The nesting and programming reference solution for 2D cutting and punching-nibbling
Advantages and benefits

• Support of machines of any types and brands.
• Support of any cutting technology requirements.
• Powerful nesting algorithms and optimized tool path research.
• Automatic user assistance at any stage of the programming and ability to work in full automatic mode.
• Easy-to-use.
• Software openability (interaction with various 2D/3D CAD systems and Production Management Systems or ERP solutions).
• Available built-in customization tools.
• Availability of complementary and task-oriented modules: metal sheet part unfolding/folding, libraries of 3D and 2D shapes, letter and drawing cutting, stock and manufacturing order management.

Supporting a wide range of machine and technology requirements at every step of programming - from part preparation to the NC code generation, including nesting and tool path definition - act/cut can pilot any types of machines.

Providing unique nesting algorithms that fit any type of cutting needs, act/cut significantly decreases material loss rates and improves productivity.

Whenever possible, the software operates in full automatic mode. However, in very touchy situations, act/cut, in order to ensure the most efficiency, operates in interactive mode, and the user makes the final decision.

Open and customizable, act/cut imports part geometries from any CAD software and easily interacts with Production Management Systems or ERP solutions. Various complementary modules can be optionally integrated to act/cut.

“act/cut automatic nesting decreased preparation time by a factor of 2 and improved material use by 23%.”

Socata
Main functions

### 2D cutting
- Support of all technological parameters and machine configurations.
- Launching order management: parts and formats are grouped according to material and thickness for nesting purposes.
- Manufacturing order and format stock management (act/manager optional module).
- Connection to production management and ERP systems (act/manager optional module).

### Punching
- Support of all technological parameters and machine configurations (including punching or combined machines).
- Tool library management.

### Remote software operation
- CAD import and 2D geometry creation
- Technology
- Automatic and interactive nesting

### Streamlining the use of sheet formats, combined with act/cut nesting performances enabled us to decrease loss rate by 10 points.
*Trane*
Main functions

### Tool path optimization

**2D cutting**
- Automatic calculation of tool paths respecting technological constraints (for example to avoid warping).
- Interactive modification (lead-ins, cutting sequence, trajectory, etc.).
- Simulation of tool path.
- Automatic calculation of off-sets in straight and beveled cut.
- Specific cutting functions: continuous cutting (to minimize lead-ins), common cut, skeleton cutting, programmable bevel management, control of marking etching and boring systems, speed control in water-jet cutting (accelerations or decelerations), loop support, collision avoidance with parts already cut, etc.

### ISO code generation

- Advanced post-processor generator.
- Programming with or without sub-programs.
- Cycle time calculation.
- Printing of customizable workshop documents (PDF).

### Punching

- Automatic calculation of tool paths respecting the part evacuation and tool use order.
- Interactive modification of tool or or sequence, etc.
- Simulation of tool path.
- Common cut ensuring the evacuation of a single part at once.

### All round benefits with act/cut

#### Reduced preparation and programming time

- Full automation available for every step of the programming process (CAD-CAM interfaces, nesting, tool assignment and tool path definition ...) and operation possible in «batch» mode.
- «Intelligent» features: selection of optimization strategies according to specific situations; re-use of recorded scenarii in similar contexts.
- Smooth-integration to the client’s Information System: direct and automatic links with CAD solutions, ERPs and other CAM modules (bending, unfolding, etc.).
- Control of all your machines using the same software.
- Complementary task-oriented modules (folding/unfolding, letter and drawing cutting, tube cutting, 3D cutting, etc.)
- Simplified programming (user friendly, software standardization, flexible switch between automation and interactivity).
- Easy to learn (short learning curve).

Using the same programming software for all our cutting machines, and on all of our production sites enabled us to share our resources.

Marchesini Group
### The various shortcuts found within all levels of the software, and its full integration in the Windows operating system resulted in fast programming.

**Nichrominox**
Laser cutting
Providing efficient and automated nesting capabilities combined with the ability to support all laser cutting functions as well as to manage a wide range of technological parameters, act/cut is the most productive and effective solution for programming your laser cutting machines.

Plasma cutting and oxy-cutting
Thanks to its ability to meet specific machine requirements, including heat constraints, involved in oxy-cutting and plasma cutting, act/cut is a powerful and flexible solution which efficiently combines automation and user interaction, when required.

Punching-nibbling
act/cut’s added value in punching-nibbling technology lies mainly in the software’s powerful automation (tool allocation, machining sequence, nesting, part evacuation, etc.). This makes act/cut a highly productive solution for on-demand production of numerous and varied parts. The software can manage all loading/unloading peripheral systems and is perfectly adapted to combined machines.

Waterjet cutting
Particularly suitable for continuous cutting whether you manage large-scale nesting or unit cutting projects, act/cut can meet any types of waterjet-cutting requirements in terms of tool trajectory, cutting speed or lead-ins/outs control. With its ability to easily adjust parameter setting to any kind of material that can be waterjet-cut, act/cut is the programming solution for your waterjet cutting machines.

Aluminium sheet routing
Alma has developed a unique expertise in the field of aluminium sheet routing technology. Today, numerous aircraft manufacturers and subcontractors use act/cut on a daily basis to pilot their NC routing machines. With high nesting performance and the ability to meet all the technological requirements and constraints of the routing process, act/cut is the ideal solution for the programming of your aluminum routing machines.

Wood panel routing
Alma has developed a unique expertise in the field of wood panel machining on 2.5 axis machines. act/cut is a high added-value software solution for all manufacturers who have significant needs in terms of part nesting. Furthermore, a dedicated module that combines geometry recognition functions and automatic machining functions, enables any CAD-designed 3D part to be imported, prepared and programmed.

Optional act/cut modules
• act/unfold: 3D import and unfolding of sheet metal parts.
• act/shapes: library of developed shapes for boiler making.
• act/sign: transformation of pictures and fonts into CAM ready files for cutting.
• act/manager: cutting process management (manufacturing orders, stock, launching orders) and data import from/export to production management and ERP systems.