

SIEMENS

The Siemens approach in automation

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Interviewees:



Dr. Hartmut Klocker
Head of the Siemens Automation and Engineering Systems Business Segment



Douglas Ortiz
Head of Product Management and Marketing for Process Control Technology at Siemens USA

PROZESSTECHNIK Two years ago, Simatic PCS neo was launched. Why was it so important to provide information as early and precisely as possible about where the possibilities and strengths of Simatic PCS neo would be?

Dr. Klocker: For us, it was and still is enormously important to give our customers a viable perspective. We want to make our future-proof strategy absolutely transparent for them. Every Simatic PCS 7 customer appreciates the benefits of the system, and we are committed to informing our customers as early as possible about the advantages that Simatic PCS neo will offer them and how the path to achieving this can be designed very efficiently. As far as I am aware, this is unique in the control technology market. And because we provide this information very well in advance and comprehensively, we were also able to hold the first intensive discussions with our customers very early on, to engage them, to involve them and to inspire them. Basically, we still do it that way today.

Ortiz: A control system is not comparable to any consumer product. A new smartphone generation sometimes leads to a lot of enthusiasm in the smartphone market with immediate adoption. This is rather rare for - let's say: a new version of an operating system, and when we think of process control systems, our customers place safety above anything else: investment security, operational reliability, secure and uninterrupted production, and so on. So knowing what is coming as early as possible is very advantageous for them.

PROZESSTECHNIK What does the market launch of Simatic PCS neo mean for plants that are equipped with Simatic PCS 7?

Ortiz: Let's stay with the example I mentioned for a moment: investment terms for process plants are at the level of human generations, i.e. 30-40 years, which is completely different in comparison to the annual release of a new smartphone model. That's why we always emphasize future-proofing and the long-term nature and sustainability of our approach.

Dr. Klocker: And that is precisely why I can answer your question in two words: For Simatic PCS 7 and our customers, this means no changes. We are remaining to develop Simatic PCS 7 and will continue to do so.

PROZESSTECHNIK Can you be more specific?

Dr. Klocker: With pleasure. We have just released Simatic PCS 7 Version 9.1. With this, we are taking the next step towards more scalability, availability and safety in process automation! This also includes enhancements in the distributed periphery scope - hardened for the use cases of the process industries with redundancy, extended temperature range, as well as explosion protection and fault safety. Technological engineering of sequential controls becomes even more comprehensive and intuitive. Proactive lifecycle management ensures that process control technology with hardware, software and firmware is always up to date and supports our customers with functions for system analysis, including the essential topic of cybersecurity.

Ortiz: In addition to this and other development steps - already concretely planned today - our customers themselves are demonstrating how much confidence they have in our future-proof concepts. For example, BioNTech is using the latest Simatic PCS 7 technology for its new COVID 19 vaccine production facility in Marburg, Germany, and has thus made a secure investment for the next 20-30 years.

PROZESSTECHNIK Even though Simatic PCS 7 will obviously continue to be developed for a long time, what strategies for switching to Simatic PCS neo can users of Simatic PCS 7 already rely on today?

Dr. Klocker: Before Mr. Ortiz gives a few technical details, I would like to give two examples that illustrate Siemens' strategic approach. Ten years ago, we introduced a completely renewed software architecture for engineering with version 8.2 of Simatic PCS 7. Since then, we have consistently relied on Control Module Types (CMT) and our process library, the Advanced Process Library (APL). These standards, which are themselves based on international, generally accepted standards, are also used in Simatic PCS neo. But that's not all: Both systems not only use the same application architecture, they are also based on the same PROFINET-based Simatic hardware platform, which we introduced in 2017 and have been consistently expanding ever since. In concrete terms, this means that hardware that customers are currently using with Simatic PCS 7 can be combined with Simatic PCS neo today, tomorrow, and later. In this way, we not only protect our customers' investments, but also their know-how through the reuse or continued use of engineering knowledge and hardware.

