

Towards a conceptual model for supporting the design of location-based systems for social interaction within urban public space

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The convergence of new mobile telecommunication networks, geographical positioning systems and interactive graphical interfaces on mobile devices, as they are already being utilised in a series of location-based activities (games, socialising services, commercial applications and artworks), introduces new forms of interpersonal communication. These forms may significantly alter the way that individuals conceive of, act and communicate within this convergence of physical and technologically mediated environments.

This paper documents the first phase of a research project, which aims at investigating the emergence of these forms of Information and Communication Technologies (ICTs), supported by the integration of new mobile and locative media technologies and the impact of their use on mediated communication within urban public space.

The paper proposes an appropriate conceptual framework, which may function as the theoretical basis for designing locative media systems. For this purpose, the proposed framework will take into account the impact that the implementation and use of such systems may have on their users, and ultimately on mediated communication taking place within the urban context as such.

LOCUNET¹ (LOcation-based Communication Urban NETwork) is a research project that mainly focuses on the social implications of using location-based systems in the context of urban everyday life and not only on the technical aspects of designing and implementing such systems. Its main 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. To that end, LOCUNET adopts a methodological approach that favours in-depth, qualitative research.

In this paper it will be argued that locative media are to be understood as systems of technologically mediated interpersonal communication. Based on this understanding, the paper proceeds to consider the various perspectives, which the design of locative media should encompass and attempts to synthesise aspects of them in order to outline a theoretical framework on which the LOCUNET project is based. Finally, a short description of the system design and the scenario that the project will implement for evaluating its theoretical approach will be presented.

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More specifically, the location-based application, which will be designed for studying the use of mobile locative media, will support communication amongst groups of citizens in a contemporary setting, the scenario of which refers to a location-based game activity that will take place in the city centre of Athens, Greece. It consists of a series of time-defined quests, which will be the basic elements of this activity. While users are navigating within the city, the system displays on their screens a graphical representation of themselves and other participating players, whether they are using desktop computers or mobile devices. The system also allows users to communicate with each other in real time and to “attach” information to specific locations or alter the information they find attached on a location for the purposes of the activity.

Short biographical note of 1st author

Dimitrios Charitos (vedesign@otenet.gr) is a lecturer at the Faculty of Communication and Media Studies of the University of Athens. He teaches “Human-Computer Communication”, “Art & Technology”, “Visual Communication”, “Digital Communication Environments”. He has studied Architectural Design (National Technical University of Athens, 1990) Computer Aided Design and has a PhD on Interactive Design and Virtual Environments (University of Strathclyde, 1998). He has taught at an undergraduate and postgraduate level since 1994 in Scotland and Greece (Department of Informatics, University of Athens and Dept of Architecture, National Technical University of Athens). He has authored or co-authored more than 50 publications in books, journals or conference proceedings. His artistic work involves electronic music, audiovisual, non-interactive or interactive, site-specific installations and virtual environments.