

FROM PHYSICAL TO DIGITAL SPACES: EXPLORING TIME-SPACE MOBILITY THROUGH A TELEGEOMONITORING APPROACH

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Abstract

We are witnessing an urban revolution. The cities of concrete and steel gave way to city regions supported by pervasive ICT systems, of devices and gears, computers and software, technologies “living” underground, inside walls and in our pockets, all linked up via internet that communicate among themselves creating virtual spaces. Machines through a digital nervous system “run” the world and this digital upgrade is giving rise to a new kind of city, a “smart city”. Telecommunications and Geotechnologies (GIS, GPS, RS) are the backbone of those urban structures.

Mobility is one of the topics that city planners are facing today, and there is comparatively few studies related to gender space-time use imbalance. Not only unequal gendered mobility’s patterns are a real challenge to planning, as well as its consequences to the environment (greenhouse emissions and fossil fuels dependency), economy (productivity levels related to time spent on commuting), and society (time spent with family, caring activities, leisure and education).

This research lies on the use a TeleGeomonitoring methodology – mobile devices, such as Smartphone Apps and/or Tracking devices with GPS incorporated, as sensors acquiring real time data and producing a GIS database – to outline gender patterns’ mobility, linked to a real-time mapping device and giving out space-time prisms and animated cartography.

Due to urban planning new paradigms, and bottom-up methods (based on mobilized citizen-actors), to telecommunications real-time sensors and Big-Data, urban planners have now

access to a new understanding of the tech-urban systems through real-time urban dynamics monitoring.

This methodology generates accurate information on daily activity to support policies for the reconciliation of professional activity, family and personal life, with the detail of the everyday/local spaces. The paper presents some results of the GenMob project (PT07, EEA Grants) that can provide powerful analytical tools for time-space studies and also helps to deepen knowledge and influence more inclusive social and mobility policies (targeted to private and public organizations).

Keywords: smart city; TeleGeomonitoring; space-time geography; gender mobility.