SURFCAM offers three options for part design:
1. SURFCAM contains a true 3D database for complete part design, dimensioning and editing. Design your 2D and 3D parts by using SURFCAM’s robust surface and wireframe technology. Freeform design and surface manipulation have been native to SURFCAM’s kernel for over 20 years.
2. SURFCAM also offers SolidWorks to accelerate the design to manufacturing process with SolidWorks, PDM or SolidWorks, PD&A, the world’s most widely used CAD system.
3. Part Modeler is a cost effective, 3D modeling tool specifically designed for quick and simple construction/modification of solid models. Part Modeler includes translators for most CAD systems such as SolidWorks, Solid Edge, Catia, Pro/E, NX, STEP, IGES, DWG & Parasolid.

TRUEMill offers the following benefits:
- Increased Material Removal Rates up to 5x
- Reduced Cycle Times up to 80%
- Increased Tool Life up to 10x

What is TRUEMill?
TRUEMill is a patented 2 & 3 Axis toolpath that controls the tool’s engagement with the material to deliver faster and deeper cutting to achieve the highest material removal rates - in all materials & geometries.

TRUEMill Highlights:
- Full Kinematic Machine Simulation
- Comprehensive Collision and Axis Limits Checking
- Stock Removal Verification

SOLIDWORKS Associativity:
Powerful associativity enables users to open native SolidWorks files directly into SURFCAM, completely eliminating the translation process. SURFCAM automatically recognizes any design revisions in the solid model and regenerates only the affected operations. With this seamless interoperability, SURFCAM users can quickly adapt to myriad design changes.

What is TRUEMill?
TRUEMill is a patented 2 & 3 Axis toolpath that controls the tool’s engagement with the material to deliver faster and deeper cutting to achieve the highest material removal rates - in all materials & geometries.

TRUEMill Benefits:
- Increased Material Removal Rates up to 5x
- Reduced Cycle Times up to 80%
- Increased Tool Life up to 10x

Patented controlled Tool Engagement means:
- Constant Tool Engagement
- Constant Chip Thickness
- Constant Feed Rate
- Constant Tool Load
- Constant Material Removal Rate
- Ability to cut into sharp corners

Toolpath Verification Highlights:
- Compare verification results against the current part model
- Section the part after verification for detailed analysis
- Provides automatic collision detection with stock or fixtures.
- Dynamically inspect the part to determine finished dimensions.
- Display real-time, scrolling tool coordinates during verification.
- Contains many powerful tools to help ensure program accuracy.

SurfCAM’s Wire EDM package contains three different strategies designed to meet your wire EDM needs.

Wire EDM Highlights:
- 2-Axis XY: Contour cutting with multiple skim pass and tab configurations.
- 4-Axis: Cut complex angles and shapes controlled by surfaces.
- 4-Axis UV: Control your complex cuts using profiles and constriction lines.

Machine Simulation
SURFCAM offers state of the art technology to support full Machine Simulation on toolpaths in SURFCAM to ensure accurate and optimal tool and machine movement on the shop floor.

Machine Simulation Highlights:
- Full Kinematic Machine Simulation
- Comprehensive Collision and Axis Limits Checking
- Stock Removal Verification

SurfCAM uses world class technology to provide unsurpassed validation, speed and accuracy.

Wire EDM
SurfCAM’s Wire EDM package contains three different strategies designed to meet your wire EDM needs.

Toolpath Verification
SURFCAM uses world class technology to provide unsurpassed validation, speed and accuracy.

Toolpath Verification Highlights:
- Compare verification results against the current part model
- Section the part after verification for detailed analysis.
- Provides automatic collision detection with stock or fixtures.
- Dynamically inspect the part to determine finished dimensions.
- Display real-time, scrolling tool coordinates during verification.
- Contains many powerful tools to help ensure program accuracy.

“...What used to take two and a half hours with our previous, non-SURFCAM verification product, now takes under five minutes. The images are sharp and clean. The speed and accuracy enable us to have an increased sense of confidence when cutting.”

