*Data management system with integrated web server*

# Manual search becomes a relic

In the field of automated production, changes and improvements are made to production processes on a regular basis in order to maximise productivity, efficiency and product quality. However, changing the control programmes in this way is far from risk-free, and errors can occur at any time. To overcome this problem, intelligent data management systems are used to manage and protect key project data. By organising data absolutely transparently at a central storage location and enabling users to carry out predictive maintenance, the data management system helps to keep a plant fully operational.

**T**hanks to the Versiondog data management system, users in production and maintenance can benefit from a truly all-in-one solution that offers version control, automated backup and the ability to document data from a wide range of controllers and automation devices in a single, non-proprietary system. With constant access to a plant's latest software version at a centralised location, improvements and modifications can be carried out quickly and efficiently.

All changes are documented in the change history along with a comment explaining why each one was made. Versiondog not only records changes made by the plant's own personnel but also documents those undertaken by external service providers or plant manufacturers. Unwanted programme changes are likewise recorded, no matter whether they occurred by accident, through ignorance or intentionally (e. g. cyber attack). The system thus ensures complete documentation and even helps users prepare for audits by providing the required documents. The recently released Versiondog 4.0 introduces many enhancements and new features with a particular emphasis on Industry 4.0.

**Web server for more flexibility**

The Versiondog system now features an integrated web server. This is part of the standard setup and can be activated in the server settings with a simple click. Users can then view reports compiled by the Versiondog Report-Client via their browser from any location using any device. All the most common web browsers are supported (IE, Chrome, Safari, Firefox). With new report formats, more filtering and sorting options and touch screen support, Versiondog is more user-friendly than ever before. If further evaluation is required (e. g. in Excel), all reports can now be downloaded from the browser as a CSV file.

Non-proprietariness is one of the key features of Versiondog. The device integration is continually being improved to offer the widest range of support for automation systems currently available in the market. With this in mind, the latest editors for devices already supported by Versiondog, such as PCS7 V8.2, RS Logix5000 V28, Citectscada V7.50 and Intouch V11.1, will also be integrated into the software. The range of supported automation devices has also been expanded to include SEW frequency converters, GE Proficy ME, Siemens Scalance switches, Mitsubishi robots and Kistler process monitors.

**Predictive maintenance**

The add-on Factory Floor Status helps users create a comprehensive data management strategy to facilitate predictive maintenance and ensure sustainable production quality. With web server integration, device information that is spread out across an entire production facility can be quickly accessed from anywhere in the network. Furthermore, Factory Floor Status shows the current status of automatic backup and compare jobs and the results of comparisons with the programme's latest version on the Versiondog system. Device-specific monitors also ensure complete transparency by displaying production-related information for every device.
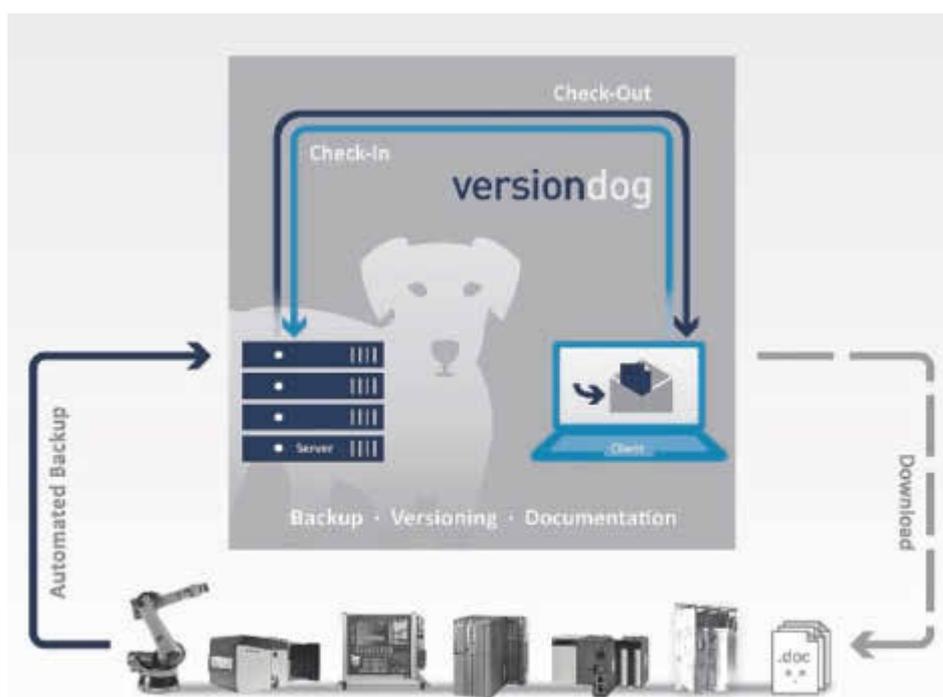


