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A Parametric Design System for Street Cross Sections

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Abstract. City environment is very much determined by the design of its streets  
and in particular by the design of its cross section. This paper shows a street cross  
section design interface where designs are controlled by an ontology and a  
parametric design system. The system keeps its semantic structure through the  
ontology and provides a design interface that understands the computer  
interaction needed by the urban designer. Real time visual analytics are used to  
support the design decision process, allowing designers to objectively compare  
designs and measure the differences between them, in order to make informed  
decisions.

Keywords: Parametric design · Ontologies · Compound grammars · Street cross  
section · Urban design systems