Ian Ardie, Western Industrial Tooling

For more information, please contact info@surfcam.com or find a local sales partner at: www.surfcam.com

www.surfcam.com
SURFCAM Lathe features turning, facing, grooving, boring, threading and cut-off capability. The turning package also delivers front and back angle checking on the tool for gouge-free toolpaths.

Lathe & Mill Turn Product Highlights:
• Sub-Spindle programming and automatic retract logic for complex inner diameter machining.
• Complete visualization and gouge protection providing error-free toolpath.
• One-step ID/OD roughing and finishing for an automated turning process.
• Support for canned cycles.
• Polar interpolation support and Y-Axis cutting increase the range of production capabilities.
• Seamless integration of live tooling and off-center operations for Mill/Turn programming.
• Complete access to all 2- thru 5-Axis milling strategies for use in a Mill/Turn environment.

“SURFCAM is powerful yet easy to learn and very user friendly.”
Michael Schuffert, RKS Designs, Inc.

SURFCAM’S 4/5-Axis system offers true simultaneous multi-axis machining providing the programmer precise control over tool motion in the most challenging situations.

4/5-Axis Product Highlights:
• Multi-surface 4/5-Axis machining that supports all standard tools.
• Three types of rapid areas, cylinder, plane and sphere are now available.
• Advanced vector control with the ability to lock or limit tool planes.
• Independent control of how surface gaps and edges are handled, including seven new lead-in/lead-out strategies.
• Multi-axis gouge checking offers control of drive surfaces as well as the ability to select up to four separate check surface groups.
• Enhanced swarf cutting provides complete tool axis control and now fully supports the use of tapered tools.
• Full visualization and verification of tool motion.

“SURFCAM software has really provided a seamless transition into a whole new world of capabilities that we are eager to explore.”
Rick Ward, Owner, WARD Performance

SURFCAM delivers efficient and reliable 3-Axis toolpath on the most complex geometry. 3-Axis high-speed machining strategies feature fast processing, minimal rapid motions, tapered tool support and excellent surface finish.

3-Axis Product Highlights:
• High-Speed optimized finishing strategies feature smooth, fluid toolpath.
• Fast processing using powerful algorithms and multiple processors provides short calculation times.
• 3D Offset provides superior surface finish regardless of the part shape.
• Steep/Shallow intelligently adjusts the toolpath style based on the slope of the part.
• Pencil Cut is designed to clean up the fillets and produce an excellent surface finish by allowing multiple offset passes along the fillets.
• Rest-Machine automatically calculates material left by the previous tool and generates path to remove only that excess material.
• Full gouge protection along with powerful toolpath containment, provides precise tool control.

“Yesterday, I cut 28 corners using SURFCAM, something that would have taken us three weeks to do by hand. We are still able to get the look and feel of something that is hand-shaped using NC software and a router.”
Randy Cockrell, Tiffany Yachts

SURFCAM’S 2-Axis system is a robust, high-performance, cost effective CAM solution for any machine shop looking for the balance between feature sets and ease of use.

2-Axis Product Highlights:
• Rough and finish contours with multiple island heights and tapered side walls.
• Advanced strategies for face, groove, contour round and chamfer milling.
• Support for 4- and 5-Axis rotary indexing.
• Rest-Machine will detect and machine areas left by the previous tool.
• Powerful multi-tool hole processing with intelligent pattern sorting.
• Tapered thread milling with helical entry/exit.

“CAD/CAM Software with world class precision and control...”

Lathe & Mill Turn Product Highlights:
• Sub-Spindle programming and automatic retract logic for complex inner diameter machining.
• Complete visualization and gouge protection providing error-free toolpath.
• One-stop ID/OD roughing and finishing for an automated turning process.
• Support for canned cycles.
• Polar interpolation support and Y-Axis cutting increase the range of production capabilities.
• Seamless integration of live tooling and off-center operations for Mill/Turn programming.
• Complete access to all 2- thru 5-Axis milling strategies for use in a Mill/Turn environment.

“SURFCAM is powerful yet easy to learn and very user-friendly.”
Michael Schuffert, RKS Designs, Inc.