APPROACH FOR THE SEMI-AUTOMATIC VERIFICATION OF 3D BUILDING MODELS

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Abstract. In the field of spatial sciences, there are a large number of disciplines and techniques for capturing data to solve a variety of different tasks and problems for different applications. Examples include: traditional survey for boundary definitions, aerial imagery for building models, and laser scanning for heritage facades. These techniques have different attributes such as the number of dimensions, accuracy and precision, and the format of the data. However, because of the number of applications and jobs, often over time these data sets captured from different sensor platforms and for different purposes will overlap in some way. In most cases, while this data is archived, it is not used in future applications to value add to the data capture campaign of current projects. It is also the case that newly acquire data are often not used to combine and improve existing models and data integrity. The purpose of this paper is to discuss a methodology and infrastructure to automatically support this concept. That is, based on a job specification, to automatically query existing and newly acquired data based on temporal and spatial relations, and to automatically combine and generate the best solution. To this end, there are three main challenges to examine; change detection, thematic accuracy and data matching.

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