

## Service and documentation in a modular-based system

Marcus Kessler, Quanos Content Solutions interviewed by EngineeringSpot

**Say hello to The Digital Information Twin**

Ralf Steck, Friedrichshafen · EngineeringSpot

**The Digital Twin is the talk of the product development sector. However, the digital equivalent of a product based on engineering data is just one aspect of the Digital Twin - another is the Digital Information Twin, which contains documentation, service and spare parts data. Under the name of Quanos, three companies from the documentation and spare parts catalogue sectors have joined forces to bring the Digital Information Twin to life. In our interview with Marcus Kessler, Chief Development Manager for Quanos Content Solutions (formally SCHEMA GmbH), he explains which solutions are already available and where the trend is heading.**

**Mr Kessler, you founded SCHEMA GmbH in 1995. What motivated you to do that?**

After studying computer science, I was working as part of a research project on an approach for structured documents. However, the technology required to implement this concept was not available at the time, although that all changed years later with the arrival of the Internet. I founded SCHEMA GmbH in 1995 with a colleague, to develop an intelligent solution for the documentation of products based on this technology. Today, SCHEMA GmbH employs 140 people and is the market leader in German-speaking countries for component content management systems in the technical documentation domain.

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## **SCHEMA is now merging with two other companies to form Quanos Solutions GmbH. What triggered that step?**

We were already involved in TID five years ago. Then, when we acquired Docware in early 2020, the time had come to reposition the previously isolated solutions for content, catalogue and distribution into a unified market approach. This was how the new product name of Digital Information Twin came about. Now, with Quanos Solutions, the former SCHEMA portfolio becomes Quanos Content Solutions, while Quanos Service Solutions comprises those of TID and Docware.

## **Which products do the Quanos group of companies offer?**

In the field of content solutions, we offer SCHEMA ST4. This software is based on technology that enables large, complex documents to be structured, managed and composed automatically. This approach is very powerful, particularly when documenting complex products with many variants. Manufacturers of these products face the challenge of having to provide appropriate documentation that corresponds exactly to any particular variant each time that product is shipped – and that often has to be done in several languages.

The SCHEMA approach is to compile a range of sub documents, called components, that describe the product and how to use it, rather than a single monolithic document. These components include a variety of metadata, as well as the usual text and images. Our software enables an “information component” to be compiled for each product component, which can then be translated into other languages.

There are several advantages to this approach. Firstly, whenever there are any changes or enhancements to a product, only one, or just a very few components need to be changed and re-translated. Secondly, it enables systems to be set up to automatically bring together the individual components for a purchase order and to compile documentation in the right language. This is what gave rise to what we call the Digital Information Twin – in other words, the reproduction of all information associated with an individual product.

The other two products offered by the former SCHEMA are a portal, in which the product user can access the digital information. With a highly efficient search function, the system prepares the data, such that the user always receives the information they require. An offline solution also makes this documentation available at locations where there is no Internet connectivity.

If you think about this further, it becomes clear that this Digital Information Twin also needs to include lists of spare parts, as well as general and service documentation. And that is why the TID and Docware products are such a good fit in the bigger picture.

### **What distinguishes these two solutions? Both of them are essentially spare parts catalogues.**

The approaches and the philosophy of the two solutions are different and suit different businesses. TID CATALOGcreator is ideal for companies – or their departments – whose basic data is well structured. The software enables spare parts catalogues and similar lists to be “distilled” from this basic data in the same way as for documentation. The PARTS-PUBLISHER Docware solution is geared more towards a component content management system and is ideal for companies for whom the compilation of spare parts data and catalogues requires a high proportion of manual work.

Both solutions complement each other, as companies often ask for both – the automatic as well as the authoring compilation of spare parts catalogues.

### **What does the integration of these technologies mean for users?**

First of all, I must say that some of our customers have already integrated the TID or Docware solutions with SCHEMA ST4 – there is therefore clearly a need for this. When you take the creation of a Digital Twin seriously – that is to say the reproduction of all aspects of a product – a Digital Information Twin becomes obvious. And with the Quanos portfolio, we have a flexible modular-based system to be able to replicate products while they are being used.

As soon as the product goes into use, the Digital Information Twin data becomes important. The service engineer needs to know which components are installed in the system, how they work and how to replace them. This means: a spare parts catalogue and documentation. Pre-

emptive maintenance is virtually impossible without information about the respective “as built” and “as maintained” status of the individual machine.

Beforehand it was the case that the longer the service engineer was working on a machine and the more spare parts they installed, the more lucrative the after-sales business. New business models, such as “as a service”, where it is not the machine that is being sold, but the machine’s performance, or more specifically, its output, turn everything upside down: the customer is guaranteed specific availability and predictable downtimes, therefore it must be possible to schedule work and work quickly to keep systems running. The Quanos solutions provide the information needed for this.

### **What is your roadmap for being able to bring together these three software worlds and offering customers these synergies?**

Our first priority is based on two supporting measures: it must be possible to access the three solutions on a shared database and both service solutions need to be synchronised with each other. We are currently developing a data linking technology on which all systems can be established. As all three companies have already integrated web technologies in their architectures, this is not as difficult as it sounds.

Do you then want to integrate the three systems further, for example, under a common user interface?

At the moment, there is little sense in harmonising user interfaces as the users in the two domains are not the same. Documentation and spare parts catalogues usually reside in different departments. The functionality of the TID and Docware solution will certainly be consolidated into a single product of a modular construction, as there are many functions, such as input and output interfaces, that are duplicated and are perfect candidates for consolidation.

### **And who are your preferred customers?**

Our focus is on SMEs, where all three companies are already mainly involved. But tech companies also rely on the huge process benefits of Quanos products. Whereas multinational

corporations can often entrust the localisation of documentation to their national subsidiaries, many of our medium-sized “hidden champions”, with 200 or 2300 employees face the challenge of needing to provide product documentation for customers the world over in a multitude of languages. These companies rely on the highly efficient solutions offered by Quanos.

**Mr Kessler, thank you very much for talking to me.**

Dipl.-Ing. Ralf Steck is a freelance journalist and expert in the area of CAD/CAM, IT and mechanical engineering.