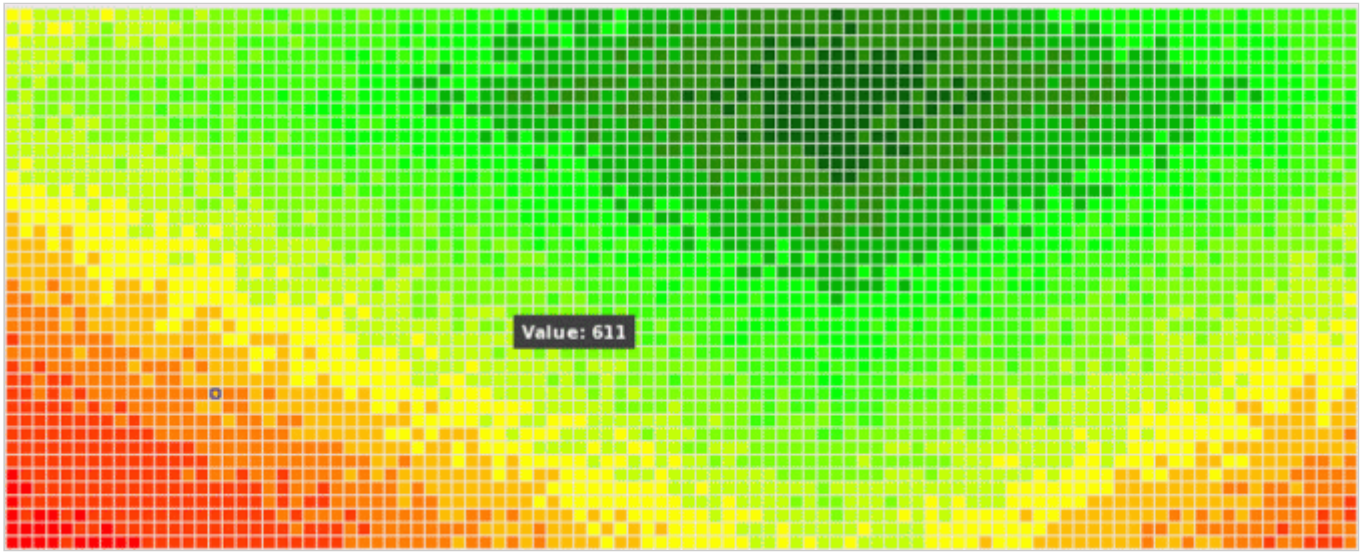
CERN and Siemens subsidiary ETM sign knowledge transfer agreement

NEW AGREEMENT IMPROVES INDUSTRIAL CONTROL AND AUTOMATION SYSTEMS.



The human-machine interface of the software helps visualise the measurements of industrial control and automation systems.

CERN signed a knowledge transfer agreement with the company ETM, a 100% owned subsidiary of Siemens AG, headquartered in Austria. ETM develops Simatic WinCC Open Architecture (WinCC OA), a SCADA software (Supervisory Control and Data Acquisition) that is key to industrial control and automation. This system is used widely across a broad range of industries, from traffic management, water and energy to the oil and gas industry. The agreement enables ETM to give its customers access to visualisation software developed by CERN.

Simatic WinCC Open Architecture is designed to allow customers and developers to implement tailored industrial control solutions easily. The system is efficient for large and complex applications and projects. WinCC OA was formerly known as PVSS.

CERN uses ETM's WinCC OA software for over 15 years for the infrastructure systems linked to its installations for fundamental research in High Energy Physics. The day-to-day operations of the Large Hadron Collider (LHC) require a large number of highly specialised control systems. WinCC OA is used for example to control the extensive LHC cryogenic system, which cools super-conducting electro-magnets down to a temperature below that of outer space, and operates over the 27 kilometres ring of the LHC.

A central part of the WinCC OA system is the human-machine interface, essential to an efficient supervision of the control system. The CERN Engineering department developed a new software tool to integrate powerful JavaScript visualisation libraries like Highcharts, D3.js and others, within WinCC OA. The group who developed the visualisation software has now integrated the Beams department.

"There has been a rapid growth of graphical tools available on the web that can contribute to making the human-machine interfaces of control systems user-friendly and efficient,"says Manuel Gonzalez who leads the SCADA Systems section at CERN. "Our software offers a seamless integration between the two systems."

The agreement signed with ETM in March means that the new visualisation tools will be deep integrated in future releases of the WinCC OA software. “This native integration of the human-machine interface will benefit both industry clients as well as CERN,” says Nick Ziogas, who works in the Knowledge Transfer Group at CERN, and contributed to bringing CERN and ETM together for the agreement. “ETM guarantees the maintenance of the new functionality so that it will be enduring,”he adds.

The software package was first presented internally at one of the CERN departmental Knowledge Transfer days, where CERN engineers, technicians and scientists can periodically present the latest technological developments with potential for industrial applications.

“This is not just about the technical tool,” adds Piotr Golonka, the project leader on the CERN side and one of the product developers. “Knowledge transfer also happened through the technical student who was involved in developing the software with us. He now works in industry.”

The exploitation rights related to the agreement will contribute to the CERN Knowledge Transfer Fund, a centralised fund that helps bring the technology readiness level of CERN technologies closer to that of industry. The CERN KT Fund is dedicated to bridging the gap between research and commercialisation.

This transfer sparked interest from ETM to take the concept further with CERN, which will take place within the CERN openlab framework.

Find out more here:

- *ETM, 100% owned subsidiary of Siemens.*

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