OPC – A Decade of Success by Any Standard

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OPC – A Decade of Success by Any Standard

The first OPC specification was introduced 10 years ago, and has been more successful than anyone had ever imagined. What started as a handful of vendors attempting to simplify communications for automation projects has grown into a collection of specifications that have become the de facto standard for industrial automation data transfer and device interoperability. The OPC Foundation has over 300 members worldwide, including many of world's major providers of control systems, instrumentation, process control systems and industrial automation software. Together these members represent countless thousands of OPC product installations in industries around the globe, including a significant number of the top Fortune 500 companies. Looking to the next decade and beyond, OPC is leveraging this unprecedented success, and continuing to be the leader in interoperability and innovation for the automation industry.

OPC was formally an acronym for OLE (Object Linking and Embedding) for Process Control. Over the past years OPC has grown beyond the Microsoft OLE/COM technologies, and is used in a wide variety of applications outside of process control. OPC now stands for "Interoperability", more specifically as the OPC Foundation vision statement reads "interoperability for moving information vertically from the factory floor through the enterprise of multi-vendor systems". The first OPC specification was a simplified interface for moving real time data. This later matured to become the OPC Data Access specification, which is far and away the most widely adopted and installed OPC specification. Within a few years newer revisions were released, as well as specifications that targeted historical data, alarms and events, batch, and complex data. These had varying degrees of successful adoption as well. The achievement of OPC lies in the members of the OPC community being true to the Vision of Interoperability.

OPC was developed to solve common communication issues, by people who faced the issues every day. From the beginning, OPC followed three key principles that have lead to its success as the standardized way to move data; 1) do not 'reinvent the wheel'. Leverage existing, accepted technologies and collaborate with those who add value to the specifications. 2) A specification is more than paper. An OPC specification release includes the specification documentation, a proven sample or 'jump-start' code base, and certified test procedures and tools. 3) Be vendor neutral. Invite all interested parties, including competitors, to the table to be united in solving a common problem. One definition of a de facto standard is: "A format, language, or protocol that has become a standard not just because it has been approved by a standards organization but because it is widely used and recognized by the industry as being standard." Has OPC succeeded in this regard? As they say, 'the proof is in the pudding'. Looking at this year's Fortune 500 list, our company, MatrikonOPC, has sold or installed OPC products to over 150 of these companies, including 9 of the top 10. When a single vendor, alone among hundreds, can boast of such numbers, there leaves little doubt that OPC is indeed *the* accepted standard.

Not only are these corporations using OPC in their projects, some notable companies are setting OPC as the standard at the corporate level. Executives know that standardization reaps benefits from all levels, including reduced project costs, training, sustainability/ system migration, and long term maintenance. In addition to being a standard, serious OPC vendors bring to the table, certified compliance, multi-vendor interoperability testing, and years of wide spread product installations in a multitude of industries.

So where does OPC go from here? Another key principle OPC understands is; 4) the world and business is always changing. OPC must keep pace with business and technology in order to continue serving industry. For the last few years the OPC Foundation members have been working on the next evolution of OPC, the OPC Unified Architecture (UA) specification. This multi-part specification is being released in stages this year, and already has the backing of several other standards bodies. As the name implies OPC Unified Architecture encompasses the breadth of the existing OPC specifications. OPC UA is targeted for Web Services and SOA (Service Orientated

Architectures), which currently have a good degree of acceptance by major software vendors and developers. It also empowers the ability of existing OPC connectivity solutions to be exposed to higher levels of the enterprise, and across a wider range of system platforms.

Over the past decade OPC has proven itself to be a reliable, widely accepted standard. Looking to the future, OPC is staying true to its same principles with the evolution of the OPC UA specification. There is a high level of confidence and expectation that OPC UA will enjoy even greater levels of achievement than its predecessors. So, here's to the next 10 years of OPC and continued success in industry.

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