

We propose to create an architectural musical instrument in the Visual Arts Center (VAC) for the Music in Architecture – Architecture in Music Symposium that explores how the movement of people through a large space, as well as their movements in relationship to one another, can be utilized to create music. Using a program we devised to translate a physical presence in a given space into tangible audible form, we will transform the built environment of the VAC into an experiential installation. In the same way that some musical instruments are comprised of the three basic parts of mouthpiece (the source of the sound), valves (the mechanisms for manipulating that sound) and bell (the vehicle for projecting it), our intention is to create a new instrument in which these component parts take the form of separate rooms. The Infinite Space Between will thus occupy five spaces of the VAC, which are indicated in the floor plans below (see the poster for more detail). Our team will perform a twenty-minute through-composed piece on the instrument to demonstrate its capabilities, and during remaining open hours the installation will be offered to the general public as an interactive sound experience.



# the infinite space between

"A togetherness between two people is an impossibility, and where it seems, nevertheless, to exist, it is a narrowing, a reciprocal agreement which robs either one party or both of his fullest freedom and development. But, once the realization is accepted that even between the closest human beings infinite distances continue to exist, a wonderful living side by side can grow up, if they succeed in loving the distance between them which makes it possible for each to see the other whole and against a wide sky." - Rainer Maria Rilke

**atrium**

This large room is where the final, processed sounds of the instrument are amplified and received by the audience and passersby. Adding to the auditory and kinetic layers of the work, participants in this area will have a clear view of the performers in the pods above and thus have the opportunity to observe how their movements are affecting the sounds filling the atrium to access a greater understanding of the workings of the instrument.

**stairwell**

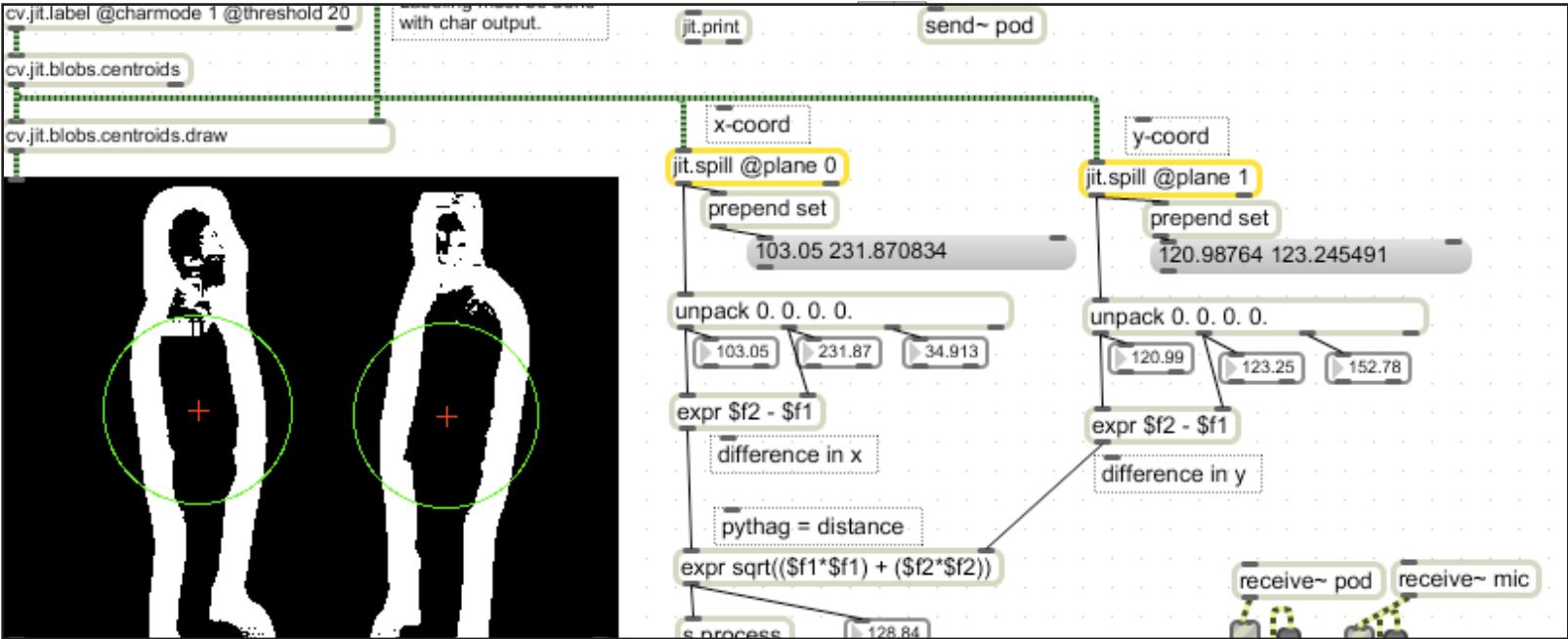
As an architectural element, a staircase prescribes movement and cultivates order to an extent unparalleled by any other feature of a building. Because of this, rhythm, polyrhythm, timing and direction are inherent qualities of this space. As such, this is where the sounds of the architectural instrument will originate.

