

Towards the Integration of Digital Avatars in Urban Digital Twins on the Cloud-to-Thing Continuum^{*}

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Abstract. Urban Digital Twins (UDTs) represent a powerful tool to effectively make cities smart. Over the last few years, the interest in the social aspects of smart cities is growing fast. For this reason, citizens must be considered as first-class entities in UDTs. At the same time, citizens' privacy cannot be compromised. In this paper, we propose to integrate citizens through their digital avatars (DAs) into UDTs. DAs allow to exploit citizens' information, behavioral habits and personal preferences, while allowing them to have full control of their own data. We present our envisioned architecture that makes use of the cloud-to-thing continuum for optimizing the available processing resources. We focus on a case study of the public transformation service of the city of Malaga (Spain) and describe how we are addressing its implementation.

Keywords: Urban Digital Twin · Digital Avatar · Cloud-to-thing Continuum.

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