**Connected Spaces**  
Satoru Higa and Akihiro Kubota

*Connected Spaces* is a duo live coding performance using originally developed three-dimensional visual audio programming environment, called “VP3L.” VP3L is a kind of patch-based visual music programming language that is a 3D space, allowing the musician to rotate, zoom in/out, and walk around inside the program during coding and performances.

VP3L’s 3D programming space is also a sound space. The position of the output objects in the 3D programming space corresponds to that of the sound sources in the 3D audio environment. Both performers and audience members can walk through the sound space during the performance.

http://lalalila.org/vp3l/ConnectedSpaces/

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**backscatter**  
Robin Fox

Robin Fox’s recent research into audiovisual equivalence employs an audio-controlled laser system that translates voltage from a sound card directly into visible light shapes and abstract forms. This recent work is a progression from the two dimensional explorations of signal equivalence that he has undertaken previously, using the Cathode Ray Tube to convert audio to visual data. Combining preset sonic objects with live laptop based improvisation; the result is a quasi-synesthetic amalgam of sense modalities. As well as the new interface for musical expression used to perform the audio, the translation from sound to light and movement extends the possibilities for the expression of sonic forms.

The backscatter project represents the audiovisual aspect of performer, composer, and researcher Robin Fox’s diverse output. The performance presents a series of real-time synesthetic experiences which meld sound and light at the point of signal path and electrical current. The same electrical signal that moves the speaker cones also affects the electromagnets inside a Cathode Ray Tube creating a synesthetic audio-visual immediacy for both the performer and the audience.

The performance system designed for the live realization of these works involves the design of visibly interesting sound sources in Max/MSP, the adaptation of certain haptic controllers (shuttle pro, track ball mouse etc) that allows for interactive sound/visual performance at the level of a performance instrument and, finally, the incorporation of pressure and light based sensors to enhance the playability of the system.