**pods**

The sounds created in the stairwell will be processed according to the movement of people in these three small gallery rooms, referred to as pods. Firewire cameras placed on the ceiling of these pods will measure the distances between occupants. This will be achieved through a video-tracking program already developed by the team using the Max/MSP/Jitter language. (An initial test/sample can be seen at <http://vimeo.com/23863943>)



As individuals approach and retreat from one other, the distance between them at any given moment is translated into discreet audio processes such as delay time, volume, notch filtering and panning that affect the input being generated in the stairwell. The resulting sounds will be played through small speakers in the pods enabling those inside to hear how their own movements are affecting the output of the instrument in real time.

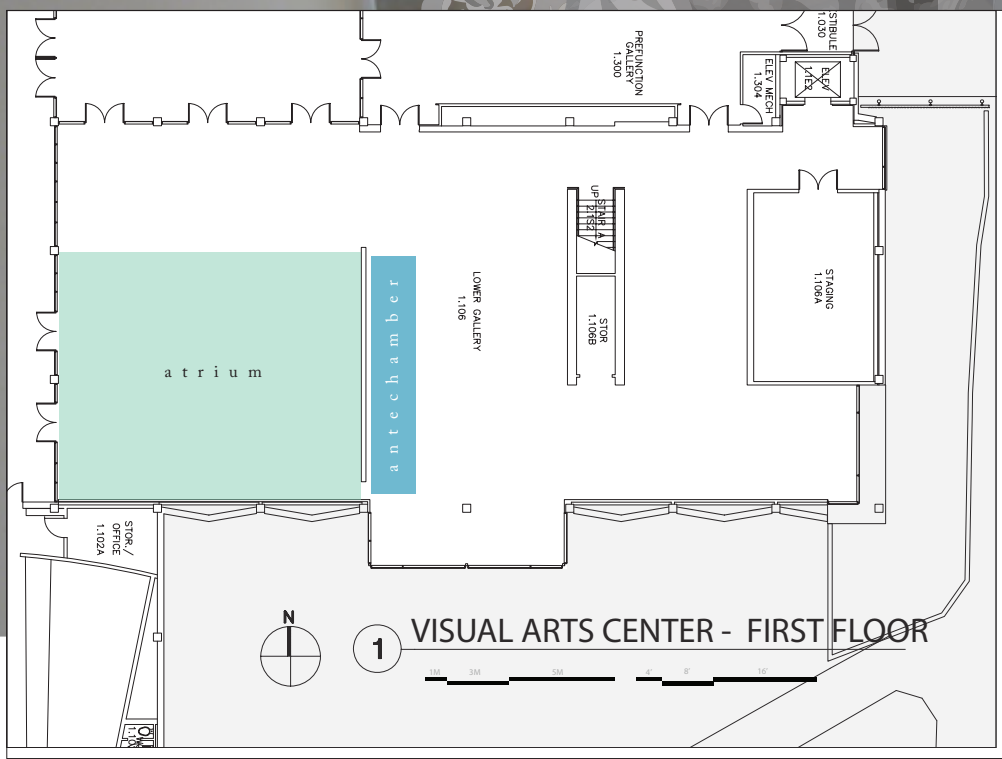
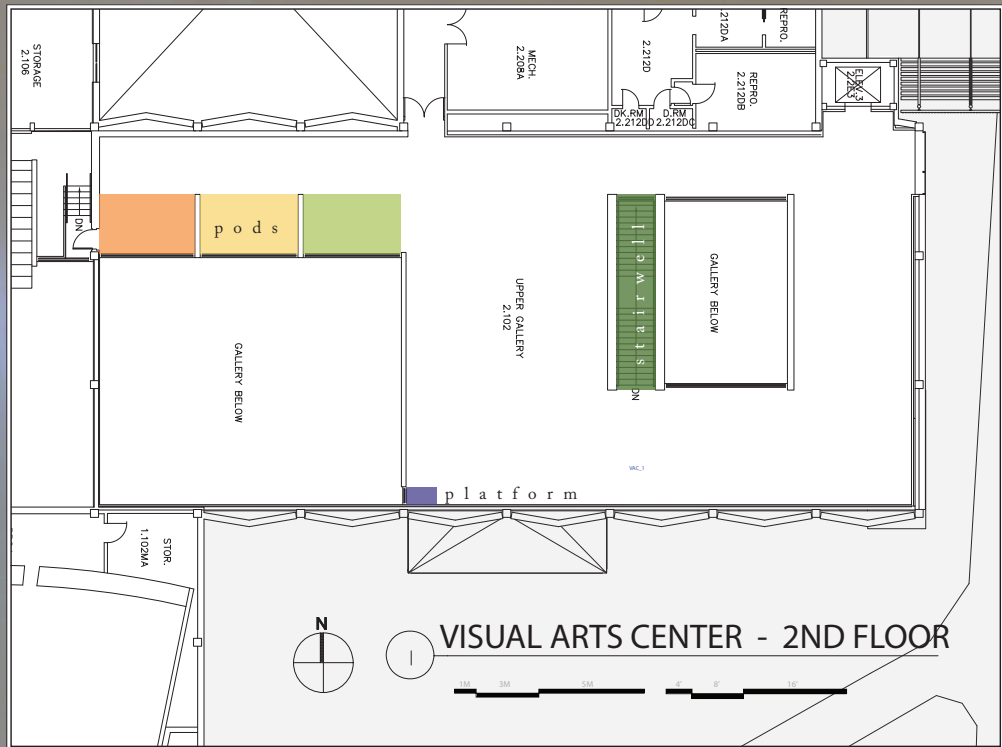


