Fields

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Abstract. Fields is an exploration into the use of mobile technology as a medium for live sound diffusion. It is presented as both a digital system and bespoke composition. During a performance of Fields, audience members can join in at any time by simply connecting to a specially designed website with their mobile phone, laptop or tablet. The connected devices become an array of speakers that the performers can control live, resulting in an omni-directional sonic experience. Fields is an attempt to show the potential for technologically supported communal listening experiences through the exploration of new aural contexts and we believe it opens up new possible paradigms within musical performance and sound spatialization.

Keywords: diffusion, spatialization, performance, music, sound,

1 Introduction

Fields is a networked performance exploring new areas of musical composition and audience participation through the use of mobile technology as a medium for sound diffusion. The project is an interdisciplinary collaboration between software developer / musician Sébastien Piquemal and sound artist / field recordist Tim Shaw. Fields stems from a desire to reconfigure the audience-performer relationship, and encourage shared listening experiences within alternative performance structures. The piece was premiered at CTM's musicmakers hacklab in Berlin, and has been performed in Helsinki, Newcastle and Athens since.
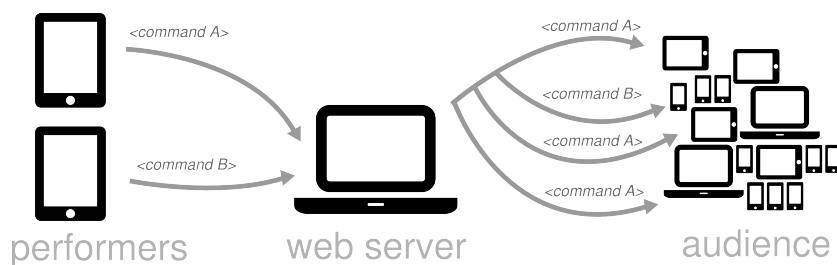
2 The system

Fig. 1. Outline of the Fields system

Through adopting an artistic-led, creative approach we allowed for the technical aspects of the system and the composition to be directly informed by each other. An important goal from the beginning of this project has been to allow for a casual performance with an unprepared audience. Therefore we have designed the system to have a very low threshold for participation.

The option of using of a native app was immediately discarded, as it would require participants to install the app on their devices prior to the performance. We chose to build the system entirely with web technologies: Web Audio API to generate sounds and a custom server (now released as open-source) for the control and communication (Piquemal 2014). As a result, almost any device running a web browser is supported[1].

Though we use web technologies, there is no need for an Internet connection to join in. The system is deployed on our own Wi-Fi network. Participants only need to join this network with their device, and point their web browser to the given address which is available locally.

This system has also been built with modularity and openness in mind. It is easily extensible, and we plan to publish it as open-source in early 2015.

3 Experimenting with alternative performance structures

In western culture, attending a concert is the dominant context for live music listening. This tradition is largely codified; there tends to be a clear separation between stage and audience, with the focus on the performers, who are sometimes elevated, physically and culturally, to superhuman status. However, outside of this dominant culture there exist many alternative forms of music performance, one illustration can be found in some indigenous societies where live music is fully embedded into everyday life.

Fig. 2. Audience sharing devices at a Fields performance

Fields provides an alternative to this tradition. Once a mobile device is connected, sound will be played from it, creating the possibility for each audience member to hold their own personal speaker.

[1] Internet Explorer is the only browser not supported yet as it doesn't implement Web Audio API.

This decentralization of the sound diffusion shifts the focus of the piece to the audience itself, and we have observed many participants starting to "collaborate" and share their mobile devices with neighbours, forming small pockets of sound throughout the performance space.

Presenting Fields through regular performances has opened-up many creative problems around audience engagement, performer-audience relationships and sound design for tiny speakers. Very early on, we decided not to feature a stage. So far we have performed the piece from within, behind and anonymously inside the audience. We are currently experimenting with different configurations and sound design, in order to create a stronger feeling of shared experience between participants and performers.

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