In Focus Stays Sharp With I-DEAS™

SITUATION

In Focus® created the market for devices that display digital images, such as PowerPoint slides and full-motion video, on a wall. Since introducing its first product in the late 1980s, the In Focus product line has grown to include a robust suite of data/video projectors designed to meet the specific needs of today's business presenters. Constant innovation makes In Focus a leader in this competitive field. To maintain its leadership position, In Focus continues to utilize technology tools to bring top-quality products to market quickly and cost-effectively. Part of that effort involves extending the use of solid models from design throughout the product development process.

OBJECTIVES

✔ Continue to create industry-leading, innovative data/video display products in three categories: personal devices, standard conference room equipment, and fixed installation display systems.

✔ Maintain a competitive edge through continuous "2x Improvement," which includes reducing product development costs by 50%; and reducing the product cycle by 50%.

PROCESS VISION

Use the solid models created in I-DEAS software as the core of a concurrent engineering environment, accelerating product development by sharing design-related information throughout the development cycle.

ACTIONS

✔ Several years ago, In Focus upgraded its system to I-DEAS Master Modeler™ software to take advantage of solid modeling for on-screen interference checking. Since then, the company has expanded the value of I-DEAS as a design tool by purchasing I-DEAS modules for sheet metal, assembly, and surface design.

✔ In Focus also has begun using the I-DEAS models as a means of collaboration by using them in downstream applications such as drafting, PCB design (via the I-DEAS interface with Mentor Graphics), rapid prototyping (stereolithography via I-DEAS STL output), and tooling (the company has found vendors that can work directly from solid models).

"The concept we implemented gives everyone – mechanical engineers, electronics engineers, optics engineers, marketing personnel, and tooling suppliers – the information they need, when they need it, and in the format they need. The integrated nature of I-DEAS™ software makes that concept work, and is one of the tools making it possible for us to achieve our '2x Improvement' goals."

- David Mulholland, Senior CAD Application Engineer, In Focus Systems, Inc.

I-deas™

Get There Faster™

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✔ In Focus engineers maintain a library of solid models through I-DEAS Team Data Manager™. This software enables them to make the information instantly accessible to everyone involved in a project.

RESULTS

Immediate access to design data through the I-DEAS models has streamlined many aspects of the product development process. For example:

✔ PCB designers get board shapes from the library, populate the boards, and send them back to the library for use by the mechanical engineers. The two groups typically go through three or four iterations of a design in the time it used to take to complete one.

✔ Tooling suppliers access solid models while a design is still in progress, to get an earlier start on mold production. Prior to the use of I-DEAS, tooling had to wait until a design was finished and drawings were made which took as long as 16 weeks to complete. That has now dropped to two-to-four weeks. Having prototype parts earlier allows design validation (shock, thermal, vibration testing) to begin sooner.

✔ In Focus makes between 200 and 500 SLA prototypes in the course of a design, which is far more prototypes than when conventional machined parts fulfilled this function. The availability of rapid prototypes allows for better reviews by non-technical people as well as a greater degree of design optimization.

✔ Instead of rushing to make drawings so they can order prototypes, In Focus now generates them only at the end of a project. The plan is to eliminate drawings completely as soon as all suppliers can work with solid models.

✔ I-DEAS models are imported into Alias to create photorealistic marketing materials while the design is still in progress. In the past, marketing had to wait until a product was manufactured and then take photos of the device before they could generate their materials.

✔ This streamlined approach was recently used to bring a new ultra-portable display device, the LP™420, from concept to production in 11 months. At seven pounds, this 8.5 x 11 x 4-inch device is the smallest and brightest on the market today. The cycle time for this product is half that required formerly, so In Focus is well on its way to achieving its "2x Improvement" goals.

PLANS

In Focus has purchased the engineering animation software VisFly™ and is exploring its use for a number of applications, including using I-DEAS assembly models in animated assembly instructions, and to produce marketing presentations. The company is planning to take advantage of the Internet by putting I-DEAS models onto a Web site for suppliers to download.

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