

## Seco Tools Reduces Design Time 20% with 3Dconnexion's SpaceMouse



Seco Tools AB in Fagersta Sweden, is a large worldwide producer of cutting tools for the automotive, aviation, energy and tooling industries. Since its founding in 1929, Seco Tools has met the challenge of ever-changing markets with continuous innovation. Seco's most

recent challenge has been to leverage its design engineering capability in order to compete in markets that are experiencing slow, or negative growth. While the design engineers at Seco were quite satisfied with the time-cutting capabilities of tools such as Unigraphics for construction, Vericut from CGTech for production simulation, and eMatrix for PDM, they knew that substantial productivity improvements could still be made.

### Accelerating Productivity

Magnus Skilberg, a design engineer at Seco Tools, initially spotted the 3Dconnexion SpaceMouse, a special 3D motion controller designed to accelerate productivity in CAD/CAM/CAE applications. "I know how hard it is for the arm to zoom, pan and rotate a CAD model and I was really impressed how the SpaceMouse controlled the model. I hoped this might address the company's goal for shorter design cycles, while also making the work less tedious for design engineers." In Unigraphics and a large number of other CAD programs, zooming, panning and rotating are done with a sequence of commands. Each individual movement of the model usually takes around 15-20 seconds, and typically interrupts the creative process. However, if you maneuver the model with a SpaceMouse in your left hand, and manipulate and edit with the standard mouse in your right hand, the entire workflow is streamlined, and tasks are completed more efficiently.

"I planned a little test. Four design engineers would try the device, fill in a questionnaire and hand it over to their colleagues for a try," said Peter Matsén who was Seco's project leader. "However, it didn't go as we had planned. Nobody was willing to hand over the SpaceMouse when they were asked to. So we had to buy a few more..."

One of the four test pilots at Seco was Thomas Eriksson, who designs cutting and pressing tools. He works with very tiny objects that are highly magnified, so both the handling of the models and the surfacing must be extremely precise. "I realized that I could work in a faster and much smoother way than before. I estimate I save 10-20% of the design time because I avoid the interruptions caused by zooming, panning and rotating the model."

The various tools designed at Seco's plant need to be reviewed by the CAM staff, using the same zoom, pan and rotate functions to inspect the product. Mr. Eriksson estimates that these individuals could save up to 50% of their time by using a SpaceMouse.

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### Don't Take my SpaceMouse

"Don't take my SpaceMouse," became a slogan among the Seco staff. The device turned out to be so useful, no one wanted to work without one. "When I go to another computer, I just feel how my left arm would move on its own. And if anybody forced me to hand it over I really don't know how I could continue with my work. I would probably need to buy one with my own funds..." Accordingly, Seco Tools ordered 30 more SpaceMouse devices for its design engineers. The main advantage of the SpaceMouse is that it reduces the nearly non-stop activity of the mouse hand, and balances the user interaction between the left and right hands.

### A SpaceMouse for Every Designer

"It really worked for me," Linnéa Sall notes. "The only disadvantage is that at first it felt strange working with both hands. But it became much easier to use it over time."

Seco Tools experienced such notable productivity gains throughout the design process by using SpaceMouse that they were compelled to make it a standard. To both increase productivity and reduce physiological strain, management decided that everyone who works with CAD/CAM programs at Seco Tools should have a SpaceMouse. Now the entire team from design to manufacturing can experience the benefits of using a 3D motion controller.

