

Improving quality and cutting costs using a modular XML-based information architecture Towards the industrialization of technical documentation

Many companies still generate their technical documents manually producing single copies for each product. Creativity in content creation and layout still remains crucial for technical writers. However, as project cycles become shorter and new markets are opened up documentation teams have to face the challenge of keeping cost down while delivering high-quality documentation – on time. In light of these increased requirements, XML-based Content Management Systems have proven to be the right tool for an efficient content life-cycle.

From manual creation ...

When creating documentation for very few products without considering product and language variants, manual creation and editing processes are the right approach. Here, content creation is a straightforward process which does not yield any rationalisation gains.

It becomes a lot more complicated, however, once writers have to handle various products and product variants at the same time. This demands a great variety of technical documents in multiple languages and across a wide range of output formats. Added to this, technical documentation departments now also have to face an exponential increase in their work load.

Let's consider a simple example: An operating manual has been created for the UK market. Now, the same product is to be produced in three variants with different features and components each. The product variants will also be available on the international market, namely in Italy, France, Spain, Germany and the Netherlands. The documentation team, without changing the way product information is created, would now have to face the challenge of producing 18 manuals instead of just one. Every single modification of the product could have an impact on just one or all product variants and would then require a change in the technical documentation of the variants concerned and their translations. As a result, costs for document creation and translation would explode, the documentation would be ready long after the associated products and the company would quite likely experience a decrease in documentation quality.

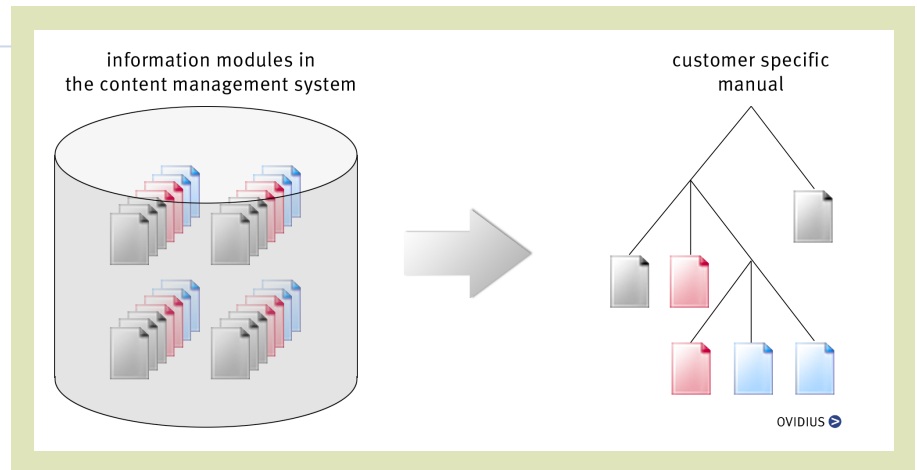
... to automation

Hence, the only way to handle the growing complexity in technical documentation is to completely restructure the creation, editing and reviewing processes associated with documentation. Since small modifications to existing processes never provide the required results, a new way of handling content creation has to be implemented. This will involve the integration of a XML-based Authoring, Content Management and Publishing Systems.

Modularisation and reuse

In the same way that identical or similar components are reused across various product variants, technical documents can be split into modules which are then reused to describe recurring product features or components. Once a change is made to a reusable component it can instantly be updated in any other technical document that uses the same component. In a modularised documentation process changes are easy to track and only need to be documented once. In addition, changes in documents only entail the translation of the specific modules affected in the target language, which are translated once and later referenced in all operating manuals. This specific combination of modularisation, reuse and optimisation of translations helps documentation teams to efficiently produce technical content and streamline all processes involved.

To handle the growing number of information modules, technical writers can classify them according to information type, version, approval status and author. Together with a powerful database, storing, tracking, and reusing of modules is easy.



When creating technical content for similar products reuse of information modules saves time and money.

Flexibility

In order to leverage reuse of information modules and to allow using them in various products and product variants their contents need to be adapted in a flexible way. For instance, the same sentence with slight modifications according to the variant it represents is repeated several times in a module. The sentences carry additional information which identifies the relevant variant and can be filtered out of the publication, depending on the product variant that is to be published.

Automation

Sometimes, layout and formatting of technical documents can be even more time-consuming than the creation of technical content. A well-designed layout is crucial since it helps readers to quickly browse through the document and easily find the information relevant to their specific problem. Here again, automated processes will promote efficiency by allowing technical writers to reuse the same layout information across a wide range of technical documents and output formats.

Savings can also be gained from automated translation, for instance with the help of translation memory systems, or by leveraging reuse of information drawn from third-party-systems such as databases for parts list compilation.

Standardisation

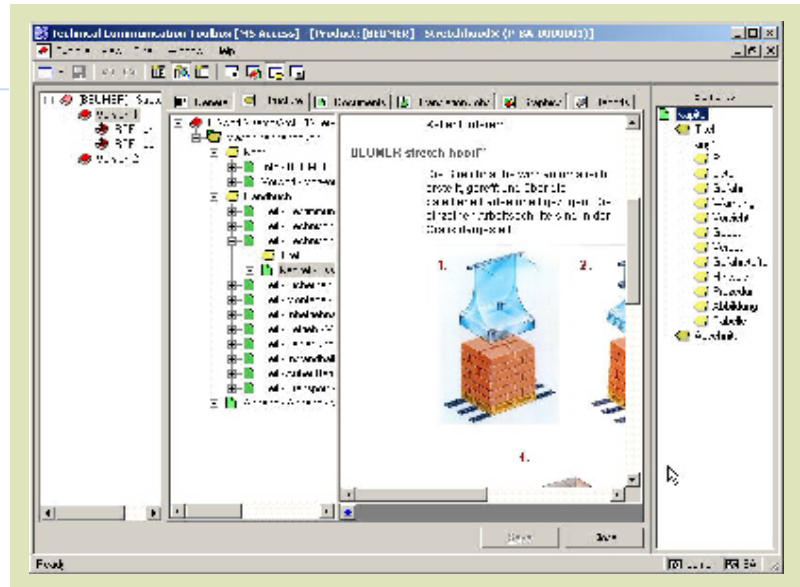
Standardised components and processes are key factors when creating technical content. However, proprietary formats are still widely used although they prevent easy exchange of documents and lead to vendor lock-in. Migration from one proprietary format to another can also get extremely complicated. Here, XML is the standard the industry has been looking for. It allows for easy automation, creation and management of information modules and leverages reuse across documents.

Customer Centric

All of the above will inevitably result in a better customer experience of a company's products and services. Manuals, help systems, maintenance schedules for example can be quickly updated based upon customer feedback and experience resulting in improved customer retention and loyalty.

Redefining the role of the technical writer

Technical writers sometimes feel that due to the automation of processes they are relegated to a support role and denied the creativity they feel they can bring to the job. Yet, on the contrary, technical writers become ever more important in the creation and editing of technical content. As more and more tedious and time-consuming work is now handled by software programmes, writers are able to do away with general administrative tasks and focus on content creation as the central issue in technical documentation. With their ability to analyse, design and document processes and to write concise, easy-to-read documentation that conforms to legal standards, technical writers become once again the driving force behind documentation processes.



With the XML-based Technical Publications CMS TCToolbox Ovidius offers a software solution for easy creation and managing of information modules.

About Ovidius

Ovidius is based in Berlin, Germany, and specialises in XML and SGML software solutions for creating, managing, and publishing of technical and scientific information. We help companies with complex documentation requirements, e.g. automotive, mechanical engineering, software „manufacturers“, aviation and defence, medical engineering and IT companies.

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