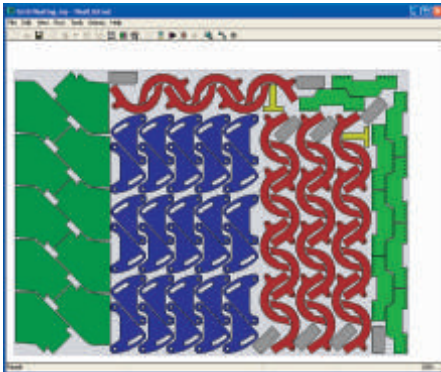# NestLib®

A **Geometric** Product

OPTIMIZE
Material Usage

INCREASE
Productivity

Automatic Nesting Software Library
Powered By Multi-core Technology

NestLib®
A Geometric Product

17 years
1994-2010 WORLDWIDE

NestLib: The first choice for nesting engine.

Grid Nesting

NestLib® is a comprehensive, automatic nesting software library that aims at optimal utilization of raw material. NestLib studies the requirements of heterogeneous parts to obtain the most efficient way of producing them. In addition to saving material while producing the parts, the software also allows reuse of the waste material for future requirements. Auto manufacturing, aircraft, printing, sheet metal and shipping industries actively use NestLib to achieve their production targets faster.

NestLib comes with a highly flexible and customizable Base Module that incorporates core algorithms and techniques for automatic nesting. It also offers a host of additional functionalities to customize the nesting application for diverse requirements, and optional advanced modules for highly specialized requirements.

Features of Base Module

Fully automatic True shape nesting solution

- Efficient nesting on multiple sheets of different sizes and shapes in a single run
- Corner and direction specification for each sheet
- Grain direction control for parts and sheets
- Lead-in and lead-out support for each part
- Support to attach priority to each part
- Preferential nesting of parts in holes of larger parts
- Multiple corner support for each sheet
- Support for rotation and mirroring for each part
- Nest filler parts for improved material utilization
- Facility to nest collection of inter-related parts as a single unit
- Guillotine cut feature
- Utilizes best nesting direction for optimum utilization
- Local area feature to nest in specific region on the sheet

Optional Advanced Modules

- Clusters and Common Cut
- Multiple Torch
- Master Plate
- Common Punch
- Grid Fit
- Optimizer
- Shear Nesting
- Optimized Rectangular Nesting
- Inventory Forecasting
- Cutting Sequence Generation
- Remnant & Scrap Generation
- Strip Nesting
- Speed Nesting
- Leather Nesting
- Tube Nesting
- Snap Nesting
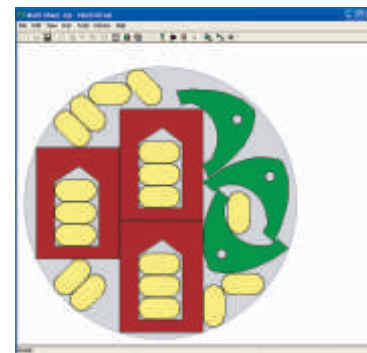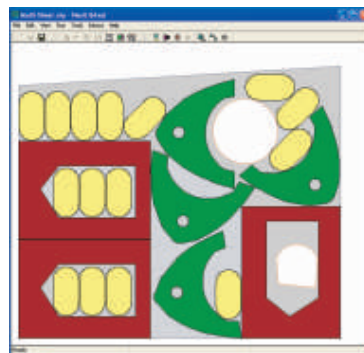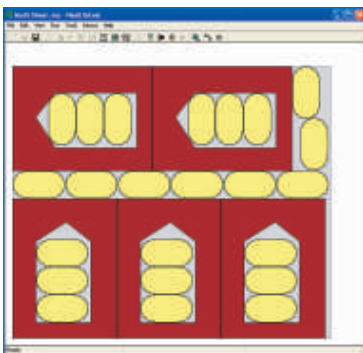
Nesting on multiple sheets - Rectangular/ Non-rectangular sheets with holes
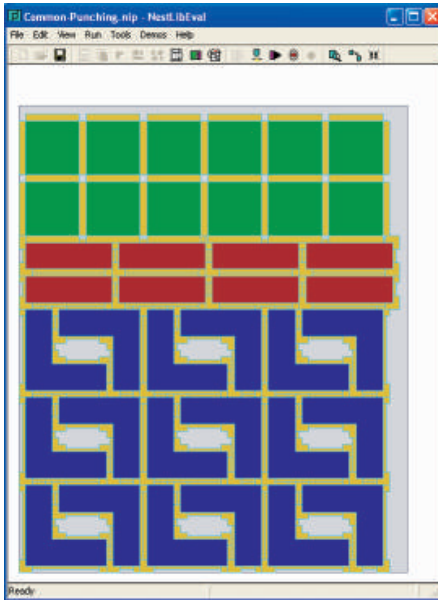
Common Punching

Why NestLib?

