

Touching Sound: technologies for mediated interaction in music therapy

Abstract

This paper describes an inter-disciplinary project, currently in the early stages of development. It looks at beneficial connections between music technology and health environments, including those involving music therapy, and is concerned with the design and implementation of new hardware tools to be clinically applied and tested during the project.

In music therapy one objective is to influence positively a client's skills of communication and interaction. In therapeutic interaction the musical capacities of therapist and client are mediated by musical instruments and vocalisation. While using 'traditional' instruments, interaction is encouraged and shared music can lead to improved outcomes such as increased awareness of the other, or the capacity to be more playful. The members of the Touching Sound project, rather than attempting to extend the possibilities of standard musical interfaces, aim to explore the merits of mechanisms encouraging shared music making and co-operation by designing and implementing instruments that stimulate this interaction, making it the focus of mediation and the enhancement of individual capacities. These devices can also help to overcome pre-existing and perhaps negative responses to understood interfaces, such as keyboards, through considered and imaginative design that is sensitive to appearance, texture and the physical metaphor. In our implementations, the interface and the sound-producing devices are separately designed within an overarching framework within which the nature of the desired interaction can be specified independently. It is considered a prerequisite that the design of the devices should be as inconspicuous as possible and in some cases will be effectively 'invisible'.

The paper outlines the project, its participants and relevant frameworks, and provides demonstrations of prototypical devices and their projected methods of application.

Sam Aaron (Cambridge University Computer Laboratory)

Ian Cross (Centre for Music and Science, Cambridge University)

Satinder Gill (Centre for Music and Science, Cambridge University)

Tommi Himberg (University of Jyvaskyla)

Richard Hoadley (Anglia Ruskin University)*

Helen Odell-Miller (Anglia Ruskin University)

Rob Toulson (Anglia Ruskin University)

* Main author: Richard Hoadley, address for correspondence:
richard.hoadley@anglia.ac.uk