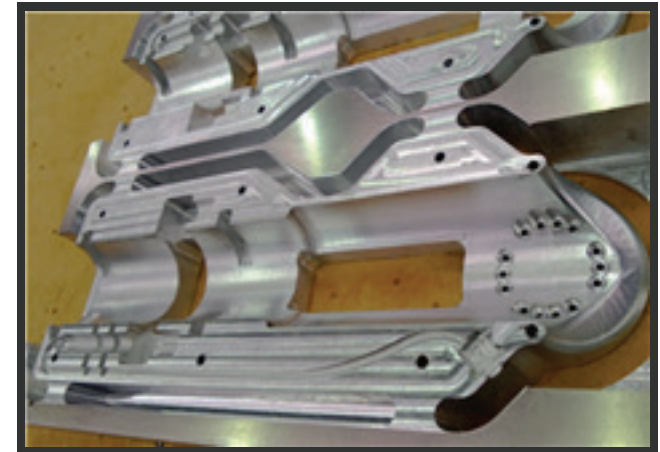


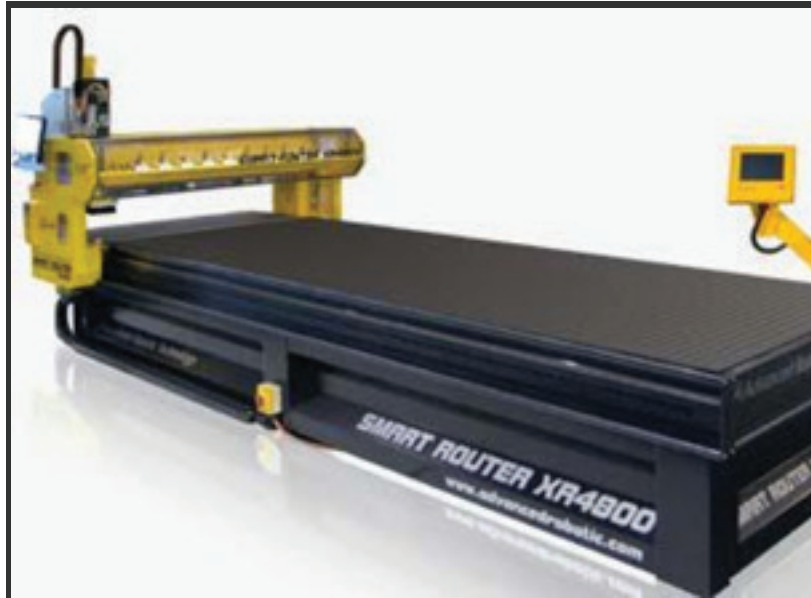


RhinoCAM at Advanced Robotic Technology (ART)

Advanced Robotic Technology (ART) is located a few minutes east of Brisbane in Queensland (QLD) Australia. It is a family owned and operated company that prides itself in the design and manufacture of state-of-the-art CNC routers, plasma cutters, laser cutters and milling machines.



Greg White of ART sat down with us recently to discuss their use of MecSoft's CAM software. The project in question is the manufacture of prototype components for their newest 10-axis CNC plasma cutter design for the industrial fabrication industry. Interestingly, ART uses their own routers in their facility to manufacture these prototype and production components used in their new Multi-Axis Plasma Cutter designs!



ART CNC Routers



ART CNC Plasma Cutters

Why RhinoCAM?

The Design & Engineering department at ART models their designs in [SOLIDWORKS](#) and [Rhinceros](#) (i.e., Rhino) software and then relies on [VisualCAM](#) and [RhinoCAM](#) from MecSoft Corporation to develop the CAM strategies and toolpaths required for manufacturing. VisualCAM can run as a stand-alone CAD system (called VisualCADCAM) as well as an integrated plugin for SOLIDWORKS (called [VisualCAM for SOLIDWORKS](#)). RhinoCAM is an integrated plugin that runs inside of Rhinceros. Any prototype part, and in many cases production parts, in their product designs that requires a 3D surface, are machines using one of MecSoft's integrated CAM solutions.

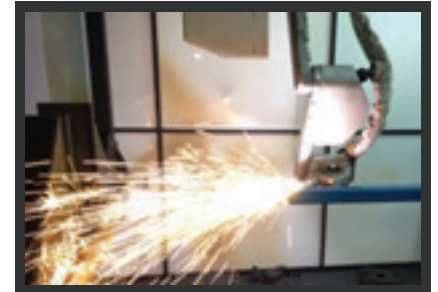


Being so “visual” in the way that RhinoCAM presents the job, is where I’ve found it very easy to learn myself. To be able to visually see your setup, stock material, and operations in relation to the part is very helpful. The ease of use and step by step approach to the user interface walks you through the process of generating toolpaths

