Intricate 3D shapes in Stone

Metro Technology, Incorporated of Smithfield Rhode Island, uses VisualMill to sculpt intricate 3D shapes into stone and similar material for the giftware and tabletop industries. Metro Technology started out as a graphite-brazing fixture manufacturing company for the local jewelry industry in Rhode Island. And as 3D design and manufacturing technology became easier to use and more accessible, the need for 3D prototyping and model making was identified. John Cross with a BS-IT from Rhode Island College, a ten-year veteran of CAD/CAM/CNC machines was identified as the key person for this initiative.

First came the long and exhaustive search for a suitable CAD/CAM/CNC system to create these shapes. After careful analysis of the market place, Metro Technologies selected Rhino, a 3D design product. The main reason for this was the need for sculpted surface modeling capabilities - which Rhino excels in. Additionally Metro Technologies receives digital data from customers. Rhino with its excellent part import translators allowed Metro successful receipt of these files.

VisualMill was the CAM system of choice primarily because of the extensive set of toolpath methods that came with the product. These toolpath methods allowed Metro to produce the very difficult and intricate prototypes for various industries quickly and cost effectively. An additional important factor in the decision of choosing VisualMill was the seamless integration between Rhino and VisualMill. John identifies this interface between Rhino3D and VisualMill as one of the key factors.
for being successful in his job. VisualMill reads Rhino3D files flawlessly making data translation an issue that does not have to be worried about, allowing John to use his energies in more creative and useful pursuits. Additionally John identifies VisualMill’s ability to store machining intelligence in the form of knowledge bases that can be loaded at any time to machine any type of geometry as an important productivity saver allowing him to save valuable time on programming jobs.

All the machining of these shapes is being done in a vertical machining center from Fadal.

Machining of the front and back of a mantle piece clock on a Fadal vertical machining center

Finished front and back of a mantle piece clock.

As he looks forward to creating exciting new products for the market, John feels that only his imagination is the limit. He is confident that the tools that he has chosen can bridge the gap between what he can imagine and what he can actually create.