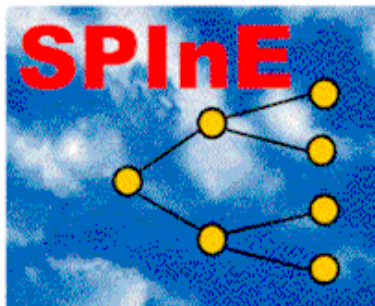


***Beta Release**

Key Features

- Modular design, customizable for vertical applications
- Based on algebraic modelling extension SMPL and SAMPL

SPInE is an integrated modeling and solving tool for stochastic programming which can be used to investigate a large family of models for optimization under uncertainty. Spine features include:



- Scenario Analysis
- Chance Constrained Models
- Multistage Stochastic Programming Models
- Two-stage Stochastic Programming Models

SPInE is deployed to build, solve and analyse stochastic models for supply chain planning and agricultural planning, as well as a wide range of financial applications: asset & liability management, portfolio selection, pension fund management models can be easily implemented within SPInE as the system is designed to communicate with virtually any commercial or customized scenario generator.

SPInE: Stochastic Programming Integrated Environment

- Supports SMPS data standard representation for stochastic programming models
- Connects to virtually any DBMS through ODBC interface
- Multidimensional viewers for data and solution analysis

Modeling

The modeling subsystem of the SPInE environment is based on our stochastic programming extensions SMPL and SAMPL, which extend the leading algebraic modeling languages MPL and AMPL. By combining natural definitions of the randomness of the problems with the existing features of these optimization systems, such extensions introduce powerful constructs for formulating complex stochastic programming and chance constrained programming models.

The modeling subsystem is able to generate the SMPS model data representation proprietary giving SPInE the ability to link any external solver which supports this standard.

Solving

Besides the modeling system, SPInE embeds a stochastic solver which incorporates alternative solution algorithms including:

- Benders' decomposition
- Lagrangean relaxation

The solver is also capable of computing good discrete feasible solutions to "real world" instances of mixed integer SP models. Deterministic equivalent instances may be also constructed and solved using the Interior Point Method (IPM).

Analysis

The SPInE system is sufficiently versatile and allows the modeler to perform scenario analysis, here and now analysis, and expected value analysis of a given problem. Stochastic information such as the expected value of perfect information (EVPI) and the value of stochastic solution (VSS) are easily computed.

SPInE also supports the ODBC standard for database connection. Therefore, commercial database systems can be used to link the system with scenario generators as well as to store and analyze the application data. The user can also take advantage of multidimensional viewers for the analysis of the model data and optimal decisions data.

Customizable

The modular architecture of SPInE makes it easy to embed the various system components into customized applications; taken together, the components comprise a flexible platform for building vertical solutions.

***Please contact us for a beta evaluation version.**

OptiRisk Systems

UNICOM R&D House
One Oxford Road
Uxbridge
Middlesex
UB9 4DA
UNITED KINGDOM

Tel. +44-(0) 1895-256488
Fax. +44-(0) 1895-813095
www.optirisk-systems.com

Contact:

- info@optirisk-systems.com

OptiRisk
SYSTEMS