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**PERVASIVE OPEN PUBLIC SPACES – THE AMALGAMATION OF INFORMATION AND
COMMUNICATION TECHNOLOGIES INTO OPEN PUBLIC SPACES.
REFLECTIONS OF THE COST ACTION CYBERPARKS - TU 1306**

Abstract

This paper discusses the increasing penetration of digital communication technologies into public open spaces; and how ICT can enhance the understanding of the relationship between spaces and their users, towards the production of inclusive and cohesive urban spaces.

The analysis is built on the Project CyberParks¹, which aims to increase the knowledge about this challenging relationship. Through this, we intend to analyse how these digital forms of communication can help planners to improve public open spaces.

The first results of CyberParks prove that ICT can be an asset for all stakeholders, i.e. technical planners, municipal decision entities, as well as the inhabitants, who is truly important in urban development, as it can include more peoples and make the decision-making process more transparent *and crowd sourced* (i.e. via e-planning). The discussion will be centred on the application WAY CyberParks (app & web), developed to track users in public spaces, and as an interaction interface, as it allows through augmented reality display more information about the space and its elements, and as social reporting, as users can provide information about problems, or warning about incidents. This approach is full of challenges, particularly in the use of collected data, as defining the number of users required to obtain a representative sample, and with regard to the privacy of users depending on the type of technology selected for the study.

Digital information technologies enables not only the collection and analysis of data, but also the interaction with effective and potential users, necessary for a more effective and sustainable planning aiming at transforming spaces into more liveable places. In an increasing technological

¹ www.cost.eu/domains_actions/tud/Actions/TU1306 and www.cyberparks-project.eu

world, the ICT must be used to improve the participatory methods, but also as a tool to bring people to be more outdoors and use public.

Keywords: open public space, information and communication technologies, users of public space, urban planning and design, CyberParks

Short biography

Tiago Duarte has a degree in Environmental Engineering, and is PhD student in Urban Planning at Universidade Lusófona, Lisbon, Portugal. Member of the COST Action TU 1306 CyberParks.

Carlos Smaniotto Costa is a Landscape Architect and Environmental Planner, graduated and PhD degree from the University of Hanover, Germany. He is professor of Urban Ecology and Landscape Design at Universidade Lusófona, Lisbon and senior researcher at its Interdisciplinary Research Centre for Education and Development. His research activities deal with issues of sustainable urban development strategies for the integration of open spaces and nature conservation in urban context. He is the Chair of the Action TU 1306 CyberParks.

Diogo Mateus is PhD, MsC, BsC in Urban Planning and Design, is researcher on CeIED - Interdisciplinary Research Centre for Education and Development of Lusófona University. Acts in urban planning & Design, mostly on issues concerning urban (life) quality, Practice and Theory of urban planning/Design, European Policies on urban issues and territorial planning. Is member and vice-president of Scientific Council of Portuguese Network for Territorial Development (Instituto do Território). Took part in scientific national and international projects and acts on territorial planning and design, evaluation and monitoring of territorial plans and policies including European founding programmes. Member of COST Action TU 1306 CyberParks.

Marluci Menezes is a Geographer, Master and PhD in Anthropology, Research Officer at LNEC (National Laboratory for Civil Engineering- Lisbon), where since 1991 studying urban cultures of use and appropriation of space, the dynamics of adaptation to urban transformation processes, the use and conservation of heritage resources, and the relationship between tangible and intangible heritage. Member of COST Action TU 1306 CyberParks.

Alfonso Bahillo got his Telecommunications Engineering and PhD degrees at the University of Valladolid, Spain. He got the PMP certification at the PMI. He is senior researcher at the University of Deusto, and R&D project manager at the DeustoTech Mobility Research Unit. He has worked in more than 20 R&D projects. He is co-author of more than 17 JCR journals and 3 national patents. His interests include local positioning techniques, ambient assisted living, internet of things, and wireless networking. Member of COST Action TU 1306 CyberParks.