

AUDIO, VIDEO AND I2 DESIGN NEW WORLD CENTER

Miami's New World Center
is the first concert hall designed
for a digital world.





Claudia Uribe

CONNECTING NEW AUDIENCES TO THE MUSIC

The New World Center is designed to technologically and architecturally support a new way of thinking about symphonic music. Visionary artistic director, Michael Tilson Thomas, conceived the idea of a laboratory for the way music is taught, performed and experienced. The New World Center embodies this vision, breaking boundaries and creating new levels of accessibility to symphonic music.

CREATING AN IMMERSIVE EXPERIENCE

Architect, Frank Gehry is legendary for the curved surfaces and non-standard construction methodologies that characterize his work. The 756-seat hall is intentionally small with steeply-banked seating arrangements designed to bring the audience as close to the music as possible. (In fact, no seat is more than thirteen rows from

the stage.) The architecture provides endless opportunities for lighting and projection to envelop the audience.

VISUAL ENVELOPMENT

As you might imagine, there is an art to designing video projection for curved surfaces. None of the video projection screens are linear. Consider what happens if you aim a video projector at a column or other curved surface. The image distorts. Idibri engineered the solution using digital image correction through seven multichannel video servers that serve the five main projection surfaces.

Digital media servers provide a digital library of virtual imagery so that the operator can create the visual experience in the hall as real-time painting on video canvas.

There are 14 projectors at 32,500 lumens each. Each projector's position was designed in 3-D to coordinate

with building geometry so the image fits perfectly onto the screen and each projector is isolated acoustically to maintain the hall's low noise rating.

Broadcast camera angles were carefully plotted and visually tested with 3-D modeling for sightlines before being integrated into the architecture so that they are not a distraction to the performance. Two of the cameras use elevating mounts on the stage to allow the audience to see facial expressions of the performers as well as providing images of the audience themselves to enhance the sense of community.

REINFORCING THE AUDIO

There are four levels of audio systems in the hall. The first is a simple system for speech that supports paging and announcements. The second system is for individual instruments and vocal amplification providing localization to discrete stage and performance platform locations as needed. The third



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system provides natural and enveloping reinforcement of the ensemble. The fourth system supports the imaging of audio from the video projection screens. This system is comprised of fixed speaker systems behind the projection sails and a portable system this is set up to the left and right of the 40-foot screen that can be deployed from the ceiling.

GOING BEYOND THE WALLS

Everything about the building bends the rules. From the video art and live concerts projected in high definition onto the large exterior wall to the systems designed to support real-time collaborations between musicians in Miami Beach and anywhere else in the world, New World Center is the first concert hall to think as the digital world thinks—without regard to boundaries and geography. New World Center utilizes Internet2—an advanced networking consortium led by the research and education

community—to access a high-bandwidth, low-latency internet connection that is not possible over the current business-grade Internet. This technology allows the New World Symphony to perform with orchestras in other cities, connect students with master-teachers and provide for interaction with composers in other countries.

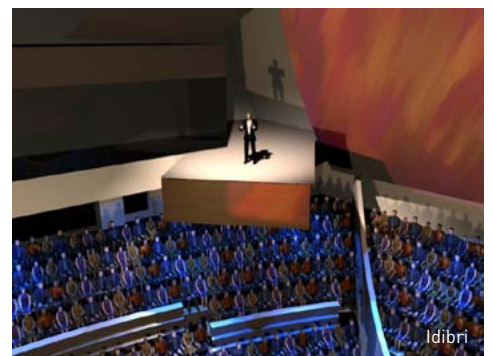
Outside of the building is a new 2.5-acre public park designed by West 8. A half acre creates the SoundScape area--which allows outside visitors to experience live, free “wallcasts” of select events throughout the season.

The 7,000-square-foot projection wall is fed from the same video control room as the hall. The projectors are housed and cooled in an outdoor tower in the park and provide high definition projection to the surface.



Idibri

Idibri used 3-D models to test camera angles and photorealistic visualizations to communicate design options to the client during the process.



Idibri

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