Ortiz: I think our existing customers really appreciate hearing that no one will be „forced out“ of Simatic PCS 7 and that all the benefits they have enjoyed by using the proven Simatic PCS 7 engineering principles, such as the extended process library and Control Module Types, will continue to apply. Returning now to your question about evolution strategies: We embed our approaches for entry and evolution scenarios into the future-proof strategy outlined by Dr. Klocker. We are working on tailored solutions for all kinds of applications, regardless of whether we are talking about Simatic PCS 7 customers with new sub-projects that are controlled with Simatic PCS neo, existing Simatic PCS 7 installations that are to be completely converted to Simatic PCS neo, or new customers who want to completely master their control technology challenge with our web-based control system. In each individual case, Siemens will be able to support the customer in bringing their control technology to Simatic PCS neo at the time that is best for them.

Dr. Klocker: In addition to technical strategies, we also offer a commercial approach that ensures a worry-free future via a Simatic PCS 7 lifecycle contracts. We have given a lot of thought and developed methods to rule out a system discontinuity for our customers under all circumstances. Like our users, we are committed to making the transition as smooth as possible at the desired time.

PROZESSTECHNIK What about the current capabilities of Simatic PCS neo? Especially compared to those that Simatic PCS 7 already has.

Ortiz: I have been able to participate in a number of Simatic PCS neo projects. Especially in the chemical industry and in water management, the number is growing very fast. For example, the enthusiasm for the global multi-user engineering of Simatic PCS neo and the zero-installation client is very real. Users derive immediate benefits from this: Global engineering collaboration - even from home office - is intuitive and secure thanks to our session concept. Simply using a browser as secure access to the process, engineering or administration, is on the one hand seen as radically different and innovative, but at the same time perceived as completely natural and familiar.

Dr. Klocker: Simatic PCS 7 has now been on the market for over 20 years. The system is in use in thousands of installations and proves itself day after day all over the world. For Simatic PCS neo, we are deliberately opting for a transparent evolution: the system does not yet cover the functional scope of Simatic PCS 7. However, this is not so important for our customers who want to familiarize themselves with the next generation control system today. Our existing customers use it in those areas where it makes sense. They usually start at small scale and provide valuable feedback. This means that we learn every day, which leads us to open communication and back to the transparency I mentioned at the beginning.

Ortiz: Through the ongoing transparent development process, we are constantly bringing new versions and upgrades to market for Simatic PCS neo to provide more functionality on an ongoing basis. In addition, we specifically find applications where Simatic PCS neo already fits, be it in the chemical industry, in the water sector or in the food and beverage industry.

Dr. Klocker: We think now is a good time for everyone in the process industries to gain experience with Simatic PCS neo. In parallel, users can develop their own implementation strategy as new functionalities are introduced - willingly with our assistance! As the Process Automation business unit, we have full control over our developments: from hardware to the software value chain. In other words, from the controller to automation and simulation. Bundled in Karlsruhe, Germany as well as worldwide via our subsidiaries and competence centers.

PROZESSTECHNIK That sounds very passionate! How can interested parties also experience this passion for process control technology?

Dr. Klocker: In Karlsruhe alone, we have thousands of employees, well over half of whom work exclusively in process automation. You can sense the team's harmony. The colleagues are always striving to find out where they can do even better. Be it in individual products, systems or workflows. That's why we're happy to invite anyone who's interested to come to Karlsruhe to Process Automation World and see for themselves how we live and breathe process automation. I am aware that this is not yet possible without restrictions now. So, for the moment, we simply enable it virtually and, in doing so, are happy to show what we can do and how we create the digital twin by integrating engineering, simulation and automation!

Dr. Klocker, Mr. Ortiz, thank you for this interview!

SIMATIC PCS 7

More flexibility & safety
in process automation

Industrial Connectivity

SIMATIC Hardware for DCS

One hardware platform -
Proven and future-ready

SIMATIC PCS neo

Enter a new world
of process control

THINK neo
Enter a new world
of process control