

Panasonic Shikoku Electronics Co., Ltd.

Panasonic Shikoku Electronics streamlines development and reduces manufacturing costs with CATIA V5



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– *Yoshiro Kato, MMD Business and Development Center, Visual Products Business Unit, Panasonic Shikoku Electronics.*

Overview

■ **The Challenge**

Panasonic Shikoku Electronics needed to streamline and simplify its 3D design processes with a single, comprehensive toolset capable of meeting all of its product development needs – from styling to manufacturing

■ **The Solution**

CATIA V5 was chosen by Panasonic Shikoku Electronics as its company-wide, unified CAD system to boost its competitiveness by accelerating the development cycle

■ **The Benefit**

With CATIA V5, Panasonic Shikoku Electronics has reduced development times and optimised the use of existing designs and engineering know-how.

Electronics maker streamlines design process

Panasonic Shikoku Electronics is well known for its hard disk and DVD multidrives, as well as for visual products, including DVD/VCR units and digital camcorders and still cameras. The company also designs and manufactures medical devices and computer system components and tools.

Until 1990, Panasonic Shikoku Electronics mainly used 2D CAD tools for its design projects. Throughout the 1990s, it tested and adopted a variety of 3D CAD applications, but found the solutions too cumbersome and time consuming to use effectively.

With more than 20 2D CAD application brands being applied across its various design departments in 2001, Panasonic Shikoku Electronics needed a single, comprehensive toolset that would allow it to streamline and simplify its 3D design processes company-wide to meet all of its product development needs – from styling to manufacturing.

CATIA V5 accelerates development company-wide

The company began an organisation wide 3D CAD implementation project piloting several high-end 3D CAD applications in its mechanical design department. It sought a solution that could handle its extensive product line and manage the complete design and development process.

Panasonic Shikoku Electronics selected CATIA V5, the IBM Product Lifecycle Management (PLM) authoring solution developed by Dassault Systèmes, because it was pleased with its demonstrated evolution of functionality and potential for future advancement. The company believed that CATIA V5 would play a key role in strengthening its competitiveness by accelerating the development cycle with its capabilities for seamless 3D data flow.

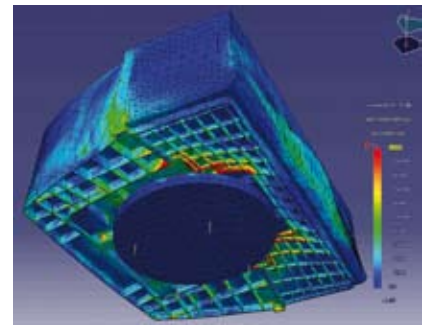
All ongoing projects in the styling design department are conducted with CATIA V5 and it is now applied to almost all products, including video camcorders and televisions with built in DVDs, developed by the company's visual products mechanical design department. And other Panasonic Shikoku Electronics business units are beginning to work with CATIA V5.

Intuitive tools make CATIA V5 a robust solution

Panasonic Shikoku Electronics is already seeing the benefits of CATIA V5 in many departments.

“The combination of intuitive tools, like the 2D sketcher and 3D solid modellers, integrated with its parametric modelling function make CATIA V5 a robust design solution,” says Koya Kurokawa, Development Design Group Product Design Team Manager.

“With CATIA V5, by defining product design specifications in advance, you can make changes to any design dimension or parameter and see the model updated immediately on the screen, allowing the final design to be completed quickly and easily,” adds Mr. Kurokawa.



And the benefits extend beyond the design units. “CATIA V5's 3D data incorporates product die requirements, simplifying collaboration with global supply chain partners by transcending the language barrier and saving valuable time,” says Yoshiro Kato, Product Development Group, MMD Business Promotion Centre, Visual Products Unit.

With continuously outsourced manufacturing, the cost of mock-ups are a significant, but by using CATIA V5 3D data communicated to Panasonic Shikoku Electronic's own Numerical Control (NC) machine tools, the company is saving time and money.

“The engineering collaboration enabled by IBM PLM solutions helped us reduce manufacturing costs to 75 percent on mock-up orders in 2003,” says Mr. Kato. “And in some cases, with CATIA V5, the styling design department has been able to reduce lead times from development to product delivery by 50 percent.”

By being able to quickly share design mock-ups and alternatives with customers, manufacturability can be assessed early in the design process, allowing final engineering and initial production steps to be completed concurrently, significantly reducing a new product's total time-to-delivery.

"It is very helpful for us to be able to quickly and efficiently manufacture mock-ups and check them with the styling department and the client," says Mr. Kurokawa. "Being able to see the real product first-hand to identify and solve issues at an earlier stage is a real benefit."

With CATIA V5, designers can perform analysis of product behaviour and performance under deformation and other external influences earlier and more easily. This allows designers to preserve quality standards and reduce design iterations.

"Requirements can be finalised earlier in development, eliminating corrections and changes to occur late in the design cycle, thus saving time and reducing cost," says Mr. Kurokawa.

And with CATIA V5, the borderlines between departments at Panasonic Shikoku Electronics are blurring and collaboration and efficiency are increasing.

"We consider cross-department collaboration a benefit that contributes to our overall efficiency," Mr. Kato says.

With CATIA V5, Panasonic Shikoku Electronics can work more flexibly across departments, and depending on the given conditions and workload, the most appropriate group can take the lead on a project and ensure time-to-market requirements.

Future plans

"With CATIA V5, collaboration of styling design and mechanical design is going well and CATIA V5 is being applied to more and more products and in collaborations with die manufacturers," says Mr. Aitani, Manager, Mechanical Design Team, Technology Group, Visual Products Business Unit. "Our next step is to begin using CATIA V5 in collaboration with the production engineering and electrical design departments, ultimately integrating the embedded software design processes as well."

CATIA V5 will also play a key role in the creation of rules to optimise the use of existing company know-how. Through the use of CATIA Knowledgeware solutions, Panasonic Shikoku Electronics will ensure the proliferation of design skills and keep design know-how accessible and instrumental in the development of new products.



The company also plans to implement a managed collaborative 3D environment through the use of product data management capabilities for its design-to-manufacturing processes.

"We know tool line-up makes our work easier and more efficient. We need to spread it throughout the company and each business unit to bring the benefits of 3D data utilisation and CATIA V5 to the entire company," says Mr. Kurokawa.

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