With SOLIDWORKS Industrial Designer software, Carl Design can more quickly develop innovative design concepts, such as its redesign of this handle for AMPERE, a client that is developing electric vehicle chargers.
Carl Design AB is a leading Scandinavian industrial design firm that helps clients develop and mass-produce creative, compelling products. Owner and Lead Designer Carl Öjerstam founded the company after spending several years as a designer at IKEA, where he managed the implementation of computerized industrial design technologies, tools, and techniques. Carl Design has won numerous design awards and serves an impressive list of clients ranging from IKEA to Tupperware to Vodafone.

Since establishing his award-winning consultancy, Öjerstam has maintained a keen interest in leveraging new design technologies to advance the high levels of creativity and quality for which Carl Design is known. Öjerstam has used a few freeform surfacing tools—including Autodesk Alias®, Rhino® with T-Splines®, Modo® and Power Surfacing® software—but has relied on SOLIDWORKS® software since 1998 to deliver production-ready designs and drawings.

Öjerstam was on the lookout for a subD, freeform modeling application that would better integrate with SOLIDWORKS software, to overcome the limitations related to bringing surface models into the SOLIDWORKS CAD system as well as editing freeform geometry. Then he saw a YouTube video from the SOLIDWORKS World 2014 Conference and Exposition subD demonstrating a new SOLIDWORKS modeler. “I instantly understood what that video was about and approached my SOLIDWORKS reseller to learn more,” Öjerstam recalls.

Carl Design signed up for the SOLIDWORKS Industrial Designer Lighthouse Program, which provides the opportunity to use the software in production as part of prerelease testing. Through its involvement in early usage and testing of SOLIDWORKS Industrial Designer software, Carl Design discovered a better approach for combining freeform, subD modeling capabilities with SOLIDWORKS software.

“Because SOLIDWORKS is the standard CAD software used by many of my clients—including IKEA and its subcontractors—we need a freeform modeling solution that enables us to more easily and quickly go back and forth between conceptual ideas and production geometry, so we can refine design concepts and efficiently handle design modifications,” Öjerstam explains. “I found that solution with SOLIDWORKS Industrial Designer software.”

AS CLOSE TO DIGITAL CLAY AS POSSIBLE

Carl Design immediately realized benefits from using SOLIDWORKS Industrial Designer software because the software is easy to use, provides fast freeform modeling performance, and produces surfaces of superior quality. “The push-and-pull, subD modeling capabilities of SOLIDWORKS Industrial Designer are as close as you can come to working with clay in a digital environment,” Öjerstam notes.

“With SOLIDWORKS Industrial Designer software, you don’t have to think about how to build a shape and have the unconstrained freedom to explore new concepts and innovative ideas,” Öjerstam continues. “You can also bring existing CAD models into SOLIDWORKS Industrial Designer software as a reference and easily import surface geometry into SOLIDWORKS CAD software. With this improved performance, you can create industrial design concepts faster than with other freeform modelers.”

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— Carl Öjerstam, Owner and Lead Designer

**FAST, EASY DESIGN CHANGES**

Because SOLIDWORKS Industrial Designer software is better integrated with SOLIDWORKS mechanical design software and includes both freeform and parametric modeling capabilities, Carl Design can more efficiently make design changes and more easily move back and forth between freeform and solid modeling. “The most beneficial advance with SOLIDWORKS Industrial Designer software is the ability to go back and forth between an idea and an actual product,” Öjerstam stresses.

“With other freeform surfacing applications, making design changes basically requires you to build the geometry again from the very beginning,” he adds. “That’s not the case with SOLIDWORKS Industrial Designer software, with which I can make a design change in 30 to 60 minutes that would have taken me a half day using another surfacing package or the surfacing tools in SOLIDWORKS CAD software.”
Carl Design AB
VAR: PLM Group, Stockholm/Kista, Sweden

Headquarters: Sundbybergstorg 1C
Sundbyberg 172 67
Sweden
Phone: +46 (0)70 979 76 09

For more information
www.carldesign.se

INDUSTRIAL DESIGN DRIVES EV CHARGER REDESIGN

Carl Design’s first project with SOLIDWORKS Industrial Designer was a redesign of an electric vehicle connector for a client that is developing charging solutions for electric vehicles, a business that will certainly grow in the near future. “I like clients that have a clear green commitment and that is one of the reasons why I am still working with IKEA after 20 years!” Öjerstam says.

“I brought in the existing mechanical and electrical design and shaped a new skin over it with SOLIDWORKS Industrial Designer software, added a softer curve, moved the parting lines from the top to the sides, and made the handle watertight,” Öjerstam explains. “It took me about 30 to 60 minutes to improve the aesthetics, manufacturability, and performance of the product with SOLIDWORKS Industrial Designer software. I was able to realistically test the power of the software on this project.”

Using SOLIDWORKS Industrial Designer software, Carl Design can more easily and efficiently move back and forth between its subD surface modeler and SOLIDWORKS CAD software, resulting in improved design aesthetics, performance, and manufacturability.

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