

SITUATION

Minolta Co., Ltd. is one of the world's leading manufacturers of copiers, cameras, and other consumer electronics equipment. Minolta officials realized the importance of upgrading the company's design practices from 2D to solid modeling to remain competitive. However, they wanted to make the transition in a way that ensured high levels of user productivity and no loss of legacy data.

OBJECTIVES

- ✓ Migrate from existing 2D, mainframe-based CADAM system to a next-generation system that would allow innovative production design using 3D, and eliminate the costs associated with maintaining two mainframe computer systems.
- ✓ To make the transition as smooth as possible, ensure that the new system can support the existing 2D process AND enable process evolution to 3D to ultimately improve design and drafting productivity.
- ✓ Overcome deficiencies in the existing 2D, drawing-based design approach such as interferences and expensive prototype testing.

PROCESS VISION

- ✓ Re-engineer product development process to improve time to market.
- ✓ Establish a company-wide, concurrent solids-based, tightly integrated design process that supports all phases of product development, from marketing planning to product shipping.
- ✓ Use solid models as the basis for downstream operations such as drafting, rapid prototyping, analysis, mold design, NC toolpath generation.
- ✓ Simulate manufacturing, assembly, and serviceability using solid models, and feed results back to designers.
- ✓ Manage all product development data and processes with a tightly linked PDM system.

ACTIONS

- ✓ Minolta benchmarked existing systems (CADAM, CATIA), as well as several others, to find the best one for its new product development process.
- ✓ I-DEAS Master Series™ was selected because the software enabled Minolta to migrate in a stepped fashion,

Minolta Focuses on 3D With SDRC



"As we move to solid modeling, we are also changing our entire product development process to take advantage of the power of this approach. I-DEAS™, with its I-DEAS Drafting™ software, was the ideal choice for us because it is allowing us to make this transition efficiently and productively."

- Hideyuki Baba,
Manager, Information
Systems Division



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moving users and legacy 2D data to I-DEAS Drafting, and then to the full 3D power of I-DEAS Master Series software.

- Users were trained in I-DEAS Drafting with help from ISI-D, an SDRC distributor.
- ISI-D also assisted Minolta in converting an enormous amount of legacy CADAM data using the direct I-DEAS-CADAM Data Translator.
- Once user productivity was high and legacy data were available in I-DEAS Drafting, the company began the migration to solids.

- ✓ The company's first test of its new process involved the development of a new Vectis camera, which incorporates new features and technology that make the camera more rugged and compact, simplifying film loading.
- ✓ During this project, Minolta engineers used I-DEAS software to view complex assemblies and help eliminate interferences among components. The software also helped them verify manufacturability and assembly procedures. Once the 3D model was proven in these ways, the data were used to generate rapid prototypes and user documentation/manuals.

RESULTS

- ✓ All Minolta users are now productive in I-DEAS Drafting. In fact, the software is so easy to use, that the existing CADAM users mastered it in less than three months, while keeping the new camera product on schedule.
- ✓ An enormous amount of legacy CADAM data has been successfully converted and can now be leveraged by I-DEAS Drafting users. The Osaka Division has translated 30,000 drawings, and the Mikawa Division has translated 70,000.
- ✓ Drafting productivity has increased significantly. Users are now able to create drawings 20% faster with I-DEAS Drafting compared to CADAM.

PLANS

Minolta is continuing to evolve to a solids-based concurrent engineering environment, which will eventually encompass outside suppliers as well. When the migration is complete, I-DEAS will be the sole design platform across all Minolta divisions. The company is also implementing SDRC's Metaphase® Series 2 software for product data management in an effort to further shorten the design and production cycle.

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