

Press release

10 July 2018

New workflow efficiency in rail vehicle construction Optimized harness design due to standards AND customization

At Innotrans 2018, the software developer Aucotec will be showing for the first time its mobility solution with a special variant for the development of vehicle electrical engineering and wiring of rail vehicles. The cooperative platform Engineering Base (EB) supports both standardized work as well as customized requirements. It allows entire functions to be reused, and it does not force processes into a rigid chronology as is customary.

Correctly combined

The call for standardized modules is becoming louder also in the railway sector. Such modules would assure faster vehicle development and smoother commissioning. However, a ready-made modular system, as in the automobile sector, would not work here because rail vehicles have to be adapted individually to different track requirements.

In EB, functions can be maintained as modules in a freely extensible basic modular system, for example, for lighting that consists of controls, indicators and luminaires. Options are stored as separate circuit components, which saves you from requiring the otherwise innumerable variants of sheets with all possible combinations of options. With EB, railway carriages are no longer designed individually for each train, but are configured from the quality-tested function modules. "This is how the platform combines individuality and standards into a significantly optimized workflow," said Georg Hiebl, Product Manager Mobility at Aucotec.

Flexibly adaptable

However, that was not enough for the software developers. A workflow is perfect only when the engineering system allows users freedom within the work process. "With the current cost pressure, it is important to adapt the design process to the internal specifications – not the other way round, as in having to subject the processes to the limiting capabilities of a system," said Hiebl. Furthermore, it should be possible to seamlessly integrate everything into the IT environment. For this purpose, EB is equipped with a multi-layer architecture that allows flexible adaptations to processes and seamless linking to other systems.

"Single source of truth" makes changes transparent

The system also permits an exceptionally transparent change process. The many changes in the rail vehicle development process are a major challenge when different disciplines are working together. In EB, all disciplines work in parallel, even simultaneously, on a central data model. This "single source of truth" automatically remains up-to-date and results in particularly continuous data consistency, not only for engineers, but also for the individually configurable production lists. It is always possible to see what has been changed by whom. EB's data model ensures that corrections made once at one point in the documentation are immediately displayed in any further representation of the changed object.



Links to the images*:



[Urban railway of Kiepe Electric GmbH](#). The company is a forerunner in using the potential of a continuously connected, digital workflow with Engineering Base. (© Kiepe Electric GmbH)



[A railcar's typical equipment](#) by Kiepe Electric (© Kiepe Electric GmbH)



[Cabinet for vehicle control](#) by Engineering Base user Kiepe Electric (© Kiepe Electric GmbH)



[Georg Hiebl, Product Manager Mobility](#) at Aucotec (© AUCOTEC AG)

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Aucotec AG has over 30 years of experience in developing engineering software for the entire lifecycle of machines, plants and mobile systems. The solutions range from flow diagrams via control and electrical engineering for large-scale plants to modular harness design in the automotive industry. Aucotec software is in use all over the world. In addition to its headquarters in Hanover, Aucotec operates six further sites in Germany as well as subsidiaries in China, South Korea, France, the United Kingdom, Italy, Austria, Poland, Sweden and the US. A global network of partners ensures local support throughout the world.