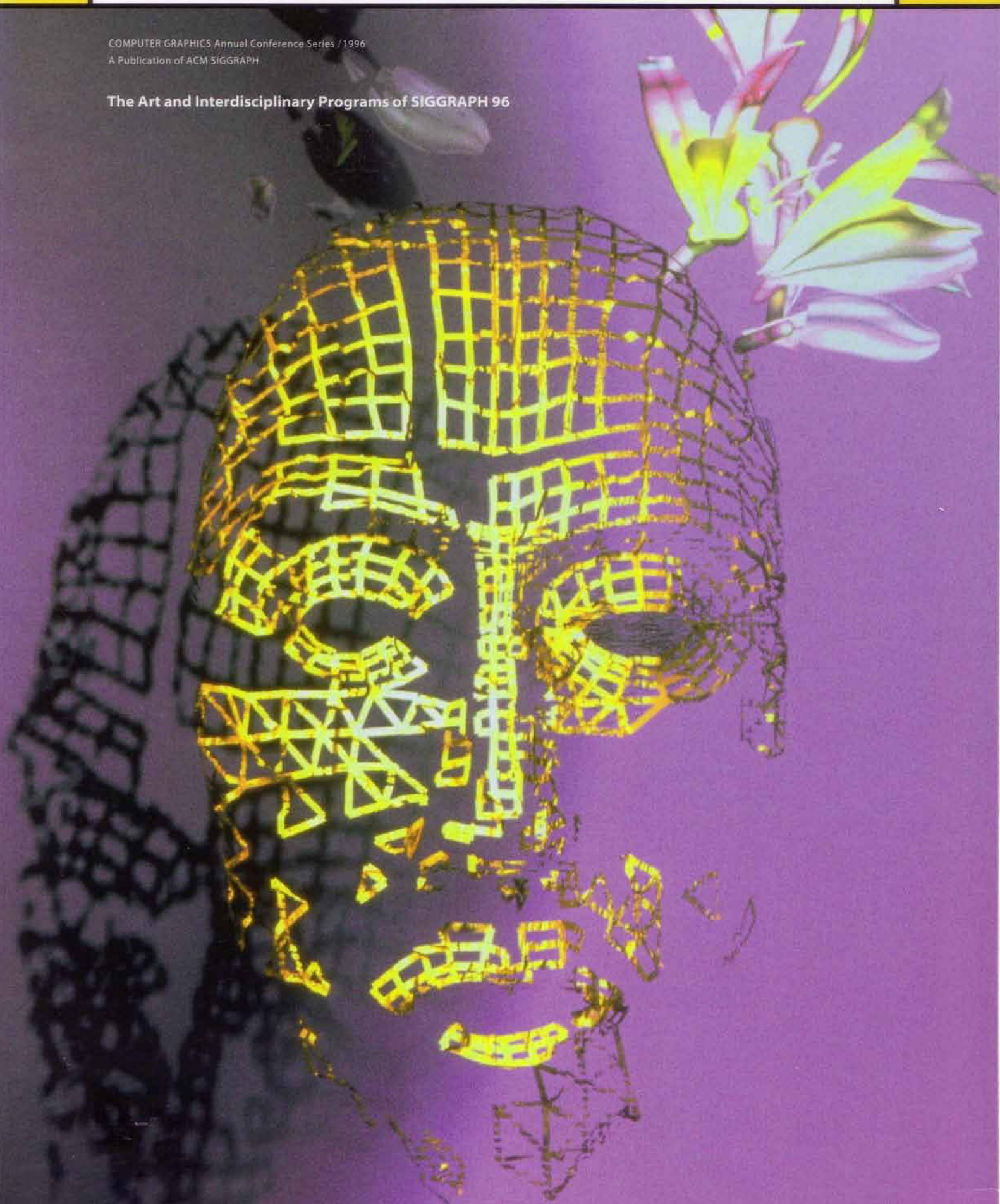


# Visual Proceedings

COMPUTER GRAPHICS Annual Conference Series / 1996  
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The Louisiana Bayou is not far from here, in every direction, and cyberspace surrounds us. Both are rich and complex ecosystems, with rapid speciation and a wealth of evolving lifeforms coexisting and competing for resources and a chance to reproduce. At the Digital Bayou, you'll find some of the most advanced interactive and graphics technologies on the planet, co-existing in one vibrant space. We've tried to create a place teeming with the nutrients for fresh ideas and for the explosive growth of new commercial, research, and entertainment life forms.