NestLib increases productivity
- Provides complete nesting in a matter of few seconds
- Automates the production line completely

NestLib saves material
- Provides optimized and compact layout, reducing raw material consumption
- Reuses waste material
- Predicts inventory requirement

NestLib is easy to integrate
- Integrates with existing system or product in less than five days
- Requires minimal programming knowledge

NestLib is flexible
- Can be customized to meet diverse requirements
- Classified modules for industry specific needs
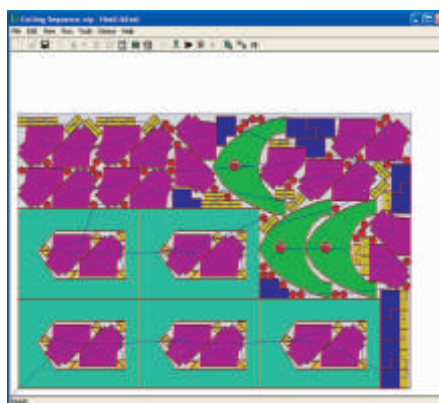
Industries using NestLib

- Agriculture equipment manufacturer
- Aircraft/ Composites
- Automotive
- CAD/ CAM Solution provider
- Construction
- Engraving/ Sign making
- Leather
- Machine Tool
- Oil
- Packaging
- Plastic/ Marble/ Glass/ Granite
- Printing
- Sheet metal
- Shipping
- Shoe manufacturing
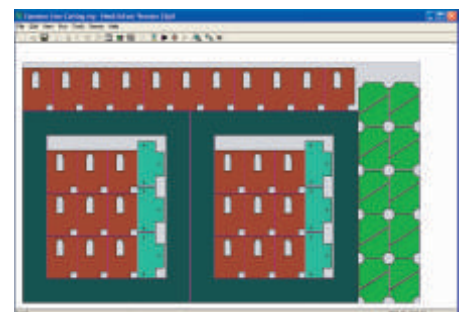- Textile
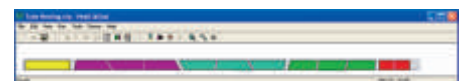- Wood working/ Cabinet making
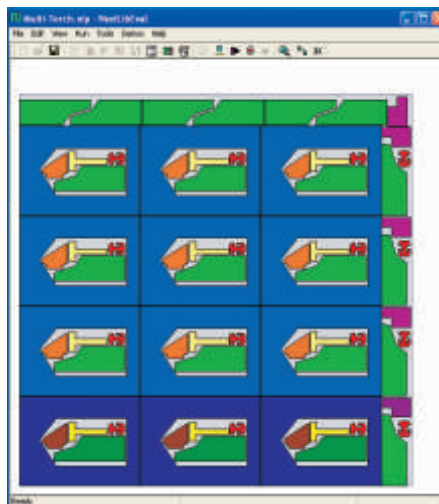
Multiple Torch Nesting
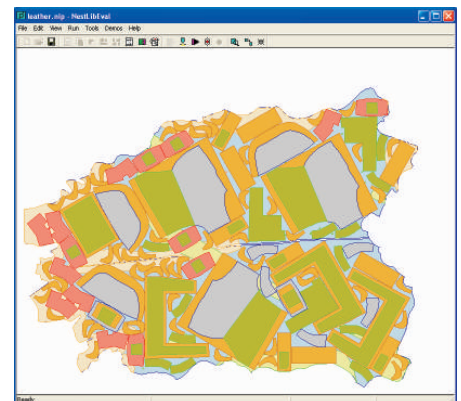
Leather Nesting

Cutting Sequence

Common Line Nesting

Tube Nesting

*Licensed by over 96 original equipment manufacturers and independent software vendors*

NestLib Successes

Enterprise wide efficiencies for a global heavy equipment manufacturer

A global Fortune 500 company increased its material utilization and efficiency by sharing and reuse of engineering expertise across the enterprise. The solution involved integration of heterogeneous design formats and platforms into a browser based design tool, to generate nested designs, collaborate and capture engineering knowledge for sheet metal cutting. The design processes were automated using NestLib technology. This led to *significant savings of over 20 man-years of direct development effort* and resulted in *over 4% improvement in enterprise wide material utilization.*
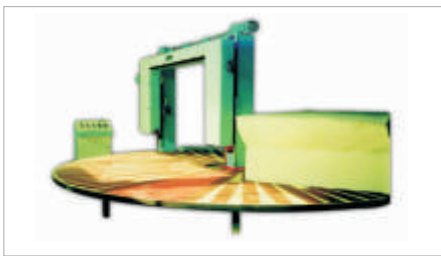
Heavy equipment machinery

A US based machine manufacturer increases productivity with NestLib

A leading US machine manufacturer of foam products required a solution for nesting and cutting parts from foam blocks. Specific modules from the NestLib technology were deployed to automate the manufacturing process. A sequential cutter path was generated specially for the nested parts, thus addressing the blade twisting constraint faced by the customer. This unique solution allowed parts to be cut vertically from a foam block, reduced programming time and manufacturing cost, to give the customers a leading edge.

Foam product machinery

NestLib is available on Windows platform as:

- *32 bit static library*
- *32 bit DLL*
- *32 bit executable*
- *Support for multi-core computing for both dual & quad core computers*

- *64 bit static library*
- *64 bit DLL*
- *64 bit executable*

- *Support for COM DLL*
- *Support for .NET*
- *Library with JAVA wrappers*

Also available on UNIX, LINUX, SUN Solaris

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http://nestlib.geometricglobal.com

About Geometric

Geometric is a specialist in the domain of engineering solutions, services and technologies. Its Desktop Products and Technologies (DPT) business unit develops cutting-edge point productivity solutions that enhance design and improve manufacturing operations. The end-user products from Geometric include CAMWorks®, eDrawings® Publisher, DFMPro, GeomCaliper® and 3DPaintBrush™, and the key technologies are NestLib®, Feature Recognition (FR), GeomDiff and 3DSearchIT®. Geometric licenses these technologies to OEM partners and also designs and implements customized process solutions using these technologies for industrial customers.

For further details about Geometric's DPT business unit, please visit www.geometricglobal.com/

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