Design and manufacturing data in your CAD system is automatically read by Optimation®. Some examples are:
- raw material
- grain direction
- revision level of the geometry
- common cutting properties
- text etching or geometric marking
- part name or number

The nesting process begins with collecting part geometries through an automated interface module.

> **The Optimation® Advantage**
> Our automatic CAD interface saves time and reduces the chance of error in the input process. Optimation is unique; no other system has the intelligent, automated, knowledge based, programming system that will cut costs and respond rapidly to complex and demanding requirements.

Seamless Connection

Optimation provides a tight integration with built-in configuration management. The Optimation CAD interface works with all standard CAD formats and a number of custom imbedded CAD interfaces that automate unfolding and seamlessly transfers data to Optimation.

Automating the Repetitive

Within Optimation the user has the option of operating the CAD interface in "Automatic mode," programming hundreds of new CAD files in a few minutes. Optimation can support automatic programming because of its powerful expert system and the Knowledge Base. Hundreds of "set and forget" parameters allow Optimation to customize NCExpert™ to your exact needs. The automation reduces programming time to less than 10% of interactive systems. Fast, intelligent and accurate part programming allows our customers to program thousands of parts with little to no human interaction.

When operating in automatic mode, the process to prepare CAD files for nest creation takes very little time, and it is done without human intervention. This automatic process eliminates countless hours of repetitive work and frees your valuable technical assets for more important cost reduction work.

Ask about the importance of our single-step, single-database interface that eliminate the cost and errors of double database systems. Contact us at optinest.com/ contact_us.asp

Single-Step, Single-Database Design

Optimation can automatically retrieve manufacturing data from your manufacturing database and merge it with the CAD data in a single seamless step. Unlike the obsolete design that requires the purchase of a second CAD system and adds multiple steps to the process, Optimation® provides a highly integrated single step system that works automatically with our part programming expert system NCExpert™.

The CAD files are automatically programmed for production and stored in the Master Part Library for nesting on demand.

Concurrent Engineering

Our single-step, single-database design provides for concurrent engineering by allowing all needed data to be stored in the CAD model.   A designer can quickly check a part that was just designed for manufacturability with the existing machines and tooling.   A single button push will allow NCExpert™ to check the program to make sure that it can be manufactured. This allows the designer to make changes or call in manufacturing engineers to ensure that the new requirement is met before the order hits the shop floor.

Identifying Exceptions Automatically

If any parts are identified as not "production-ready," for example no material is assigned to the part or the geometry cannot be produced as designed, the part will be flagged for correction.

The CAD interface can automatically communicate manufacturing attributes assigned to a part during the design stage to the expert programming system.

If any part is missing information that prevents it from being automatically programmed, it is placed in an exception directory for correction by system operators.   This allows for special treatment of a few parts while eliminating the need to touch every part programmed.

With our single-step, single-database design, configuration management is automatically built-in.

The Optimation Advantage
Optimation® tightly integrates with your existing CAD system(s). Design and manufacturing data can be input into Optimation® automatically in a single step.   Our design eliminates the need to purchase, learn, and maintain another CAD system.   Because we work with all CAD systems multiple CAD systems can be integrated into Optimation®.

Communicating Manufacturing Attributes

A range of manufacturing attributes can be assigned to a. part during the design stage of the manufacturing system. This information can include machine process type (cutting or marking process type), raw material, grain direction, work center destination (limit part to a specific machine) revision level of the geometry, common cutting properties, text etching or geometric marking, part name or number, and more.

Contact Optimation for more information.

About Optimation®

Optimation® delivers economic performance for fabricators through advanced nesting software. Optimation® develops and supports nesting and CNC part programming software for fabrication processes, which include punch, laser, plasma, Waterjet, router, and CNC knives. We cover the range from single-machine sites to sites with hundreds of machine tools with the highest possible automation.

Our automated approach to manufacturing solutions dates back to our beginning more than three decades ago. It is our belief that routine - and even not so routine - nest technology fabrication can be best achieved through a rules-based system that reduces not only material waste but programming time and error and keeps the manufacturer in control.