No more searching for software

Making life easier for maintenance staff with the version control system versiondog
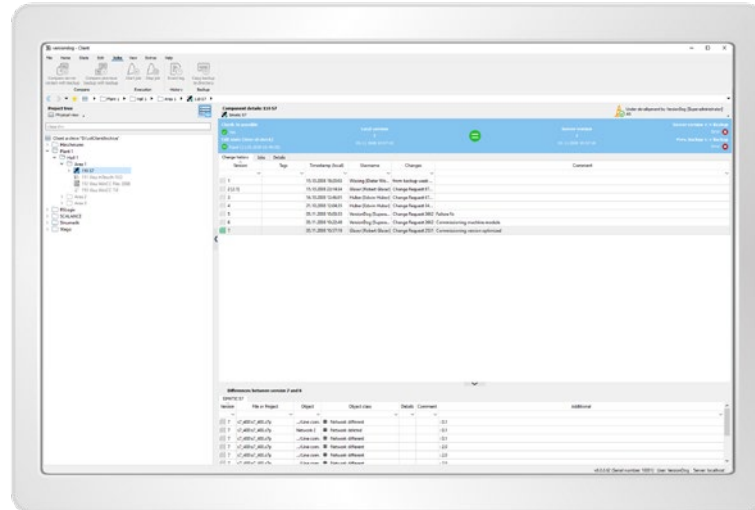
„Documentation is key." This is the last piece of advice that production line suppliers always give their customers. And yet, despite the best intentions, the advice is usually swiftly forgotten. At Mann + Hummel, however, staff have truly taken this mantra on board. At the company's factory in Marklkofen, version control and data management software has been in use for over 16 years now. Not only were they one of the very first users of versiondog, they even used its predecessor, too.

Marklkofen is the branch of the Mann + Hummel group that makes filters for all automobile fluids except water. The filters then go to the spare parts business, with only a small proportion of the factory's production dedicated to parts for industrial filters.

With a production area spanning 200,000 m², Marklkofen is the company's largest facility, and thus plays something of a leading role in all aspects of production, either in the form of new machines, production processes or process standardisation.

Klaus Wanninger, head of electrical maintenance at this location, says, "We're really good at what we do." Nonetheless, considerable money is invested every year in new machines, robots and peripheral devices. Production begins on a Monday morning and ends on Saturday on a three-shift system, with a particular emphasis placed on maximising availability and minimising downtime.

In order to achieve this, almost every part of the production process is networked. All of the machines are connected to an MES system, so they can be fully monitored and all errors can be recorded. If a new machine is added, then it is allocated a new IP address,

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The change history allows you to track WHO changed WHAT, WHEN, WHY and WHERE in the Simatic S7 project.

a network cable is connected and the communications module is installed. The machine can then run on the network. Maintenance ports are also created so that a maintenance worker or external programmer can log in to the versiondog data management system and make programming changes to the production line. This means remote maintenance is also controlled by versiondog, which helps to ensure that the most recent version is always used.

Increasing efficiency through data backups
The number of daily backups alone shows just how important data backup and version control are to the company. Of over 1,100 backups, around 600 are carried out daily, with a further 300 executed on a weekly basis. For each one, the seven most recent uploads are saved. These saved versions also include complete lists of all current parameters. This ensures that the most recent software version is always running on every single component

in the network. As a result, maintenance work is not only easier, but also generally takes less time. At the very least, it is no longer necessary to search for the "correct" software version.

For Wanninger, this represents a considerable improvement. "Repair times are now much shorter, as the system can be restored much more quickly following downtime," he explains. "At Mann + Hummel, there have also been times when maintenance workers have had to search extensively for the latest software version. And sometimes there were no backups at all.

The fast disaster recovery provided by the version control and data management system versiondog is extremely important to our day-to-day work." With machine parameters changed and improvements made on a daily basis, it is particularly important that the latest version be accessible at any time.

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Klaus Wanninger,
head of electrical maintenance
at Mann + Hummel

"Education and a high level of knowledge are key factors in ensuring good maintenance. They learn how to use versiondog during their training so they are ready to go as soon as they are finished."

There are some parameters, however, that cannot be changed under any circumstances. Because versiondog allows users to limit access to specific parameters, certain sources of error can be eliminated completely. Fortunately, the systems used by Mann + Hummel are not made by a huge variety of different manufacturers. Of the Siemens systems (which account for 95%), components such as IPCs and PLCs are standardised, and a sufficient number of them are available.

