



Ripe for engineering!

AUCOTEC is the first to dive into cloud and app for professional ECAE



To make the best of the things one has is always good but unfortunately often insufficient. To reduce project run times in engineering, a flexible team composition is important, but teams should be capable of being expanded by external staff members in the shortest possible time. But how then about the access to programs and data, not to speak of licensed workplaces? The AUCOTEC solution for the first time achieves the leap to an efficient and safe use of cloud and apps for engineering purposes. Yet although the terms cloud and app have become commonplace and apps for leisure time or information are already widespread: in professional engineering their practical use has up to now still been in its infancy.

Since all employees working on a planning or construction project need access to the programs used and the current data, an efficient integration of external coworkers is usually possible only via their on-site presence. For reasons of costs additional project engineers nonetheless are often assigned external jobs. However, this means that one has first to install the appropriate software package and to send the data of the current project status before work can start. For reasons of safety sending by e-mail is often out of the question. Subsequently the data must be consistently reintegrated into the complete project. All this entails a high communication and adjustment effort that often distinctly exceeds the benefit provided by external helpers.

Those who are familiar with these considerations should start thinking about cloud computing. Cloud computing can provide distinct relief for the dynamic combination of teams and in introducing external resources because it flexibly provides IT infrastructure (computing power, data memory and software) via a network. Thus project run times can be shortened not only distinctly but also efficiently.

Up-to-date from anywhere:

AUCOTEC's solution uses the advantages of these technologies for increasing the efficiency of the engineering and maintenance of machines, plants and mobile systems. It shows that the foresight of the developers of Engineering Base (EB) headed precisely in the right direction when over 10 years ago they laid the foundation for this very future-oriented and flexible software system. Only EB's 3-level architecture optimally supports the cloud computing concept and offers the scalability required for its use from a single workplace to a global enterprise solution. And it is only because of this that it can be offered and managed in a private cloud as "Infrastructure-as-a-Service" (IaaS).

With EB, the client level is relieved of computing power by the application server. Instructed by the user, the latter in turn uses the Microsoft SQL server, which keeps all of the information, including associated information such as 3-D data, control software codes or stored PDF files and other documents in a central data model. The two server levels can be readily managed in the cloud. EB thus grows with the company size while flexibly adapting to changing structures. With the virtualization of the hardware via the cloud, the IT can quickly react to new demands. Here the use of a SQL server farm can distinctly increase not only the scalability but also the availability. Automatic load balancing ensures optimum use of the existing IT resources.

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Editorial

Dear readers,



There is hardly any other industrial segment where the importance of technological change is greater than in the CAE industry, which must meet the increasing demands of its customers. In this context the recognition of the most important technological trends plays an enormous role: This year cloud computing, mobile end devices or the integration of engineering processes will be the focus of our customers.

In this issue you will find interesting pertinent contributions. They illustrate AUCOTEC's stringent strategic approach: further development of the Engineering Base platform, addressing the most important market segments, worldwide presence and technological partnerships. The SANY example shows how important all these components are for our customers.

Of course we are proud that together with you we were able to conclude the most successful fiscal year of AUCOTEC AG. Yet even more important for us is sustainability, therefore we prepare for the future. During the past months we have achieved much in this context: two new subsidiaries, decisive successes in the cement and commercial vehicle industries, new partnerships and further increases in the performance of Engineering Base.

We look forward to further successfully address your technological trends and to support you as a strong, reliable and future-oriented partner.

Yours truly,



Markus Bochynek, Board of Directors

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App makes mobile

A higher configuration level of the cloud use is the extension of the data access: via app in mobile devices. At the Hanover fair AUCOTEC presents its new web service which makes the data elaborated via EB available to other applications. The solution ranges from the "dashboard" project overview to maintenance applications. The new app offering enables the service personnel to call the data of the actual "as-built" status of a plant from the EB database directly via the mobile device. This might be the next maintenance deadline for a device, an assembly instruction or details about a connected cable including its destination. The app also permits entering maintenance information directly into the EB database. Thus the current plant documentation is accessible from anywhere.

