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Abstract submission for the NCG Symposium 2020

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Presentation title: Mobile Laser Scanning point cloud segmentation with LSTM: Preliminary results

Demo: no

Abstract:

Point clouds acquired with Mobile Laser Scanning (MLS) present 3D environments and are processed as 3D data. However, the acquisition of MLS point cloud data is done in a linear way and the time in which each point was acquired is recorded in the timestamp attribute. Following this consideration, the point cloud can be interpreted as a continuous signal in time. This work explores a first approach to MLS point cloud segmentation (Figure 1) using Recurrent Neural Networks, specifically the Long short-term memory (LSTM), which is widely used in the processing of other signals such as text and voice.

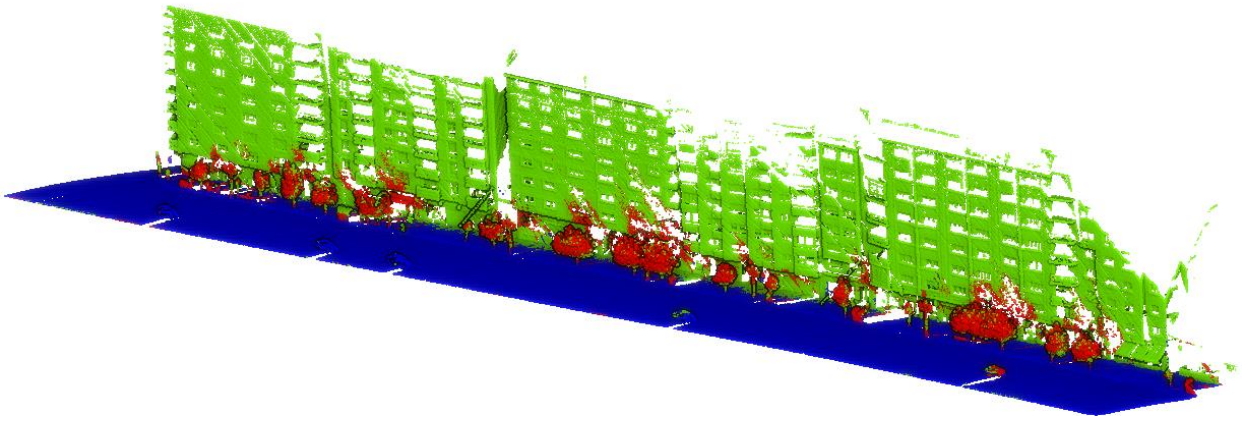

Figure 1: Street point cloud segmented with LSTM in ground (blue), building (green) and objects (red).