Intelligent Sheet Optimizing CAD-CAM Software

The new Nesting module within BobCAD-CAM software is an advanced nesting system that allows you to achieve a higher per-job profitability via improved sheet yields and reduced waste. The powerful true shape nesting engine and intelligent sheet optimizers run your job through up to 102 trials to deliver the best possible part placement.

FEATURE: Redesigned User Interface

The newly redesigned user interface features a modern, Ribbon-style UI. This will help users discover functions easier. With the intuitive organization of the interface, users will be able to remember where functions are easier, and as the software grows, it will be much easier to find new functions in already familiar groups.

FEATURES:

**True Shape Nesting Engine**
True shape nesting goes beyond the classic tile-styled nesting. Instead, it quickly evaluates the entire sheet area and intelligently positions parts around each other to yield the best sheet utilization rate and least amount of waste material.

**Nesting CAM Wizards**
The wizards include helpful images to remove the guesswork and provide a simplified nesting solution on even the most complex of jobs.

**Remnant Sheet Generation**
Generating a remnant sheet, allows you to save the shape of the leftover sheet and use it to nest a future job.

**Custom Sheet Shapes**
Not only can you create high efficiency nesting jobs on rectangular stock, but you can also use custom defined shapes and even sheets with holes.

**Nesting with Tabs**
The system has 2 different strategies for adding tabs to fit your machining needs. For a typical woodworking job, you can simply have the tool lift to leave a tab. Or, you can apply leads to create your tabs.

**Nesting Optimizers**
Without any optimization, most results are created in a matter of seconds. However, by allowing the system to run up to 102 trials, the system can improve material utilization by an average of 3-15%, which can have a significant impact on material savings.

**Grain Direction**
The nesting solution allows you to define the grain direction for both the sheet and parts to assure your parts are cut exactly how you want them to be.

**Part-in-Part Nesting**
The powerful nesting engine calculates which parts can be placed inside of larger parts that would otherwise contain wasted material.

**Filler Parts**
The software will add as many filler parts as possible at the end of the nest to maximize the sheet usage. Simply add the filler part to your nest, specify a quantity, and let BobCAD-CAM do the rest.

**Thermal Considerations in Cutting Sequences**
To avoid collision points, you can now define a thermal distance, which the software uses to calculate a smarter cutting path to avoid hot zones.

**Sheet & Part Priority**
Setting priority levels on your sheets and parts lets you control the order in which parts and sheets are nested.

**Enhanced Stock Margin**
You can select either a uniform margin around the entire sheet or specify a variable margin for each side of any rectangular sheet.

**Local Area Nesting**
Whether you’re working with rectangular sheets or custom shapes, local area nesting allows you to specify an X and Y area of the sheet that you want your nesting to stay within.

**Multiple Corner Nesting**
With multiple corner nesting, you can assign larger or higher priority parts in more than one corner to gain a better layout.

**Multiple Machining Order Options**
By Part – Each part is finished before moving on to the next part.

By Tool – Each tool is used to finish all of its operations before switching to the next tool, reducing the amount of tool changes.

By Tool Per Feature – Each tool is used in order and completes the same feature of all parts before machining the next feature of a part instance.

**Nesting Summary Information**
After all the parts have been nested, the software creates a detailed summary report on the number of parts nested, any parts not nested, and effective sheet utilization percentage.

**Full Machine Simulation (Optional)**
Full machine simulation allows you to utilize the kinematics of your machine and provides a full visualization for testing and confirming your nest programming.

**Export DXF**
Many controllers for CNC routers and plasma machines expect the toolpath to be imported onto the machine using DXF files instead of NC files. BobCAD-CAM gives you the ability to export the toolpath or the nested parts to a DXF file to accommodate these machines.