



INTEGRATION OF AUTOMATION AND MANUFACTURING EXECUTION SYSTEMS (MES)

Valio Ltd

Valio is the market leader in all key dairy product groups in Finland and a world class pioneer as the developer of functional foods. The company has 15 production plants in Finland, two in Estonia, one cheese packaging facility in Belgium and a Customer Service Center including production facilities in Moscow. Valio also commands global sales in food ingredients. International operations including licensing encompass 65 countries accounting for one third of turnover. Subsidiaries are located in Russia, Estonia, Sweden, Belgium USA, and China.

At Valio production planning and management is based on the consumer's needs. Product quality and traceability requirements are at a very high level, consequently efficient and reliable data transfer between different systems is crucial. To meet this need Prosys developed integration software between automation and manufacturing execution systems, based on the OPC UA standard.

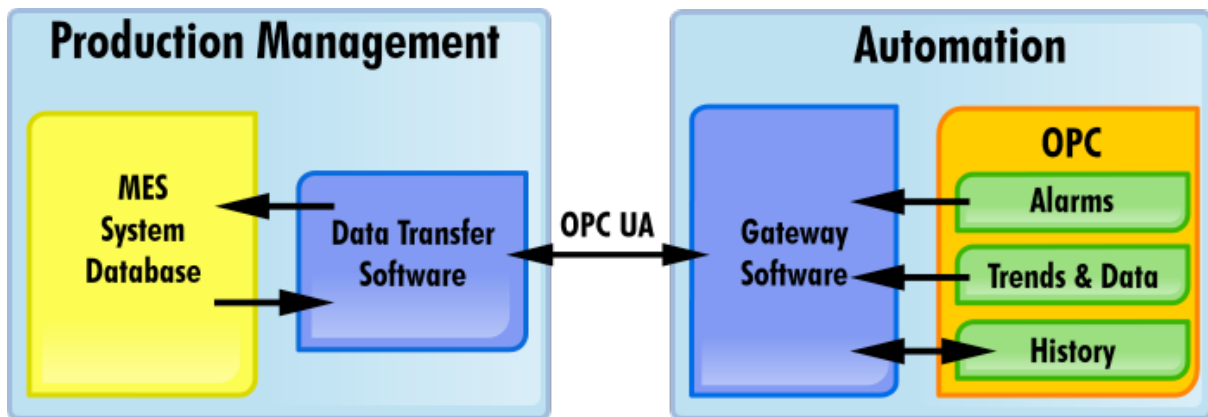


Production systems development

At Valio production is continuously developed with several suppliers. The aim is to optimize production efficiency and quality using the best technical solutions for each process, while at the same time maintaining complete integration. According to Valio's production and automation systems development manager Jukka Peltola, strengths of Prosys are innovation, effective solution implementation, knowledge of new technology (OPC UA) and proactive communication. "We were provided good experts, whose focus and expertise is strong in industrial systems", says Peltola about the co-operation. "For us, it is important that we have a reliable and long-term partner, which understands the needs of the production environment and is able to carry out demanding production systems integration using OPC UA technology."

Integration Solution

Solution uses data communication as specified in OPC UA standard, to integrate different automation (DCS, PLC) systems with manufacturing execution system (MES). Transferred data includes for example process orders, process messages, as well as measurement data. Operational platforms are Microsoft Windows operating systems with .NET 3.5 and interface to MES is Oracle database based. Main software development tool is Microsoft Visual Studio 2010. For easy configuration of data transfer a Windows Forms user interface was developed, so that for example new trends can be added to data acquisition.



Using OPC UA, all of the above data transfer needs can be managed centrally by a single reliable and easily configurable connection. The solution also improves data security, because OPC UA technology allows the use of the latest security methods and at the same time is easily routable even in difficult network conditions. The solution can be used to manage integration needs between automation and manufacturing execution systems, in all production plants of Valio.

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Jukka Peltola, Valio Ltd

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