The Effective Use of Three Dimensional Visualisation Modelling in the Routine Development Control of Urban Environments.

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By

Susan Mary Plotsch

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School of Architecture, Landscape Architecture and Urban Design, Adelaide University, Australia,
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Abstract

The effective use of three dimensional computer visualisation in shaping our urban environments is a recurrent goal in the research literature. Much of this literature focuses on visualisation's use in development control as a means of improving the decision making of planners and politicians and assisting the participation of the public in the approval process. However, implementation of visualisation on a routine basis within planning authorities remains very limited.

This research investigates technical and cultural issues in using such modelling in a busy Australian city planning office. It trials relatively abstract three dimensional visualisation models rather than the more human and computer time intensive photorealistic renderings emphasised in the literature. It recognises that development control is a wholly socially constructed process and therefore also explores the implications that the social, cultural and organisational issues have for the use of visualisation modelling within this construction. These issues have been rarely raised in the literature. By examining the social as well as the technical sides to the social process of development control, a fuller picture of visualisation modelling's potential role and place within everyday, routine planning practice emerges.

Chapter 1 of this thesis sets out the purpose of this research and the key questions it seeks to examine. Chapter 2 explores two areas. Firstly, the wider context of the research literature is discussed, highlighting where this research seeks to extend and develop three dimensional modelling for development control beyond the limitations of sophisticated and costly modelling approaches. Secondly, the local context is examined with a review of development assessment procedures and the computer modelling experience of the planning authority prior to this research. Chapter 3 presents and justifies the constructivist research approach and the methods used to pursue this research. Chapter 4 describes fifteen case studies as practice narratives, each providing the material for Chapter 5's discussion of their significance for the use of three dimensional modelling in routine development control. Chapter 6 concludes the research, outlining its key findings and implications for planning practice, architectural practice and future visualisation research.