



Handling Systems & Conveyors Gets Fast and Consistent Results with Advanced CAM Solution

The Organization

Founded in 1992, **Handling Systems & Conveyors (HSC)** designs, builds, installs, and tests crane and conveyor components throughout the world for a variety of applications. Its parts range in weight from a few ounces to several tons, and its customers include *Fortune* 500 companies, regional and national governmental agencies, local manufacturers, and service companies.



The Challenge

Company Outgrows CAM Software

Several years ago, HSC worked with IMAGINiT to integrate Autodesk Inventor software with its CAM tools to program complex parts. "The technology was quite capable of creating the toolpaths required for manufacturing," said Phil Tawney, Lead Engineer and Production Manager, HSC. "Recently, when we reached the maximum capacity of our existing tools, I started looking for technology that could increase output without increasing staff. I got an invitation from IMAGINiT to a webinar on [automating CAM processes with Autodesk FeatureCAM software](#), which looked like it might be a good fit."

The Solution

About FeatureCAM

FeatureCAM is one of the best CAM tools on the market. It automates the workflow from design to NC code to reduce programming time and produce consistent results for a range of CNC machines.

FeatureCAM uses information provided about the preferred tool crib, parameters, stepovers, ramping strategy, lead in, and lead out to guide the automation. If a solid model is brought in from Autodesk Fusion 360, Inventor, or even SolidWorks, FeatureCAM identifies three-dimensional features like pockets, holes, and turn parts, and knows what it needs to approach the CNC programming.

Technology Validated; Solution Developed

The FeatureCAM webinar demonstrated tremendous potential time savings. To investigate the software further, Phil contacted IMAGINiT. "I wanted to see just how much faster FeatureCAM was, so I asked IMAGINiT to use it to program a part that had taken my team about five hours to make using InventorCAM. IMAGINiT did the job in just 15 minutes, and I was convinced!"

Phil worked with IMAGINiT to develop a solution that included customizing FeatureCAM to match their demands with the software's capabilities and a goal of delivering HSC a tested, production-ready platform they could use on day one.

IMAGINiT's Solution included:

1. **FeatureCAM software** for HSC's CNC programmers.
2. **Implementation services** that included creating complete tool libraries, configuring the software to the users' preferences, providing post processors, and setting up accurate machine simulation files.
3. **Onsite training** based on IMAGINiT's FeatureCAM Fundamentals course and customized with examples geared toward the types of parts created by HSC. The course was delivered by a FeatureCAM expert with extensive training experience.
4. **Ongoing support** for quick answers to questions as they came up.

"We know that user buy-in is critical to the success of a software change," said Phil. "The IMAGINiT team helped us get users 100% behind this change. The installation and setup went smoothly, and the trainer was prompt, efficient, and organized. With all the background tasks completed before he arrived onsite, we were able to jump right into the exercises, which were based on our workflows. The trainer started each lesson with a demonstration, then we practiced working in the system with him there to provide guidance and answer questions."

The training was successful. The implementation concluded on a Thursday afternoon, and by Monday morning, HSC was in full-blown production with their new CAM solution.



The Results

New Software and Skills Deliver Staggering ROI

"We immediately saw a staggering ROI," said Phil. "With FeatureCAM, the team was programming parts 10 times faster than they were just a few days before."

Jordan Taylor, CNC Programmer, HSC, talked about the differences experienced:

- "We no longer have to select the tool, feed, speed, contours, etc. for each operation. All the steps are automated. For example, we make plates with holes in them. With our previous software, we would have to select each hole. Now, they are all selected automatically."
- "The 4th and 5th axis features of FeatureCAM are much more efficient. We used to spend a lot of time on calculations, and now we can get the job done three to four hours faster."
- "Because the parameters are programmed into the software, consistency is greatly improved. When a customer orders duplicate parts later, it is easy for us to fulfill the order quickly."

Phil concluded, "FeatureCAM is the right solution for us today and in the future. Today, we make parts much more quickly, which means our customers are happy. Rework has been reduced, which keeps employees happy. Moving forward, we have the capacity to prepare quotes and cost estimations more quickly and to make more parts, which will increase profits. And, as parts gain in complexity, we can confidently make them to their specifications."

Solutions Beyond Software

IMAGINiT Technologies, a division of Rand Worldwide, helps architects and engineers become more proficient in the use of 3D technologies to design, develop and manage complex engineering projects faster and more cost-effectively.