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*Digital Cities – Reality, Vision, Cognition, Virtuality*

The digital city metaphor has been used in several contexts that are slightly connected. The digital city can be a representation of reality, it may be an IT infrastructure or even a virtual community. The recent development of positioning, imaging and information technology – as a byproduct – has produced an enormous amount of continuously generated instant data that can be used to describe, register and analyze the human environment. The bottleneck of the digital city solutions is the management of the Petabyte range of information. The most efficient way of communication is the synthesis and aggregation of mass data in a structured, iconic graphic map form. The cartographic representation as a “language of the eye” constitutes a basic sign system for storing, understanding and communicating spatial information. The iconic turn, the increasing need of efficient visualization of mass data requires the complex analysis of the geometrical, graphical, semantical, ontological representations of geospatial phenomena. In the present paper we analyze the visual communication requirements of digital cities, and compare the traditional precision-oriented geometrical map representations with the cognitive mental model of the depicted geographic space.

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