Blue MUSE:

A Custom Theatre Earns AAM Honors

By Maris Ensing and Tricia Rodriguez, Mad Systems Inc.

The Blue Planet Theatre is the centerpiece of the new Gwinnett County Environmental & Heritage Center which opened September 2006 in metro Atlanta, close to the Mall of Georgia. The theatre uses multimedia, HD video, water features and in-theatre effects to engage and teach schoolchildren and the public about ecology, water and natural resources. The Blue Planet Theatre has been named for a 2007 MUSE Award in the category "Multimedia Installation." The award will be presented May 13 in Chicago at the annual convention of the American Association of Museums (AAM). MUSE award winners demonstrate outstanding achievement in the following areas: content, visual design, production quality, functionality, appropriate use of technology, innovative use of technology, and overall appeal. The awards are overseen by the AAM Committee for Media & Technology, which receives more than 100 entries every year from institutions around the world. A jury of some 30 museum and media professionals helps select the winners.

In 2005 Gwinnett County brought our company, Mad Systems, onto the creative team headed by designer Van Sickle & Rolleri, Ltd., to serve as audiovisual specialist for the new heritage center, and to engineer and install its Blue Planet Theatre. Also on the team were Exhibit Concepts (fabricator); and Cortina Productions (media producer). Water is the primary subject of the facility, and so we helped them integrate the best of modern water-show technology into a centerpiece show - using water to tell the story of water, in a manner that captivates while it educates.

Located at 2020 Clean Water Drive in Buford, Georgia, on the grounds of the F. Wayne Hill Water Resources Center, the Gwinnett County Environmental and Heritage Center is a place for people to learn about water management, natural systems and how the choices they make affect the environment. This 59,000-square-foot, $16.6 million facility is a collaboration of the Gwinnett County Board of Commissioners, the Gwinnett County Public School System, the University of Georgia, and the Gwinnett Environmental & Heritage Center Foundation. Gwinnett's slogan is "Come Soak Up The Science." To realize the vision of a modern science center with an ecological message, the property includes 200-plus acres of open green space and a facility that incorporates modern show technology and green building design principles. The architect of the gold-standard LEED building was Lord, Aeck & Sargent (Atlanta).

Since technology plays a big part in how humankind relates to the world today - including how we understand nature, and how we will conserve and preserve our natural resources - technology is an essential component in Gwinnett's exhibits. "What we asked Mad Systems to provide is not something you can find on a shelf anywhere," remarks Gwinnett Executive Director Steve Cannon. "But they have the ability to take complex thoughts and ideas and bring them to life. They can take a dream and make it reality – while staying within the budget. And because of their experience and problem-solving abilities, the project stays on schedule. For me - a project guy who's trying to get it done - that's very important."

"When we developed the creative concept for the Blue Planet Theatre, we wanted it to be an immersive and unique experience------ - to go beyond the typical orientation theatre," says Andrea Rolleri, principal of Van Sickle & Rolleri, Ltd. "We were delighted to find that Mad Systems was the technology team selected by the County to implement the Blue Planet Theatre. We knew Mad Systems would work to maintain the integrity of our design and overall concept."

The circular Blue Planet Theatre has two curved banks of bench seating that each hold 25 people, and are removable. It occupies one end of a 61-foot by 64-foot, accessible multi-purpose room. (For special events, with the bench seats taken out, the room can hold up to about 400 standing visitors.) The focal point is a round, black "infinity" pool of water, nine feet in diameter and mounted about 18 inches above the floor. Water flows continuously over its edges and fog rolls out over its surface. Flanking the pool are two front-projection HD video screens. Simulated rain falls from jets over the pool and forms into a central water screen 12-feet high and seven-feet wide called a "waterscrim," which is used as a high-definition video projection surface (the use of very fine water jets provides an excellent high-resolution surface with just the right element of textural interest). The waterscrim is flanked by two smaller, custom-cut video screens. A light fog haze floats near the top of the set and catches beams of light. The waterscrim is turned off, and subsequent images are projected onto an eight-foot-diameter, topographic map of north Georgia that rises from the pool via a hidden underwater mechanism designed and manufactured by Mad Systems. There are four video projectors: one for the waterscrim, one for each of the flanking screens and one for the topo map. During the 12-minute show, lively incidental effects are provided by the seats themselves, which conceal Buttkicker™ transducers.

"Using water to tell the story of water was so natural, because we could focus visitors' attention first on the simple elegance of falling water, and then magically project images upon the waterfall effect," says Andrea Rolleri. "We also wanted the land and river creation story to be equally exciting. That is why we designed the topographic map with its animated story surface. It seamlessly integrates into the show, and dramatically emerges from the black pool of water."

Staging the show with its multiple water features called for Mad Systems to design and implement an infrastructure for conditions involving pumps, reservoirs, filters and sterilizers – along with the usual audiovisual components. The actual amount of water used is minimal, and it is recycled continuously from pool to pump to reservoir to screen. The haze and fog effects both use Mad's own pure-water fog system. To raise and lower the topographic map, Mad designed and custom-built a stainless steel lift mechanism that lives underwater and is driven by a submersible pneumatic system.

As specific and sophisticated as this configuration is, it is simple to operate. Mad provided the custom control system and operator interface, and also set up a remote support network that enables Mad to remotely maintain the system and even to upload content through a secure online connection. The Blue Planet Theatre is also extremely versatile and adaptable for fundraisers and special events. The waterscreen provides a dramatic focal point and projection surface, and the fog and lighting effects add additional interest. The bench seats are on air casters and easily removed.

In addition to the theatre, Mad Systems designed and installed audiovisuals for other interactive exhibits throughout the Gwinnett Center, including a number of 60" plasma screens and 21" LCD displays.

We at Mad Systems were instantly drawn to this project because it would enable us to use our company's core skills in audiovisual and mechanical systems to help realize something very special and meaningful. We believe in Gwinnett's mission, and we embraced its creative challenges. There was never a question of compromise. Being a part of the team that built Gwinnett and its Blue Planet Theatre is just about as good as it gets.

Maris Ensing and Tricia Rodriguez are co-owners of Mad Systems Inc. (www.madsystems.com) based in Orange, Calif. Mad Systems provides custom audiovisual design, system integration and technology solutions for today's museums and attractions, and the industry that supports them. Mad Systems is a majority woman-owned company, founded in 1998. Recent and current projects include Kidspace Children's Museum in Pasadena, the Nevada Atomic Testing Museum in Las Vegas, Griffith Observatory in Los Angeles and the Viejas Casino show in San Diego.

Photos courtesy of Mad Systems Inc.