Networked virtual societies, innovative interfaces, pre-competitive technologies, scientific visualization, teleoperation, and fun are linked by meandering walkways, punctuated by gathering spaces, and protected by canopied nets. Activity migrates from exhibit to stage to screens. People can engage in conversation with the experts, then meet in a comfortable setting to reflect on their experience in a scenic getaway.

We hope the Digital Bayou will inspire you to examine how technology continues to rapidly transform the possibilities in our lives. This is a world where edges and boundaries mesh and weave. Where the connections mean more than the individual elements. And, not coincidentally, where natural plant life and digital systems are equally simple and sacred, yet silently bewildering.

We know the culture's expectations outpace even the fastest technological advancements at SIGGRAPH 96. Many attendees know how it feels to realize that the public is bored with a high-tech future we will never finish inventing. It's our responsibility to invent interfaces for that future that leverage our abilities without isolating our spirits.

We want to thank our selection committee for their generous commitment of time and expertise, and the SIGGRAPH 96 committee for their enthusiastic support. Intervista Software has provided extensive technical and moral support. Special thanks go to Marisa Shumway, Marshall Pittman, and Jeff Mayer. The most thanks Brian can give goes to Trish Blau. Maggie Rawlings and Nam June Paik have been a continual source of inspiration.

## Digital Bayou Committee

Co-Chairs  
BRIAN BLAU  
*Intervista Software*

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**F**akespace Music presents a completely new type of virtual reality experience. In our worlds, sound is the fuel used to drive a continuous stream of stereoscopic graphics, all in temporal harmony with the music. It's like nothing ever seen before: a "music video" where the user is completely immersed and free to explore a world generated by music.

With the understanding that music is more than just audio, Fakespace Music developed the Soundsculpt Toolkit, a software interface that allows the world of music to communicate with the graphical elements of virtual reality. Cues extracted from either live or recorded music create geometry and control object behaviors within a virtual world. Three-dimensional objects respond in sync with the music, creating a rich, multi-sensory experience.

By analyzing music for standard audio characteristics such as rhythm and frequency, information is extracted and mapped onto individual objects within the virtual environment, along with associated behaviors. Mapping decisions are based on the aesthetic requirements of directors and designers. This provides for visually active, immersive environments in which virtual objects behave in real-time correlation with the music, effectively extending the influence of music from our ears to our eyes.

In *Soundscapes*, visitors are totally engulfed as they enter the virtual world. These pieces are presented using either a Fakespace BOOM 3C or the new Fakespace PUSH high-resolution stereoscopic viewer with a Silicon Graphics Onyx Reality Engine2. It can also be configured with Immersive

Entertainment Kiosks, which are ideal for public venues and provide for greater audience throughput.

When the music begins, visitors are transported into a virtual world in which the graphics are completely controlled by what they hear. Objects gyrate in real time to the tempo of the music. Kaleidoscopic mandalas pulse to the beat. Geometry appears and moves about to the rhythm. Melodies draw colorful trails across the sky as the visitor moves through the virtual space, discovering new visions at every turn of the head.

This music-driven virtual reality opens up several possibilities for new types of artistic and entertainment experiences, such as fully immersive 3D "music videos" and interactive landscapes for live performance. Artists can create landscapes that transform in direct relationship with their live music. Location-based entertainment centers will be able to offer these experiences as a new form of entertainment for their guests.

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