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## Engineering framework ready for continuous software development

- **New Version V16 of the TIA Portal engineering framework with focus on standardization and continuous integration**
- **Enhanced engineering efficiency with distributed working in the developer team**
- **Increased software quality thanks to integrated Test Suite**
- **Transparent operation with cross-vendor OPC UA communication**

With the new TIA Portal V16 (Totally Integrated Automation Portal), Siemens has expanded its engineering framework with practical new functions for various phases from planning, to engineering, to commissioning. The innovations concentrate on the continuous integration of the development process. These include standardization, integrated engineering spread across teams and an integrated function test. This enables users to increase the quality of their software, shorten commissioning times and reduce engineering costs.

During the development process, the focus is on distributed working concepts and teamwork. On the TIA Portal project server, the user can now exclusively access server projects via the new Exclusive Engineering function – with features such as project revision and change protocol, as well as automated reporting and archiving. This means there are no functional restrictions when organizing automation tasks on a device, object or function-oriented basis. No special license is required for using Exclusive Engineering. To enable projects to be commissioned by teams, TIA Portal V16 has been expanded with an “asynchronous commissioning” mode, whereby loading to the Simatic S7-1500 controller is carried out by a second TIA Portal instance running in the background. The TIA Portal instance running in the foreground can be operated again immediately, enabling load times to be considerably shortened. TIA Portal V16 includes the new Version Control Interface

**Siemens AG**  
Communications  
Head: Clarissa Haller

Werner-von-Siemens-Strasse 1  
80333 Munich  
Germany

(VCI) to external versioning systems such as GIT, SVN and TFS. The import and export of software objects via the TIA Portal interface allows versioning to be seamlessly integrated into the development process. This enables object-granular, completely transparent versioning of all software objects outside the TIA Portal. Another innovation is the TIA Portal Test Suite. In addition to allowing automated creation and checking of adherence to programming guidelines, the so-called Styleguide Check, it is also possible to generate and carry out application tests with the virtual S7-PLCSIM Advanced controller. This support reduces engineering and commissioning times and enhances the quality of the software.

With TIA Portal V16, all Simatic S7-1200 controllers are now equipped with OPC UA server functionality. Connection to higher-level systems, such as manufacturing execution systems, can be implemented for vertical data integration. Controller-controller communication throughout all Simatic controllers is also now possible using OPC UA. Standardized interfaces, known as companion specifications, are simple to import with the TIA Portal, making it easy to integrate machines in production lines or plants. The SiOME Siemens OPC UA Modelling Editor helps the automation engineer with the interconnection of tags and simplifies their import into the Simatic machine control. The SiOME also has some new functions such as the creation of data blocks based on OPC UA information models, or the option of checking OPC-UA information models and companion specifications for conformity. Users can now model server interfaces or companion specifications in the TIA Portal V16. In simplified form and without the need for specialist knowledge, it is possible to create a server interface or use a companion specification. The OPC UA server functionality for the Simatic S7-1500 controllers has also been supplemented with additional diagnostic buffer entries: OPC UA messages can now be combined to only appear once in the diagnostic buffer.

The new Simatic Drive Controller has been integrated for motion control applications. It combines a Simatic S7-1500 control system with motion control, technology and safety functionality with a Sinamics S120 drive control in a single device, thus saving space. The new package also enables Simatic users to perform advanced motion control tasks, such as those involving multi-axis drive systems, in a familiar environment. Simatic WinCC Unified is also available in TIA Portal V16: The completely redesigned visualization system provides solutions for HMI and

SCADA applications, and in the future also for Industrial Edge, Cloud and Augmented Reality scenarios. It includes a new generation of HMI devices which can be configured with TIA Portal V16, namely the Simatic HMI Unified Comfort Panels. In the latest TIA Portal version, the Simatic Energy Suite includes a load management function. This option automatically prevents load peaks by using intelligent strategies to switch generators and loads on and off, without influencing the production process. The Simatic Energy Suite engineering takes place in the TIA Portal: The user configures the load management via the screen form in the TIA Portal, program generation is completed, and the corresponding visualization configured.

Background information:

The TIA Portal (Totally Integrated Automation Portal) was launched by Siemens in 2010 and enables users to perform automation and drive tasks quickly and intuitively through efficient configuration. The software architecture is designed for high efficiency and ease of use and is suitable for both new and experienced users. It offers a standardized operating concept for controllers, human machine interfaces (HMIs) and drives for shared data storage and consistency, for example during configuration, communication and diagnostics, as well as powerful and comprehensive automation object libraries. The simple engineering in the TIA Portal facilitates full access to the entire spectrum of digitized automation, from digital planning and integrated engineering up to transparent operation. Alongside PLM (Product Lifecycle Management) and MES (Manufacturing Execution Systems) within the Digital Enterprise Software Suite, the TIA Portal complements the holistic range of software available from Siemens for companies on the path toward Industry 4.0.



This press release and press images can be found at

<https://sie.ag/33hd0WA>

For further information on Simatic WinCC Unified System, please see

[www.siemens.com/wincc-unified](http://www.siemens.com/wincc-unified)

Additional Information about Simatic Drive Controller can be found at

[www.siemens.com/drive-controller](http://www.siemens.com/drive-controller)

Additional information about Siemens at SPS 2019 can be found at

[www.siemens.com/press/sps19](http://www.siemens.com/press/sps19) and [www.siemens.com/sps19](http://www.siemens.com/sps19)

**Contact for journalists:**

Andreas Friedrich

Phone: +49 1522 2103967; E-mail: [friedrich@siemens.com](mailto:friedrich@siemens.com)Follow us on **Social Media:****Twitter:** [www.twitter.com/MediaServiceInd](https://www.twitter.com/MediaServiceInd) and [www.twitter.com/siemens\\_press](https://www.twitter.com/siemens_press)**Blog:** <https://blogs.siemens.com/mediaservice-industries-en>

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