



## Taking Production Design to a New Level with Advanced Rendering

By Shelby Swatek

In the fast-paced, competitive, and innovative corporate event and conference production business, two designers are finding a new application for software technology more commonly used in video game and motion picture animation.

"In our industry we're always looking for better solutions to streamline our communication process and get across our message," explains lighting designer and technical director Tommy Melancon. Tommy and production designer Andy McCasland are partners in the Dallas, Texas firm Level 2 Design. They provide production design, including scenic elements and audio-visual and lighting systems, and production management for large corporate end-clients such as IBM, Intel, Applied Materials, TGI Friday's, and Wyndham Hotels.

With today's budget constraints and the added geographic challenge of having production team members, clients, and venues spread across multiple time zones, Andy and Tommy are finding technology normally used for motion graphics and special effects allows them to achieve new levels of efficiency in planning and design, while helping them meet the inevitable communication challenges of large-scale projects. Andy has paired Nemetschek's CAD software package VectorWorks, its rendering geared primarily towards architecture, with MAXON'S CINEMA 4D, software more commonly used for motion graphics and special effects for film and television. Andy and Tommy find CINEMA 4D to be a powerful design tool, allowing them to communicate their visual ideas clearly and effectively throughout the development process. VectorWorks and CINEMA 4D also allow them to effectively work out planning and logistics in a virtual environment: The end result is the nearly complete elimination of the guess work about exactly how things will look, feel, and work on the day of the event.

Andy explains the typical Level 2 Design process: "A production company contacts us and outlines the schedule, scope of the meeting and budget guidelines. The producers of the event will often come up with a theme for the event and we will rough out some concepts for stage set, audiovisual equipment, and lighting design. Sometimes we also design custom registration environments, internet cafes and demo areas for the conference. Tommy and I travel to the venue to meet with the convention staff and determine what is feasible to do in the space. We begin our production design in VectorWorks, creating all the CAD drawings associated with the event — seating layout, all AV and lighting equipment — placed in the room in CAD drawings. We then export the drawings out of VectorWorks into CINEMA 4D where we add all the lighting effects, all the materials and textures, camera angles and animation. We will also submit the designs to scenic shops and AV equipment suppliers for bid and put together an overall tech budget. After a sometimes lengthy review and revision process with the production company, the producers present the proposal to the end client. Once we are awarded the show, Tommy and I manage the entire process from selecting and managing the vendors through on-site execution and final billing."



Andy's realistic renderings are an essential part of Level 2 Design's job-winning proposals. "The 3D renderings are normally the cornerstone of the presentation and do a lot to convey the look and feel of the conference to the client," Andy begins. "I began using VectorWorks about 5



years ago and started doing 3D renderings using their built in rendering module. After doing this for several years and getting satisfactory results I began looking for more advanced capabilities. I used 3D Studio MAX for a while, but when the VectorWorks exchange was released for C4D I jumped on board. I was one of the first adopters of this plug-in and was absolutely amazed at what I could do. After just a few days I was producing results that were far superior to anything I had been able to do in VectorWorks alone. I had a considerable amount of time invested in creating custom objects

in VectorWorks and the exchange plug in allows me to simply export the drawings out of VectorWorks and into C4D to use the advanced texturing and lighting tools. With the exchange plug-in the workflow is also much better than with 3D Studio MAX. Simply put, I get far better results in far less time at a cost that is comparable to the rendering module for VectorWorks," Andy explains.

Tommy and Andy have always emphasized representing the production environment as realistically as possible to their clients, and CINEMA 4D's advanced rendering gives them a new way to achieve that goal. "Using CINEMA 4D we can really give the end client a very, very, good idea of what the actual show will look like, incorporating all of the elements — all of the video and lighting equipment, the scenery, down to the carpeting on the floor in the room — we can give them an extremely accurate representation of what the show will look like," Tommy explains. Andy adds, "We also do camera fly-throughs, and animated lighting changes,

demonstrating the transition from an opening look to a show look and what the room will look like during a video playback. We can animate all of those changes with CINEMA 4D.”

The ability to create quick rough renderings proves an invaluable design tool at Level 2 Design. Explains Andy, “We can do test renders along the way to see how things are progressing — to see what it looks like and determine what we need to change, what needs to be added or taken away. CINEMA 4D’s faster rendering engine allows us to do many, many more test renders along the way.” Tommy continues, “We can create a lot more options for our client — we can do three or four test renders instead of one picture because it’s easy for us to do that once we have all the modeling in place. We can create a walk-in look and a show look, also an infinite number of camera angles and different images on the screen. We can show the producer and creative director all the elements they are proposing for the event. We can show them everything in the realistic simulation of the setting where the show will actually be.”



Sight lines are a primary concern in designing for large scale corporate events, and the Level 2 Design team is often called upon to create the entire environment in an empty hotel ballroom. “It’s very important to look at all your sight lines and see how it’s all going to work,” Tommy begins. “With CINEMA 4D it’s very easy for us if a client is, say, concerned if the video screen that has been picked will work in the room. In the design process we can do rough modeling and put the screen into the room to get a sense of scale, and see how it will look from the first row, from the last row — how will it play in the room. Then we can send those roughs to the client to put them at ease, and to give them a sense of the direction we’re going in before we go too far down a certain path. It’s a good way to show the client how all of the elements are working together.”

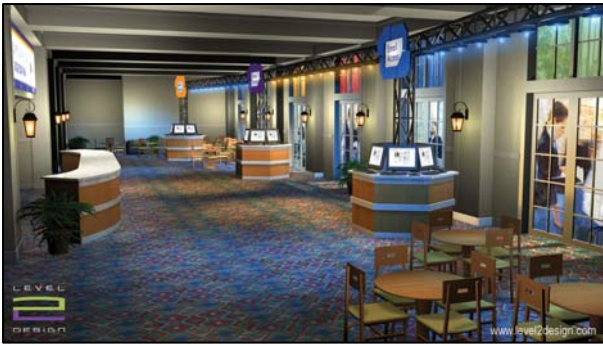
In a big advantage over the artist storyboard renderings of the past, CAD files can be fully rendered in CINEMA 4D and are easy to update. “The renderings created in CINEMA 4D are



built from the actual CAD files that must be produced for a meeting of any size. I can be sure that anything we design will actually work in the room and producing build drawings for the scene shop is just a matter of pulling out my 3D symbols that the rendering was made from and adding in the needed details,” explains Andy. “We can be working on a rendering in CINEMA 4D and decide that we need to move something and it’s just a matter of switching back over to VectorWorks, making the change, re-exporting, and going back to CINEMA 4D and everything is automatically updated and all of my

lighting and textures remain in place — it’s a very seamless process.”

Andy and Tommy leveraged the capabilities of CINEMA 4D on a recent project for which they were asked to create a “partner village” environment, with pedestal and demo areas throughout the venue. Explains Andy, “With VectorWorks and CINEMA 4D we created CAD drawings, still



renderings, and QTVR animations for every area. With the QTVRs, you can spin the camera around 360 degrees and see what the environment will look like and feel like as if you were standing there. You can look up and down, zoom in and out — it's an interactive way to look at the room — very helpful when doing an environment like a registration, internet café, or demo area. We also did a close-up of one pedestal and all the details, since for this particular client it was important to get a feeling for the size of the area, can one person stand there or two, and what does that

feel and look like. We also did a fly-through of one of the areas."

Andy sums up the CINEMA 4D experience at Level 2 Design: "This has given us a whole new way to approach the design process. It's not just a rendering tool — this process is a great way to communicate ideas."

**This article was the November 2004 cover story for Rental & Staging Systems magazine.**

