Timber Species Identifier

Object Raku’s Timber Species Identifier (TSI) is an automated GIS software system that analyzes LiDAR point cloud data to determine the location and species of individual trees. The software was developed to the exacting standards of key forestry partners. Leveraging that industry-specific expertise freed Object Raku research staff to focus on solving the critical problem at hand — how to tell one tree from another based only on the composition of its point cloud.

The combination of innovative spatial analysis and Object Raku’s years of experience working with remote sensing data enabled the team to achieve the TSI breakthrough. TSI’s species identification capability represents a remarkable innovation and a tremendous advantage to the forestry industry.

To date, TSI has been tested and validated on over 250,000 hectares of timber area and has segmented over 82 million trees. TSI allows foresters to extract the maximum return and operational benefit from their LiDAR investment.

What is the TSI process?

The first goal is to determine the scope of your organization’s species identification requirements. In a nutshell, we want to determine how many different species need to be identified over how much area.

From there we will look at any existing LiDAR data and its suitability for the TSI process. The key factors in this stage are the point density of the data along with the completeness of the LiDAR attributes.

Having answered the questions on scope and data compatibility, the next step will be to decide on the most efficient deployment of the TSI software. The latter will depend on your organization’s GIS structure and ongoing operational goals.

And then finally, the project plan including timeline and required resources can be outlined. The range of outcomes here can be a straightforward delivery of species identification with no software delivered up to a full integration of the TSI suite into your organization’s GIS framework.