"Private" makes safe

Suppliers, external employees and the maintenance professionals can thus be dynamically integrated into projects from the outside without extended setup times, time-consuming consultations or data transfer and adjustment. The private cloud assures the manufacturer of maintaining control of his data. No security gaps and no more data transmission via e-mail.

Thus it becomes clear that cloud and apps are in fact fully developed for a useful application in professional engineering: If as in the case of EB the preconditions are met, then the IT resources cost money only when actually used, and keeping safety capacities is superfluous.

Aucotec grows and grows...

New subsidiary in France, new location in Munich, strong increase in turnover



Dijon

After the strong increase in turnover in the past fiscal years, AUCOTEC now also grows spatially. With the establishment of the sixth subsidiary, the French AUCOTEC S.à.r.l, the presence there has been distinctly improved and is to be further expanded. For this purpose the centrally located Dijon, which lies directly at the French industrial belt, was selected as site.

"The market is very interesting, and indeed we have been active in France already since a number of years", says General Manager Djibi Dia, since 14 years at AUCOTEC and now head of the new subsidiary. "Our product

Engineering Base precisely meets the local requirements; yet it is quite a different story to act in France as a French supplier. This is going to distinctly improve our standing." The physical proximity also yields distinct advantages for customers already won such as Alstom/Schneider, EADS Astrium or the cabinet specialist Comeca.

Customer proximity with a tradition

Just like the French subsidiary, the new branch office on the area of the former Munich airport Riem is also prepared for an expansion. Its head Thomas Salitz, who in addition to the turnover already envisages the possible expansion, looks forward to his tasks: "Mechanical engineering but in particular the process industry and the transport sector are strongly represented in the south. And because we are very strong in terms of engineering for these sectors and because we steadily grow there, we approach the market also in terms of physical proximity. AUCOTEC board member Markus Bochynek adds: "With the expansion we uncompromisingly continue our tradition of customer proximity, which we have been maintaining since 27 years. We owe the greater part of our success to the close cooperation with our customers – and that is supposed to remain so."

Strong result

That the special AUCOTEC mixture of tradition and innovation sustains permanent success is also confirmed by the impressive figures of the fiscal year that just ended: In the last year, AUCOTEC has hired more new employees than ever. With an increase of almost 20 %, over 300 people worldwide now work for AUCOTEC and its partners. The turnover increased in parallel. Particularly noteworthy is the platform EB, which likewise could expand by 20 %. The Chinese and Italian subsidiaries even achieved a growth of over 50 %.



Munich

AUCOTEC Quality for China from China



A 50 % increase in turnover makes it clear: AUCOTEC quality is sought after in China. Since the foundation of AUCOTEC Information Technology (Shanghai) Co., Ltd. by the German parent company and its long-standing Chinese partner Hai Zhao in December 2008, the sales team has doubled. But the research and development as well as the service team have also continuously increased.

Thus the AUCOTEC subsidiary with its highly professional service and the localized products representing the complete AUCOTEC portfolio could acquire renowned customers in China. They stand for quite different industries: metallurgy, electricity, rail transport, engineering and machine construction, cars and more. For example the Baosteel Group, Baosight Group, China South Locomotive & Rolling Stock ("CSR"), China CNR, Huaxin Cement, Sany Group (see page 4), China Southern Power Grid, China XD Group, SINOMA or the XJ Group.

Best connections

Many of these customers could be won over with the database-driven platform Engineering Base. It convinces with its particular openness and flexibility entailing a high integration capability. For a large number of customers the development team could already provide a quick linkage of the CAE with diverse ERP systems such as SAP and also an interconnection with the PDM (e.g. Windchill, TeamCenter, SmarTeam) and with 3-D systems such as Pro/E, Catia or Solidworks.

"We pay particular attention to a sustained development", stresses general manager Hai Zhao, who studied in Germany. Thus one focus is on the combination of the requirements of the local market and special customer requests with the high quality standards of the German parent company. Obviously a recipe for success, as the numbers show. In the development of customer-specific application solutions AUCOTEC is the undisputed leader in China.

