

Humax Co. Modernizes Its Product Data Management with Windchill® from PTC

PTC's Proven PDM Solution Transforms Development, Serves as Backbone for Future Growth

Humax Co. Ltd., Gyeonggi-do, Korea

Humax, a world leader in digital broadcasting device technology, designs and manufactures high-quality digital set-top TV boxes and digital TVs. The company – whose name is derived from the phrase “HUMAN MAXimization” – is committed to developing quality products that bring the ultimate in digital broadcasting comfort to consumers worldwide. In 2007, Humax revenues topped US \$814 million, primarily from sales in the USA, Europe and the Middle East.

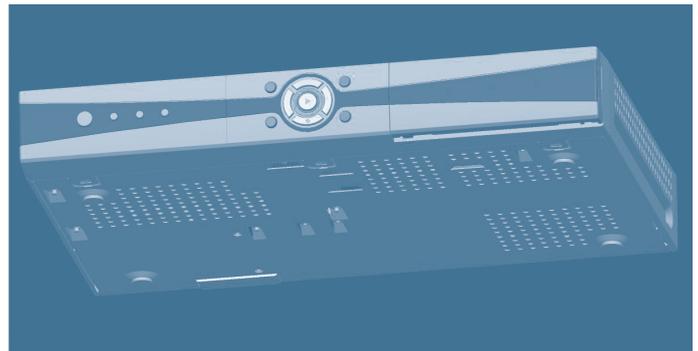
Since 2001, this fast-growing, innovative company has been designing products with PTC's Pro/ENGINEER® 3D CAD software. They have also implemented PTC's InterComm™ for PCB (printed circuit board) analysis, and ProductView™ for sharing designs across the Web.

The Challenge: Replace Outdated Email- and Excel-Based PDM System

Humax was first established as a venture company. But as the company evolved into a larger, international manufacturing organization, problems began to arise with collaboration among its many product development teams. Because much of the communication and interaction involved email, designers and engineers were often working on different versions of the latest designs. Company leaders realized that if Humax wanted to achieve its ambitious business goals, their product development teams would require a modern, automated Product Data Management System.

The Solution: Windchill Content and Process Management Software from PTC

In 2007, a decision was made to, first, begin analyzing the company's needs, and then to start researching PDM systems that could satisfy the company's requirements of an automated, centralized process and data management solution. After reviewing three PDM solutions on the market, Humax selected PTC's Windchill, a proven solution that ensures all product stakeholders – everywhere – have fast, easy access to the most up-to-date product information in a single, fully secure vault. Windchill enhances efficiency in many areas – communication, collaboration, development, project visibility, data management, and web-accessibility.



A Pro/ENGINEER 3D image of Humax's digital set-top box.

Results: Humax Poised for Rapid Global Growth

As a result of implementing Windchill, Humax has completely transformed its PDM and product development processes, particularly since their 3D CAD data (Pro/ENGINEER) is now being managed in a powerful PDM solution. Today, all product stakeholders can quickly access, work on, and share the most up-to-date versions of the product models. Windchill has boosted productivity and reduced losses, as engineers and designers have eliminated time previously wasted working on the wrong versions of model data. ECAD and MCAD efficiency has improved, as business is now conducted in a single environment – from parts information searches to BOM creation. As Humax continues its impressive global expansion, Windchill is expected to become ‘the backbone’ for growth going forward.

“The Windchill PDM System is expected to help Humax realize its vision and achieve its goals of becoming a global leader.”

Humax: Realizing Human-Oriented Values

Established in 1989 under the name Gunin System, Humax Co. Ltd.'s primary business was originally factory automation and multimedia home appliances. In 1998, the company changed its name to Humax and began its transformation into one of the world's leading technology enterprises.

Why the name Humax? Eun-hyuk Lee, Senior Manager of the Innovation Division, explains: "All that our company strives for relates to people. In other words, the company's core focus is human value. We are striving to become a human-oriented company that achieves corporate growth through collaboration between people."

Today, over 90% of the company's revenue comes from Europe, the Middle East, and the USA. The company's major products are digital set-top boxes for digital TVs, which is one of the few niche markets that large, conglomerate Korean corporations have left untouched, as Korea's cable TV set-top box market is insignificant. Humax has achieved successful growth by targeting the global export market. The company's goal is to one day become a global brand for household appliances.

Optimizing Product Development

Humax was first established as a venture company. As the company evolved into a larger manufacturing organization, problems arose that were associated with collaboration amongst its teams. In 2007, the company launched a number of product development optimization efforts to change its internal work processes and its corporate culture, including adding a modern Product Data Management (PDM) system.

