Publication of OPC UA Companion Specification for Wire Harness Manufacturing (OPC 40570)

Frankfurt, April 16th, 2025 - We are pleased to announce the publication of the OPC UA Companion Specification for Wire Harness Manufacturing OPC 40570 on April 16th, 2025. This significant milestone was achieved through the coordinated efforts of the Sector Group VDMA Productronics and VDMA Machine Information Interoperability as well as OPC Foundation, and was sponsored in part by the ARENA2036 VWS4LS project, funded by the German state. The development of this standard involved active participation of several key industry players. We would like to acknowledge the contributions of wire harness manufacturers, software maker DiIT and machine makers Komax and Schleuniger.

Special thanks goes to the prostep ivip group VES-WF for providing their data models and support, which facilitated the standardization process.
The OPC UA Companion Specification for Wire Harness Manufacturing (OPC 40570) is based on the OPC UA for Machinery standard (OPC 40001), incorporating elements such as nameplate, machine and module state, and job management. It also reuses definitions from the ISA-95 Job Control (OPC 10031-4) standard and the base standard for Devices (OPC 10000-100) from the OPC Foundation.

This standard offers numerous benefits by defining communication between production machines and manufacturing execution systems. It enhances interoperability, streamlines processes, and improves overall efficiency in wire harness manufacturing.

The first version of the standard specifically covers processes in the cutting room, including cut, strip, crimp, and seal processes.
Looking ahead, the work will continue to expand the standard to include additional production processes, ensuring that the wire harness manufacturing industry remains at the forefront of technological advancements.

Document	https://opcfoundation.org/developer-tools/documents/view/354
Online Ref	http://opcfoundation.org/UA/WireHarness/ http://opcfoundation.org/UA/WireHarness/VEC/
GitHub	https://github.com/OPCFoundation/UA-Nodeset/tree/WireHarness-1.0.0-2025-04-01/WireHarness

About VDMA

The VDMA represents 3,600 member companies in the engineering industry, making it one of the largest industry associations in Europe. The VDMA supports its members with a wide range of services and represents their interests in Germany, Europe, and abroad.

About VDMA Sector Group Productronics

VDMA Sector Group Productronics comprises 115 member companies manufacturing a broad spectrum of machines- and equipment for front-end and back-end of electronics- and semiconductor manufacturing. Main objectives of the sector group:

- Representing the interests of electronics and semiconductor equipment manufacturers towards policy makers, the press, and the public.
- Information about technological trends, markets, and the business climate.
- Development of market studies, in cooperation with research institutes or other external partners.
- Promoting industry dialogue on current technical and economic policy issues at regional and international trade fairs, seminars, and networking events.
- Supporting member companies in the development of new markets, e.g., through international market networking and development activities.

About VDMA Machine Information Interoperability

The VDMA Machine Information Interoperability (MII) department is the central point of contact for the interoperable exchange of information between components, machines, and systems for smart production. Together with manufacturers, their customers, and international partners, MII develops and harmonizes standardized interface information (e.g., based on OPC UA) for products in the production environment. The department thus acts as a link between machine and plant engineering, and the IT and OT world.

About ARENA2036

ARENA2036 is a research campus in Stuttgart that focuses on the future of mobility and production. The VWS4LS project is an important initiative of the wire harness project family within

ARENA2036. It aims to enable cross-company and end-to-end digitalization in the wiring harness value chain by implementing a standardized digital twin (Asset Administration Shell).

About Komax Group

Komax Group is a leading manufacturer of innovative and high-quality solutions for the wire processing industry, employing around 3,500 people globally. The technology group comprises brands such as Komax, Schleuniger, DiIT, adaptronic, and Cirris.

About OPC Foundation

Since 1996, the OPC Foundation has supported the development and adoption of OPC standards for information exchange. As the proponent and guardian of these specifications, the Foundation's mission is to help industry vendors, end users, and software developers maintain interoperability of their manufacturing and automation equipment. The OPC Foundation provides excellent technologies, processes and certifications to achieve secure and reliable multi-vendor interoperability, platforms for moving data and information from the embedded world to the enterprise cloud. The OPC Foundation has over 1010 members worldwide in the fields of industrial automation, IT, IoT, IIoT, M2M, Industry 4.0, building automation, machine tools, pharmaceuticals, petrochemicals, and smart energy.

About prostep ivip

prostep ivip is a leading provider of data models and solutions for the digital transformation of the industry. Their contributions, namely the Vehicle Electric Container (VEC) as reference model for the product "wiring harness", have been instrumental in the development of the OPC UA Companion Specification for Wire Harness Manufacturing.