SP TimberNav

SP TimberNav is an application for the optimization of log class boundaries, sawing patterns and product outcomes. SP TimberNav uses statistical methods and linear programming to forecast and keep track of log classes, settings and product outcomes. SP TimberNav can also optimize the value of the sawmill’s produced lumber by determining appropriate sawing patterns and/or log class limits, and by optimizing settings according to customer requirements.

What do you get out of SP TimberNav

- Product outcomes for different time horizons
  - Select the timber distribution, e.g., monthly or annual amount of log batches. You can work with any number of distributions and you can quickly switch between different time horizons.

- Calculate the impact on the product outcome depending on changes in:
  - Log classes
  - Sawing patterns and the distributions of different sawing patterns in log classes
  - Product pricing

By testing and changing, you can predict what volumes and values will result under varying circumstances.

Value optimization of product outcomes

SP TimberNav can also optimize the value of sawmill product outcomes.

By adding the desired minimum and maximum volumes for different products, the program can optimize the total product value based on the given conditions. This may, in a first step, be done by letting SP TimberNav select the best combination of sawing patterns for your log classes.

If you want to go further, you can let SP TimberNav change the diameter boundaries of log classes to see if this leads to additional value improvement. By using SP TimberNav’s optimization function you can optimize both the log classes and the product outcome of your sawmill.

How it works

SP TimberNav is a standalone desktop application that uses the sawmill’s own data about logs, sawing patterns, timber distributions and product volumes to create forecasts and optimize production settings.

Raw data on an appropriate number of logs, 4000 to 8000, is collected using the 3D scanner at the log sorting station or at the saw intake. Based on this data, sawing simulations are done over the whole batch of collected logs using a number of different sawing patterns for each log. You can use your own sawing simulation software if you have one or ask us to do the simulations for you. All data is stored in a database and used for the production optimization. Finally, by applying linear optimization, the combination of log classes and sawing patterns yielding the highest value of sawn goods and meeting all production demands is found.

SP TimberNav is developed in cooperation between SP Wood Technology and WoodCenter North, a research organisation including many of the major sawmill companies in Sweden.

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SP Wood Technology is a major player in the development of the new bio based society. Our research and development activities are dominated by large national- and international projects as well as industry projects. We are also actively involved in standardization through CEN and ISO. SP Wood Technology has qualified resources for research as well as testing for a range of materials and products.

The department of Processing and Processes supplies the wood working industry with measuring tools developed from extensive research activities as well as from customer demands. Processing and Processes supply the industry with development of new technology, methods, and processes in order to give the wood mechanical industry possibilities to deliver high quality products in a cost-efficient way.

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