- Greg White, Advanced Robotic Technology

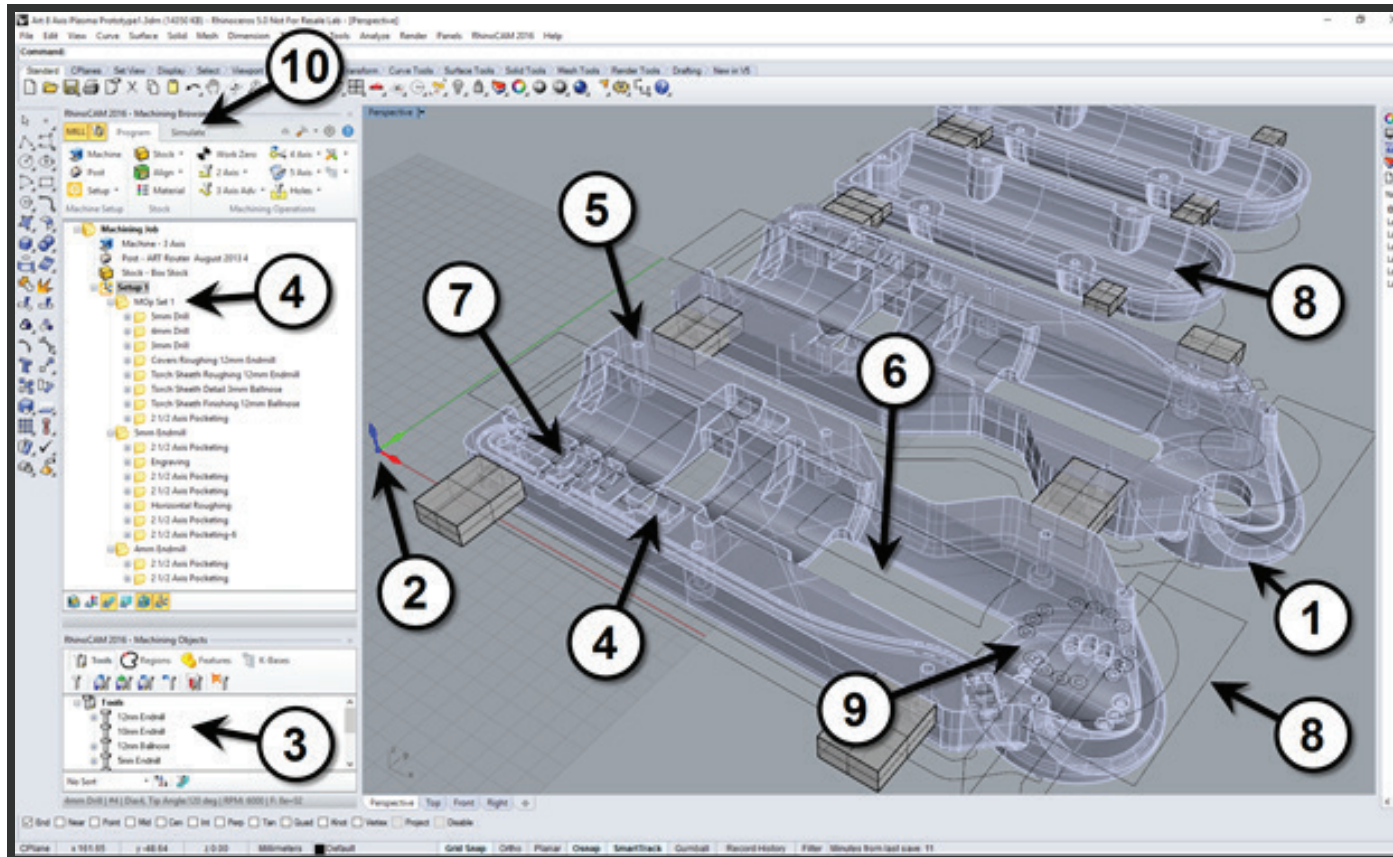
Anatomy of a RhinoCAM Part at ART:

The following RhinoCAM example shows components needed for the robotic arm assembly of ART’s newest 10-axis CNC plasma cutter (a similar BeamLine arm is shown here). The CNC machine measures 32 x 4 x 4 meters, is designed for processing industrial I-Beams and other extrusions up to 1.2 meters square and can automatically feed 32 meters of material and beyond.



