

A global perspective on 3D cadastral development

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Abstract:

Nowadays 3D city models, 3D urban databases and 3D land information systems are reality in many countries. However, despite these advances, accurate 3D geometries and appropriate legal registration of cadastral objects in the third dimension is still lagging. This is despite existing well over a decade of significant research and development work in the area. The key driver for these developments were arguments suggesting that two dimensional land-parcel data was insufficient for representing 3D land rights, restrictions and responsibilities (3D RRR) – especially in highly complex urban areas where the variety and multifunctional use of buildings and spaces is prevalent. Despite no country having seemingly fully transitioned their 2D cadastral environment to 3D, there has been much implementation exploration across numerous contexts. To this end, this paper begins by revisits the ground breaking work completed in the Netherlands before providing an overview of other more recent developments globally. The aim is to provide a global overview of the hotbeds of development and also discover trends in terms of technology development and societal demand. This study concludes with review of the key findings and provides suggestions for global perspective and development for 3D Cadastre.