

# CURVENTA DESIGNWORKS LTD.

Pushing the envelope on innovative design with SolidWorks Premium



*Curventa used SolidWorks software to develop the X-plorer Plus, a handheld MP3 player used in conjunction with tours at world-renowned museums.*

Curventa Designworks Ltd. is a leading product design consultant that develops innovative products for its clients. Before founding Curventa in 2001, Directors Ian Murison and Adrian Bennett had used several 2D and 3D CAD programs. From their experience using different CAD packages, they realized that their firm would need a single 3D CAD system that not only offered solid, engineering-based modeling functions, but also provided effective, high-quality design communication and presentation tools.

"For us, it's important to have one package that we can rely on to take us from initial concepts through manufacturing," Murison explains. "We knew that we needed a 3D CAD system—when we had to design some of our projects in 2D, it would take twice as much time, double our development costs, and be painful beyond belief. We wanted a system that was easy to use, so we could train new designers quickly. Having the ability to provide photorealistic images, so we could show our work to clients and prospects, was another key factor. Finally, we needed a system that could support different types of CAD formats, so we could integrate effectively with design and manufacturing partners."

Curventa chose SolidWorks® Premium because of its ease of use, stability, and ongoing development. The firm also values the software's integrated surfacing, analysis, communication, and photorealistic rendering capabilities. "SolidWorks software provides us with a stable platform and the confidence that our products will get to market on time and on budget."

## Designing innovative products quickly

Since implementing SolidWorks Premium, Curventa has produced unique, award-winning products, while reducing design cycles and development costs at the same time. Examples of the firm's work include development of the FlareSafe, a combined smoke detector, flashlight, and panic alarm for use by travelers lodging in unfamiliar housing, and the X-plorer Plus, a handheld MP3 player used in conjunction with tours at world-renowned museums, such as London's National Gallery, Alcatraz Prison, and the Guggenheim Museum. Both projects had tight budgets and ambitious project deadlines.

## Results:

- Shortened product design time by 66 percent
- Cut prototype fabrication costs by 50 percent
- Increased market share substantially
- Improved effectiveness of client communications

"Adhering to timelines is a core fundamental in the service industry," Bennett points out. "SolidWorks software is a great system for getting from art to part quickly and without hitches. When we give clients a timeline, we know our CAD package will not let us down or force us into 24-hour workdays."

Murison says that using SolidWorks software allows Curventa to develop products in a third of the time it would take otherwise. "We have been able to design very complex forms within the software without having to go to other packages for surfacing tools," he explains. "The biggest advantage to using SolidWorks Premium is having all of the tools we need in one package, which ultimately saves time and accelerates development."

### Improving quality, minimizing prototypes with integrated tools

A full suite of integrated tools permits Curventa designers and engineers to identify potential errors, improve product quality, minimize prototyping needs, and reduce development costs. The firm uses SolidWorks software interference detection tools to address component collisions within assemblies, SolidWorks Simulation analysis capabilities to locate and resolve potential failures, and the draft analysis and mold development tools found in SolidWorks software to validate the production of injection-molded parts.

"We have avoided problems, such as part collisions, high-stress areas, or thin walls in mold casings, by using SolidWorks software to evaluate our designs," Murison notes. "Draft analysis is particularly helpful in ensuring that we get parts right before delivering them to the toolmakers. These tools enable us to cut prototyping costs in half."

### Enhancing client communication

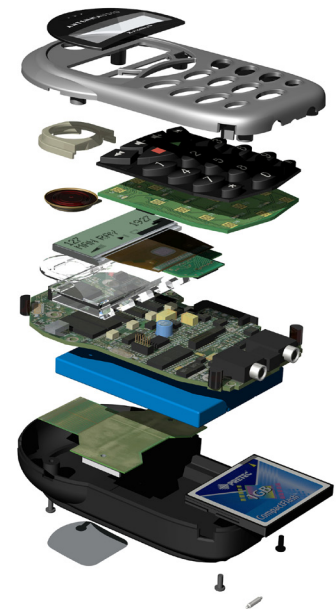
In addition to facilitating the modeling of product designs, SolidWorks software helps Curventa communicate design concepts to its customers. The firm uses a combination of SolidWorks eDrawings® communications and PhotoWorks photorealistic rendering tools to provide accurate and dramatic concept visuals. "As a visual tool for clients, PhotoWorks is ideal," Bennett says. "I can explain materials and colors effectively, and it does not slow down the development process."

"eDrawings is a very powerful tool," Murison adds. "The files are tiny, so it is very convenient to deliver models by email that clients can spin around and fully visualize. 3D technology has really taken over in the design world, and tools like eDrawings files and PhotoWorks have improved our ability to communicate, illustrate, and show concepts to customers. These tools really enhance the quality of the presentations we deliver."

Since implementing SolidWorks 3D software as its primary development platform, Curventa has increased its market share substantially.

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Ian Murison  
Director



SolidWorks software provides Curventa with an integrated suite of modeling and visualization tools, which help the firm to deliver consistently innovative designs on time and within budget.

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