

# Responsive Space

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## ABSTRACT

The performance "Open Form III" is created with a framework called "Responsive Space". The framework allows a flexible way of working with distributed sound and image projections. The system consists of a multichannel speaker-system, 2-3 video projections a local Wifi network with a connected webservice and mobile devices. The audience is invited to log into the local network with their mobile devices. In the browser of the mobile devices sound and image is generated or streamed.

As we experienced in previous projects with live audio-streaming and mobile devices the spatial gesture of music as a musical parameter comes to the fore. In the performances the audio is streamed with an icecast-server. The visual output is generated with javascript in the client's browser. Shortcomings, like the various time delay of the audio-stream of different mobile devices or the variation of spatial and visual output, lead to interesting artistic effects. The system offers great opportunities to experiment with different spaces and the spatialization of sound and image.

## 1 INTRODUCTION

The project deals with the question of how the audience can be addressed and integrated in multimedia performances. It is about the development of a performance system that focuses on the use of mobile devices (smartphones) of the audience and explores the possibilities in connection with a loudspeaker setup and projections.

This mobile setup should enable a flexible distribution of sound and image projections. The aim is to experiment with it in different rooms and situations. The viewers can log into a local network with their mobile devices. The browsers of the smartphones or tablets will then generate audiovisual content and offer opportunities for interaction.

## 1.1 Description of the piece

The piece "Open Form III" generates variations with five different sound modules for each playback. Simple basic sounds, such as a sinewave, noise and granulators generate tonal structures which are formed into musical sequences according to contrapuntal criteria and stochastic processes. The superposition and layering of these simple tonal gestures results in a complex musical structure. The individual sounds are translated into visual forms and determined by the parameters of the sound and an independent process. The sequence of the piece is created generatively and is not predetermined. It experiments with the interplay of sound and image and their distribution in space through various reproduction media.

## 1.2 Setup

The Setup includes a multi-channel speaker system, up to three visual projections distributed throughout the room, and a local network for the audience's mobile devices.

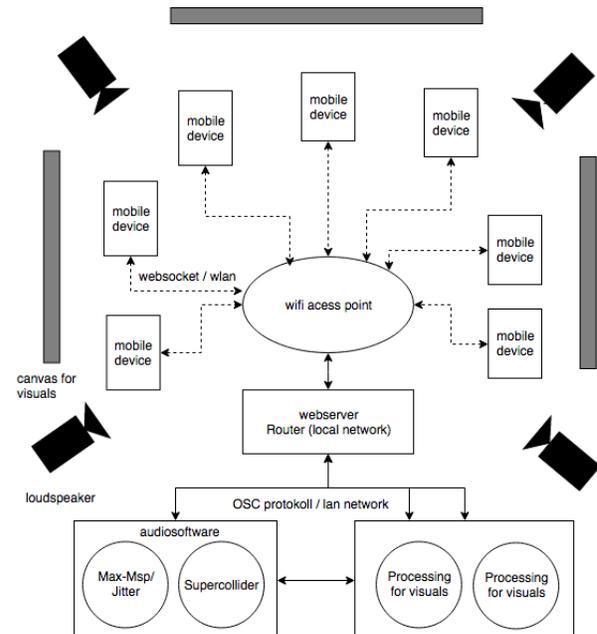


Figure 2. Communication diagram of the setup



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