

A photograph of a laboratory setting with several stacks of Agilent Technologies analytical instruments. The equipment is white and grey, with various components like bottles and tubes. A computer monitor in the foreground shows a data analysis software interface with tables and graphs. The background is a dark blue gradient with a bright light source behind the equipment.

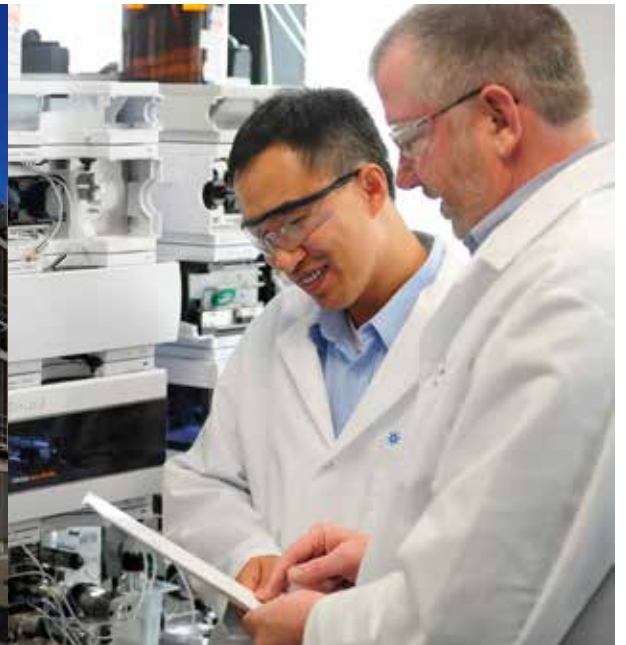
# AGILENT TECHNOLOGIES RELIES ON SCHEMA

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Agilent Technologies' Life Sciences Group is decentralized, operating worldwide with locations in Germany, the Netherlands, Great Britain, Japan, and the US. The Waldbronn, Germany location is responsible for the "Liquid Phase Analysis" business. Here, about 650 employees develop, produce and market entire analysis solutions used in pharmaceutical and chemical industries, as well as in research institutions around the world.



**Agilent Technologies**



## AGILENT'S LIFE SCIENCES BUSINESS AREA STRIKES A NEW PATH WITH SCHEMA ST4

**Support engineers are involved early on in product development at Agilent. Before a product is launched, they know how it works, which information customers and service engineers need to successfully install, implement, use, maintain and repair the product, and what kind of questions can be expected. Agilent utilized this knowledge and placed the creation of documentation in the hands of the support engineers, as they already handling this task in a conventional DTP-Application prior to the implementation of the editing system.**

In total, there were about 200 English publications, from small two- to four-page documents to user guides with 400 pages. There was also the online help for the locally developed software products. An external service provider did the translation, including the online help texts, which the service provider delivered as ready-to-deploy HTML texts. In total, eight languages were offered: English, French, German, Italian, Spanish, Brazilian Portuguese, Simplified Chinese, and Japanese. When localization costs started growing exponentially after 2000, Agilent in 2004 decided it was time to act.

"After the first high-level investigation, we examined the situation more closely and realized that measures other than just reducing localization costs were needed in order to effectively adapt the User Information department's efficiency to continually increasing requirements. It was clear to us that the process of creating documentation by our own employees, could not continue any longer in the face of ever shorter product innovation cycles, an increasing number of products, and a growing amount of variants, all to be handled by fewer and busier staff. We took this as a chance to re-

shape the department strategically. And we aimed for the highest possible level of optimization instead of implementing only a few measures and reaching only a portion of what was actually possible and necessary," explains Thomas Richwien, Program Manager User Information for the Life Sciences Group.

### **Workflow Automation through Standardized Content and Processes**

Reuse of content, as well as automated document and online help production in particular were expected to reduce localization costs and processing times. The central focus was to implement single source publishing with the help of an XML-based content management system. Editors would in the future create and maintain a central data pool, which would then serve as the source for publications.

The challenge was how to continue to use the authors to provide input for the documentation, but at the same time find a way to unify writing styles. As it was impossible to force the authors to adhere to strict rules, and at the same time necessary to effectively meet the requirement of outsourcing to a certain degree, Agilent divided the tasks between authors and technical writers. The engineers continue to be responsible for the documentation and deliver the content. Implementation of the documentation in the CMS is done by professional technical writers working for a service provider.

Based on the results of the requirements analysis, various CMS products on the market were assessed. Guided by a profit analysis, several potential editing systems were then examined more closely. The central requirements dictated

that the system needed to adapt to a high degree to business needs and to support a proprietary data model. A further requirement was unlimited scalability. Along the lines of "think big, start small," the system had to be able to adapt to an increasing number of users and supported target formats and to continually expanding functionality. And it needed to be modular.

The decision for the central component of the editing system was made in favor of SCHEMA ST4 from SCHEMA GmbH. Deciding factors were the system's capability to meet all critical requirements, and that a good business relationship with SCHEMA had existed for several years. Agilent had been using the predecessor-product Schema-Text for the creation of online help for a software product. "For us it is a strategic advantage when you can rely on short paths of communication and you know that the partner understands your needs and will implement solutions accordingly," says Richwien.

