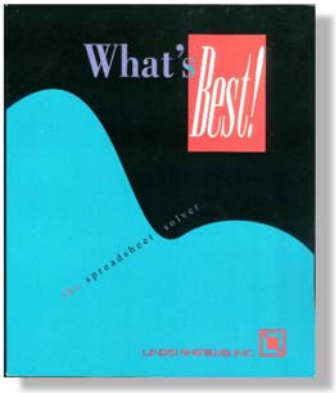

WHAT'S NEW?

What'sBest 11.0

LARGE SCALE SOLVER FOR EXCEL What's*Best* is an add-in to Excel that allows you to build large scale linear, nonlinear and integer models in a free form layout within Excel. What's*Best* is powerful enough to handle your toughest models and ideal for providing models to managers and clients.

- **THE WORLD'S MOST POWERFUL SOLVER FOR MICROSOFT EXCEL** - What's*Best* will efficiently solve your biggest, toughest models. The comprehensive set of solvers in What's*Best* have been designed for large scale commercial use and field tested on real world models by companies around the world. For optimization modeling in Excel, What's*Best* offers unrivaled speed and capacity.

- **LINEAR SOLVERS** – What's*Best* is available with three state of the art solvers for linear models.
  - → **PRIMAL AND DUAL SIMPLEX SOLVERS** – Included in the base version, these solvers incorporate numerous enhancements for maximum speed and robustness.
  - → **BARRIER SOLVER** – This optional solver provides an alternative means of solving linear models. Depending upon the size and structure of a particular model, the Barrier solver may be significantly faster than the Simplex solvers on large linear models.

- **INTEGER SOLVER** - What's*Best* includes an integer solver that works in conjunction with the linear, nonlinear and quadratic solvers. For linear models, you have the ability to tailor the solution strategy and apply different classes of cuts to ensure maximum speed on particular problem structures.

- **NONLINEAR SOLVERS** - What's*Best* is the first full-featured callable solver to offer general nonlinear capabilities. What's*Best* includes a number of ways to find locally or globally optimal solutions to nonlinear models.
  - → **GENERAL NONLINEAR SOLVER** - For nonlinear programming models, the primary underlying technique used by What's*Best*'s optional Nonlinear Solver is based upon a Generalized Reduce Gradient (GRG) algorithm. The Nonlinear Solver also incorporates Successive Linear Programming (SLP) and takes advantage of sparsity for improved speed and more efficient memory usage.
  - → **GLOBAL SOLVER** - Unlike traditional nonlinear solvers that can get stuck at suboptimal, local solutions, the global solver finds the proven global solutions to non-convex nonlinear programs or mixed-integer nonlinear programs.
  - → **MULTISTART CAPABILITY** – This feature can be a powerful tool for finding good solutions more quickly. It intelligently generates and investigates different starting points in the solution space.
  - → **QUADRATIC SOLVER** – The QP Solver can automatically detect and solve models in which the objective function includes quadratic terms. By taking advantage of the quadratic structure, these models can be solved much more quickly. The Quadratic solver can even handle quadratic models with binary and general integer restrictions.

- **STOCHASTIC PROGRAMMING CAPABILITIES** – What's*Best* allows modeling and optimization for models with uncertain elements via multistage stochastic linear, nonlinear and integer stochastic programming (SP).

- **Linearization** – What's*Best*'s unique linearization capability can automatically convert many non-smooth functions (e.g., if, max, absolute value) into a series of linear, mathematically equivalent expressions. Many non-smooth models may be entirely linearized. This allows the linear solver to quickly find a global solution to what would have otherwise been an intractable problem.

- **Modeling is Fast and Easy** - What's*Best* takes full advantage of Excel's flexibility and ease of use. You can quickly build models in a free form manner using standard Excel equations. If you are comfortable using Excel, you will probably be able to begin building your first What's*Best* model within minutes of installations. For What's*Best*, all of the optimization information is stored in a natural manner within the worksheet. Constraints and relationships are expressed using standard Excel style functions. What'sBest models are very visual and interactive.

- **Build Models for Colleagues and Clients** - What's*Best* is an ideal tool for creating optimization applications for use by others. What's*Best* allows you to provide the application in a form that is best suited to the user. For managers, you can build a simple, easy-to-understand spreadsheet. For clerical workers, you can create turn-key applications with custom interfaces.

- **Extensive Documentation and Help** - What's*Best* provides all of the tools you will need to get up and running quickly. You get the What's*Best* User Manual (in printed form and available via the online Help) that fully describes the commands and features of the program. Also included in the manual is discussion of the major classes of linear, integer and nonlinear optimization problems along with over two dozen real world based examples that you can modify and expand.

Enhancements in Release 11

- **Stochastic Solver Improvements**
  - → Improved warm-start in solving multistage Stochastic Programming models.
  - → Improved method to induce correlations among stochastic parameters.

- **MIP Solver Improvements**
  - → Significant improvements in root node heuristics for quickly finding good, integer-feasible solutions.
  - → Improved identification of special structures in certain classes of models, as in multi-period models, and the ability to exploit this structure to achieve significant reductions in solve times.

- **Global Solver Improvements**
  - → Improved heuristics for finding a good, feasible solution quickly.
  - → Constraints may now be flagged as being convex, in cases where the constraint's complexity makes it impossible for the global solver to automatically determine convexity. This speeds the proof of global optimality.
  - → Improved ability to identify constraints that can be reformulated as conic (i.e., second-order cone) constraints and thus be solved by the faster conic solver.
  - → Improved ability for efficiently handling polynomial terms. Improved bounds for non-convex quadratic terms using SDP and eigenvalue reformulations.

- **Support of Additional Excel's Functions** Support has been added for additional Cumulative Distribution and Probability Density functions.

- **New Tool to Help Translate Models** A feature has been added to assist you in translating models set up for competing optimization solvers working in Excel into a format you can use with What's*Best*.

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