

3D Object Reconstruction from Point Cloud Sample

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ABSTRACT

The rapid progress of computation and laser scanner in market have driven the CAD/CAM softwares to promote the functions for integrating its pre- and post processing, Owing to the advance of scanning technology, the reconstruction of point cloud data obtained from surface scanning of real object becomes the important research topics, and is also the aim of this paper. Because of the different data format adpted by scanner and software, the first work in this paper is the processing and transformation of these data format between softwares. Next , the reconstruction of surface model from point cloud data are explored. Also the gap filling during reconstruction are concerned. Finally, The three more concerns : the construction of 3d solid model from surface model, the treatment of sharp edge feature, and the error analysis are explored.

Keywords : Reverse Engineering ; point cloud ; solid model ; error analysis

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