

Augmented Reality Soundscape (ARS): method and practice for urban regeneration

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Abstract. The Augmented Reality Soundscape-ARS project approaches the issue of constructing digital soundscapes in open urban spaces. Through the perception of natural/artificial elements capable of configuring an appropriate soundscape [1], it is possible to define urban regeneration actions. These actions constitute a new type of urban intervention for the city, being easy to implement, low-cost for the local administration, and, above all, are also based on the involvement of the community that lives and enjoys such spaces. Underlying the proposed method is the distinction between "acoustic entropy" and "urban euphony." Starting from this distinction - identifying its characteristics and peculiarities - the project, which is being implemented, proposes a new fruitive dimension through the creation of specific soundscapes elaborated with the use of innovative technologies such as augmented and mixed reality [2], with spatialized sound [3]. The main aim of the project is to establish a plan that can be defined as Soft Urban Regeneration based on the development of three phases: a) study of the sustainability (economic, environmental and social) of the intervention; b) use of participatory processes to define the interventions; c) evaluation of the fruitive polarization effect by stable and temporary users of the space under intervention and the urban surroundings. In line with these methodological considerations, the paper presents the first results of an experiment conducted in the municipality of Cachan in France, located in the first suburban belt south of Paris.

References

- 1. Westerkamp, H.: Linking Soundscape Composition and Acoustic Ecology. Organised Sound, 7(1), 51-56 (2002).
- Fistola, R., Fabbri, F., Zingariello, I.: La rifunzionalizzazione "aumentata" della smart city: spazi e contenuti ibridi digitali. In: XXV CONFERENZA NAZIONALE SIU Transizioni, giustizia spaziale e progetto di territorio – Transitions, Spatial Justice and Territorial Planning, Cagliari 15/16 giugno 2023 (in press).
- McCartney, A., Paquette, D.: Sonic Experience: A Guide to Everyday Sounds. In: J.-F. Augoyard & H. Torgue, Eds. McGill-Queen's University Press (2005).

