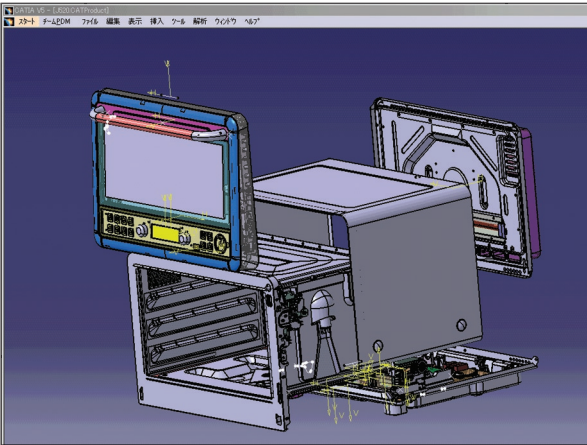


# Matsushita Electric Industrial Co. Ltd.

*CATIA V5 spurs 'design evolution', streamlining development and improving market competitiveness*



*"Our policy for the NE-J520 development was to do whatever was possible to enhance the product's strength. CATIA V5 contributed to the success of this development project."*

*– Shigeki Ueda, New Business Promotion Project Leader, Matsushita*

Under this slogan, we started development of the NE-J520 product model as part of our first portfolio of products for our new business improvement."

### Full 3-D design

Matsushita began its new design process by thoroughly investigating the needs of the customer at the earliest stages of concept design. "When we started our business improvement, the head of engineering department decided to aggressively promote 3-dimensional CAD for enhancing product quality and strength, and we agreed with his decision," Ueda said.

The company's trial manufacturing department began actively using CATIA V4 and CATIA V5 was introduced to promote collaboration among the design, trial manufacture and production manufacturing departments, as well as the sheet metal design function.

### Concept design with CATIA

During the concept design stage of the new microwave product, Matsushita used a 3-D model of the old product that had been designed with 2-D method just a year before. Designers used some existing parts from the

### Highlights

- *Matsushita was losing market share and needed to offer greater value and higher quality in its microwave oven products by leaving its 2-D design processes behind*
- *CATIA V5 was implemented to streamline development of a new microwave model intended to regain market share*
- *CATIA V5 helped to reduce product development time, reduce the required number of product prototypes, and make late-stage design changes with ease.*

### Reaffirming a commitment to quality

Matsushita markets its products under the brand names 'Panasonic' and 'National.' Its Home Appliance and Housing Electronics' Cooking Systems Division is engaged in microwave oven production activities in Japan and five overseas locations, including Shanghai and the United Kingdom.

In 2001, competition in the microwave oven market heated up, with competitors manufacturing products in an upscale performance and price point range. "We were steadily losing market share and sales," said Shigeki Ueda, New Business Promotion Project Leader for Matsushita. "We decided to sharply improve our business performance in 2002 and adopted the slogan 'Regain Trust in the Market by Reaffirming Matsushita's Commitment to Quality.'





previous design and incorporated them into the new 3-D model for the NE-J520. They then designed new parts and finished the initial design by completing a virtual model of the new product.

“Using the virtual model displayed on the CATIA V5 screen, we demonstrated a general view of the new product to the sections involved,” said Ueda. “As a result, we could detect problems related to the product mechanism and assembly early. Most of these problems were then solved before trial manufacture began.”

### Late stage design changes simplified with CATIA

After trial manufacturing the new product, designers sought opinions from sales people and distributors who were close to end-users. These groups raised concerns with the NE-J520's exterior design attractiveness, indicating the product might appear inferior to others on the market.

In response, designers decided to change the entire product family's front plate to stainless steel instead of plastic. “Without CATIA V5, we could not have made such a drastic change that easily in the short period of time available,” Ueda said.

Although several design changes were implemented, including significant changes in the external design, the lead time for the product did not exceed that of a 2-D design with few changes and was significantly less than products designed in 2-D with large numbers of changes.

“We made about ten percent fewer design modifications for overall quality enhancement than we had made before,” Ueda said. “A very small part of them were modifications related to the mechanism design. The number of modifications related to that aspect of the design was dramatically reduced by one-third. All of these benefits are attributable to full 3-dimensional design with CATIA V5.”

### Improving the process

“I think our design approach was successful,” Ueda said. “It possesses many advantages over the previous design approach, so I'm sure it can pave the way to developing future products. Our policy for NE-J520 development was to do whatever was possible to enhance the product strength. Looking back, I think the CATIA V5 contributed to the success of this development project.”

### For more information

Contact your IBM Marketing Representative, IBM Business Partner or visit the IBM PLM Web site at:

**ibm.com/solutions/plm**



### IBM Product Lifecycle Management

Tour Descartes  
La Defense 5  
2, avenue Gambetta  
92066 Paris La Defense cedex  
France

The IBM home page can be found at **ibm.com**

IBM and the IBM logo are trademarks of International Business Machines Corporation in the United States, other countries, or both.

Other company, product and service names may be trademarks, or service marks of others.

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program or service is not intended to imply that only IBM's product, program or service may be used. Any functionally equivalent product, program or service may be used instead.

This case study illustrates how one IBM customer uses IBM and/or Business Partner technologies/services. Many factors have contributed to the results and benefits described. IBM does not guarantee comparable results. All information contained herein was provided by the featured customer and/or Business Partner. IBM does not attest to its accuracy.

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may not be new and may have been previously installed. Regardless, IBM warranty terms apply.

This publication is for general guidance only.

Photographs may show design models.

© Copyright IBM Corporation 2003  
All Rights Reserved.