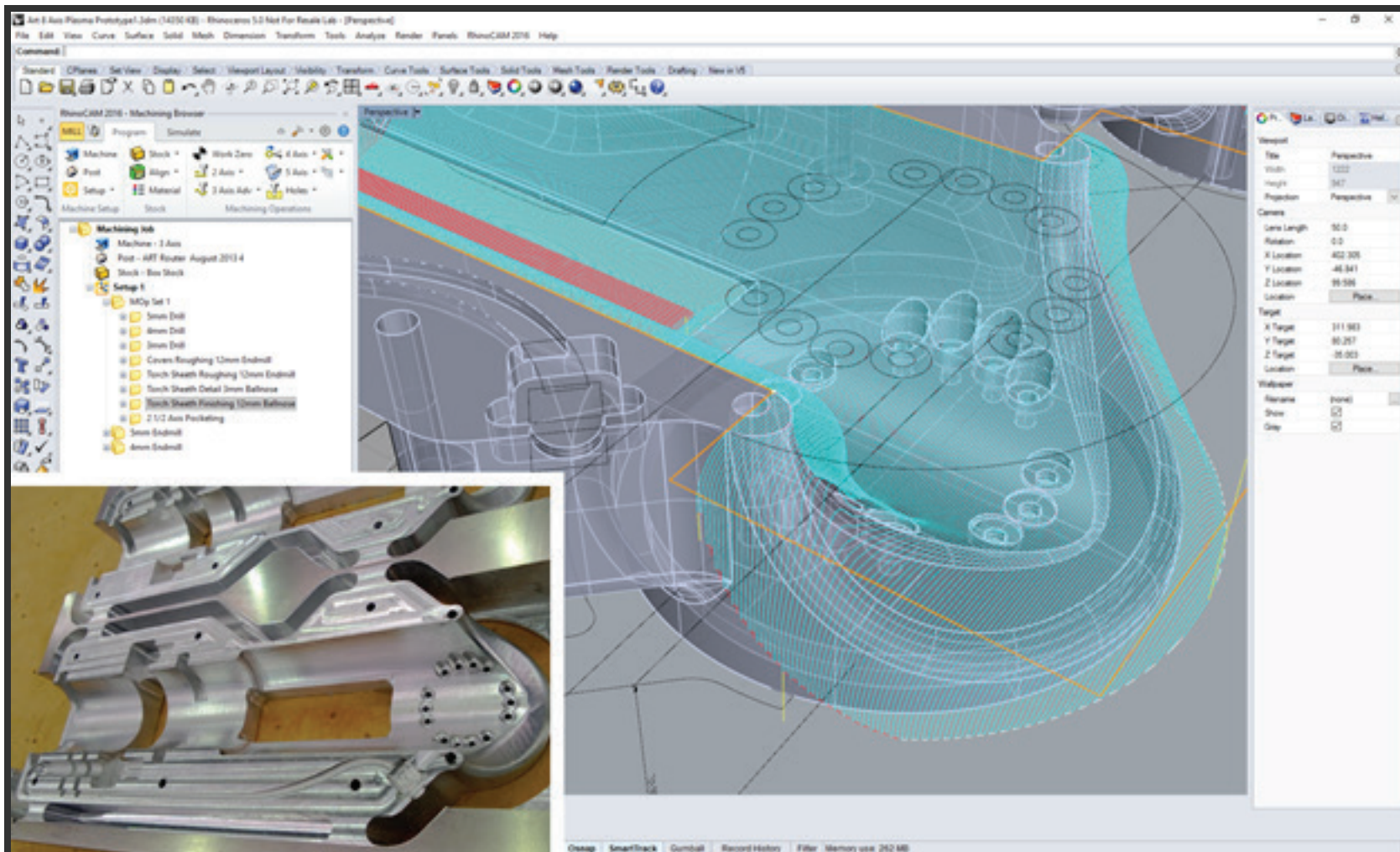
The 3D model geometry is designed in SOLIDWORKS and loaded into Rhino. The associative CNC machining strategies (i.e., the toolpaths) are designed using the RhinoCAM plugin and are saved with the Rhino part file. Any revisions to the geometry opened in Rhino are automatically incorporated into the toolpath strategies! The screen image below illustrates the typical anatomy of a RhinoCAM part as designed by Greg White and the engineering staff at ART.

For more detail on this anatomy, please refer to our [technical blog post](#).