*Versioning, automated backup and documentation with Versiondog*
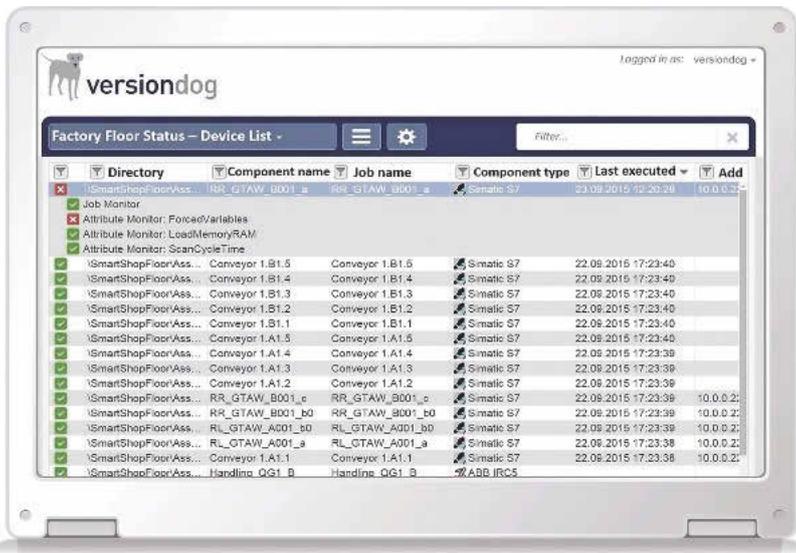
*Versiondog Factory Floor Status – tabulated surface*
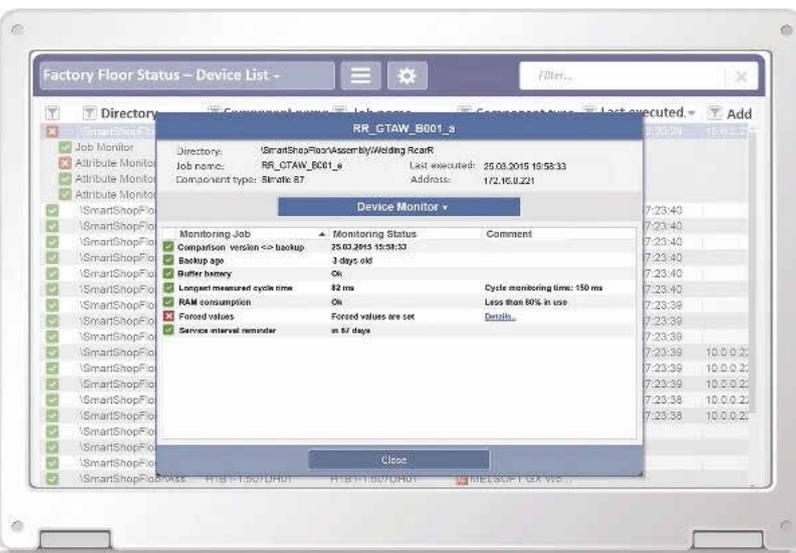


*Versiondog Factory Floor Status with control monitor view*

Owing to the colour coding system (red / yellow / green), it is easy to evaluate the situation and take any necessary action. The system dashboard additionally provides basic information such as module numbers (e. g. MLFB), RAM usage, battery status, cycle time overruns and forced values. One particularly useful feature is the ability to quickly check the firmware version currently installed on an automation device. With Versiondog 4.0, Factory Floor Status will initially provide support for Simatic S7 in particular.

## Automated data management

Factory Floor Status was born out of customer requests and the desire to clearly see which firmware versions are running on which devices. The initial requirement was to minimise the workload associated with Simatic S7 firmware updates and make the update process generally more efficient. Updates to eliminate bugs, for example, are rolled out on a regular basis and each time the same questions are asked: "Which firmware and hardware is installed on which PLC?" "Which devices will be affected by the update?" Up to now, this information had to be recorded manually using Excel tables. This meant, of course, that the data had to be updated by hand every time a new update was announced. Depending on the number of PLCs and CPUs installed in the facility, this could be a long and arduous pro-

cess. With Factory Floor Status, these recurring costs can now be easily avoided in networked production facilities. The system lists all controllers together with their associated MLFB numbers and their current firmware and hardware status. Users can also search for specific MLFB or module numbers, which saves time and prevents the errors that could occur if outdated firmware is overlooked. The automated display of information rules out errors caused by manual transcription or by information being read incorrectly.

Apart from this, the Factory Floor Status add-on provides even more production-related information that further increases efficiency and saves both time and money. The ability to check the battery status of devices, for example, helps to prevent data loss if a power outage occurs. The constant warnings whenever forced values have been set act as an automatic reminder until these settings are reset as planned.

Information on RAM usage and cycle times helps to proactively optimise processes and facilitates plant monitoring. These values are useful while the plant is being constructed or expanded for identifying unnoticed errors or exceeded limit values. Aided by this information, the plant engineer can then decide where to install alternative controllers / CPUs and where to initiate adjustments or performance improvements.

The fact that the system shows the current status of backups alongside this new device information is another huge user benefit. At the start of each shift, the plant personnel can therefore see at a glance whether any changes were made during the previous shift. If there are any errors or uncertainties, the changes concerned can be localised and checked immediately. Absolute transparency and maximum data availability save time and free up resources for improvements and new maintenance tasks.

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