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The French Connection

Cetehor is a French government advisory agency that acts as a technical center to assist the French Clockwork, Jewelry, Precious Stone and Metalworking industries. For over 60 years Cetehor has played a key role in helping large establishments as well as small craftsmen in the development of new products. Cetehor main area of competence is in the areas of product design and manufacturing. Its services include testing and analysis of new product design, offering advice and recommendations on choice of material, equipment and software systems and offering expertise in the utilization of these.

Recently this agency initiated a search for a CAM software product that would complement Rhinoceros 3.0 that is widely used as a design tool in these industries. As Mr. Suter, whose main functions or researching and evaluating CAD designs and prototypes, points out: "Businesses have found in Rhinoceros 3.0 a tool with excellent value for money to express their ideas without limitations, avoid all risk of style interpretation and grasp symmetry production. CAD has become an efficient way of speeding the production of collections and of easily enriching them with new creations."



Mr. Suter benchmarking VisualMill 5.0

Selection of VisualMill

As for manufacturing, the two different techniques used by the clockwork and jewelry industries are rapid prototyping and milling. Acting on the advice of a jeweler and a member of Cetehor, they evaluated VisualMill 5.0 using the expertise of Pacox the value added resellers of MecSoft's products in France. The intent was to select a CAM system that could be used in conjunction with a desktop milling machine.

Mr Suter adds: "We were looking for a CAM that could offer various milling strategies, allowing to create an excellent surface from STL files. The decision to select VisualMill was made soon after the presentation. This is because we worked on real jewelry cases, which convinced us of the software's capabilities. VisualMill is, for the jeweler a genuine solution to help react quickly and positively to the pressures of the market."

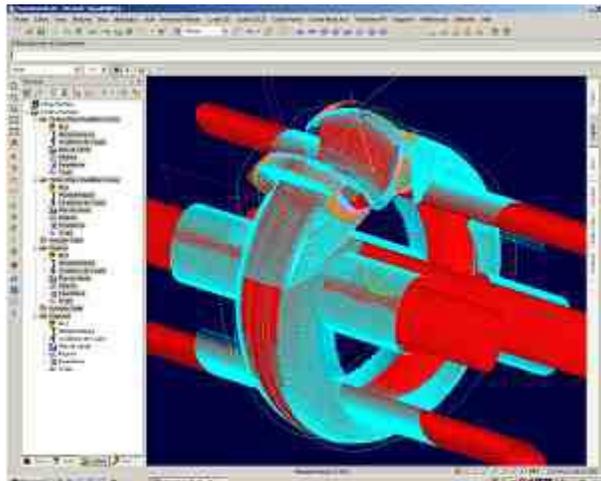
Learning Curve

Mr Gauby, in charge of Production Research, adds: "VisualMill and Rhinoceros , present the benefit of being easily operated by those who do not deal everyday with CAD or CAM. They are user-friendly but contain every function our members need for 80% of their creations." This means that due to the learning curve for these products being very small it allows even casual CAD/CAM users to use this comfortably with very little training.

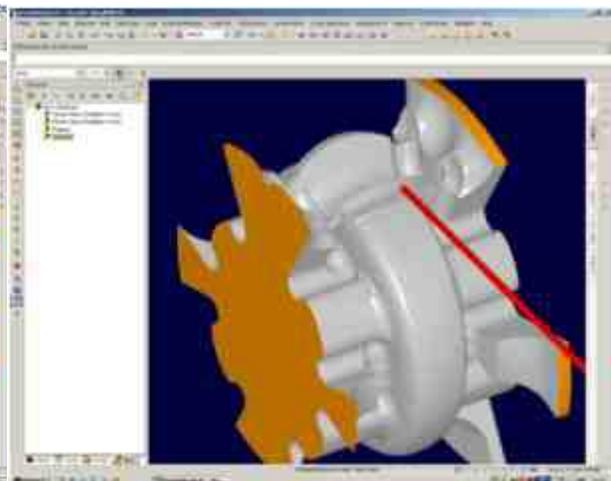
Application of VisualMill

Typical real world parts used in these industries were modeled in Rhinoceros 3.0 and brought into to VisualMill to perform the programming of the milling toolpaths. Milling was done using 2-1/2, 3 and 4 axis methods to mill the master models. Machining was done on wax to create these master models. These wax masters would then be used in a loss wax casting process to actually manufacture the parts.

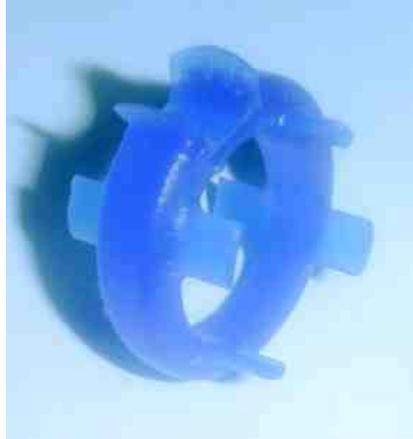
An example of a master model of a ring programmed and machined using VisualMill is shown below.



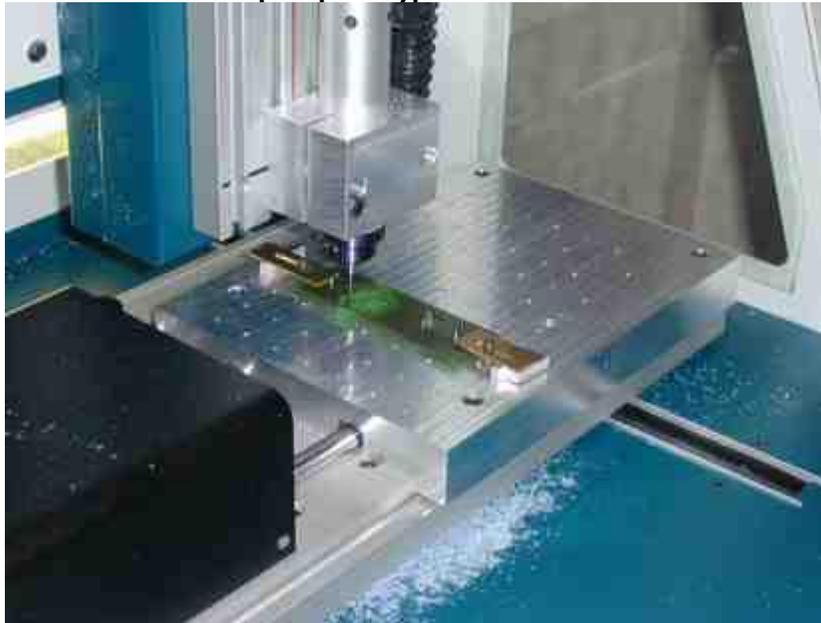
Toolpath generation on a ring model in VisualMill



Cut material simulation performed in VisualMill



Final part prototype cut on machine



Final Word

We at MecSoft are extremely proud and excited about Cetehor adopting VisualMill/RhinoCAM a CAM product for recommendation in the French market. As we move ahead users can look forward to additional exciting toolpath methods targeted specifically at the Jewelry market.