

Michael Sechman and Associates

To Michael Sechman and Associates (MSA), an Orinda, California-based firm specializing in the design and representation of architectural spaces, photorealism is crucial. "That's why architects and developers come to us," says lead digital artist Michael Sechman. "They know we have the skill and the tools to create photorealistic images and animations that show precisely what their proposed structures will look like."

3ds max[®] fuels leading design firm with stunning rendering to deliver riveting results



The skill comes from years of experience creating architectural renderings for such top-name clients as Skidmore, Owings & Merrill, Hellmuth, Obata & Kassabaum, Bechtel Corp., and Gensler Associates. The tool of choice is **3ds max** software from Discreet.

MSA was founded in 1982 and began using **3ds max** in 1986. "Even then we knew the software would become ubiquitous in this field," Sechman recalls. "Plus, we liked its compatibility with Autodesk's AutoCAD[®] software. Most of the drawings we worked from were AutoCAD files."

Today, MSA has four seats of **3ds max**, and its three staff artists put the software through its paces on all their projects. "One of the greatest strengths of **3ds max** is its amazing lighting features that let us achieve photorealism, which brings our renderings to life," Sechman says. Specifically, he cites the software's lighting solutions, including Global Illumination and radiosity, for producing realistic and compelling renderings.

"The software's open architecture and its world of available plug-ins have made **3ds max** the world-class 3D modeling software," Sechman proclaims. "When you're dealing with the way light works in a space, you must take into consideration reality but also the delicacies of perception. I want to leave room for viewers to fill in, with their imaginations, what is being presented. Perceived reality is only one part of the equation."

The animation features in **3ds max** software also are beneficial to the MSA team. For instance, the software's easy-to-navigate Track View Function Curve Editor facilitates animation by providing accurate feedback on animation timing. Plus, its Dope Sheet Editor offers an intuitive graph of animation data, simplifying the management of keyframe animation. "Some of our models can reach 80MB. Both features come in handy on projects containing such large, complex models," Sechman notes.

"Also handy on complex models is the Layers feature found in **3ds max** software. With it, the artists can place multiple objects and scene elements on layers, and employ an easy-to-use manager tool to quickly reveal, hide, and freeze scene data. When several people are working on the same project, organization is critical," Sechman says. "With Layers, we have the best way of organizing our data."

Projects at MSA typically begin with AutoCAD drawings and hand sketches provided by the client. In such cases, there's generally a lot of back-and-forth as the client suggests design changes and the artists implement them.

Sometimes, however, the artists receive a complete set of detailed working drawings that they follow precisely. Other times they receive fairly accurate AutoCAD drawings and, perhaps, a 3D model. Regardless of what they begin with, they import everything into **3ds max**, where they build the geometry, apply textures and materials, and light and render the scenes. They also create their animations in **3ds max** software.

Occasionally a project will present certain challenges. For instance, recently MSA was asked to render an architect's design for proposed student housing to be built in San Francisco's Mission Bay section. "The design was constantly changing. Speed and efficiency were very important," Sechman says.

"Thanks to Layers and the fast scanline renderer in **3ds max**, we quickly accommodated the client's changes," he adds. The artists also used **3ds max** software and its **character studio**® plug-in to populate the imagery with people.

For another challenging project, an architectural firm hired MSA to render its design for a proposed high-rise in Korea. "This was for a competition held between international architectural firms," Sechman explains.

The approach MSA's client took required complex slopes and numerous compound curves that had to be precise. Again, **3ds max** came to the rescue. "By manipulating splines, and by using the powerful modifiers in **3ds max**, we created these slopes and curves to the architect's exact specifications," Sechman says.



"In every project, **3ds max** software enables MSA to render imagery that simulates reality and is emotionally compelling. We couldn't do this without the quantitative and qualitative capabilities of **3ds max**," Sechman concludes. "There's always a way to accomplish our goals in **3ds max**."



Images courtesy of Michael Sechman and Associates