Tecnitoys

Scalextric®/SCX® manufacturer reduces development time with DS PLM

Overview

Challenge

Tecnitoys needed to design model cars that accurately reproduce the original car in miniature format and improve efficiency of data access and management.

Solution

The company adopted CATIA and ENOVIA SmarTeam from Dassault Systèmes for all its design and information management needs.

Benefits

CATIA provides the surfacing capabilities that make Tecnitoys cars so unique while ENOVIA improves versioning management and ensures access to the most current data at all times.

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Luis Arnau
R&D Director
Tecnitoys

TECNITOYS

Specialist in miniature electric cars

Founded in 1997, Tecnitoys is the Spanish manufacturer and distributor of the famous Scalextric®/SCX® electric car racing games. From the beginning, the company has been a pioneer in the model car, track and slot accessories markets, applying innovative ideas and techniques to develop leading products for this industry. Currently holding approximately 80% of the toy track and car market share in Spain, the company enjoys a strong presence in other countries such as Germany, Mexico, Australia, UK and the USA.

Tecnitoys offers a range of products for all ages – from compact toys for children under 4 to pro versions for adults – as well as products for competition purposes. The company's latest innovations include the Pit Box Original, which measures fuel consumption in the cars, and the MotoGP track, which features replicas of the Yamaha motorcycles driven by Jorge Lorenzo and Valentino Rossi. Tecnitoys is planning a gradual expansion into the Chinese market via stores and franchises in Shanghai, Beijing and Hong Kong, with hopes to tap market potential estimated to be worth over one million dollars.

Tecnitoys puts a lot of emphasis on innovation, which is why its R&D department is staffed with a team of engineers, designers and marketing specialists who work on product development in conjunction with universities and companies specializing in digital communications systems. Headed by R&D Director Luis Arnau, the team is located in Barcelona with production based in China.

Reproducing famous models with CATIA

Tecnitoys adopted CATIA for car and track design creating better synergy with the companies who design the original size cars and who themselves use CATIA. These real-life car manufacturers share their car designs with Tecnitoys, which adapts them for the miniature world. "We receive information from

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the manufacturers in electronic format, mainly in the original CATIA format," explained Arnau. "We use the same digital 3D models as the original cars such as leading Formula 1 designs, and scale down the surface areas which enables us to precisely and accurately reproduce the car in miniature format." In effect, Scalextric model cars are 32 times smaller than the original vehicles. The development team uses CATIA to model everything from a new track to the stopwatch that is used to clock the race.

In the past, physical prototypes were produced for each car out of materials such as clay or wood, starting with the outer body and culminating in the creation of each component. This process required a considerable amount of time, resources and budget. Developing its products entirely with CATIA helps reduce mold production time by directly generating the master reference.

Tecnitoys' previous design solution lacked the surfacing capabilities required for the design of its products. The switch to CATIA became the obvious solution. "The changeover to CATIA was a huge step – before, we lacked the capacity to handle the complex surface areas needed for our car models. CATIA helps us be more flexible and precise in our work. It's a very robust solution," said Arnau.

Streamlining organization in the engineering office

Since 2008, the company has also been actively using ENOVIA SmarTeam for product data management, change management and archiving. Following a brief training period, a basic configuration of the solution was implemented and specific parameters were incorporated with the help of a Dassault Systèmes' reseller. "We tried an alternative PDM solution, but implementation was very expensive and we did not receive adequate support. The Dassault Systèmes tool comes with all the support we could ever need," commented Arnau.

For Tecnitoys, ENOVIA ensures that design data never goes astray, reduces overall development time, and guarantees reliable acces to information. "Organization in the engineering office has improved considerably. Tecnitoys' designers are now sure to access the correct up-to-date versions of each design," said Arnau.

In addition to streamlining the engineering office, future plans at Tecnitoys include introducing kinematic simulation to verify the way a product functions before proceeding to production.

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