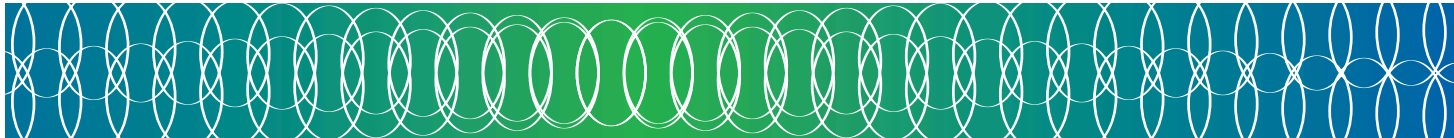


UNILEVER CLEANS UP THE MANAGEMENT OF DRAWINGS ACROSS AN ENGINEERING ENTERPRISE



After almost 70 years of continuous operation, Unilever, headquartered in London, England, has grown into an international manufacturing and distribution powerhouse, focusing on home and personal care products as well as foods. With brand names like Dove, Wisk, Vaseline, Q-tips, Faberge/Elizabeth Arden, Pepsodent, Lipton Tea, I Can't Believe it's not Butter, Breyers and Birds Eye, its corporate mission is to "meet the everyday needs of people everywhere."

Just prior to the merger of Lever Brothers Company (LBC) into the Home and Personal Care operating unit of Unilever, the corporate engineering division of LBC approached TITAN Microsystems, New York-based computer-aided design consulting firm, with a seemingly straightforward, but far-reaching problem:

"How can we better manage our electronic documentation?"

It was the fall of 1996, 15 years after Lever converted from manual drafting to computer-aided design technology. By this time, the organization had produced tens of thousands of documents of its four manufacturing facilities, including a plant constructed in the 1980s, designed entirely using computer-aided design. The problem was that these drawings were scattered among various computer-aided design installations within the enterprise. Each plant site, the corporate engineering headquarters,

and Lever's consulting engineering firms all maintained volumes of computer-aided design data. Without a system to uniformly track the documents, the company had a hard time determining which drawings were the most relevant to its facilities at any given time.

Before the adoption of computer-aided design, the physical document (the Mylar tracing) was owned by the designer. The designer might be an architectural/engineering (A/E) firm or an engineering team at one of the factories. There was never any question as to which document was the original. But, with the advent of computer-aided design and the ease

SUMMARY

Organization

Unilever Corporation

Vertical Market

Platform

Location

New Jersey, U.S.

Project Objectives

- Deploy a system to efficiently manage and catalog Unilever's electronic documentation across an engineering enterprise consisting of various plant sites, a corporate engineering department and outside consulting firms.

Fast Facts

- Unilever is one of the world's leading manufacturers and distributors of brand-name home and personal care products, such as soaps, fragrances, and toiletries.
- Unilever implemented its document management system, linking the disparate engineering workgroups of the enterprise using extranet technology.

Bentley Products Used

- MicroStation



of duplicating electronic information, the designer had effectively lost ownership of the document.

Today, project teams typically share digital information through the use of LAN/WANs, “sneaker-net” and E-mail. As the documents proliferate throughout the engineering enterprise, it is extremely difficult to maintain real-time catalogs of the documentation and enforce access/version controls (that is, prevent two or more different designers from modifying digital replicas of the same drawing).

To make a complex problem even more challenging, Lever underwent a series of corporate “right-sizing” measures through the early 1990s. Its engineering presence on the corporate level and in each of the plants was significantly reduced. In a move to outsource much of its engineering, the company adopted a concept of alliance engineering firms— independent A/E consultants under contract by Lever to support both the day-to-day and large-scale engineering projects at each of the factories. The coordination among these disparate groups was critical to the success of the engineering enterprise.



Prior to TITAN’s involvement in this project, Lever had attempted to solve these problems with a document management initiative undertaken at the corporate level. However, after making a significant capital investment in the technology, the system proved to be overly complex and cumbersome, with poor support for the unique requirements of its engineering application software.

The system was ultimately phased out. Lever needed a technology that was easy to use, affordable and computer-aided-design friendly. Because Lever had standardized on Bentley’s MicroStation® software, TITAN proposed a client/server approach based on Bentley ProjectWise®. This software had both the tightest integration with MicroStation and the brightest future of the offerings in this technology category.

TITAN’s solution entails the deployment of an NT 4.0 server as the hub of the document management system located in Lever’s New Jersey-based corporate engineering offices. This system runs ProjectWise using an Oracle database. In addition to the local computer-aided design workstations networked to the system, wide-area communication links (both analog dial-up and digital dial-on-demand) support access to users in the field, plants and at the offices of alliance engineering firms. ProjectWise functions as the librarian of Lever’s document archive, facilitating the search and retrieval of documents and managing the check-in/out process of drawings from the system. Both the database and the ProjectWise front-end GUI were customized to suit the specific needs of the enterprise with the help of an Oracle sub-consultant



Because ProjectWise is based on a 3-tier client/server software architecture rather than the traditional client/server approach, Lever will have more options to tap into its document database. Not only does ProjectWise support a stand-alone Windows application to access the system, but users also have the option of connecting via a Web browser.

Using the latter scenario, no additional software beyond a Java-capable Web browser needs to be installed or managed on the workstation. Since most computers deployed in a corporate environment already run a browser as part of their basic operating environment, access to an organization's engineering document

database is no longer limited to a handful of selected users using specialized client software. Here, ProjectWise server-side processes actually publish computer-aided design images, in real-time, directly to native browser data formats (such as JPG).

Alternatively, Java-based viewing applets allow reviewers to examine computer-aided design drawings with full-view control features (such as zoom in/out and pan) and measuring/take-off capabilities.



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