

Investigating New Models of Communication as a Spatial Practice through the Implementation of a Locative Media System

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Introduction

The integration of wireless media, tracking and mapping technologies and the impact of their use on mediated communication within urban public space is one of the primary concerns of theoretical research on the subject of Locative Media. Locative media are systems of technologically mediated interpersonal and group communication. By introducing context awareness and by supporting multi-user communication, these ICT systems alter the situation within which mediated communication takes place, thus bringing to light new spatial contexts and affording new types of experiences where social interaction may occur and novel forms of cultural practices may emerge.

The potential for supporting real social interactions among mobile individuals along with the unique “hybrid” spatial character of the experience afforded by the use of these ICT systems challenge the traditional ways in which we perceive and interact with the “physical” inhabited world. Mobile, wearable, devices could nowadays be networked, internet enabled and location aware. As a result, mobile users holding these devices could be easily positioned and their surrounding, concrete environmental elements in the physical world can be tagged as well as mapped onto appropriately designed environmental representations. By affording location detection of each user, multi-user locative media systems may allow groups of such users to interact with each other, while being aware of each other’s location at all times, thus triggering social experiences and a range of “latent” geospatial activities, in an existential, inhabited, “lived” physical space.

Locative media and the hybridisation of urban space

To city dwellers, the urban context is not merely a geographical term. Depending on a dweller’s preferences, experience, and daily routines, parts of urban space will be perceived as socially significant, as people attach meaning to them and appropriate them. Attribution of meaning, appropriation, and regular occupation of spaces may lead to their transformation to places (Dourish, 2001). The concepts of space and place are not identical. Space refers to the spatial arrangement of elements which establishes an environment, whereas place has more social connotations and is not exclusively confined to the material world. Regular occupation and appropriation of a space are essential for the transformation of spaces to places. In addition to the social significance attributed to spaces in this fashion, locative media superimpose a layer of digital information over the urban landscape. Thus, physical space is enhanced, and at the same time the layer of digital information is mapped onto it. The result is an effective combination of the digital layer’s fluidity and the durability and permanence of real space (McCullough, 2004).

In summary, the nature of urban space as a stage for computer-mediated activity and communication is threefold: geographical (arrangement of physical space); social (the concept of place); and digital (the layer of digital information). Public space that becomes ‘mediatised’ (i.e. that successfully integrates digital media with the physical environment) and imbued with social significance may give rise to new forms of social activity, as in the case of pervasive games, social networking, etc.

The LOCUNET project

LOCUNET (LOCation-based Urban NETwork) is a research project that aims to investigate the social and communicational aspects of using such multi-user location-aware systems in an everyday urban context. The aim of this project is to develop a theoretical framework which describes locative media use at various levels (personal communication, interpersonal mediated communication, inter-group communication). This framework ultimately aims to inform the design of locative media. For the purposes of evaluating this framework, a location-based pervasive game activity has been designed and implemented. This activity will engage a number of mobile and desktop users and will take place in central Athens, Greece in May 2008.

The LOCUNET¹ project adopts an interdisciplinary approach in studying “novel” forms of intergroup communication and social relations which may occur within a locative media group context, focusing on the technical features and aspects of designing and implementing location-based systems, as well as on the social implications of using such systems in the everyday urban context. Its primary research objective is to study the way that users interact with other users (human-computer-human interaction aspect) and with the location-based system itself (human-computer interaction aspect), while focusing on the physical and social context in which this interaction takes place.

From this angle, LOCUNET attempts to explore to what extent a location based activity can modify group interaction and communication, as well as on the way members of such groups manage to perform a joint task relying, at the same time, on spatial information to coordinate themselves. The main outcome of the conducted research is to present a conceptual framework by which to examine the engaged innovative technologies and their potential social impacts, perceiving locative media systems as “mixed-dialectic experiences” conjoining two seemingly opposite concepts:

- the physical environment of the real world and
- the “virtual” environmental context of the digital information and communication layer, which is mapped onto physical space and is supported by the locative media system.

Research issues addressed by LOCUNET

LOCUNET aims to investigate certain issues related to inter-group relations and group formation, and the relationship between individuals and the environment in the context of locative media. A primary research

objective is to investigate whether locative media support the relationship between group members, and how effectively they do so. More precisely, our research will attempt to provide answers to the following questions:

- What is the role of locative media users as members of mediated groups? Are users indeed “agents” and is, accordingly, locative media use a form of social action?
- How do factors such as real or virtual environmental elements influence the generation of social meaning on the part of the communicating users?
- How do users cope with the hybrid nature of such spaces? To what extent does real space become a vital part of a location-aware device’s interface?
- How does the configuration of such hybrid spaces affect the course of user activity?

In order to achieve the above objectives, LOCUNET adopts a methodological approach that includes both quantitative and in-depth qualitative research, for the purpose of evaluating the system and users’ attitudes towards locative media. Quantitative methods include questionnaires and system logs, while qualitative approaches include observation, interviews and focus groups [Diamantaki, et al., 2007 and Hare & Bales, 1963].

Furthermore, we attempt to determine whether and in which way mobile locative media contribute to the constitution of what we call “social world”, a hybrid and synthetic formation that is constituted by non-homogeneous correlations of human and non-human entities. The answers to these questions are expected to provide a valuable theoretical grounding for the processes of developing locative media and investigating their use as an act of communication.

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