Urban Modeling through Laser Scanning

Professor Baoquan Chen
Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences
http://web.siat.ac.cn/~baoquan/

Digital Earth platforms such as Google Earth 3D and the recent Apple 3D Maps have seen explosive growth in applications by governments, industry, and end users. This has thus provided impetus for more efficient and capable tools to push 3D representation and simulation of urban environments to a finer level than it is today. In this work we introduce our effort on acquiring, modeling, and visualizing large and detailed urban environments, facilitating generation of a "live" digital city environment. Specifically we introduce a set of methods for reconstructing buildings and trees based on laser-scanned 3D point clouds that are often sparse, incomplete and noisy.