Drive Mind

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Abstract: *Drive Mind* is a unique electro acoustic system that provides audiences with a new sonic experience produced by the refraction of light. The main feature of *Drive Mind* is to visualize abstract figures of sound by a ray of LED light, and to manipulate sound by the refraction of this light. To ease recognition and understanding by the audience, the performer manipulates the acrylic objects physically, and the system produces the sound with this manipulation data, which was generated through well-understood physical phenomena. In this way, an audience will have a full sonic and visual experience filtered through their own imaginations.

1. Introduction

Advances in computing have led to achievements in complex virtualization. Also, with the development of peripheral devices, such as touch panel screens and remote controllers, it has become easy for anyone to have a 'virtual experience'. These tools are actively utilized in the field of media art.

2. Aim

Advances in virtualization have not been able to eliminate the incongruity of one's tactile experience. For example, when a user is using gestures while performing an operation with motion graphics, ideally the user should feel the weight of the operation, not only the air resistance. Also, most of the data for the operation is in reality invisible. Therefore, the user would be unaware of the method working 'behind the scenes'. Because of these problems, an audience has difficulty empathizing with the performer or system and does not have a full experience expanded by the audience's own imaginations. To overcome these difficulties I have developed an electro-acoustic system named *Drive Mind*.

3. Approach and Implementation

A ray of LED light visualizes the manipulation data. This ray of light is a metaphor for a stream of sound. The system is manipulated physically through acrylic objects. The ray of light is projected onto a panel and the camera shoots an image onto that panel. The input to this system is an image taken with a Web camera. When the acrylic objects move, the ray of light gets refracted; in effect, the position of the light on the panel changes. The moving light on the panel is tracked by an application called *Max/MSP/Jitter* and produces positional information. This positional information is converted to MIDI information, which is used to produce a variety of sounds generated by a software synthesizer called Reason.
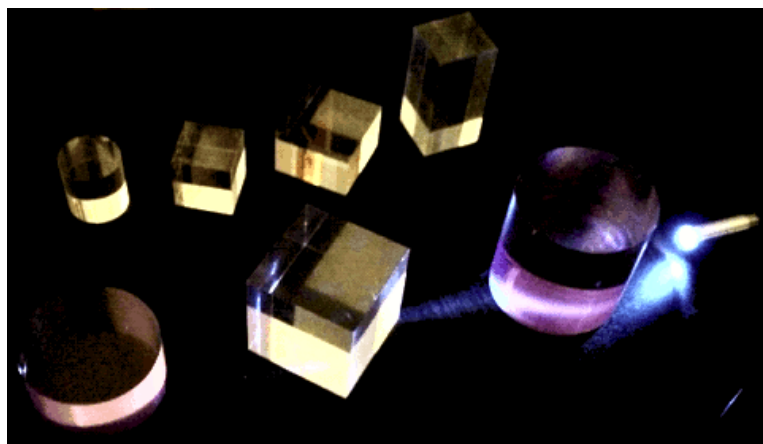

Fig. 1. An LED light and acrylic objects.

4. Media Assets

Fig. 2. A video asset (http://www.youtube.com/watch?v=iyS3WUbAQD8).

References

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