Clear message(s)!

Easily handled interface transmits unambiguous maintenance information directly to the engineering



More automation and efficiency for the industry are the magic words per se, there is hardly any report about the planning and construction of machinery and plants that can do without the formula "the more the better". AUCOTEC too always keeps this goal in mind for its customers and has since meanwhile 27 years been engaged in elaborating ever more opportunities for an increase. Yet the realization has in no way consistently achieved this goal in practice for an important part of the life cycle of plants where it would be necessary: maintenance!

CAx is also no solution...

Be it the commissioning or the maintenance of technical equipment: there is a constant flow of information about changes and corrections. Yet this information is often transmitted only in handwritten form or orally. Therefore the information is still often traceable only with difficulty

or not at all. Frequently it is misinterpreted, and together with a time delay in accepting the original documentation this results in additional problems. To use a CAx tool for maintenance is no solution because the maintenance personnel do not need the enormous complexity already common for today's high-quality tools, nor are they as a rule trained for this approach. And for maintenance purposes it is impossible and unnecessary to take into account the hardware requirements of these tools.

Easy handling creates unambiguousness

With Engineering Base (EB) Maintenance AUCOTEC has created a solution by means of which all of the change information for an existing machine or plant can be entered into the system on-site via an easy-to-operate user interface. It is sufficient to be able to operate a Windows Explorer and a simple 2-D drawing program.

Using the comfortable redlining function, users can enter information directly in the drawings in the form of comments or graphics. EB sees to it that no changes of the original data can be made. Thus one can be sure not to commit errors. In the design department the new data is assessed and can be adopted directly into the originals. All of this on a common data stock and under full control.

The flow of information from commissioning and maintenance to design and engineering is distinctly improved because misunderstandings are avoided, the messages are clear and unmistakable. Changes become traceable, project run times shorter. The additional possibility to use mobile apps for operation and maintenance described in this INFOpaper rounds off this highly efficient offering.

"Continue to further expand our on-site presence..."

Interview about the demands on international engineering and distant markets

Patrick Gansauge (40), Sales Director, started his training at AUCOTEC in 1993 and has since 1998 been working in international sales, a department he leads today.

You have now been with AUCOTEC since 1993, how did you experience the international development of the company during this period?

At that time AUCOTEC had focused strictly on the DACH market (Germany, Austria, Switzerland). Because of the successes there we then successively expanded our international sales activities. In this context two major developments became the foundation of the enormous international growth that has characterized the last decade: on the one hand the international campaign for ELCAD 7 in 2001 and furthermore the new development of Engineering Base (EB) as future platform, where we have implemented all insights and demands from our international customers and solution partners. We have thus learnt our lessons with ELCAD and today with EB have a product that perfectly covers the requirements particularly of our global customers. This was the prerequisite for our international success.

Which are the countries where AUCOTEC is currently active?

On the Asian market it is mainly China, but we focus likewise on Eastern Europe, Scandinavia and of course France, a fact demonstrated by the establishment of our new subsidiary. And then Italy – there the last growth figures hit 50 % as in China – and as ever our over many years successful Austrian subsidiary. In Switzerland we are represented by a strong partner, but Great Britain and in particular the US also offer our local companies ample potential because a system like EB meets a high demand there.

What is your reason to think so?

Over and over again and almost everywhere in a similar fashion, we find many different software solutions for engineering, which means: time-consuming coordination processes, manual, error-prone data exchange and hardly any structural reusability of engineering data. With EB all this is no longer an issue.

Why the expansion to France right now?

We wanted to give a signal to our major francophone customers and offer them optimum services corresponding to their local demands. For up to now local French competitors had free rein – that is something we are right now changing successfully for diverse projects. A contributing factor certainly is that a very experienced colleague from our company whose mother tongue is French is in charge of our subsidiary.

When talking to customers, you learn much about the demands on the ideal engineering system. Are the demands in foreign countries different from the ones in Germany?

