and deployment along with visualization tools for greater insight into customer problems.

### » Solver engines

Xpress-Optimizer features optimization algorithms that enable customers to solve their most difficult business problems. It solves linear programming (LP) problems, mixed integer programming (MIP) problems, quadratic programming (QP) problems, mixed integer quadratic programming (MIQP), quadratically constrained quadratic programming (QCQP) and mixed integer quadratically constrained quadratic programming (MIQCQP) problems. Xpress-Optimizer offers multi-threaded parallel processing out-of-the box, exploiting multiple CPU cores to solve clients' most difficult MIP problems. Xpress-Optimizer includes Builder Component Library (BCL), an object-oriented API for building, solving and analyzing problems, and C, C++, VB, .NET and Java API support.

Xpress-SLP is a solver for non-linear programming (NLP) problems and mixed integer non-linear programming (MINLP) problems. It uses successive linear approximation, that has been developed from techniques used in the process industries and it is capable of solving large problems with many thousands of variables.

Xpress-Kalis is Constraint Programming software based on the Kalis solver by Artelys. It specializes in discrete combinatorial problems as they frequently occur, for instance, in scheduling and planning problems.

## » The competitive advantage of Xpress

FICO is committed to investing heavily in the Xpress Optimization Suite to maintain it as the leading optimization technology, and to providing friendly, high-quality support. With FICO™ Xpress Optimization Suite, you can expect:

- A state-of-the-art optimization engine that is robust, reliable and faster than competing solutions.
- Special features for large scale optimization including ability to solve ultra-large problems (true64bit capabilities) and support for distributed modeling and optimization.
- The premier visual development environment, IVE, for developing mathematical models, now featuring an intuitive drag-and-drop editor for creating GUIs that seamlessly integrate

with the model for rapid prototyping and deployment.

- An easy-to-learn, powerful modeling and programming language, Xpress-Mosel, now including support for N-best solutions.
- A partner committed to solving all of your most difficult optimization problems.

## » FICO and the Xpress Suite

The Xpress Optimization Suite is embedded in FICO™ Decision Optimizer, the software component of FICO™ Custom Decision Optimization. Custom Decision Optimization uses Decision Optimizer software along with a precise, data-guided methodology to solve custom decision problems for our financial services clients in such areas as credit line management, pricing and market offer optimization. These complex decisioning strategies can incorporate any number of predictive models while balancing multiple business objectives (including competing objectives from various departments) and resource constraints, even accounting for ranges of uncertainty.

FICO works in close partnership with its clients and partners, enabling them to get the best possible performance from the Xpress Optimization Suite. The suite is embedded in many software products and solutions as a component, making leading-edge optimization accessible to a wide range of clients and applications. Through expertise in the product and its application, excellent client support

and fast-track product development, FICO continues to maintain the Xpress Optimization Suite at the cutting edge.

## » About FICO

FICO combines trusted advice, world-class analytics and innovative applications to help businesses make smarter decisions. Our solutions and technologies for Decision Management give organizations the power to automate more decisions, improve the quality of their decisions and connect decisions across their business.

Clients in 80 countries work with FICO to increase customer loyalty and profitability, cut fraud losses, manage credit risk, meet regulatory and competitive demands and rapidly build market share. For more than 50 years, we have helped thousands of clients control risk and accelerate business growth through analytics and decision technology. Our innovative applications integrate analytics, optimization, business rules management and other technologies to help businesses make smarter decisions.

**For more information and to request an evaluation copy of the FICO™ Xpress Optimization Suite, go to [www.fico.com](http://www.fico.com).**



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