Duratec Speeds Design Cycle with 3Dconnexion 3D Mice

3D Mouse: SpacePilot® Pro
Application: SolidWorks®, CATIA® v5, 3DVIA Composer®

Duratec Ltd designs and builds custom bike frames. Each frame is tailor-made to enhance rider comfort and enjoyment. Founded in the Czech Republic in 1997, the company has grown to compete on the international market and currently about 60% of the innovative frames it produces are exported.

"We work in a highly competitive and demanding industry," says Duratec owner Milan Duchek. "We're a small business, but an extremely effective one. All processes from design and development through to manufacturing, marketing and sales are managed in-house."

At the heart of the business is the Duratec Development Center, home to frame design, manufacturing and composites processing. It's here that Duratec design engineers use 3Dconnexion's SpacePilot and SpacePilot Pro with SolidWorks, Catia V5 and 3DVia Composer to create the company's unique rides.

"We first learned about 3Dconnexion's 3D mice at a Dassault Systèmes PLM forum," explains Duchek. "They seemed like great products and we were keen to learn more about using them as part of the design process. We immediately recognised the potential for increased work output. Productivity is very important for a small company like ours."

Winning Advantage
Duchek believes using 3D mice gives Duratec an important competitive advantage. "We estimate a 20% acceleration of the design process from concept to production plus corresponding cost savings," he says.

In addition to saving time, Duratec is reducing the amount of errors in the design process, by using 3Dconnexion mice.

"We've noticed a decrease in errors, which we attribute to the more intuitive way our designers work using 3D mice," he says. "Improved access to functions in the software means our designers are able to devote themselves entirely to designing, because you interact with 3D objects just as you would in the real world."

3D mice aren't just making Duratec's work faster and more accurate. They're also improving comfort and reducing strain during the design process.

"The more intuitive navigation you experience with a 3D mouse makes for a more comfortable work style, especially when compared to using a standard mouse only," Duchek says.

"For example, adding a SpacePilot Pro means clicking the standard mouse a lot less, which helps protect the designer from repetitive strain injuries. Plus our employees like high-tech equipment and appreciate using the best technology. The 3D mouse is a good motivator!"

Idea Takes Flight

With increased productivity and comfort come increasingly imaginative ideas. Duratec designers recently put their 3D mice to work on a ground-breaking flying bicycle project, turning a concept design for an electric bike into a two-wheeled helicopter bike capable of vertical take-offs and landings.

The bike features electric motors, several horizontal propellers and lithium-polymer batteries. A lightweight frame, weighing in at just 187 pounds, supports the machine. Cyclists hoping to shave time off their commute might have to wait awhile for the flying bike to go into production, though.

"We set ourselves the challenge more as an exercise in creativity and imagination," says Duchek. "We relied heavily on modern technology to bring a childhood dream to life and 3Dconnexion 3D mice played a significant role in that. A modest idea was given wings!"

Whether your designs are dream machines or production-ready products, Duchek has advice for anyone thinking about investing in a 3D mouse. "Don't put it off! They are extremely effective tools and have become indispensable here at Duratec, where they are used and enjoyed every day."