

# Droplets: Geo-located Audio as a Social Media Platform

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## ABSTRACT

Location-based audio has previously attracted some attention from the HCI community. This has mainly revolved around knowledge-sharing and creation of curated experiences as artistic expression. In this paper we present initial work in which we look at located audio through the lenses of social media, and present initial work on a social media app – *Droplets* – which seeks to create new geo-located social media experiences.

## Categories and Subject Descriptors

• Human-centered computing~Social media systems~Location based services systems~Speech / audio search. • Information systems~Information systems~Speech / audio search.

## 1. INTRODUCTION

We describe initial work on a mobile application – *Droplets*, which explores more naturalistic social media experiences by borrowing mechanics, and contexts from the physical world. The inspiration for *Droplets* is that of the “overheard conversation”; an everyday experience in which we may accidentally share conversations, thoughts, or other intimate details with those around us. To enable such interactions, *Droplets* uses recorded speech rather than typed text, and content is geo-located so that other users may access it in the same physical space in which it was recorded.

We outline the mechanics of *Droplets*, but our primary interest is in the way in which users engage with this type of interface as a social media device. In particular, we focus on responses to issues around anonymity, intimacy, and sharing. We present initial findings from a pre-pilot study undertaken at the University of Lincoln (UK). We conclude by describing future directions of this work.

## 2. RELATED WORK

Geo-located audio has been previously examined in a number of relevant contexts. These are clustered primarily around two main themes: firstly, curated experiences, often as art installations; secondly as a platform for sharing information about locations (such as visitor information).

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Examples of curated experiences include Hazzard *et al.* [4] who created musical compositions for locomotive experiences. The Guardian [3] newspaper created Street Stories, where content intended to create engaging user experiences, but is carefully produced, is triggered on mobile devices as users walk around a small pre-set region. As a user experience, these kinds of works create a similar sensory platform to that which we envision, but lack the spontaneity and intimacy embodied by the exchange of personal information, and have well defined boundaries for the user.

Rider Spoke [5] is an interactive experience in which cyclists record and share personal information while travelling around a cityscape. It is framed as an artistic experience, but captures a level of intimacy and social interaction. The experience of Rider Spoke is very much embedded in the physical experience of cycling, rather than as a more general social experience. Nevertheless, we look to this work for inspiration.

Similarly, work by Giles *et al.* [2] resonates with some aspects of *Droplets*, but in Giles’ work the emphasis is on creating games or playful experiences which re-use space in new ways, rather than on using space to mediate social media interactions (the focus of *Droplets*).

## 3. THE DROPLETS PROTOTYPE

We developed a prototype version of *Droplets* using AppFurnace [1] The app comprised two screens: one to listen to other users’ recordings (termed “droplets”), and one to make new droplets. To be comfortable and familiar the interface for listening to, and recording, droplets resembled a phone interface (see Figure 1.).

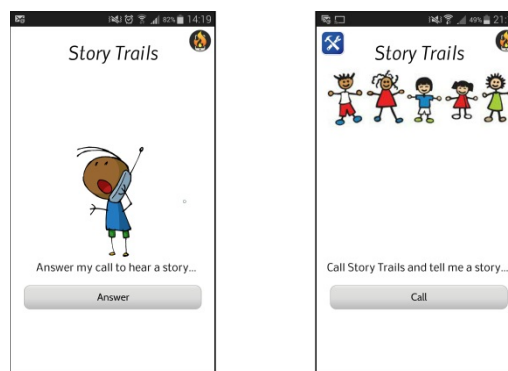


Figure 1. Droplets Interface

For this study, users’ recording was restricted – they could record their own droplets, but could only listen to pre-prepared droplets. Each (pre-prepared) droplet was associated with a particular geographical location on our university campus (see Figure 2.). When users passed close to the location of a recording, they

received it as a “phone call”. To record a droplet of their own, they could press the “call” button, causing an answering voice to ask an open-ended, self-reflective question, such as “*Tell me about a personal memory triggered by something you can see now*”.



Figure 2. Locations of pre-prepared droplets

### 3.1 Social media mechanics

This prototype version of the app does not include many social media mechanics – it was focused on exploring user responses to the droplets themselves, rather than exploring the social media components. The next stage of the design incorporates “classic” social media mechanics including: liking; following; notifications; and trending. The values and impacts of those mechanics and their relationships with the themes identified below will be explored in further work.

## 4. PRE-PILOT STUDY

We conducted a preliminary evaluation as pre-pilot study, in order to characterise emerging themes from user responses to the app. We used eight participants who were asked to perform some routine tasks on campus, for around 20-25 minutes. During that time, they received “droplet” calls, and were also prompted to record droplets of their own.

We conducted a short semi-structured interview with each participant after their experience. We performed thematic analysis on the transcriptions of the interviews and three main themes emerged: Boundaries and Intimacy; Anonymity; and Connectedness. These are discussed in more detail below.

### 4.1 Boundaries and Intimacy

How much users relate to *Droplets* as an intimate experience, and where users draw personal boundaries, is an important and interesting outcome from this study. We were surprised by the personal nature of some of the droplets. Participants discussed topics encompassing: a discussion of a recent bereavement; a recollection of an uncomfortable social experience; and work-related problems.

For example, one user recounted “... then something popped to my head which was quite personal, which I thought ‘oh no, I’m not going to share that’”, whilst another mentioned “... I said something, and then I thought ‘oh gosh, should I have said that?’”. Six of the eight participants drew comparable boundaries: in their droplets they mentioned other people who are important to them, but only identified them by relationship (brother, father, friend). One participant explicitly named other people, suggesting a looser boundary.

## 4.2 Anonymity

Anonymity was a key theme. The prototype does not identify droplets or participants (with, for example, user names); however, there is scope for voices to be recognised, and this ambiguity was identified in interviews as a factor which mediated participants’ boundaries. Two participants stated that they found the platform anonymous and consequently they found it dis-inhibiting. For example, “*it’s got, a level of anonymity to it, so you, you feel a bit more ... ok discussing it*”. However, in two other cases, participants implied that they would not want to reveal personal information, regardless of whether or not it was identifiable.

## 4.3 Connectedness

The value of the spoken voice, rather than the more usual text-based form of other social media platforms, emerged as a central theme, with entirely positive responses in that respect. A number of participants expressed that the sentiments in the droplets were more “*real*” or “*genuine*”. For example “*it was quite actually refreshing to hear a voice, as opposed to just seeing a text, because you kind of get a bit more of a feel for the person*”.

Further, there was some indication that participants experienced an empathic response to droplets. For example: “*the participant was talking about walking... with his friend, and I quite liked that, was just a nice story, that he had, you know, got the chance to do that*”. Indeed, a number of participants explicitly identified other droplets which they related to their own lives, and also prompted them to choose their own stories.

## 5. FUTURE WORK

Drawing on the outcomes of the pre-pilot study, we will further develop *Droplets*, incorporating more social media mechanics, and will conduct a more extensive quantified user study. The central themes presented here will be used to guide design and evaluation of the app.

## 6. ACKNOWLEDGMENTS

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