SIEMENS
Ingenuity for life

Electronics and semiconductor

Matsushita Electronics

Shorter timeframe for new home entertainment system? No problem

Products

NX, Teamcenter

Business challenges

Upgrade development process to match rapid-fire pace of consumer electronics industry

Make designers more efficient; boost their collaboration with rest of development team

Eliminate long delays caused by problems found late in development

Keys to success

Replace 2D design software with 3D solid and surface modeling

Show lifelike digital models instead of drawings at design reviews to get better feedback from team members

Detect problems in digital prototypes; create error-free computer models and skip most physical prototypes

Results

Individual designers 20 percent more productive versus with 2D

Singapore-based Matsushita Electronics (S) Pte Ltd used the collaborative benefits of 3D modeling to slash new product development time by 30 percent

Matsushita Electronics needed to improve its product development cycle or risk missing the continually moving target of consumer taste.

Big opportunity, small window

A new consumer electronics device is "hot" for just so long before the public's fancy moves on to bigger and better (actually smaller and faster) things. Makers of these devices are under extreme pressure to develop products quickly because if they miss a market window by even three months, they can find themselves with a brand-new yet obsolete product on their hands.

Matsushita Electronics' previous product development cycle was far too long for comfort in this fast-paced arena. The old 2D-design process had reached its threshold for higher productivity gain. Simple parts had to be redrawn repeatedly from

Results *(continued)*

Overall design cycle decreased by 20 percent due to efficiency and collaborative benefits of 3D

Prototyping time dropped by 65 percent

Overall product development reduced by 30 percent

scratch; design reviews were mostly inefficient until a prototype was made; and problems were found so late in the design cycle that new solutions would inevitably affect the preproduction schedule.

New approach: 3D modeling

The company's research and development division evaluated and convinced top management to bring in NX™ software from Siemens PLM Software. NX was chosen for its strong tooling functionality and excellent free-form solid and surface modeling – vital requirements for modeling and manufacturing the graceful shapes of consumer devices. Another product lifecycle management (PLM) solution from Siemens – Teamcenter® software – was also used to positively impact Matsushita Electronics' product development process.

Huge impact on designers as well as entire enterprise

NX had a huge impact on the digital product development process, starting with the designers but soon spreading out to the rest of the company. Design productivity rose 20 percent as designers used the software to automate many labor-intensive and tedious tasks such as plastic and metal component design. Design changes became instantaneous while the superior visualization of 3D made it possible to see at a glance what used to take pages of drawings. These benefits combined to cause a 20 percent reduction in Matsushita Electronics' overall design cycle.

"To make a significant reduction in our lead time, we had to wring all the productivity out of 3D that we could. The NX and Teamcenter combination made that possible – not only for designers but the entire product team."

Masahiko Kurimoto
Mechanical Advisor
Matsushita Electronics (S) Pte Ltd

Solutions/Services

NX
www.siemens.com/nx

Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Matsushita Electronics (S) Pte Ltd produces audio-visual consumer electronics products – DVD systems, CD players, etc. – sold under the Panasonic and Technics brand names.

Customer location

Singapore

For the rest of the company, the benefits of 3D come courtesy of Teamcenter. "Team members now visualize and comment on designs at any time," says Masahiko Kurimoto, mechanical advisor, Matsushita Electronics (S) Pte Ltd. "This lets engineers refine the designs during the design phase, rather than at the end of it. Potential errors are identified earlier too, reducing the need for redesign."

For Matsushita, the greatest return on investment for moving from 2D to 3D are product development cycles that are 30 percent faster. That means the company can have an idea for a new Panasonic product in production in six months. Addressing the constantly moving target of consumer taste, Matsushita Electronics strongly believes that in the future its new design process will help trim another 15 percent off its product development cycle.

The 3D collaboration bonus

Engineers and associates who are unfamiliar with reading 2D drawings can easily visualize a proposed product from a 3D digital mockup. Now, using PLM solutions from Siemens, these professionals can influence product direction early in the development cycle, when their suggestions have the most impact.

"Team members now visualize and comment on designs at any time."

Masahiko Kurimoto
Mechanical Advisor
Matsushita Electronics
(S) Pte Ltd

"We extend the benefits of 3D throughout the company by turning CAD models into lifelike digital mockups that everyone can understand."

Masahiko Kurimoto
Mechanical Advisor
Matsushita Electronics (S) Pte Ltd

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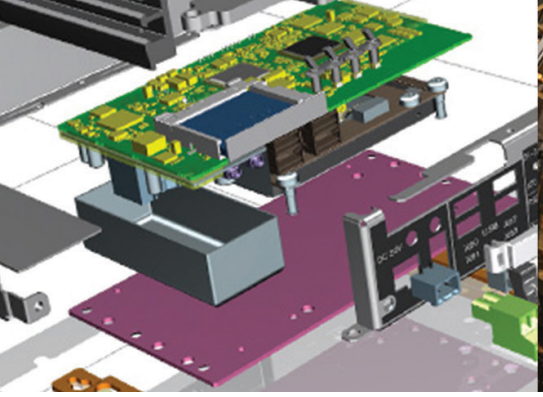

About Applied CAx

Our combination of a mechanical design firm, machine shop and FEA consultancy allows us to provide the strongest support for Siemens PLM Software in the US.

NX CAD • NX CAM • NX CAE
Teamcenter • FEMAP • STAR CCM+

- Software licenses and installation
- On-call support
- Customized training
- Teamcenter architecture
- CAM Post writing
- CAM Simulation kits
- Mechanical engineering
- Finite Element Analysis consulting

We've helped hundreds of companies stay on track with their important projects. From aerospace to mining to automotive and beyond, we do this *every day.*

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