

3D Cadastres Best Practices, Chapter 5: Visualization and New Opportunities

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SUMMARY

This paper proposes a discussion on opportunities offered by 3D visualization to improve the understanding and the analysis of cadastre data. It first introduce the rationale of having 3D visualization functionalities in the context of cadastre applications. Second the publication outline some basic concepts in 3D visualization. This section specially addresses the visualization pipeline as a driven classification schema to understand the steps leading to 3D visualization. In this section is also presented a brief review of current 3D standards and technologies. Next is proposed a summary of progress made in the last years in 3D cadastral visualization. For instance, user's requirement, data and semiotics, and platforms are highlighted as main actions performed in the development of 3D cadastre visualization. This review could be perceived as an attempt to structure and emphasise the best practices in the domain of 3D cadastre visualization and as an inventory of issues that still need to be tackled. Finally, by providing a review on advances and trends in 3D visualization, the paper initiates a discussion and a critical analysis on the benefit of applying these new developments to cadastre domain. This final section discusses about enhancing 3D techniques as dynamic transparency and cutaway, 3D generalization, 3D visibility model, 3D annotation, 3D data and web platform, augmented reality, immersive virtual environment, 3D gaming, interaction techniques and time.

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