

Streamlining Building Automation: How WSCAD's Electrical CAD Software Revolutionises Building Automation Design and Tendering

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The advent of building automation in modern offices has meant construction projects require detailed system design and documentation before works can begin. Designing building automation systems is challenging, however, innovative software platforms are streamlining the process. GA Pro Engineering Dietrich & Oertel GBR utilises WSCAD's Electrical CAD Software with the Building Automation module to provide efficient, detailed design and tendering for developers, engineering firms and contractors.

Michael Dietrich, Managing Director and Building Automation Planner at GA Pro Engineering, explains how WSCAD's software solution assists in their projects.

Automation at the office

With over 25 years of experience, GA Pro Engineering specialises in designing building and room automation, security, media, data technology, programming and electrical installation. Based in Munich, Germany, the company provides these services for the construction of large office buildings, with past customers including international IT companies and leading automotive original equipment manufacturers (OEMs) such as Porsche, BMW and Audi.

GA Pro Engineering not only uses WSCAD's building automation solution as a configuration tool for creating schematics, but also to provide clearly specified tender documents for awarding projects to subcontractors. Backed by 30 years of experience in electrical CAD solutions and continual updates, there is nothing that compares to WSCAD's software for building automation planners.

Project planning for building automation

WSCAD software usually starts with the design and graphical representation of plant layouts and control diagrams, which GA Pro Engineering receives as P&IDs from technical building equipment (TBE) design bureaus. These will offer guidance on design for sanitary equipment, heating, ventilation, air conditioning, water, energy demand, building automation, security and data technology. From that point onwards, it's up to GA Pro Engineering to carry out the detailed hardware and software design required for building and room automation.

A critical aspect of this is incorporating automation stations and systems, field devices, such as fire protection and smoke extraction systems, valves, actuators, sensors and meters that may be required. If the automation scheme for a ventilation system has been designed, then all associated objects or data points are defined, recorded and assigned properties in the WSCAD software. The recording of all objects and the data points means that they can be easily replicated and re-used. The data points are then available without System discontinuity through our disciplines up to our electrical schematics, which reach the connection points of the PLC controllers and their programming. The innate scalability of the software also allows for projects of increased complexity to be accommodated.

Flexibly meeting multiple standards

Regulatory compliance symbols are also included in the automation scheme with reference to specific manufacturer's products and associated part data - a feature that is highly advantageous when specifying order requirements in tender documents. All this is taken directly from supplied information or from the free online components database offered by WSCAD, wscaduniverse.com. Detail is matched with intuitive functionality. Parts can be swapped out quickly, for example, changing the manufacturer for 120 sensors takes just a few clicks.

The structured identification of schematics to regulatory standards by WSCAD enables the reuse of designs across buildings. A ventilation system from one office schematic can be dragged and dropped to another while automatically transferring identifiers and information. As a result, any time-consuming or error-prone manual renaming is eliminated. Projects can also be structured and identified in accordance with multiple standards. A recent GA Pro Engineering project involved using AMEV and ISO IEC EN 81346 simultaneously, incorporating two identification systems in one planning process - a unique advantage of WSCAD ELECTRIX compared to other solutions.

Advantages beyond design and tendering

As well as supporting the building automation designer, WSCAD assists other contractors involved in a project too. The automation schematics with data points and functional descriptions translate directly into a bill of materials for documentation, streamlining the tendering process. Numerous interfaces in the software enable the easy import or export of data from WSCAD, if they happen to

use a different platform, allowing them to seamlessly transfer data. When complete, schematics can be imported directly into the electrical installation plan, including all specifications, locations and mounting positions.

Due to its flexibility and wide range of options, WSCAD provides more creative freedom for GA Pro Engineering's projects. Features such as recording, product information, automation of recurring processes, structured identifications and easy data transfer not only benefit designers, but also cabinet engineers and electricians at the construction site or facility managers at the building. This ensures that data for building automation systems can be used continuously throughout the design and life cycle of an office. Rather than just expediting design and tendering, WSCAD's ELECTRIX provides additional benefits across the entire construction process.

You can find out more here: <https://bit.ly/44Wmp6P>

Image captions:



Image 1: Michael Dietrich, Managing Director and Building Automation Planner at GA Pro Engineering.

