CASE STUDY

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XMetaL® Streamlines the Documentation of Engine Management Systems for Robert Bosch GmbH

Profile

The documentation mandate at Bosch has always been broad in scope – just as broad as the company's offering. By developing and manufacturing everything from automotive parts and power tools to major home appliances, Bosch has always generated vast amounts of content and documentation.

Bosch's documentation process has to keep pace with the company's ambitious go-to-market strategy. To improve the quality and reduce the scope of its technical documents, and to leverage existing documentation, minimize duplication of work and increase efficiencies, the team at Bosch turned to XML-based content management.

Sheer Volume Spurs New Era

Motor vehicles are only becoming more complex. As a consequence, the software within new vehicles is more complex as well. Sales of the largest division in the international Bosch Group is 23 billion and within this division, the documentation volume averages 2000 pages. The task given to engineers – who, as domain experts, are the main content creators – is exacerbated by the sheer volume of data.

Creating one unified, accurate document forced engineers to consolidate data, changes and approvals from multiple disparate sources. Even the most trivial of adjustments caused a ripple effect, compromising the integrity of the entire document – requiring changes to one station to be validated against the whole project. The large scope also made distribution difficult. Printing is expensive, and shipping documents from one team to another takes time.

The time had come for Bosch to reinvent and revitalize their entire approach. Conventional and stop-gap methods had always been difficult to manage because of the lack of division between layout and content. A new method – electronic-based content management – emerged as the enabling choice for companies like Bosch to keep pace with accelerating product development cycles.

Bosch, like so many other content-rich companies, was inspired by the idea of 'collaborative authoring platforms', which places a premium on working environments that streamline creation, with high accessibility and trackability. With that ideal in mind, Bosch forged ahead to full-scale content management.

CHALLENGE

To develop reusable content that keeps pace with accelerating product development cycles.

SOLUTION

A cost-effective 'single-source' strategy, using XMetaL as the authoring platform.

RESULT

· More control over documentation process

· Enhanced content quality

· Improved customer satisfaction

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> *"XML has changed our way of thinking about efficiency issues and critical business processes, and XMetaL is the tool with which we can implement and improve them."*

Bernhard Weichel,
Section Manager of Engineering Methods and Tools, Bosch

Narrowing the field: Key Solution Criteria

After a comprehensive needs-analysis, Bosch identified some key criteria for selecting the right solution and vendor. They needed a system that was platform and tool independent in order to realize easy adaptation to different development environments. For flexibility of use, they required loss-less data import and seamless export to other applications, with an intuitive user interface. And for long-term scalability and reliability, the chosen system would have to demonstrate strong performance with the largest and most complex of XML data files. Finally, Bosch also needed the system to be a cost-effective investment.

To meet all their requirements, Bosch chose XMetaL. As the working platform for broad, seamless content management of documentation and development data files, XMetaL makes it possible for Bosch to simplify their entire documentation process, integrating multiple partners and producing a higher volume of higher quality content.

Why XMetaL?

XMetaL provides end-users a framework to create reusable business content that increases content quality, cuts production costs and expedites content delivery. XMetaL Author's user interface, which looks and acts very much like Microsoft Word, allows people to use customized document templates readily with minimal training.

Bosch Puts XMetaL to Work

Once the decision was made to implement XMetaL, it was validated almost immediately by both Bosch's IT team and the end users. The ease of use, familiar Windows behaviour and open architecture of XMetaL served to make its deployment customization more seamless, and drove adoption of the platform as well.

"With XMetaL, we can capture information quickly and at the right time – as soon as it became available at each development stage," says Bernhard Weichel, Section Manager of Engineering Methods and Tools at Bosch. "XMetaL can be easily adapted and customized to our needs, across many kinds of teams and types of content. As a result, our entire documentation and development process can be XML-based from start to finish."

With the new system, an engineer can create a function with a system simulator like ASCET-SD, add further information with XMetaL, and produce the results as an element in a library. On the basis of XML, further working and examination steps follow. Finally, the developed functions are integrated to an entire system, where again XML as a data format is used. From this integrated set of data, many different views can be created in various file formats, including PDF or HTML.

At the moment, Bosch runs XMetaL in two business areas: Gasoline and Diesel Engine Control Systems. As the company has become more attuned to working with the system and measuring business results from it, plans are in place to expand to 500 additional workstations worldwide. Beyond that, the full-scale implementation will give XMetaL access to a further 1500 engineers and content creators.

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The End Result

With XMetaL, Bosch is well-equipped to collect information at any stage of the documentation process, from system and product analysis to design and manufacturing – and offers first of all a 'single source' strategy. "In co-operation with a partner, we created a reference browser for XMetaL," Weichel explains. "This could have come from the product itself. Yet its development was easy, because XMetaL's open architecture allows just about any customization."

The ability to consolidate data from different sources – either from within the company or based on ASAM® MCD/MSR standards, inter-company with partners and suppliers – saves Bosch both time and money. Documentation quality, and its development process, has greatly improved, ultimately impacting the quality of end-products and customer satisfaction.

"In the short-term, we've gained plenty of flexibility and control over the documentation process," says Weichel. "In the long-term, XML has changed our way of thinking about efficiency issues and critical business processes, and XMetaL is a tool with which we can implement and improve them."

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About JustSystems

JustSystems is a leading global software provider with three decades of successful innovation in office productivity, information management, and consumer and enterprise software. With over 2,500 customers worldwide, the company is continuing a global expansion strategy based on its xfy enterprise software, XMetaL content lifecycle solutions, and its pioneering work in enabling XBRL financial reporting technologies. JustSystems is one of the 2008 KMWorld 100 Companies that Matter in Knowledge Management, a 2008 EContent 100 member, and was recognized on the 2008 KMWorld Trend-Setting Product list for XMetaL. Major strategic partnerships include IBM, Oracle and EMC.

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