Trek Bicycles Software Races To 9-Month ROI

Trek Bicycle Corporation, founded in 1976 and based in Wisconsin, is a world-leading manufacturer of bikes. As a company that focuses as heavily on its carbon footprint as it does its manufacturing quality, they were looking for ways to streamline their nesting for their Gerber knife cutters.

Trek evaluated the market, finalizing on two systems, however only JETCAM's nesting and CAM software delivered the combined mix of automation and desired interaction. Furthermore, they had created a special format to set the cutting speed based on the number of layers to be cut per pattern, and no system other than JETCAM was found to handle the format.

"Prior to purchasing JETCAM, static nests were being generated manually," said Ben Fisher, Product Manufacturing Engineer for Trek. "These static nests could take several hours to create and were often inefficient depending on the creator and the part shape. We were looking for an opportunity to decrease our nesting time, maximize our material yield, and possibly generate dynamic nests for daily production. Dynamic nesting could not have been done effectively with our current method of manual nest building."

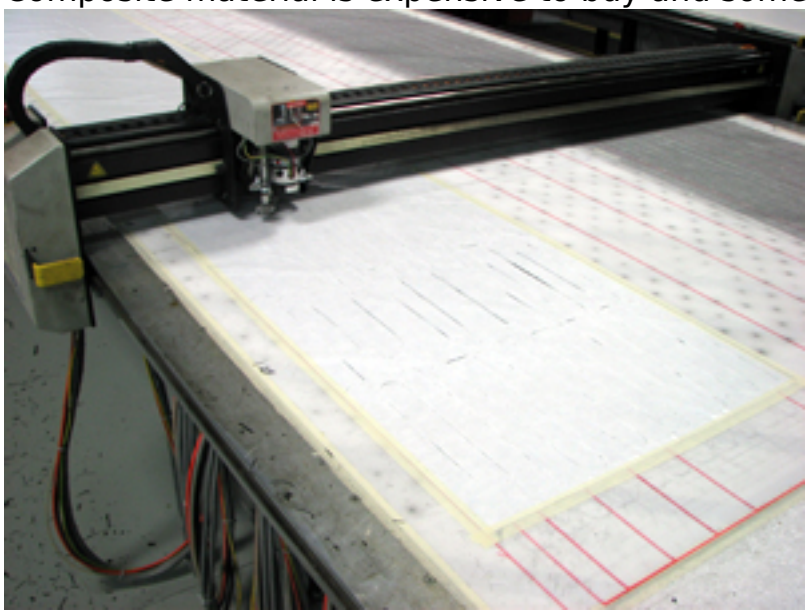
TClaude Drehfal, a manufacturing engineer for Trek, also worked on the implementation.

"Based on sample nests of common parts we were able to justify the cost with less than one year payback," noted Drehfal. "Also, JETCAM distributor NestOne allowed us to fully evaluate the software to ensure it met our needs."

The system was installed in December of 2009. Five engineers were trained, with the full installation taking just one week. JETCAM Expert, High Performance Nesting and Remote Control Processing (RCP) were installed to act as a ‘black box’, automatically nesting orders. JETCAM Orders Controller (JOC) was used to manage kits to be nested. Users could batch process nests to determine optimal kit quantities, and also provided the ability to import files from DXF or CATIA-generated XML files. JETCAM’s advanced security module also provided user level access rights to functions.

Immediately after going live a number of benefits came to light. Programming time was virtually eliminated, as orders were queued in JOC and then passed to RCP for automatic nest processing. Single Component Automatic nesting (SCAP) is also used to process CAD files, creating geometry and applying profiling automatically.

Composite material is expensive to buy and sometimes difficult to source.



“After going through and replacing our manual static nests, with JETCAM built nests, we have seen a 5% increase of material yield,” said Fisher.

In the six months since installation, Trek has already received one update which provided new functionality, and Fisher feels confident about the service he has received from NestOne.

“The support we received from NestOne before the sale made us much more comfortable purchasing the system,” he said. “They have a great support team there and we receive quick and helpful responses.”

Trek is on target to see a complete return on investment within nine months of installation. Several programmers are using a single system, accessed through remote desktop and automated through RCP. They also plan to move to complete dynamic nest generation along with laser kitting at the machines. Fisher is confident that JETCAM will continue to play a major role within the company.

“The system is very user-friendly, the speed of nest build is very fast, and we've

received excellent support," he stated.

Benefits Achieved:

- Return on investment in under 9 months
- Immediate 5% increase in material yield
- Full evaluation allowed Trek to buy with confidence
- RCP allows for totally unmanned nesting, saving 1-2 hours per kit
- JOC provides batch processing of kits and also to import CATIA XML files
- Software updates deliver further benefits
- Advanced Security allows user level restrictions
- Installed, with five staff trained in under a week
- Excellent dealer support

Machines in use:

- 3 x Gerber DCS 2500 CNC knife cutters

For more information on JETCAM International, visit www.jetcam.com *[1].*

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