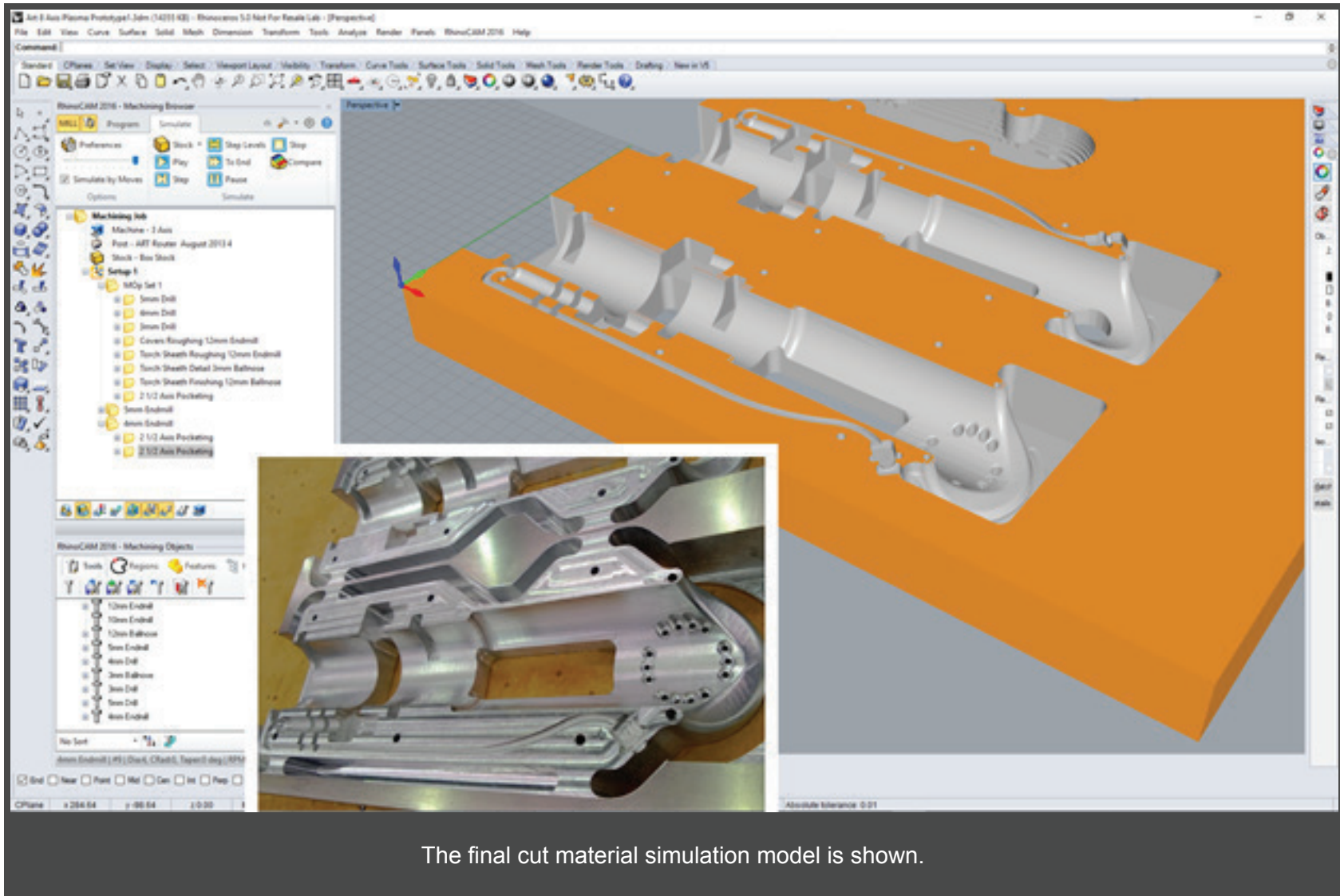


Advanced Robotic Technology (ART) designs prototype & production components for their multi-axis routers and plasma cutters in SOLIDWORKS and Rhinoceros CAD systems. They use the RhinoCAM plugin from MecSoft Corporation to design their machining strategies and post toolpaths to their CNC routers for manufacturing. This illustration identifies the anatomy of a typical RhinoCAM part from ART. Each item in the illustration is listed below. You can also refer to our technical blog post “Anatomy of a RhinoCAM Part at ART” [insert link here] for more details on this part.

1. Part Geometry
2. Machine Setup, Material & Stock Definition
3. Tool Library & Knowledge Base
4. Machining Job Tree
5. Hole Machining Strategies
6. 2½ Axis Blind & Thru Pocketing Strategies
7. 2½ Axis Engraving Strategies
8. 3 Axis Horizontal Roughing Strategies
9. 3 Axis Parallel Finishing Strategies
10. Cut Material Simulation & G-Code Posting



The Machining Job tree is shown in the RhinoCAM browser on the left with multiple CNC setups programmed. A 3 Axis Parallel Finishing operation is selected and its toolpath is displayed on the part's surface. The final component after CNC machining is shown inset in the bottom-left image.



The final cut material simulation model is shown.

More about Advanced Robotic Technology

[Advanced Robotic Technology \(ART\)](#) came from humble beginnings to become an international supplier of quality and state of the art CNC Router and Plasma profile machines. Now employing over 40 personnel, ART is developing machines with up-to-the-minute cutting technology locally and internationally. Today, ART is a world leader in CNC technology. Their CNC machines have enabled manufacturers to make drastic increases in productivity. Manufactures ranging from ship and boat builders, cabinet makers, sheet metal workers, steel fabrication, plastic engineering as well as others, have been able to benefit from ART's CNC routers and plasma cutters.

More Parts Machined with RhinoCAM at ART