Certainly there are differences with respect to standardizations and representations – something EB can take into account in a special way. But since the competitive pressure is meanwhile totally globalized, there are today no more major differences in the demands on the ideal engineering system, they are nearly identical. But no, one aspect has a higher priority in a number of countries than here: ease of operation, especially if people do not work with the system on a daily basis.

Is that the reason for EB's international success?

Yes, in any case this is an important reason because many countries do not have a large stock of highly trained specialists as is the case e.g. in Germany. EB has deliberately been designed for easy familiarization and intuitive operation of the software package; for this purpose Microsoft components that nowadays are global standards have been integrated. Although the particular ease of operation is also accepted very positively in Germany, its importance is not esteemed as highly here as elsewhere. This simplicity and flexibility of EB, properties that enable it to offer tailor-made solutions for any customer workflow, are the parameters that make Engineering Base so successful abroad.



What are your next plans, do you envisage certain markets in particular?

In the upcoming months we will effectively strengthen and further expand our subsidiaries and thus our on-site presence in order to be able to support our international customers even better and faster.

Special attention will be given to our US site. There we have recently been growing dynamically because in the past few years US American companies have begun to restructure their engineering. This is because engineering tasks get ever more complex and a shortage of young engineers forces the companies to reconsider and restructure their engineering processes. Indeed the US faces an enormous backlog! A system like EB that leads to a standardization of the tool environment and at the same time is open to intelligent interconnection with existing software solutions such as those for PLM, CAD or ERP comes just in time.

We want to be present on all strategic target markets by representatives of our own, always as close to the customer as possible. Our distribution and solution partners continue to be an essential pillar of our sales strategy, but in the future they will be guided considerably more strongly via the regions; up to now everything was managed from Hanover.

Thank you for the talk, Mr. Gansauge!



Engineering Base changes the SANY world

Chinese construction machinery group standardizes its planning processes



The SANY Group Co., Ltd., founded in China in 1989 as private enterprise, is the world's largest manufacturer of concrete machinery and also the construction machinery manufacturer ranked first in China. About 70,000 employees at 21 Chinese locations and 140 representations worldwide work for the development and distribution of the sought-after pumps, mining and road construction machinery, cranes, port machinery and wind power equipment. Their motto "Quality changes the world" is uncompromisingly realized by the consortium in all areas – including the engineering.

Thus for unifying its electrotechnical planning, including the hydraulic and pneumatic equipment, SANY opted in favor of the database-driven software package Engineering Base from AUCOTEC – both within the company and covering any number of products. EB permits to integrate even associated engineering sections and achieves a considerable reduction of the hitherto problematic error rate.

Large plus in quality, minus in costs

EB and its exceptionally easy learnability have e.g. achieved a zero-error rate for the real-time reports. Thanks to the Excel-compliant worksheets huge data volumes can now be processed much more quickly. Moreover the genuine database structure ensures consistency at all times as well as parallel, consistent working of different disciplines and locations on the same project.

For example, the 3-D routing of the wires in combination with Pro/E is integrated. The successful integration of EB and PDM system WindChill enables the synchro-

nization of SAP / PDM database with EB and simple uploading of parts lists and drawings. Altogether the introduction of EB since the management have been considerably

thus the to the PDM. end of 2009 efficiency and thus costs for the quality reduced.

Comprehensive on-site services

SANY got help for the introduction systematically accompanied the SANY training courses, application support optimization or integration. Thanks from AUCOTEC Information Techno-

main users of each department planning standards and a large number of templates within a



And besides ...

... most recently among others the following companies opted for AUCOTEC:

AKDV
Automatisierungstechnik GmbH
we control the move

AKDV Automatisierungstechnik GmbH
Harsum, Germany

ALTEK

Altek Hebeteknik GmbH
Rahden, Germany

ARCADIS
Infrastructure, environment, buildings

ARCADIS Nederland
GV Amersfoort, Netherlands

1908
BEDESCHI
PADOVA

Bedeschi S.p.A.
Limena (PD), Italy

Cegelec

Cegelec Deutschland GmbH
Schkeuditz, Germany

LIJN

De Lijn
Antwerp, Netherlands

EKOTEC
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