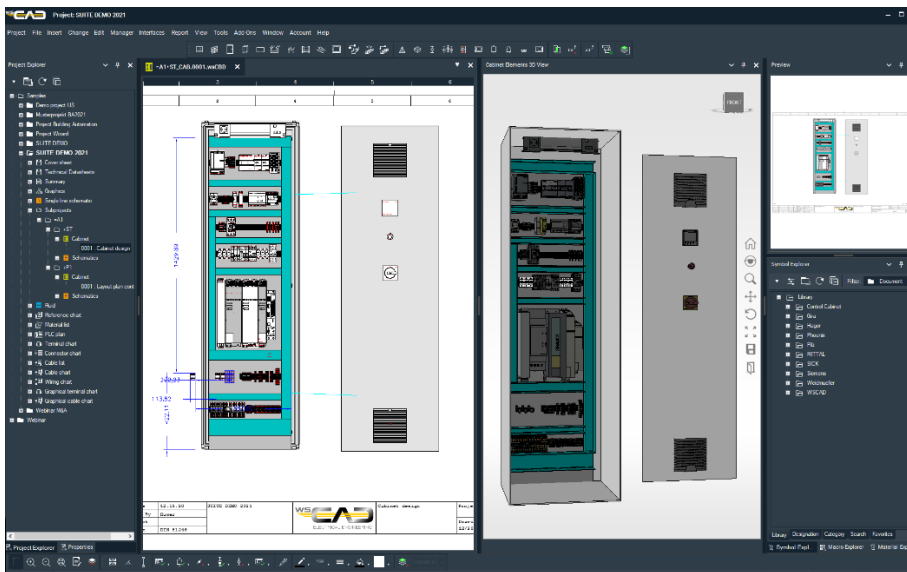


Image 2: The data points including their properties are recorded in the WSCAD software via the data point manager.

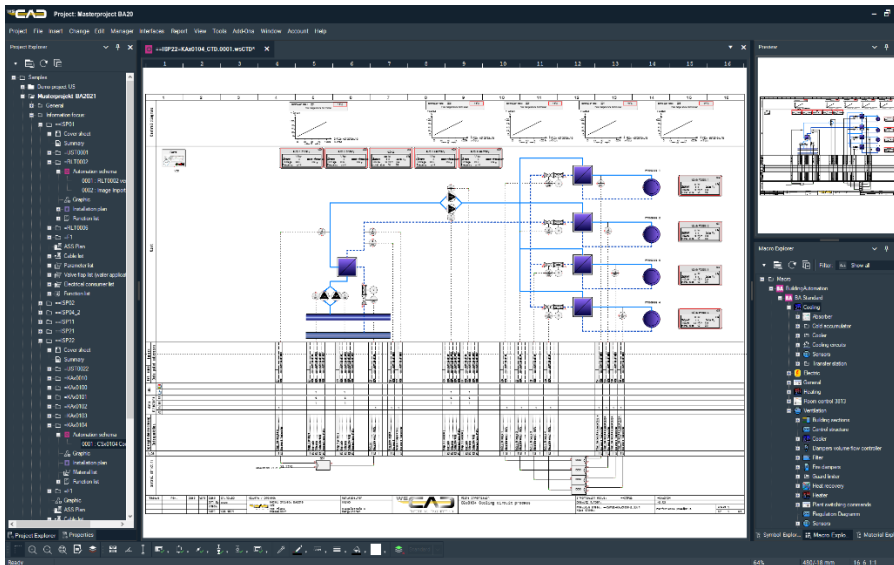


Image 3: Everything on one platform: With the Electrical Engineering and Cabinet Engineering modules from WSCAD ELEXTRIX, circuit diagrams and control cabinet layouts are created immediately.

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About WSCAD

WSCAD is part of the Buhl group with more than 700 employees. WSCAD has been developing electrical CAD solutions for three decades. Customers include medium-sized companies, international corporations and engineering service providers. More than 35,000 users rely on WSCAD as their electrical CAD solution. The software is based on one core platform that covers six engineering disciplines: Electrical Engineering, Cabinet Engineering, Piping and Instrumentation, Fluid Engineering, Building Automation and Electrical Installation. Any change made to a component in one discipline immediately reflects in all the other disciplines saving time and raising quality. WSCAD methodologies for standardization, reuse and automation significantly reduce engineering time from several weeks to just a few hours or even minutes. At the same time, these practices also ensure a much higher quality of work.

wscaduniverse.com is by far the largest electrical CAD data library on the market offering over 1.4 million parts from more than 370 manufacturers. It is the only digital library that supports WSCAD, EDZ, DWG and 3D CAD data. Use and data provisioning is free of charge for all users and manufacturers of components and equipment. WSCAD also offers apps for mobile devices: maintenance engineers and service personnel are now able to scan components within the control cabinet by using the WSCAD Cabinet AR App. This way they get instant access to the schematics, device tags, part data, 3D views and even the original data sheets from the manufacturers. Building engineers can use the Building AR App on site to scan rooms and then edit the scanned floor plans in WSCAD for building automation and electrical installation.

The WSCAD portfolio is completed by eleven seamlessly integrated service offerings from WSCAD Global Business Services. Engineering and migration check-ups, consulting and training, digitization of paper

documents and conversion of third-party electrical CAD formats quickly help to shorten engineering times and increase productivity.

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