



World Trade Center Design Team Partners With Autodesk to Help Facilitate Freedom Tower Design and Construction Process

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Autodesk Collaboration Services and Design Software Serve as Technology of Choice for Skidmore, Owings, & Merrill LLP on the Nation's Highest Profile Project

SAN RAFAEL, Calif., Jun 16, 2004 /PRNewswire-FirstCall via COMTEX/ -- Autodesk, Inc. (Nasdaq: ADSK), the world's leading design software and digital content company, announced today that it is working closely with Skidmore, Owings, & Merrill (SOM), the design architect of the first tower to rise on the World Trade Center site, to define optimal technology and collaboration protocols for this highly symbolic and technically complex project. Known for its unparalleled expertise in designing skyscrapers, SOM recognized the need to establish an optimal process for creating, managing, and sharing information on the Freedom Tower project. As a longstanding technology partner to SOM, Autodesk is advising the team on how to best implement Autodesk(R) Buzzsaw(R) Professional and a range of design software, from AutoCAD(R) to Autodesk(R) Revit(R), to help it realize the highest quality design for America's new civic icon.

"The Freedom Tower is challenging us to work in new and extraordinary ways," said Carl Galoto, partner-in-charge of SOM's technical group. "Autodesk is helping us to extend the value of our collaboration platform to project and construction management, and to explore the use of new parametric design tools."

Keeping the Team and Project Information Connected

Extending the long tradition of American ingenuity and innovation in skyscraper construction, the Freedom Tower incorporates the highest standards of design, safety, and technology in what will be the tallest building in the world. With 70 occupied floors and 2.6 million square feet of office and public space, the Freedom Tower must succeed both as a practical, commercial building and as a symbol of the rebirth of the World Trade Center twin towers.

Facilitating communication and managing data on a project of this complexity poses enormous challenges. The entire project team, including consultants, currently involves over a hundred individuals and, as construction begins on July 4, 2004, will soon expand to thousands. SOM expects the project to generate more paperwork and design data than any other single project since the firm's founding almost 70 years ago. At the same time, the fast-track schedule demands that the team work efficiently together, staging and accomplishing tasks quickly, and securing approvals from the diverse project stakeholders, including the owner/developer (Silverstein Properties), the landlord (The Port Authority of New York and New Jersey), the Lower Manhattan Development Corporation (LMDC), and the Mayor of New York City and Governor of New York State.

To manage this complex process, SOM is using the Autodesk Buzzsaw Professional online project portfolio management service as its primary tool for communicating project reports, sharing design documents, and, eventually, managing construction. Throughout the course of the Freedom Tower project, Buzzsaw Professional will enable the project team to share at least 100 different subsets of drawings as well as meeting minutes, progress reports, and schedules.

The Freedom Tower's fast-track construction schedule requires an efficient method for managing the building process. Working closely with Autodesk, SOM is customizing Buzzsaw Professional forms, such as Requests for Information (RFIs) and change orders, to accelerate communication during construction administration. Autodesk is also collaborating with SOM to customize the extranet views within Buzzsaw Professional for specific use as a Freedom Tower dashboard -- illuminating at a glance all project components.

"SOM was one of the first architectural firms to use Buzzsaw, and now we're expanding our project and construction management capabilities with Buzzsaw Professional," said Doris Pulsifer, applications director at SOM. "It keeps our project team focused on the most time-sensitive tasks and provides our project managers and the owner with an immediate and comprehensive view of all project information, increasing accountability and accelerating the design process."

"The Freedom Tower project is the ultimate test case for use of Autodesk Buzzsaw Professional as a construction management tool," said Amar Hanspal, senior director of Autodesk Collaboration Services. "SOM is once again leading the way in employing the latest technology to improve team performance and achieve optimal results for the benefit of its client."

Innovative Design Process

Paralleling the project management challenges are the complexities of the Freedom Tower design itself. Clad in shimmering glass, the tower evokes the form of the Statue of Liberty, and its parallelogram-shaped base conforms to the street grid of the lower Manhattan site. Its innovative structural system includes a cable-net structure, which recalls the form of the Brooklyn Bridge and encloses wind turbines that serve as a "wind farm" to collect energy -- one of the building's many sustainable design features.

"The complex geometries of the building's design are testing our ability to describe form in conventional two-dimensional terms," said Jeffrey Holmes, senior designer on the project and associate partner in design at SOM. "Autodesk is helping us to implement integrated three-dimensional design tools that allow a great number of people to work simultaneously while communicating in a real-time three-dimensional environment."

AutoCAD software serves as the project's primary 2D and 3D design and documentation tool. Because AutoCAD is a highly customizable application, SOM has been able to create tools in AutoCAD to facilitate modeling the complex building geometry as well as design variations, and to coordinate different aspects of the Freedom Tower design. The team is also using the Autodesk Revit building information modeling platform on the whole building, including complex sub-grade levels. Autodesk(R) Architectural Desktop is being employed for energy analysis with a third-party application, and Discreet(R) 3ds max(R) software is being used for design visualization and creation of 3D renderings and animations.

"Working with SOM to implement our building information modeling platform and collaboration services on a project of this stature and complexity helps us to discover new and better ways to serve businesses across the construction industry," said Phil Bernstein, FAIA, vice president of Autodesk's

Building Solutions Division.

About SOM

Founded in 1936, Skidmore, Owings & Merrill LLP (SOM) is one of the world's leading architecture, urban design, engineering, and interiors firms. SOM has completed more than 10,000 architecture, engineering, interior architecture, and planning projects in more than 50 countries around the world. The firm has unparalleled expertise in designing super high-rise buildings. It was responsible for the design and structural engineering of America's tallest building to date—the 109-story Sears Tower in Chicago. Other signature projects include Lever House, an office building in New York City that set standards for office design around the world; the 100-story John Hancock Tower in Chicago; Jin Mao, an 88-story mixed-use tower in Shanghai; and the Bank of America World Headquarters in San Francisco.

About Autodesk

Founded in 1982, Autodesk, Inc., is the world's leading design software and digital content company. Autodesk offers solutions for professionals in building design, geographic information systems, manufacturing, digital media, and wireless data services. By delivering progressive products and services, Autodesk helps customers create, manage, use and maximize the value of their digital data throughout the lifecycle of their projects. For more information about the company, see www.autodesk.com. For more information on Autodesk's building industry solutions, see <http://www.autodesk.com/buildinginformation>.

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