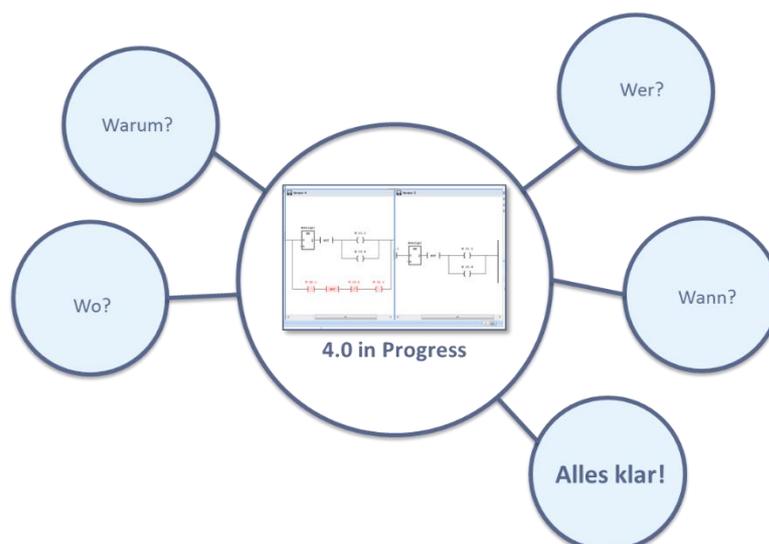


Technical article

versiondog – your companion on the road to the Industrial IoT



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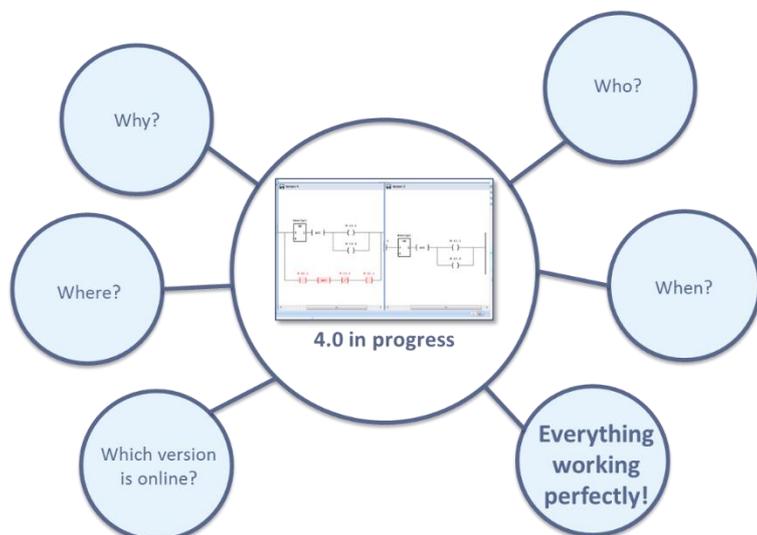
Everyone is talking about the Industrial Internet of Things. It's a term that encapsulates the dawning of a new revolution in manufacturing, and it is coming ever closer to reality. But what exactly will this transformation mean for today's complex automated production environments? How can companies be sure that their systems will be protected? These and other questions are quite understandable as companies move toward opening up relatively closed network structures and interconnecting them in a way that enables them to function as autonomously as possible.

The destination

When we talk about the Industrial IoT, we are not just talking about smart factories, but also smart products. The combination of the two means that the production of small batches and one-off products becomes practical even in highly automated facilities. One prerequisite for this is that the products "know" which part of the factory to go to next. Another is that the production line "knows" what to do with them, which materials to use, which version of the product it is working on, how many in the batch and so on. And as well as knowing when scheduled maintenance is due, a truly intelligent production facility also knows whether it needs or will soon need repairs and is able to notify the appropriate departments accordingly.

Getting there

One of the basic IIoT prerequisites for a manufacturing plant is that all automated production devices are networked. For the majority of plants, this is not yet the case. The reality tends to be that although there are "islands" with good internal interconnection, they are often either not connected or only partly connected with each other. And this situation is even more common where there are multiple production locations.



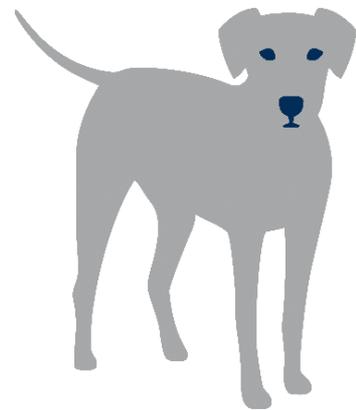
Increasing the level of networking and introducing new functionality not only promises advantages, there are also some dangers involved. What if at the time of implementation, pre-set parameters are not perfectly suited to a particular production environment? What will happen if the system fully or partly configures itself and the settings lead to a conflict that brings the entire plant to a standstill (or even worse, a whole series of plants)? There is enough of a risk that this could happen—and the potential cost of lost production can be so enormously high—that it is sensible to take the possibility seriously. Especially if there might be even the slightest doubt as to where to find the plant's most recently released backups and versions.

Major challenges

A changeover as big as the Industrial IoT needs to be accompanied each step of the way by comprehensive and clear documentation. All changes must be easy to find and quickly comprehensible. Full traceability of each change, whether deliberately made or otherwise, needs to be guaranteed. And the ability to recover to the last perfectly functioning configuration of an automated line is vital. You need to be sure that you can always quickly undo the last change and be absolutely sure about the point to which you are returning. Considering all that, it quickly becomes clear how important it is to have a system that can provide the necessary safety net when making the changes required to implement tomorrow's production environment. If things do not work exactly as expected, or if parameters are not set correctly, you need to be able to easily reset the whole system to precisely where you were before. And if you have documentation and change history showing every single change in detail, you can avoid repeating previous mistakes when making a series of changes, which will appreciably accelerate the process. The goal must be to be able to make the necessary changes without constantly having to worry about causing long and expensive production stoppages.

Your solution

AUVESY's solution comes in the form of its highly successful versiondog software. A comprehensive data management system that is not limited to any one device or software producer. With it you can create versions of programs, data on hard drives, PLCs, NCs, visualisation systems, robots, frequency converters and many other automation components. Individual changes are immediately recognisable and—for the majority of components in today's automated facilities—displayed in the same easy-to-comprehend format. This means you can easily roll back any time after making any change. But not blindly; you will always know what changes you are undoing, and you will always know to exactly which point you are rolling back. There are many changes that need to be made on the road to the Industrial Internet of Things. Some large, some small. versiondog is ready to help you maximise benefit by minimising risk as you make the transition.



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