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Stepping up to 3D with VisualMill

Advanced Machine Tool (AMT) is a 35-year old company specializing in the development of motors for appliances. For years they had successfully used a pair of CAM programs, Mazak's CAMWARE and ShopCAM from D. Broderick Software to handle their manufacturing needs, which at the time was 2D only. However, early in 2003, they had the opportunity to begin doing work for the automotive industry, which would involve 3D contour machining (see figure 1 and 2). That is when Andy Gecowets, the Machining Foreman and head of Manufacturing Systems at AMT, decided that it was time to look for a CNC program that could handle this new work.

Figure 1 and 2 – A tooling for automotive parts developed at Advanced Machine Tool.

Evaluation
Gecowets and two others co-workers, Thung Thainnon and Gary Hunt evaluated several products, including MasterCAM and SurfCAM. Then after hearing about VisualMill and downloading a demo, Gecowets noticed how easy it was for Thainnon and Hunt to pick it up. "No sooner was the program downloaded and our guys had already imported a SolidWorks part and were creating a toolpath. It didn't take long to realize VisualMill would be able to handle what we needed," Gecowets recalls. "After seeing what the various competing programs could do, there just wasn't enough difference to justify buying software that was five times the price of VisualMill."

So AMT went ahead and purchased one seat of VisualMill. While Thainnon and Hunt had picked up the demo very well, Gecowets was still expecting that once the software was installed, the two would need some professional training. However, it was never necessary. "Thung and Gary had CAM experience and were computer literate, but still I expected that they would need some professional training…but that wasn't the case."

Upgrading to VisualMill 5.0
Since then, AMT has upgraded to VisualMill 5. One of the favorite new capabilities at the shop is the new 2D drawing tools. Gecowets pointed out how they are now able to modify drawings they receive directly inside of VisualMill, rather than having to first import them into AutoCAD, thus saving time.

Speaking of interoperability, AMT also uses SolidWorks and Gecowets mentioned that the direct import that VisualMill has with this program works very well. "Once in a while if there is a glitch, we just ask the person who created the file to save it in the Parasolid format and that takes care of any model translation problems." So far AMT uses VisualMill mainly for 3D machining, but when he's had to do 2D work, Gecowets feels that it is just as good as either CAMWARE and ShopCAM.

Return On Investment
When asked about the ROI, Gecowets said that it was realized on the very first VisualMill project. "We did a rear and tail light assembly for GM (see figure 3 and 4) and because we were able to handle our own 3D work and not farm it out, that paid for the software right there." Gecowets also pointed to other ways the software has helped AMT make back what they put into the software financially. He noted "in the past, with our low-run, 2D-only work, we never had a job that needed to run a long time, so the machines here were never fully utilized. Now we have the machines run unattended all night, which has made us more productive and profitable, which further increases our return on our investment."
Gecowets concluded by saying, "when I see our programmers effortlessly using the software and the ease that VisualMill imports a solid part, finds the regions and generates the NC program, I know that it is working. The process happens so quickly and smoothly – while at the same time our capabilities have been enhanced. All I can say is that I am a satisfied customer.

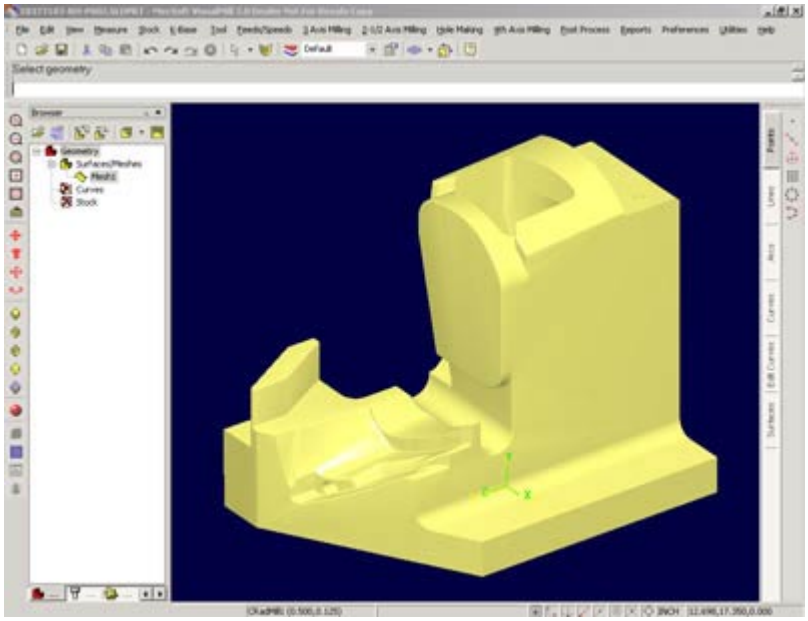

Figure 3 – A mounting housing for a molded plastic tail-light housing that was designed in SolidWorks and imported into VisualMill 5.

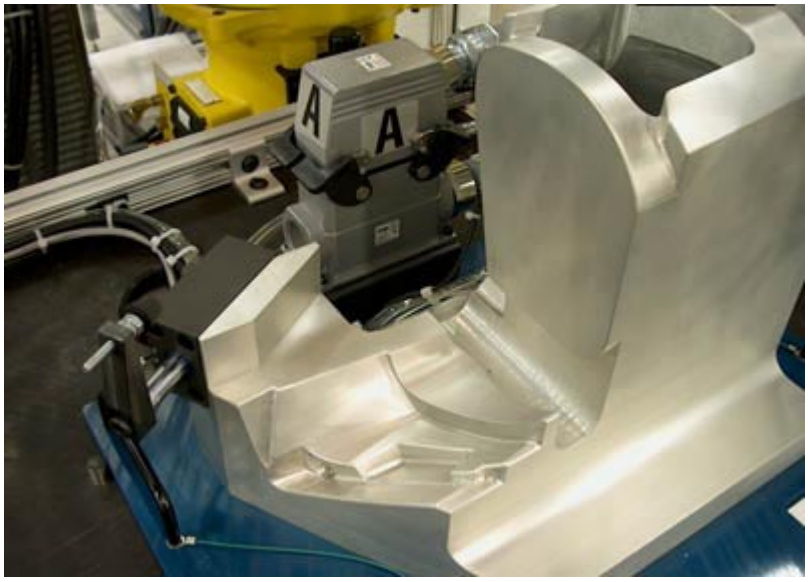

Figure 4 – Driven by VisualMill, a robotic arm mills out excess flash at Advanced Machine Tool.