actual Max/MSP/Jitter screen shot of distance translation program



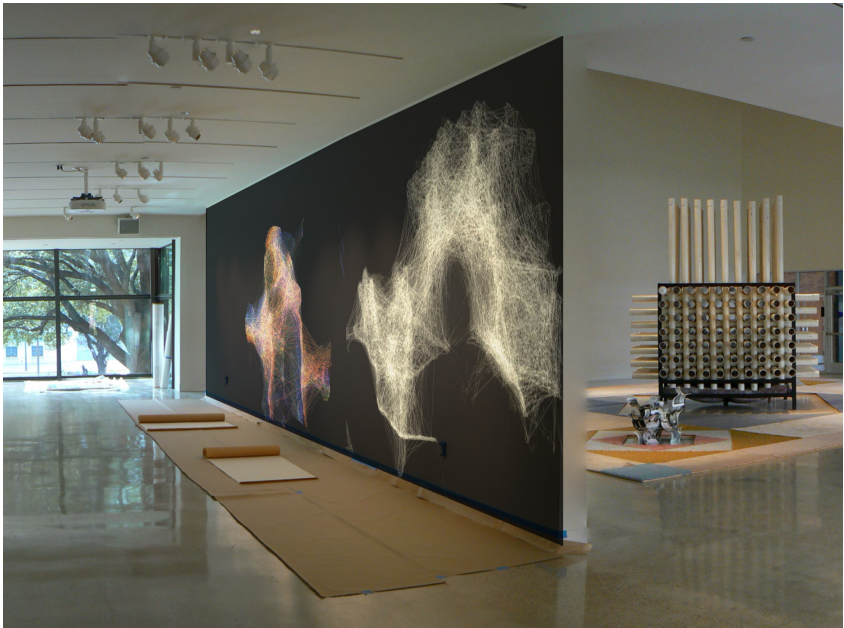
Through The Infinite Space Between, we seek to challenge existing ideas regarding the relationships among music, choreography and performance and the spaces these practices inhabit. Experimenting with this instrument, whether lingering in a stairway to sing, moving closer to a stranger to affect sounds or any other permutation that might surface, will change the way one engages with his or her built environment, heightening awareness of the spatial relationships as well as human interactions therein. Furthermore, composing for this instrument would require a different form of writing and thus necessitate thinking about music from a spatial perspective, which has the potential to shift both the creative process as well as the resulting work.

Microphones placed *here* will collect sounds made by people and musicians in the stairwell, which will be continually processed and played throughout the other rooms. During the team's performance, musicians from the Butler School of Music will play flute, bass clarinet and percussion while moving in and out of the space. Their music as well as footsteps (picked up by additional contact microphones on each stair) and any ambient sounds will be directed to the other parts of the instrument for processing and amplification. When the instrument is open for use by the general public, mics will be left in the stairwell to encourage people to speak or sing or otherwise play with the possibilities of generating sound through this mechanism.



For our composed piece, the platform in the balcony overlooking the atrium will serve as a stage for a trombonist performing live in response to the sounds filling the overall space.

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**antechamber**

A visual translation of movement in the pods will be displayed in the antechamber adjoining the atrium. Projectors will stream live feed from the cameras in one or more of the pods in the form of animated connecting lines using collaborator Yan Da's line-generating software ([http://www.darajan2.com/risd/+av\\_acrossMFA.html](http://www.darajan2.com/risd/+av_acrossMFA.html)). This will provide an alternate visual connection between the experience in the pods and participants elsewhere.