Visualizing Forest and Vegetation from Lidar data

Aerial images are great for interpreting tree species, but they don't show tree heights and structure in the forest. Blom is a supplier in the Nordic market for capturing, processing and modelling of geographical information and created Blomforestview. This software makes Lidar data easy to interpret, individual trees are visualized with a color scale that describes the height of the tree. The surface model is treated so that the user also gets an impression of heights in the landscape, and put in context, new information can be obtained from the surroundings. In both forests and urban areas, even good aerial photographs lack the ability to emphasize such altitude properties. Laser data gives good height information, however, pointclouds are still difficult to handle and hard to visualize in GIS context as raster maps. Blomforestview provides an optimized representation of laser data, with vegetation in focus.

The map is a raster representation of a digital surface model generated from a combination of processing steps to transform standard Lidar into useful imagery. Blomforestview uses 2 and 5 points/m² Lidar data from the National Detailed Height model NDH in Norway. NDH is initiated by the Norwegian Mapping Authority and the raw Lidar pointclouds are available for free.

Norwegian users start to discover the value of the visualization. Forest companies are using the data as background image while making forest management plans and for planning forest operations like logging. Powerlines companies use it for planning and evaluating vegetation clearing in powerline corridors. Other foreseen uses are urban planning, landscape monitoring and the mapping of natural vegetation.