Fujitsu General Charts Future With I-DEAS™

SITUATION

Fujitsu General is a large Japanese manufacturer with a diverse product line: appliances, audiovisual equipment, and satellite broadcasting systems. The company wants to reduce cycle time and development costs, and has targeted 50% reductions in both by the year 2000. The company also wants to improve product quality and innovation. Meeting these goals with the 2D CAD system, CADAM, was deemed impossible for several reasons. CADAM did not allow designers to create the highly sculptured surfaces needed for eye-catching consumer products. It did not integrate easily with analysis software, nor did it support concurrent engineering. For these reasons, Fujitsu General decided to upgrade to solid modeling.

OBJECTIVES

✔ Adopt a new CAD/CAM/CAE system based on solid, master models.

✔ The new system must include a CADAM translator so legacy data is not lost.

✔ Migrate from the mainframe to engineering workstations.

PROCESS VISION

✔ By the year 2000, reduce cycle time and development costs 50% by:

– Reducing the number of physical prototypes.

– Leveraging design data for tooling.

– Adopting concurrent engineering.

– Getting earlier feedback and solving problems prior to prototyping.

✔ Improve product quality and innovation by:

– Using analysis software to optimize designs.

– Creating designs by "sculpting" on the computer.

ACTIONS

✔ Fujitsu General purchased I-DEAS Master Series™ software because its excellent integration among design, manufacturing, and analysis tools supported the company's plans for design optimization and concurrent engineering. Company officials also appreciated SDRC's proven two-step transition strategy for migrating from CADAM. Under this approach, Fujitsu users worked with data converted directly from CADAM in I-DEAS Drafting™ software and then moved to 3D (I-DEAS Master Modeler™ software) as they got comfortable working in solids.

"Starting this year, our entire product development process, from design through molding, will be done in 3D with I-DEAS™ software. Our previous 2D CADAM system would not enable us to achieve our aggressive product development goals."

- Tomohisa Koga, General Manager, Research & Development Department, Corporate Engineering Control Division, Fujitsu General

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✔ Fujitsu General installed I-DEAS Drafting and I-DEAS Master Modeler in a client-server environment that puts the software out where the users can get to it, as opposed to being tied to the mainframe as was the CADAM system. The company also purchased I-DEAS Master Surfacing™, I-DEAS Master Assembly™ and I-DEAS Finite Element Modeling™ software.

✔ After all users had been trained in I-DEAS Drafting and were using it productively, the company began training designers in I-DEAS Master Modeler. Beginning this year, the training will be complete and all new product design will be performed using solid models.

RESULTS

✔ SDRC's two-step 2D-to-3D migration approach reduced the learning curve and kept the Fujitsu team productive. It also protected the company's investment in its CADAM data, which was especially important to Fujitsu since each new engineering product reuses as much as 90% of the existing product's design information.

✔ Approximately 100,000 CADAM drawings have been converted to I-DEAS software. This process is scheduled to be completed in the first half of 1998, and then the mainframe previously used to support the CADAM system will be unplugged.

✔ I-DEAS Drafting has eliminated the need to generate separate drawings for front, side and other views, as was required by CADAM. This makes the process much faster; improves consistency; and reduces the possibility for human error. Fujitsu reports further productivity improvements due to the I-DEAS Dynamic Navigator™, dynamic viewing capabilities, the IGES/DXF translators, and the Undo/Redo functions.

✔ In addition to appreciating the superior functionality of I-DEAS Drafting, Fujitsu designers have already come to value the ability to model curved surfaces in I-DEAS Master Modeler. This capability has been used to design a new air conditioner and a new refrigerator. Both have unique shapes that could not have been created using CADAM.

✔ The company has also started optimizing designs to an extent that was impossible in the past. A new satellite antenna was made thinner to reduce material costs, after using I-DEAS analysis software.

PLANS

Fujitsu General plans to expand its application of I-DEAS as it pursues its goal of establishing a completely integrated, concurrent engineering environment by the end of 1999.

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