

Conceptual Design and Consumer Experience

Designing Products that Stand Out from the Competition



Industry Business Drivers

No industrial sector has penetrated our way of life more than electronics. Electronics are becoming more and more pervasive as a common enabler across industry sectors and a key driver for innovation. Every day we discover that electronic systems have entered a new industry segment, driving the market differentiation of a new product. High-Tech and other companies that manufacture electronic components are facing top-level business drivers such as shorter product lifecycles, fewer resources, or the integration of global design, manufacturing, and test teams.

In today's highly competitive consumer electronics market, consumers are increasingly discriminating when it comes to distinguishing high quality designs. Products with stylish design and innovative usage are the first to leave the shelves, leaving behind bulky, outdated merchandise. Due

to increasing demands for aesthetically pleasing products that deliver the best features, designers need a fast, simple, and user-friendly solution to develop products that the consumers want. Having the ability to capture market requirements and the toolset to imagine, create, and experience the product prior to market brings significant competitive advantages.

The Solution

As part of IBM's comprehensive Product Lifecycle Management (PLM) V6 solution, the Conceptual Design and Consumer Experience solution is developed for industrial designers and product creators who seek to increase brand identity and create products that stand out from the competition. With this solution, designers can imagine and shape their next products with a unique virtual clay modeling approach, or

Highlights

- Provides a unique technology to support efficient product design from ideation to detail design and validation
- Increases innovation freedom by capturing ideas in natural, intuitive ways
- Speeds up product development process and avoids design flow Interruptions
- Shares product emotional content with consumers in the conceptual design stage to measure their reactions and capture their expectations
- Reviews design alternatives quickly at anytime by using real-time and photorealistic rendering
- Integrates material compliance and environmental impact study early in the product development process

start the product ideation process using available shapes to shorten the design cycle.

The Conceptual Design and Consumer Experience solution is designed to feel like an extended arm for the designers to freely express their creativity while combining visual appeal with product usability and performance aspects. The "consumer experience" feature enables the designers to simulate product behavior in the first moment of truth (i.e. in the store) and the second moment of truth (i.e. in use) in order to analyze how the product will be perceived and used by the consumers.

A robust set of dedicated design applications of the Conceptual Design and Consumer Experience solution helps designers to explore and test many ideas in the early conceptual phase with unrivalled freedom. Benefiting from products under the CATIA®, 3DVIA, and ENOVIA® brands, product designers can quickly capture ideas and experiment with new concepts for the right market. Designers can make changes at any time throughout the design process to discover opportunities with each option and help build strong product portfolios.

IBM's PLM system leverages 3D as a universal and natural language to enable all product development stakeholders from marketing, design, engineering, manufacturing, procurement departments and even the end user of the product to be included in the product creation process. Design reviews are easier with clear communication using interactive 3D models, resulting in faster decision making and more opportunities for innovation. When products are imagined, built, and shared across concurrent engineering teams, design maturity is accelerated and costly late-cycle changes can be minimized.

Understanding the unique needs of creative people has been the key driver for IBM to deliver the Conceptual Design and Consumer Experience solution. Design is not a linear process. It calls for flexible tools that corresponds to the way creative people work. This solution brings together the art and science aspects of product development with unprecedented ease by delivering the most exhaustive set of creative and engineering tools in the market today.

The Conceptual Design and Consumer Experience solution integrates the following sub-processes:

- Concept Ideation and Creation
- Industrial Design
- Material and Color Management
- Design Review and Validation
- Consumer Life-like Experience

The Conceptual Design and Consumer Experience solution is supported by the following products:

- 3DVIA Virtools
- ENOVIA® 3DLive
- ENOVIA® Engineering Central™
- ENOVIA® VPM Central™
- ENOVIA® Collaboration for Adobe Illustrator
- ENOVIA® Live Collaboration
- CATIA® Rendering
- CATIA® Concept Design
- CATIA® Concept Shape Industrialization
- CATIA® Mechanical Surface Design
- CATIA® Reverse Engineering
- CATIA® Generative Shape Optimizer
- CATIA® Imagine & Shape
- CATIA® Live Shape



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