

## Market-driven products and global operational efficiency

PLM software underlies a strategy for worldwide market dominance

### LG ELECTRONICS

Siemens PLM Software

[www.siemens.com/plm](http://www.siemens.com/plm)

#### ▶ Business initiatives

- New product development
- Value chain synchronization
- Commonization and re-use

#### ▶ Business challenges

- 14 production facilities located around the world
- Quality improvement initiative
- Cost reduction target of 30 percent
- Faster time-to-market by 30 percent

#### ▶ Keys to success

Multi-site collaboration software that supports global drawing management, BOM management and engineering change process

#### ▶ Results

- One part, one spec, one cost across all sites
- Product information distributed to suppliers electronically
- Secure data transfer
- Time to open a 50-megabyte assembly file decreased by 97.5 percent
- 98.6 percent BOM synchronization between home office and overseas
- 30 percent cost reduction and 30 percent faster to market goals on schedule

#### Delightfully smart appliances

Established in 1958, LG Electronics, Inc. (LG) is a global leader and technology innovator in consumer electronics, home appliances and mobile communications, employing more than 82,000 people working in over 110 operations including 81 subsidiaries around the world. LG's Digital Appliance Company (DAC) focuses on home appliances such as air conditioners, refrigerators, microwave ovens, washing machines and vacuum cleaners. It also makes some product components, such as air conditioner and refrigerator compressors, plasma lighting systems

and motors. Digital convergence, health consciousness and ecological friendliness are major characteristics of LG's premium appliance products.

LG DAC operates 14 plants around the world, working under the philosophy of "localized product development with efficient global logistics." The company has set a goal of becoming the leading supplier of home appliances by 2007. DAC has already achieved that ranking with its air conditioners. For five consecutive years one of its air conditioners, which resembles a work of art, has held the number-one position worldwide. LG DAC plans to achieve more top rankings through a combination of superior branding and leading-edge technology. The company has also established a quality improvement initiative and set goals for 30 percent reductions in both costs and time-to-market.

#### Applying PLM for market leadership

LG DAC is using product lifecycle management (PLM) technology from Siemens PLM Software as its platform for achieving these targets. LG DAC employs the NX™ product development system to create 3D master models of all new products via a top-down modular design approach. Engineers use NX for knowledge management and requirements engineering, and simulate performance digitally to reduce the need for physical prototypes. The company engages Teamcenter® digital lifecycle management software to support its global factory program by leveraging multi-site collaboration functionality. For example, Teamcenter synchronizes drawings



**Solutions/Services**

NX

Teamcenter

**Client's primary business**

LG Electronics is a major electronics, telecommunication company doing business in over 39 countries.  
www.lge.com

**Client location**

Changwon  
Korea

***“With Siemens PLM Software technology, LG Digital Appliance Company is able to tailor our products for many local countries and cultures while still leveraging the efficiency of globalized development.”***

Jongyoo Kim  
Group Manager  
Process Innovation Group  
LG Electronics Digital Appliance Company

***“Multi-site collaboration, made possible by a comprehensive solution from Siemens PLM Software, is bringing products to market faster while reducing costs.”***

Soonjae Chang  
R&D Manager  
LG Electronics Digital Appliance Company

and bill of materials (BOM) created at multiple sites and permits a library of standard and common parts accessible in read-only format to all locations. Using Teamcenter, DAC has also established a global engineering change process.

**One part, one spec, one cost – worldwide**

Siemens technology has made it possible for LG DAC to establish a 3D product development process that encompasses the range of activities from design to engineering, testing and manufacturing. The company has also put in place a global one part/one specification/one cost system.

Teamcenter enables LG DAC's data and product information to be securely managed as it travels the world via the internet. Product information is also distributed to suppliers electronically via Teamcenter's drawing management functionality. LG DAC and its suppliers benefit too from Teamcenter's drawing management ability to quickly open a 50-megabyte assembly file from anywhere. With Teamcenter handling global BOM management, BOMs are now synchronized between DAC and its overseas operations. In fact, non-synchronization among BOMs is down by 88 percent (from 16 percent not synchronized to only 1.4 percent). The company anticipates a 100 percent synchronization rate eventually thanks to a validation rule that prevents BOM errors. In addition, LG DAC is well on the way to achieving its business operations targets, including a 30 percent cost reduction as well as getting to market 30 percent faster.



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