PRINCIPAL INVESTIGATOR
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Co-PRINCIPAL INVESTIGATOR
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BRIEF DESCRIPTION OF DEMONSTRATION
MuSA.RT – Music on the Spiral Array . Real Time – is an interactive environment for content-based music visualization. MIDI output from a live performance is mapped to the Spiral Array model, revealing important pitch, chord and key structures. The user can also navigate through the Spiral Array space using a gaming device. The software was implemented using the Modular Flow Scheduling Middleware, an open source implementation of IMSC’s Software Architecture for Immersipresence.

UNIQUE OR DISTINGUISHING CHARACTERISTICS RELATIVE TO STATE-OF-THE-ART
• Real-time visualization of tonal patterns in live performance.
• Interactive environment for navigating through metaphorical tonal space.
• Computer generates content-based musical art.
### APPLICATIONS
- Interactive music visualization
- Content-based music visualization
- Computer generated musical art

### RECENT HIGHLIGHTS, LEVEL OF DEVELOPMENT, UPCOMING MILESTONES
- First prototype completed in September 2002.
- Color-coding, shading and textures added in March 2003.
- Automatic pilot incorporated to smoothly show features from best viewing angles.

### UNDERLYING TECHNOLOGIES
- The software was implemented in C++, using the Modular Flow Scheduling Middleware, an open source implementation of IMSC’s Software Architecture for Immersipresence (SAI). SAI provides a framework for distributed parallel processing of generic data streams. The rendering is implemented using OpenGL.

### LIST OF PUBLICATIONS, REFERENCES, URLs
- **MuSA.RT**, url: [http://cappriccio.usc.edu/MuSA.RT](http://cappriccio.usc.edu/MuSA.RT)

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For additional information, please contact the Principal Investigator listed above via email, or contact

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