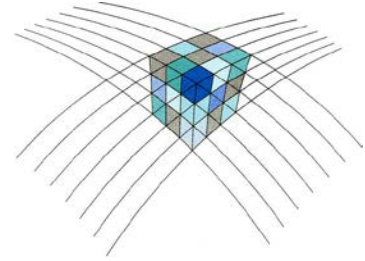


NCG



Netherlands Center for Geodesy and Geo-informatics

Abstract submission for the NCG Symposium 2020

Abstract submission deadline: **24 August 2020**

Please submit your abstract EasyChair

<https://easychair.org/conferences/?conf=ncg2020>

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Presentation title: Using Foreign Data Wrapper in PostgreSQL to Expose Point Clouds on File System

Demo: yes/no no

Abstract (~100 words and optionally 1-2 figures):

Point cloud data is being an important geographic data type and it is an advantage to manage LiDAR data in a spatial solution and combine LiDAR data with other type of geographic information. Foreign Data Wrapper (FDW) can be the hybrid solution for point cloud data management, storing data in file system and information being able to be exposed in database management system. This research is going to answer the question that to what extent we can use LiDAR point clouds directly in the PostgreSQL. To answer this question, firstly FWD need to build fundamental connection between LAS/LAZ files and PostgreSQL, in other words reading all the points in file to the foreign table in PostgreSQL. Then, FDW need to achieve subsequent functionalities, the basic one is points selection, other operations like handling multiple files, data manipulation, type conversion are also significant. Because many point clouds datasets are collection of several files as a file system, it is useful to develop a point clouds data management system, where each file contains metadata attributes in header: filename, format, bounding box/extent, point count. In this presentation, the background and related work will be introduced, then the methodology and developed implementation will be presented, then results and analysis will be given, followed by discussing the conclusion and future work.