

Jürgen Lange

ENGLISH TRANSLATION FROM THE GERMAN MAGAZINE „Computer & AUTOMATION“ 04.2008

Far behind schedule

The OPC Unified Architecture communication standard was due to be completed at the end of 2006, but the specification still isn't ready for use. Jürgen Lange explains why.

□ *Last year, things were suspiciously quiet with regard to the OPC Unified Architecture. What's the reason for this?*

■ **Lange:** To an outsider, it doesn't seem like much happened with OPC UA in 2007. The activity is really taking place in the background, since the specification work and reference implementations haven't been completed yet.

□ *Why do you think there have been delays?*

■ **Lange:** Ultimately, there are three reasons: 1. With the technological leap from DCOM to Web services and the issues of ERP/MES integration and embedded platforms, the OPC Unified Architecture has become a huge project. This naturally affects the scope of the specification.

2. Alongside the two OPC employees – technical director Jim Luth and a software developer – it is volunteers who are bearing the brunt of the specification work. With the humming economy, it's hard for many companies to pull experts off of their own projects and make them available to the OPC Foundation.

3. The OPC Foundation is diligently ensuring the practicability of the standard. A prototyping process has been underway for nearly a year, and all of the improvements are now being incorporated into Version 1.01 of the existing parts of the standard. These parts, together with the ones which are not yet complete, will form the basis for product development.

□ *Software tools will also be needed to implement the specification in actual applications. How is their development progressing?*

■ **Lange:** The core of the Software Development Kit (SDK) is the UA stack, a

are three versions of the SDK: .NET, ANSI-C/C++ and Java. The .NET and ANSI-C implementations for Windows have been available for product development since the summer of 2007. Mature SDKs should appear this fall, and the Java implementation will also become available in the course of the year. SDK ports to Linux and VxWorks, which Softing offers independently of the OPC Foundation, can be expected in July and September, respectively.

□ *What does the current timetable look like, and when will OPC UA be mature enough for developers to start implementing it?*

■ **Lange:** The missing parts of the specification are due to be released in May and July, which will be a good

starting point for product development. The first product releases should then be possible in the fourth quarter.

□ *Some companies are already claiming to have integrated an OPC UA interface into their products. Is this possible when core functions are still missing?*

■ **Lange:** At the moment, only members of the early adopter group can develop products with OPC UA. These companies have an informational advantage in the form of the draft specifications and can release products based on the immature UA SDKs. But as far as I'm concerned, they're still prototypes.

“
The OPC-UA-Specification
will be complete until July.
”



OPC – The Next Generation

OPC standardizes the exchange of data between automation components and software components according to the client/server principle. After around 12 years, the time is ripe to replace the OPC interface with partially overlapping specifications such as Alarms & Events (A&E), Data Access (DA and HDA) and XML DA. Furthermore, the basic technology – Microsoft's COM/DCOM (COM: Component Object Model) – has been outdated since the introduction of .NET technology. It is high time to usher in a new generation with the OPC Unified Architecture, which will eliminate the flaws in OPC – namely, the restriction to Microsoft operating systems and the lack of Internet capability. OPC UA goes beyond traditional communication on the field and controller level to support embedded platforms and the transition from the automation level to the MES/ERP level.