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The Dream Idea

Architecture is "frozen music"... Really there is something in this; the tone of mind produced by architecture approaches the effect of music."

Johann Wolfgang von Goethe

The statement "Architecture is *frozen music*," reveals a universal theme of expression underscoring all creative disciplines. Goethe's idea suggests all processes of creation and invention are connected by a human's need to express something, despite the final medium of construction. The expression could be a new idea, an evolution of an existing solution, or a purely aesthetic creation. What *would* a building sound like if the architect had been a composer using vibrations as the medium of expression instead of lines and shapes? It could be said that the architect "paints" with building materials, the composer "constructs" using vibrations, and the scientist "composes" forms and formulas using the "modes" of math and physics. Is music a type of "liquid architecture?"

My dream idea is to lead a multidisciplinary team of students through the process of developing a purely aesthetic and subjective method for converting an object into sound or music. I have often considered trying to provide my own proof of Goethe's statement in some way, but unfortunately I'm just not smart enough to do it alone. I need an inventive student of computer programming, a musically savvy student architect, and a brilliant student of music technology and composition to help me. I realize this is potentially a huge concept to tackle, but I do think it is an approachable one given we begin in a very simple way. Therefore, this dream project would serve as a mere beginning to the ultimate future goal of applying our invention to larger structures such as the outer shape of a building or a combination of the various elements of a building.

Goals:

The primary focus of this project is the invention of a process for converting the data representing the physical aspects of an object into its representative sound. Existing sound and image manipulating software as well as sound equipment will be our major tools for achieving this goal.

A multidisciplinary collaboration is an equal and necessary goal. It is my desire that that a variety of students from various disciplines will become excited about what we are doing and will want to lend their talents to the work.

A third goal is to present our findings to an audience. The theory is that a spectator should find the sound(s) derived from favored objects as desirable as the object itself when compared to less desirable objects and their representative sounds. Of course, our findings will be subjective in nature, but when our subjective process is applied equally to two contrasting shapes, I expect an audience will be able to compare the resulting tones/music from a more objective stance. It would be interesting to use our invention as

elements of sound design to accompany physical aspects of a Department of Drama production.

A fourth goal is to reveal and better understand the basic creative process all disciplines are subject to. The very fact that we will be creating a process through multidisciplinary collaboration will be as revealing in itself to those involved as the actual final product. I expect a strong sense of interconnectedness between science and art, especially through our use of music/sound and math will continually present itself.

A fifth goal is to seek further support for greater development of our work; given we all feel a certain amount success after completing what I suggest in this proposal.

Finally, this project is destined for a certain type of success that exists outside of any measurable accomplishments related to our collaborative outcome. I firmly believe that the members of this team will each learn they possess abilities of science, art, and craft. Although they will represent varying fields of study, a sense of unity in purpose will be experienced and the perceived differences between contrasting fields of study will be lessened.

Objectives:
My current plan for achieving the listed goals is to create a stimulating collaboration comprised of top students from the University's artistic and scientific fields of study. I propose soliciting the Chairpersons of Computer Science, Architecture, and The Virginia Center for Computer Music within the Music Department in search of one representative student from each who has displayed a certain amount of inquisitiveness and creativity within their discipline. With myself serving as advisor, and the three students serving as leaders, they will seek other interested students from their field in order to create a small team of three to five people. We will then employ an egalitarian approach in order to best determine how to use funding provided by the Mead Endowment. I imagine that a large sum of the funding will be used for technology purchases, or for employing services from interested professionals, students, etc. We will have several meetings of the three teams throughout the allotted project time frame, with ample research and discovery periods in between meetings. I have recently designed and installed a five seat, computer based sound design/composition lab in the Culbreth building, and this will be an excellent place for us to meet as a group to view, listen to, and share ideas.

Each discipline leader will be challenged to utilize any available University of Virginia resources such as chats with expert faculty in each respective field, exploring the vast amount of printed and electronic library holdings, and sampling various existing software applications for visualizing sound and music. We will welcome as many minds and resources as possible in order to best discover an aesthetic to use as a basis for our invention.

Multiple questions will need to be answered at the beginning of the process of development. Do we choose to "play" an object from bottom to top, left to right, or do we merely reveal the sound of a cross section of the object? Although a goal would be to

someday present a large piece of architecture's musical/sound equivalent, my plan is to keep the scope of this endeavor small for now by focusing on simple lines, shapes, and objects as sound generators. Starting this way would allow us to amass a library of building blocks of tones for larger objects with multiple parts.

Conclusion

It is important to me that I provide ample reason for those interested to want to devote their valuable time to this project. It seems necessary to approach this project under the formality of an independent study course in order for the students to receive credit for their work. A final grade will be based on a formal presentation of our results.

Each student involved with this process will benefit from my expertise as a theatrical sound designer and composer. My field is often characterized as a marriage of technology and art with influence from other fields including physics. As sound designer, I relate the more abstract questions of the play into more comprehendible emotive symbols. The students involved with this project will be confronted with similar challenges. And, they will have to work with the same equipment a sound designer uses since I already have an array of sound technology for us to use. Therefore, this process will by default provide for them a strong foundation in the field of sound design. This is knowledge they will be able to apply to just about anything utilizing sound in the future.