During the pilot phase, SCHEMA ST4 was used in a classic client server architecture setup. For production, this was migrated to a so-called 3-tier application: The client is installed on its own terminal server, to which the users connect via the office LAN or from outside via VPN. This means that the client only has to be installed once. Behind the terminal server is a second server, the so-called application server. This is where the ST4 services run. The database is installed on the third server. The advantage of this architecture is that the system is scalable and can be reached from anywhere via VPN connections.

#### Customizations Make Individual Solutions Possible

In order to improve the quality of documentation by using a unified, consistent structure, Agilent decided to implement a semantic data model following the Funktionsdesign® method. The system was customized according to this model, and modified to follow the designed business processes. With the help of the workflow manager integrated in SCHMA ST4, the release process for example was modeled to adhere to specifications. The status model in SCHEMA ST4 ends with "ready for release." With this, the version-controlled information products leave the editing system and are produced e.g. as PDF files which are then stored in SAP.

#### A Decision That Was Quickly Amortized

After the first large update of the business unit's product portfolio the investment was already amortized: "Using the old model, we would have had to spend more than what we invested in development, implementation and rollout of the new solution based on SCHEMA ST4," enthuses Richwien. In addition, translation costs are reduced because authors can now reuse existing content instead of repeatedly creating the same content. Variations of the same phrase now no longer incur expensive translation costs. The larger reduction in localization

costs came from eliminating external DTP costs. Layout is now done inhouse, and thanks to the seamless integration of SCHEMA ST4 with the IT solution, it is automated to the highest degree possible. In addition to cost savings, the measures described shortened the time needed for creating documentation as well. In addition, the elimination of redundant content removed the effort for reviewing and releasing, as well as managing the various publications in which this content is used.

#### Above and Beyond Cost Reduction: Much More is At Stake

Agilent is subject to restrictions as a listed company in the international finance markets. "For us it was very important to contribute to reaching one of the overarching company goals, which is 'Excellence in Operation'. It wasn't enough to effectively reduce costs in our area in comparison to a predefined value, since this effect would only be a single event," according to Richwien. "The actual goal had to be 'complete cost control', which meant being able to closely control at all times all efforts and associated expenditures made by the User Information department. The editing system has to support us in an optimal manner during planning and execution."

A few months ago, Agilent migrated from SCHMA ST4 version 1.2 to version 3.3. "In the course of the implementation projects with SCHEMA, we strayed further and further from the standard product," says Richwien. "SCHEMA was always open to ideas for the ongoing development of the standard SCHEMA ST4 system." Manufacturer and users had to take a close look at the differences between the two systems and judge whether it made sense to keep the custom solution or to use the analogous standard functionality.

#### PROJEKT- HIGHLIGHTS

- Comprehensive customizations to the standard product
- High degree of scalability with regards to number of users, features and types of publications
- Separation of roles for documentation responsibility and authoring
- ROI already reached after the first project
- Implementation of Funktionsdesign® method
- 3-tier server architecture
- Worldwide access to editing system
- Approximately 40 users in various roles

## **SCHEMA – Complex Documents Made Easy.**

SCHEMA GmbH was founded in 1995 in Nürnberg and today has around 100 employees.

SCHEMA ST4 is an XML-based editing and content management system, offering extensive features for all aspects of the creation, management, translation, quality management, publication and distribution of product information of any kind. SCHEMA ST4's scalability makes it suitable for small editing teams as well as for company-wide solutions for information logistics. SCHEMA ST4 can be used as a standard product or a customer-specific solution. With the SCHEMA Content Delivery Server, information can be distributed intelligently to all common platforms, independently of SCHEMA ST4.

Our products and solutions are successfully deployed across various branches of industry to simplify 'complex documents,' including technical documentation, software documentation and help systems, catalogs, labeling for pharmaceutical companies, training material, solutions for specialized publishers, contract and bid management. SCHEMA ST4 is based on Microsoft .NET technology with Windows and web clients, and can easily be integrated and deployed into modern IT landscapes, as it supports the entire bandwidth of documentation standards (XML, XSL:FO, DITA, etc.). SCHEMA ST4 offers a broad line-up of interfaces (XML editors, MS Office, Adobe CS & FrameMaker, SAP, etc.). SCHEMA is proud to be part of an active network of renowned partners, as this enables SCHEMA to offer specialized solutions for its customers as well.

Among the many customers already using solutions based on SCHEMA ST4 are: ABB, Agilent, Avaloq, Bosch, Boehringer Ingelheim, Bundesanzeiger, Carl Zeiss, Daimler, Deutsche Bundesbank, General Electric, Hewlett Packard, Lindauer DORNIER, MAN, Miele, Reifenhäuser, Roche Diagnostics, Schaeffler Gruppe, Siemens, Österreichische Bundesbahnen, Philips, STOLL, T-Systems, Voith and Wolffkran, and many more.

**For more information:**  
[www.schema.de](http://www.schema.de) · [www.blog.schema.de](http://www.blog.schema.de)

