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# Touchbox: Intriguing Touch between Strangers

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**Abstract**

The Touchbox is about facilitating intriguing touch interaction between strangers. The Participants each wear a pair of headphones, and when they touch each others bare skin, they both hear a complex sound pattern. Previous (successful) work involved a skilled Performer and one Participant; the Touchbox was designed to be played by pairs of pristine Participants exploring the interaction situation on their own. It turned out that their interaction experiences were quite engaging albeit more varied in mood and character. The Touchbox illustrates a novel approach to embodied interaction design where social norms are transcended by means of daring and captivating interactions.

**Keywords**

Social play, pushing norms, interactive sound, embodied interaction, bare-skin touch.

**ACM Classification Keywords**

H.5.m [Information interfaces and presentation (e.g., HCI)]: Miscellaneous.

**General Terms**

Design

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**Figure 1:** The Touchbox in use.

## Introduction

The first thing you see is a strange-looking wooden box with a vintage light bulb and an analogue meter. It looks like a quasi-scientific instrument from the 60s that will measure your health and serve to convince you to buy snake oil or to join a cult. This appearance was designed to spark your curiosity and set you in a mood for exploring the system.

The Touchbox system offers a play session for two Participants at a time. The role of the technology is to sense physical bare-skin connection between the Participants where the sensing yields analogue values in a range starting from a few centimeters from actual touch

(what I refer to as the aura), via light touch, to full contact. The values are converted into a relatively complex soundscape which is played back to each Participant through their headphones. The headphones make the interactive soundscape a privately shared experience between the Participants by limiting surrounding sounds.

The analogue nature of skin touch sensing, and relatively complex functional relations between input and output, together form an open and ambiguous [2] interaction surface for the Participants, encouraging them to explore the soundscape together and serving as an excuse to sidestep normal conventions in physical touch between strangers.

The Touchbox follows on from my previous work on touch and social play and it was designed specifically to answer a key question, as will be detailed in the following.

## Previous work: Mediated Body

The Touchbox builds on Mediated Body [4, 3], a project designed to explore embodied interaction [1] for social play [5]. Mediated Body is a suit worn by a Performer, who takes on the role of facilitating the interaction between himself and another Participant. The core technology of Mediated Body, which is now carried over into the Touchbox, is analogue sensing of bare-skin touch converted into a complex soundscape.

Mediated Body was designed in a week-long experiment at the 2010 Burning Man festival, in a context of radical self-expression and social play. It turned out to be very successful, in the simple sense that it was highly attractive to festival visitors and much appreciated. From a research point of view, it yielded a number of useful results on the topic of designing for engaging embodied interaction.



**Figure 2:** The Mediated Body suit in use at Burning Man.



**Figure 3:** The Mediated Body suit in use in the Berlin U-Bahn.

**Connecting touch to audio** seems to make for an engaging experience if the balance is right between direct responsiveness and more complex, emergent responsive behavior. **Bare-skin connection between strangers** is an intriguing and somewhat daring design move that works as an excuse for sidestepping established norms and engaging in a moment of polyvalent social play.

The play experience of Performer and Participant is characterized by what I call **performative immersion**, which entails a duality of being absorbed in the tactile/auditory/visual experience and at the same time performing knowingly for an Audience. Moreover, it represents a brief moment of **alternate social reality** where normal steps of social interaction between strangers are skipped over. Finally, it is clear that meaning in the experience is **emergent** and co-constructed in the moment of play.

Having observed the success of Mediated Body, two questions immediately presented themselves. First, would Mediated Body work anywhere outside the hedonistic festival context? I approached this question by taking it to the streets and trying Mediated Body out in everyday urban settings, finding to my surprise that the response was largely similar to what we saw at Burning Man. The Performer could easily engage people in play and bystanders would be interested in trying it out as well, even though the play sessions were typically slightly shorter and less intimate than those seen at Burning Man.

The second question concerned the role of the Performer in the Mediated Body concept. Could it be that our success was due to the charming and engaging personality of the Performer more than the touch/audio technology itself? To address this question, I designed the Touchbox, which corresponds to a Mediated Body experience for two

Participants and without a Performer. Next, I report on initial observations of the Touchbox in use and finally my preliminary conclusions.

### **The Touchbox in use**

In this section, I provide an account of the Touchbox in use. The style is that of a personal narrative, in order to better convey the experiential qualities of the Touchbox within this limited space.

*Setting:* I brought the Touchbox to an underground-style costume party themed Art in heat, gathering 150 guests in flamboyant costumes at an old barge in Copenhagen harbour.

*The setup:* Finding the right spot involved striking a balance between being a part of the party and being far enough away for the music not to interfere. However, the spot I picked turned out to be too indistinctive. People would not naturally engage in the installation or ask questions about it, simple because they didn't notice it. This, of course, had something to do with the tiny size of the box compared to the aesthetically noisy space it was placed in. What I had to do was to ask someone to grab random people and pull them over to the box for trying it out.

*First experiment:* The first people to appear were two girls, quite hesitant and uncomfortable in playing with the box. It was an odd moment where I didn't manage to make a good and playful situation, and they did not take on the challenge on their own. They played a little, but it seemed as if they were being polite rather than having an enjoyable moment.

*Putting on a show:* When the next two people came, I decided to take on the role of the Performer and tell an



**Figure 4:** The Touchbox with lightbulb, touch-o-meter and headphones.



**Figure 5:** Two guys playing with the Touchbox.

elaborate story about this being a scientific experiment, where the box would read their aura and how well they connected with each other. After careful calibration, they began to play with the box. They played for a while, and seemed to enjoy the moment greatly. It was two guys, and they were surprisingly comfortable playing with each other. It was a joyful moment between two people exploring the possibilities of the box as if it were an instrument.

*Becoming viral:* At this point, people had heard about the experiment or seen other people try it out, so new Participants would show up voluntarily. I tried it out with six more pairs. All of them had an engaging experience exploring the system. Once in a while, people would move from innocent to more sensual play, kissing, coming close and even touching more intimate parts. It usually resulted in laughs and moments of timeout, where they would just look into each others eyes.

I had put significant consideration into creating aura qualities in the Touchbox, and it turned out that many Participants started playing with touches in the air. Some noted that it was amazing to play without actually touching. The aura clearly sustained the interaction and gave a more magical feeling to it.

Some Participants played for a long time, and most Participants needed a conversation afterwards. They needed to decompress and come back to the world outside the Touchbox, understanding how the box related to them and the meaning they gave it. I noticed, though, that they often seemed to be lacking the words. Thus I took the time to explain the inner workings of the system and how other people experienced it.

## Conclusion

Most importantly, the Touchbox showed that it is possible for two pristine Participants to get an engaging experience together in a manner similar to how a Performer knowing the system would play it with a Participant.

However, it must be noted that the role of the Performer was not completely out of the equation. The Participants needed to be introduced to the system in a way that also set the mood of the experience they were going to have. To this end, Participants who tried the Touchbox for the second time tended to take on the role of a guide, showing their partners different ways of playing, and the more subtle nuances of touching in the air.

Another tentative conclusion is that the interaction seemed more honest and fragile than with the Mediated Body. With Touchbox, it is entirely up to the Participants to set the mood and energy of the interaction from fragile, passive moments to energetic, playful moments of joy.

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