

**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.

#### Contributors

MARK T. BOLAS  
NIKO BOLAS  
CHRISTIAN GREUEL  
IAN MCDOWALL

#### Contact

CHRISTIAN GREUEL  
Fakespace Music  
4085 Campbell Avenue  
Menlo Park, California 94025 USA  
+1.415.462.5830  
greuel@xian.com  
<http://www.xian.com/fsm/fsm.html>