However, they are not pre-configured. If a component has to be replaced due to a faulty CPU, for example, then the most recent image simply has to be dragged from the versiondog server onto the computer. All maintenance staff are authorised to make this sort of change and, every time they do, they must provide authorisation so that it is possible to track who changed what, where, when and why. Ultimately, therefore, a small amount of effort is required, as the changes must also be recorded in the system in writing. However, it is no longer necessary to manually update excel tables or documents, as the change reasons are entered into the project in versiondog directly. And the time saved during disaster recovery means that the effort is more than worth it.

Proactive time-saving
The maintenance staff work proactively and follow a strict schedule. "This leaves plenty of room for more event-driven tasks," says Wanninger. When asked about the benefits of versiondog, Klaus Wanninger and Christian Metz, Key Automotive Account Manager and himself a former maintenance worker at a tier 1 supplier, have many stories to tell of

how much time was spent looking for the correct version of PLC software.

For the system to function and in order to actually save time, a certain degree of preparation and discipline is required on the part of maintenance staff with regard to documentation. The structure of the production network, the assignment of permissions and the creation of different user groups must all be clarified – potentially in consultation with the experts at AUVESY.

Mann + Hummel is currently in the process of upgrading to the latest version of versiondog, version 4.0. "Fortunately," remarks Wanninger, "this version has also incorporated some suggestions from the industry". One of these suggestions had already been implemented in a previous version. The scripting interface allows small, customised sub-programs to be added to versiondog so that users have more options for backups or Check-Outs, for example. "We regularly come up with new requests or suggestions. After all, the world of automation is always changing."Tools such as the WebClient, which allows users to access various report functions (e.g. versiondog eventlog or PLC status) via their normal browser, can be used in various different ways. The Mann + Hummel facility in Marklkofen, for example, has its own PC that external maintenance workers or onsite experts can use to log in to the facility via their browser.

With version 4.0, the new versiondog Factory Floor Status add-on is now also in use. "We now have more accurate information for our spare parts inventory," explains Wannin-

ger. With this add-on, it is immediately clear which components are installed and where they are located, so it is not necessary to keep a disproportionate number of PLCs in stock. Factory Floor Status also lists all current firmware versions, so it is easy to check whether an error was caused by outdated firmware or whether an update is needed.

At Mann + Hummel, versiondog has now become such an important tool that the trainees now use it, too. "Education and a high level of knowledge are key factors in ensuring good maintenance," explains Klaus Wanninger. When trainee maintenance staff work on projects involving PLCs and EPLAN technology, they make sure to document their project versions in their own folders. Whenever a change is made, then this must also be documented – just like in the real world. The only difference is that supervisors and instructors can intervene at any time to give advice regarding potential improvements. "They learn how to use versiondog during their training so they are ready to go as soon as they are finished," says Wanninger.

Mann + Hummel is also happy to present versiondog to other interested companies at its production facility. Klaus Wanninger explains: "We first encountered versiondog's predecessor, VersionWorks, in the factory of another user. The best way to find out how something works and how it is used is to see it in action in the real world. In most cases, companies can see the potential benefits of the software after just a few minutes". This is why versiondog has also become a maintenance standard at Mann + Hummel. A standard that works, and a standard that everyone is happy to use.

About AUVESY

AUVESY GmbH (www.auvesy.com), founded in 2007, is a leading global provider of vendor-independent version control and change management software for automated production. With its software "versiondog", AUVESY offers a product that provides industrial companies with uniform central data storage, fully automatic data backup, version management with detailed change detection and clear documentation, while at the same time being highly user-friendly and adapted to the automation systems of various manufacturers. AUVESY software is already used in more than 40 countries worldwide in a variety of different branches. The company, based in Landau in the Palatinate region of Germany, employs around 90 people.

HEADQUARTER GERMANY

AUVESY GmbH
Fichtenstraße 38 B
76829 Landau in der Pfalz

Phone	+49 6341 6810-300
Fax	+49 6341 6810-311
Email	info@auvesy.de
Web	www.auvesy.de

OFFICE USA

AUVESY INC
146 Monroe Center St NW
Suite 1210
MI 49503 Grand Rapids

Phone	+1-616.888.3770
Fax	+1-616.888.3769
Email	info@auvesy.com
Web	www.auvesy.us

OFFICE CHINA

AUVESY Data Management
Solutions Co., Ltd.
Jinma Lu 3, Maqun, Qixia District, Nanjing
China

Phone	+86 25 52235097
Fax	+86 25 85725003
Email	info@auvesy.cn
Web	www.auvesy.cn

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