Major Problem: Sharing Product Information Across Teams

Since the company's product development process was largely based on sharing information by email, engineers could not respond immediately to an urgent situation, and workers had trouble finding necessary information to do their jobs. In addition, designers and engineers working on the same project were accessing different versions of the latest data, which not only created confusion, but also caused problems with overall management of the project. Since people involved with a single project were working with different versions of the same information, managers saw an urgent necessity to reduce the losses engendered by such circumstances.

The team manager who made the initial suggestion for installing a new PDM system stated, "All processes must be made into a DB (database) and networked. We need to carry out a systematic upgrade to clearly show where a current project is, what each individual must do at any given moment, and whether any change of objective that differs from my understanding of the project has occurred, and all this information must be communal so that everyone can have a unified view of matters throughout the project." The team manager declared that "Under the current work process, we do not need a document that defines the process, but a tool that can get the work done."

Windchill PDM Project Background and Objectives

Goal: Accident Prevention

- Acquire mid-stage output linked with the workflow and integrity of the final development output.
Generate → Inspect → Approve → Distribute → Save → Modification → Management
- Assume responsibility through a proper approval process of the output and improve development process quality by clearly defining responsible factors.
- Launch over 100 projects in 2007: A thorough project management system was required.

Goal: Enhance Development Efficiency

- Improve development productivity on follow-up models via the accumulation of development data.
- Backbone for achieving the New Product Generation (NPG-CFT) Process.

Goal: Improve the Efficiency of Collaboration

- Improve efficiency of CAD and MCAD work, since the work process – from parts information search to BOM generation – can be conducted in a single environment.
- Improve the efficiency of procurement collaboration (parts search, viewing, etc.).
- Improve the efficiency of quality/production collaboration for such processes as product technology and QC (technology data search, viewing, etc.).

Goal: Enhance Project Visibility

- Allow real-time verification of the progress of the project milestones.

The company decided that a PDM System would serve as the backbone to ensure New Production Generation (NPG). Before purchasing a PDM system, the company reviewed its processes for over a year before launching its PDM implementation project in April 2007. In November 2007, Humax purchased Windchill from PTC, the global leader in Product Lifecycle Management (PLM) solutions. Since 2001, Humax has been using PTC's Pro/ENGINEER CAD software to design and create 3D designs. Today, the company uses Pro/ENGINEER Wildfire 3.0.

As far as selecting PTC's Windchill as the PDM System, Senior Manager Eun-hyuk Lee said, "At the time when Humax was investigating PDM Systems, we received proposals from three companies. The factors to be considered were consulting capability, understanding of the manufacturing industry, the ability of the PMs participating in the project, and system performance with consideration to the international work process requirements. Finally, the price:quality ratio was taken into consideration before selecting a vendor to sign the contract."

Effects of PDM Adaptation on the Work Process

Humax is currently using Windchill 8.0, and is planning to enhance the internal PDM system after assessing the actual performance achieved in adapting the tool. The Windchill PDM System includes Document and Blue Print Modification Control, Workflow and BOM, Modification Management, Parts Management, and a number of other features. Now that these features have been incorporated into the work process, the company has achieved significant changes in the work process.

With the adaptation of the Windchill PDM solution, Humax now has an automated solution for CAD data management. In addition, because the PDM system is now managing CAD data, BOM generation in CAD configuration has become easier and errors have been reduced, thereby increasing the efficiency of follow-up models. Further, unified design data management has been made possible by implementing a standardized design. The Windchill PDM also made communication possible with product stakeholders who do not own OrCAD or MCAD, by allowing information to be searched easily with PTC's InterComm solution (PCB analysis software) or ProductView (web-based visualization tool). Additionally, the total number of design modifications was reduced through design modification management, and the design modification data was clarified by the standardized format. As such, the company expects to be able to verify replacement parts.

Prepared for Future Growth

Since 2000, Humax has achieved over 30% profit. Such success can be attributed not only to the lucrative market it serves, but also to the technical abilities of its developers and the skills that members of each division bring to their assignments. On the strength of such reliability and talent, the company was able to build up trusting relationships with its customers and achieve greater growth.

However, in today's environment it's difficult to maintain that level of growth for a number of reasons: there is far more complexity in their products, and gaining a competitive edge requires enhanced development efficiency, rapid identification of customers' needs, and the rapid production of end-products at the lowest possible cost. In other words, today's environment not only requires human abilities, but an optimal system capable of backing up such abilities.

Humax set ambitious goals of becoming a global enterprise, gaining a competitive edge in the international market, and achieving over two trillion KRW (South Korean Won) in revenues by 2011. The Windchill PDM System – now an inherent part of the company's core capability – is expected to help Humax realize its vision and achieve its goals of becoming a global leader.



To learn more about how PTC Product Development System can help your company create and delivery high-quality product information, please visit our website at: <http://www.single-sourcing.com/>