An urban environmental database suitable for planning purposes:
A case study for Dublin
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Abstract

One of the great challenges in urban climate research is to transfer the results of this work to planning and design practitioners. In order to handle the complexity of the urban environment much research was carried out using very simple configurations (e.g. symmetrical street canyons). However, such experimental work often requires specialized knowledge and often has little obvious correspondence to real-city environments. Ideally, urban climate knowledge could be integrated into the working context of these practitioners. This is most effectively done through an urban GIS model where the planner's local knowledge of places can be linked with environmental quality. Recent advances in both the availability of urban 3-D data and in GIS software could provide this link. For example, detailed building topography allows us to estimate variables such as solar access and sky-view factors, which exert considerable influence on micro-scale climates, on a city scale. This poster will describe a project that is building an urban environmental database for Dublin city (which includes buildings and trees) suitable for climate-based planning.