information management
How Your Business Works

Lumina Decision Systems Launches New Business Analytics Tool

Information Management Online, October 9, 2003

Information Management Editorial Staff

Lumina Decisions Systems, a publisher of business analytics software tools, announced the availability of its third-generation platform for building and deploying analytic applications.

Analytica 3.0 is designed for business analysts seeking a tool that is more visual, flexible, powerful – and less error-prone – than the common spreadsheet. According to a survey of research on spreadsheets performed by professor Raymond Panko of the University of Hawaii, as many as 50 percent of all operational spreadsheets contain errors resulting in significant miscalculations.

“Analytica is one of the best examples of an analytical tool with rich, visual modeling capabilities that is being used to build a wide range of decision-centric analytic applications,” said Henry Morris, group vice president for Applications and Information Access at industry research firm IDC. "Business intelligence tools for query/reporting are data-centric – oriented to formatting available data and delivering reports. Decision- centric tools like Analytica, on the other hand, are oriented towards modeling and optimizing operational decisions. This ability to link analytics to action represents a policy hub and is the key to achieving high return on investment.”

Analytica 3.0 offers a wide range of new features, including a more general modeling language, expanded function libraries, faster execution, increased scalability, and closer integration with other enterprise applications. Of particular importance, Analytica 3.0 provides language extensions that enable users to quickly and easily customize the system with libraries for rapid deployment within specific vertical applications, such as financial risk analysis, R&D management, product release planning, sales staff management, and lifecycle cost analysis. Analytica 3.0 uses influence diagrams as an intuitive, graphical means for defining and displaying the qualitative structure of a model. These diagrams show decisions, objectives, uncertainties, and other kinds of variable as nodes of different shapes – key knowledge that is missing in a spreadsheet. They link the nodes with arrows, showing the “influences” that reflect the underlying quantitative relationships. Analytica 3.0 offers a set of interlinked views at levels above a spreadsheet – a hierarchical outline, an influence diagram for each module, a view of each variable with meaningful name, description, and definition, as well as charts and multidimensional tables. Each view shows important aspects of a model and its implications that are obscured in the traditional spreadsheet grid. Analytica 3.0 can interoperate with legacy spreadsheets in Microsoft Excel, employing OLE for live linking of table data in either direction. It supports common standards for integration with other enterprise software, including ODBC access to database systems. Analytica 3.0 adds web-links within models for integration with

web-based business intelligence and knowledge-management systems. It uses an XML-based file format, to enable exchange of models with XML-aware editors and databases.

Analytica assesses risks using probability distributions to represent uncertainties and efficient Monte Carlo and Latin hypercube simulation to compute their implications. It offers importance analysis to identify which uncertainties really matter to the results. Analytica 3.0 adds a range of new probability distributions to expand the range of ways to express uncertainties.

Analytica's Intelligent Arrays provide great flexibility in managing multiple dimensions – such as time, geographic regions, products, or planning scenarios. The user can slice and dice over dimensions, according to interest. The model builder can easily edit, add or subtract dimensions, without the major surgery required by a spreadsheet. Changes to the dimensions of input arrays propagate through the model automatically without requiring any manual changes to downstream formulas.

Analytica's scalability has long been a key advantage over spreadsheets for large models: Modelers can visually arrange a complex model as a tree hierarchy of comprehensible modules – a clearer reflection of a complex organization and its business environment than a set of worksheets. Intelligent Arrays make it easy to extend the level of detail, with a highly efficient representation: Each multidimensional table needs just a single definition (formula), rather than one for each cell. Translating a spreadsheet into Analytica typically reduces the size of – and so, auditing effort for – a model file by a factor of ten to one hundred. A 10 Megabyte spreadsheet built by Motorola to evaluate a space-based telecommunications technology became a 120 Kilobyte model in Analytica, despite addition of considerable new functionality. Analytica 3.0 increases scalability still further, with dimensions of up to 100 million elements, and increases execution speeds by a factor of two or more.

Analytica is being used by a wide range of organizations that find spreadsheets inadequate to meet their needs for reasons of transparency, scalability, and reliability. Customers in business and government are applying it to projects small and large, in financial services, energy, manufacturing, telecommunications, healthcare and environmental risk, among others.

Further information can be found at www.lumina.com.

This piece is brought to you by the Information Management editorial staff.

For more information on related topics, visit the following channels: