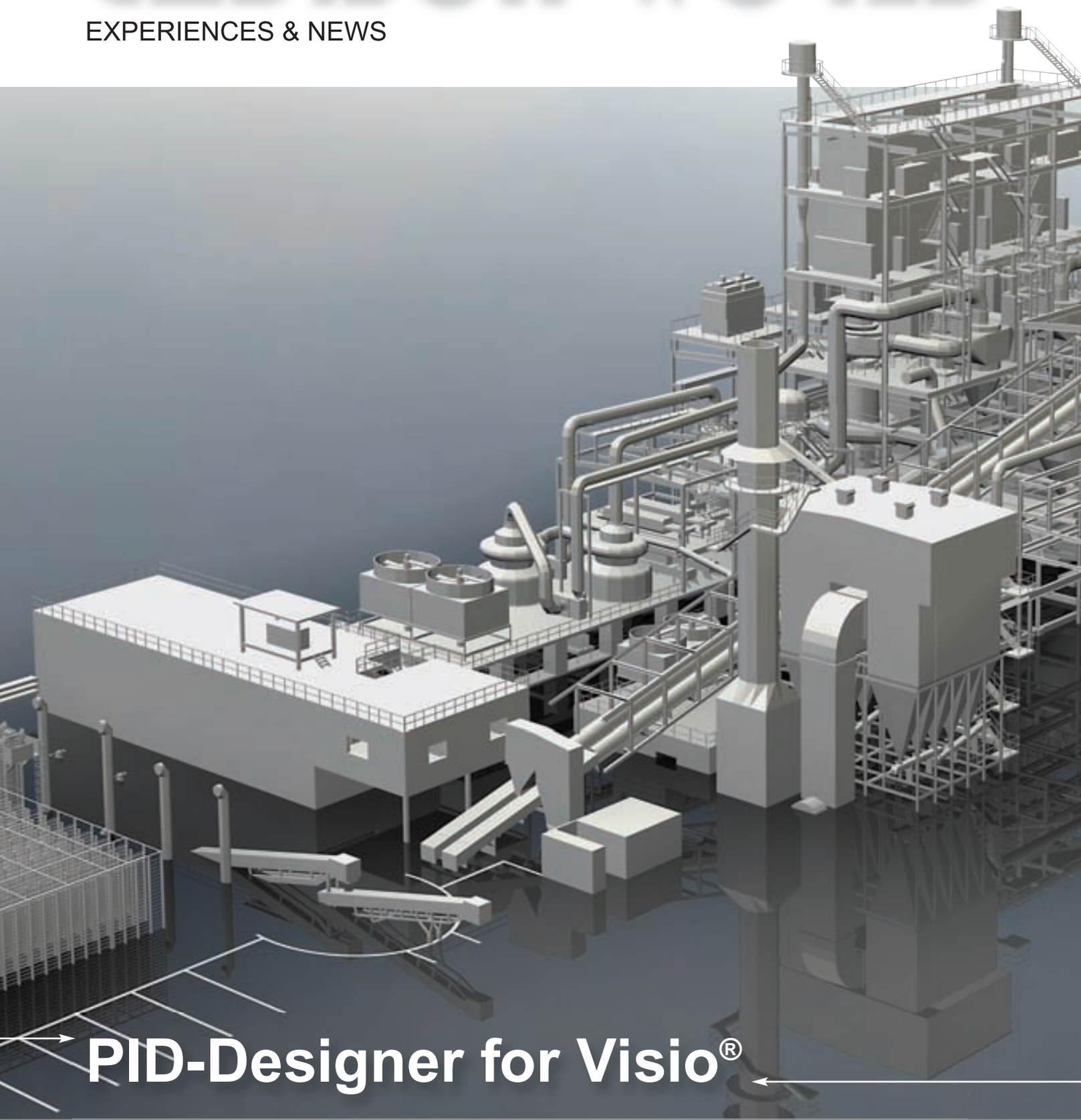
Issue 02 | 2010

CADISON WORLD

EXPERIENCES & NEWS

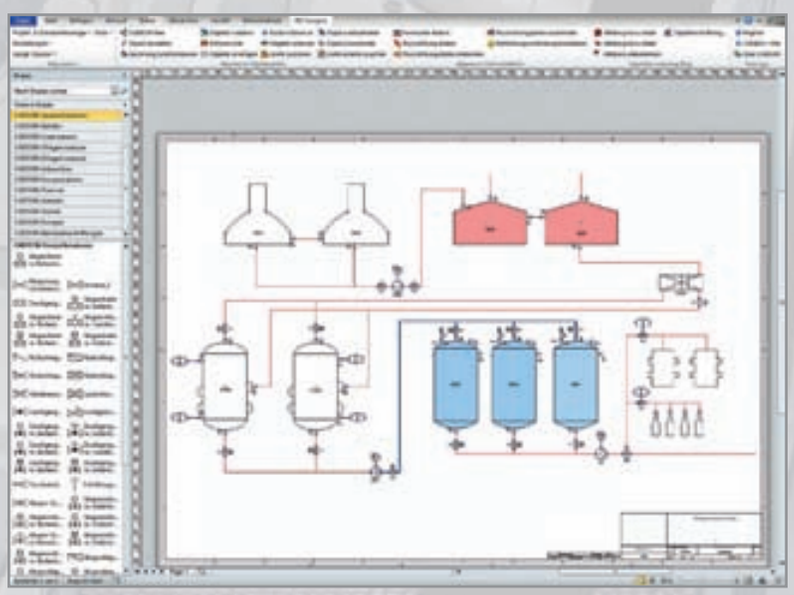


PID-Designer for Visio®

Highlight of the year is the CADISON® International Conference at the end of September which is being held in Darmstadt, Germany this year.

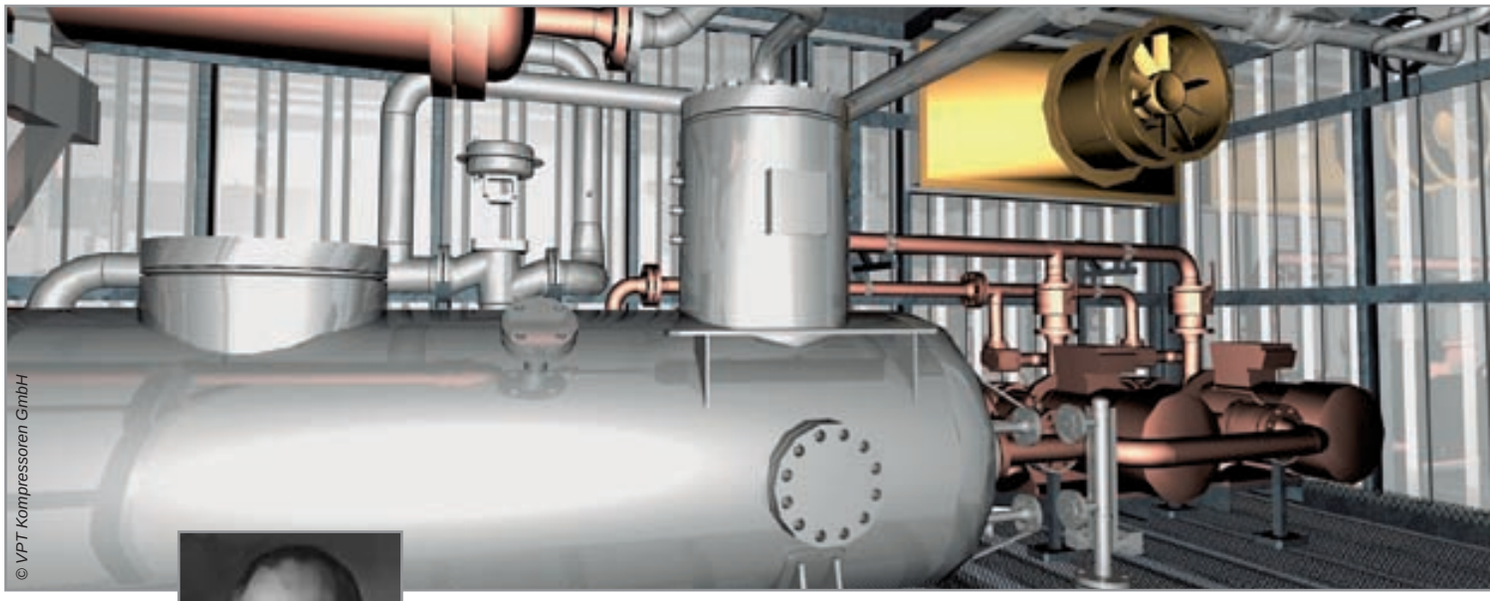
PID-Designer for Visio® – The next generation P&ID

- **Cheaper**
  - no core CAD-application needed
- **Easy** to use
  - it's an addition to part of the Microsoft Office Suite and therefor the same “look-and-feel”
- **Faster**
  - faster to the market
  - more P&ID’s at the same time
- **Less** training, time and costs
- **Document-Management**
- **Longer** life-cycle (min 3 year) without major release changes
  - No update-training needed
  - No subscription needed
- **User**- and Rights-Management
- **Report** generator for object-listings and sales-offers
- **Structural** views to the objects
- **PID-Designer** for Visio® is the fundament for the next engineering-steps in CADISON®
- **ERP-Interface** optional



“The increasing demand for price-sensitive P&ID tools in the plant design market is obvious. Since Microsoft's Visio platform tightly embedded in its Office Suite is a clear winner of customer's sympathy. ITandFactory meets perfectly this demand by offering PID-Designer for Visio®."

Dr. Bernhard D. Valnion, Editor-in-Chief
ECONOMIC ENGINEERING / digitalPLANT



Today you're holding our new magazine – CADISON WORLD – in your hands. After the first issue of CADISON WORLD has attracted so much interest in the Asian region, we determined to establish the magazine internationally starting with this issue.

Welcome

Herein you can find in compact form everything regarding CADISON® and the people behind CADISON®. With customer stories, reports from local and internationals events, market information and background but also direct support in form of best practices we put together a varied mix for you.

Innovations in CADISON® and a sneak peak on the to do's of our development team – naturally mixed with a bit advertising on our own account – are to secure you a lasting advantage on the market and to keep you posted on the newest trends from ITandFactory. Beside the CADISON WORLD you already receive our newsletter and technical newsletter, which are being distributed to you in varying languages on a regular basis.

Highlight of the year is of course the CADISON® International Conference at the end of September which is being held in Darmstadt, Germany this year. User and decision maker from diverse branches and markets come together to experience at first hand, how CADISON® technology will progress in the future.

Launch of the new CADISON® R10 in December is the finale of the year. The leap into the 64-bit world will be a quantum leap for all of us and we are sure that this will lend wings to your work.

Enjoy reading CADISON WORLD!

Sebastian Dörr
Sales Director Europe

EDITORIAL

PRODUCT

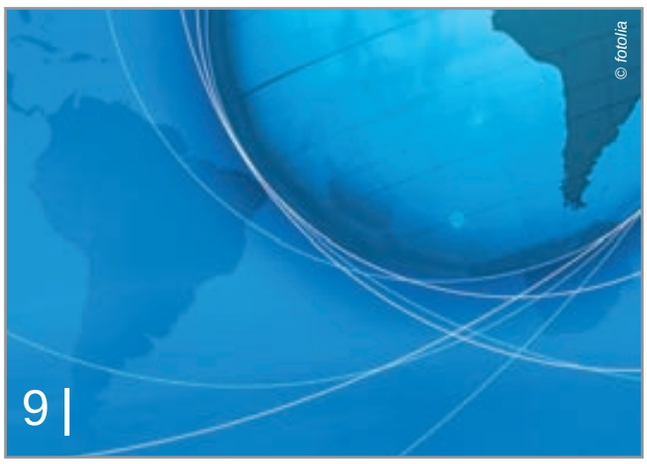
NEWS

INTERVIEW

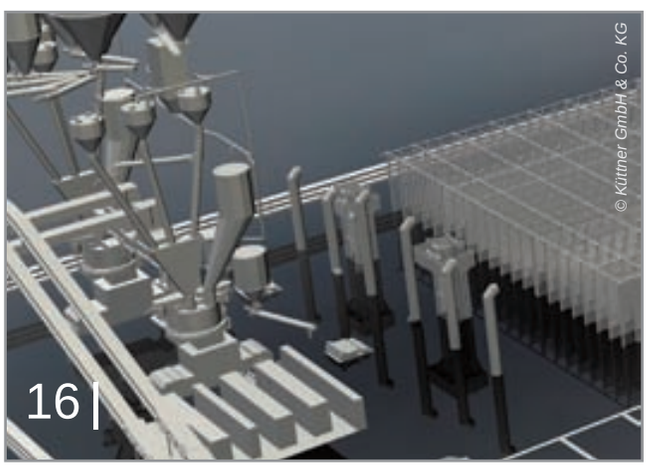
STORY

BEST PRACTICE

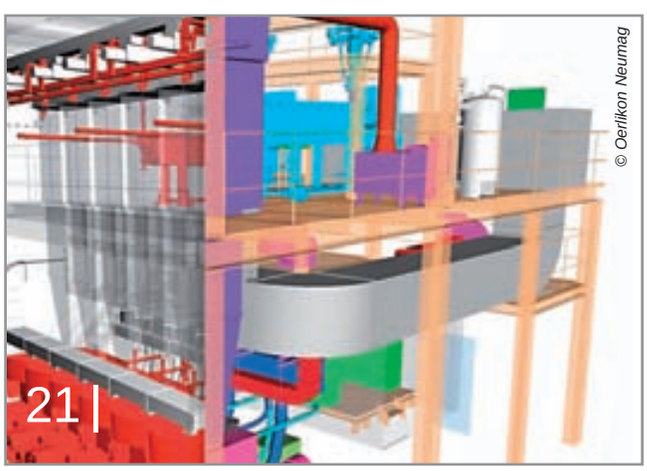
SERVICE



Two mainstay business and one safety standard
In many ways the speciality chemicals supplier United Initiators isn’t really so different. But the company’s decision to install CADISON® as a solution for service and maintenance …



10 important Reasons for CADISON® Release 10
R10 is the next step into future with its 64-bit support, with up to 30% of time- and cost savings, with a faster development of projects, with a new GUI, based on AutoCAD 2011 …



The 50 %-Idea
Today the development cycle for a new product is between 56–108 months. Read, where you’ll find the saving potential and how you can cut cost and effort to 50 % …

Faster with 64-bit and CADISON® R10

A change from a 32-bit to a 64-bit architecture is a fundamental alteration, as most operating systems, but also the applications must be extensively modified to take advantage of the new architecture.

With a 64 bit CPU, OS and our new upcoming CADISON® R10 you can take full advantage of the extra RAM and address much more than 4 GB of memory!

Most 64-bit microprocessors on the market today have an artificial limit on the amount of memory they can address, considerably lower than what might be expected from 64 bits.

For example, the AMD64 architecture currently has a 52 bit "limit" on physical memory and only supports a 48-bit virtual address space. This is 4 PB (4 x 1024^5 bytes) and 256 TB (256 x 1024^4 bytes), respectively.

… but:

1 PB (PetaByte) = 1.000.000 GB

Today we're addressing "usually" less then 4 GB or a "little more" with 8 – 10 GB. That means a server today can grow up to 100.000 times in memory!!!

You see, there is no real limit with your new CADISON® R10.

source: http://en.wikipedia.org/wiki/64-bit

Configuration CADISON®-Equipment (Server + Client)

Configuration of server

A specifically constructed hardware should be used as server; the use of a desktop pc with a server operating system is no appropriate solution!

The recommended memory has to comply with the number of simultaneously operating databases; usually 4 GB ought to be enough for about 20 simultaneously operating databases (more memory is only supported by 64-bit Windows versions or 32-bit Server Enterprise versions.

CADISON® will be released as 64-bit system with Release 10 at the end of 2010!

Until then only 32-bit versions of Windows 2003 Server or Windows 2008 come into consideration (up to 4 GB RAM there is no difference if the Standard or Enterprise version is installed).

The amount and the rate of the processors play no major Role; more effective – based on the database accesses – is to invest in faster hard drive!

Also gigabit network connectivity to the clients is important for an ideal performance. Attention: The active components between the client and server within the network have to support the rate as well.

Configuration of clients

For clients the processor and graphics card performance are very important. Advisable is a configuration with 4 GB RAM, while using a 64-bit operating system (CADISON® R10) more memory can be addressed.

For choosing a graphics card which is certified for your environment (AutoCAD and Windows version) we recommend using the Autodesk website (www.autodesk.com, see graphics card).

AutoCAD

An obstructive limitation during the processing of large drawings is currently the restriction of memory for a single process (acad.exe) to 2 GB. This problem can be decreased by adjusting the AutoCAD-resolution settings.

The problem will be solved when using a 64-bit system, since this restriction won't apply anymore.

Virtualization

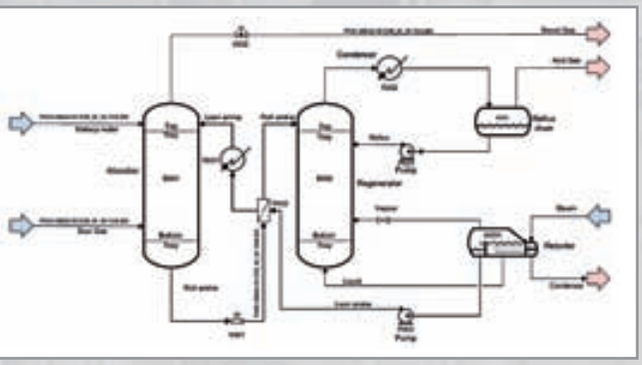
Basically nothing speaks against virtualization as long as it's ascertained that the virtual server has enough resources available!

For a productive operation a suitable product e.g. VMWare ESX-Server or Microsoft HyperV should be used.

If there are no compelling reasons for the virtualization, we recommend using a physical server.

Product advantages:

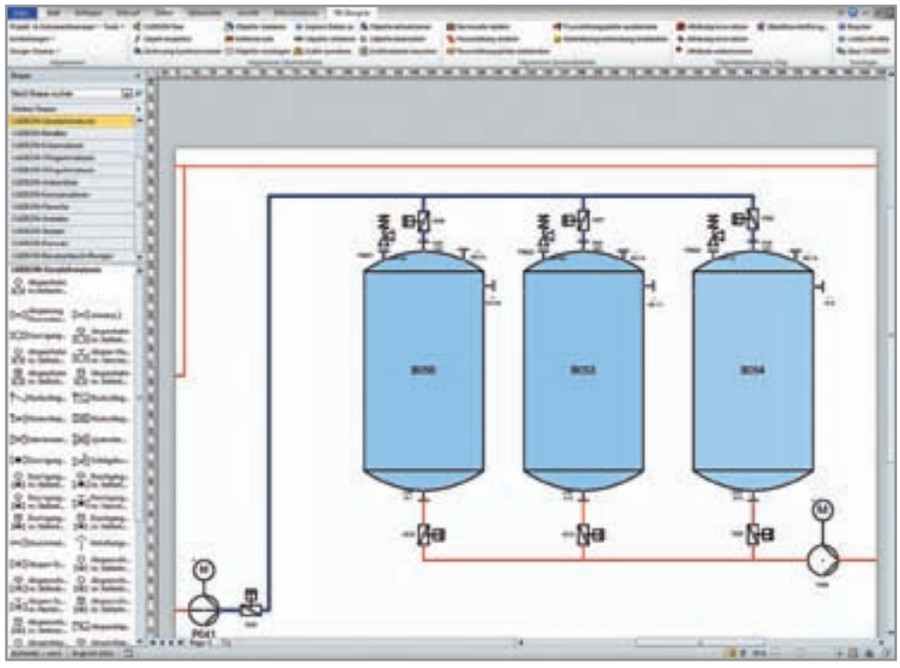
- Full integration in the Microsoft Office Suite with Visio® Professional – hence less cost
- Intuitive, simple and fast in use
- Easy to use for Basic Engineering and Sales
- Over 50 % savings compared to other P&ID-systems
- Standardised creation of P&ID including an integrated report generator
- Support of a broad range of tagging systems (DIN, KKS, AKS and so on)



PID-Designer for Visio®

The workstation for sales and engineering when creating P&ID

Microsoft Office Visio® is a widespread and cost saving platform. When used as the application to PID-Designer for Visio® it will further contribute to the enhancement of your competitiveness. For fast creation of P&ID the tool allows you to position previously defined components using the workstation's symbol library (in accordance with EN ISO 10628, ANSI etc.)



While main elements are being positioned, motors and drives are displayed graphically as standalone objects which are automatically linked with their associated parent object. Fittings are assigned to equipment as subordinate objects and automatically take on the nominal diameter of the piping system to which they have been connected.

Once positioned, armatures and equipments are automatically assigned a unique tag number from a numbering system, which can be readily adapted to your company standard. Displayed text is oriented in the standard manner and managed at levels according to their own labels. Fittings inserted into piping systems automatically inherit the relevant pipe specification parameters. Tags can be generated at any time. Predefined shapes are provided for machine bars, object labelling and they are directly connected to the object, which will be dynamically updated.

Cross-referenced objects are available for multi-page processing and are systematically updated to reflect changes in drawing data such as drawing numbers and so on. Users can define exactly, which data has to be displayed in the connectors. Pipings and their mounting parts have a specific flow direction, on which the valves, pumps, etc. are automatically oriented. PID-Designer for Visio® gives you a free choice to work with or without a pipe class support. Plant limits (marked as a "logic plant" in CADISON®) can directly be defined in the drawings. The plant conformity and respective labelling system will stay unchanged.

New shapes (symbols) can be created via common Visio-functionalities. Our Symbol-Editor allows you to implement quickly and easily any needed classification (pumps, valves etc) with an automatic take over of connecting points. This methodology enables the integration of new shapes to our Visio shape library, which are then available to all users.

PID-Designer for Visio® provides you with the following functionalities:

- Fast and simple creation of P&ID
  - DIN and ANSI symbols are included for many plant engineering activities
  - Automatic insertion of gaps and/or stylized symbols at process line intersections
  - Nominal diameter modification function
  - Flow direction monitoring and consistency checks
  - Cross-references for multiple drawings
  - Several tagging systems are available (KKS, AKS, DIN)
  - Extensive array of labelling functionalities
- Automatic synchronization of title blocks and project information
- Own Symbol-Editor for the creation of new objects and assembly-groups
- Integrated report generator
- User management
- Document management
- Revision management
- Creation of plant and calculation structures

All data can be "viewed" through the integrated report generator of PID-Designer for Visio®. Examples could be finished proposals, data sheets (pumps), suppliers' requests and lists of fittings.

The output of data is given out either in Word or in Excel upon request. If desired, revisioning could be activated.

CADISON® beats other CAE solution again

For many years world market leader Lenzing AG (Austria) has been a successful and satisfied user of the integrated CAE solution CADISON® of ITandFactory GmbH (ITF) based in Bad Soden, Germany. Now, its Indonesian subsidiary also decided pro CADISON® after a trial project with a competitor did not render the desired results. In early 2010, SPV (PT. South Pacific Viscose) took into operation its fourth production line for viscose in Purwakarta. Only shortly after, the planning process for the next production line in Asia was started with CADISON®.

Lenzing's Indonesian subsidiary SPV also decided pro CADISON®.

Project manager Rudolf Kern (SPV) wants the whole planning team for the Asian region to build on the integrated solution right from the start. Günter Krohn, new Director Global Fiber Production (Lenzing) already defined the specifications for the choice of the future engineering solution in his previous position as President Director (SPV). "The solution has to integrate all engineering processes and show the current planning status at any time. On the other hand, it needs to be easy to learn and used intuitively, because the upcoming projects will be handled by multicultural teams who need to cooperate across borders." Apart from CADISON® SPV relies on the engineering support of ITF's parent company Neilsoft Ltd. (India) for the new project in Asia. These joint efforts guarantee cost-efficient and prompt realization.

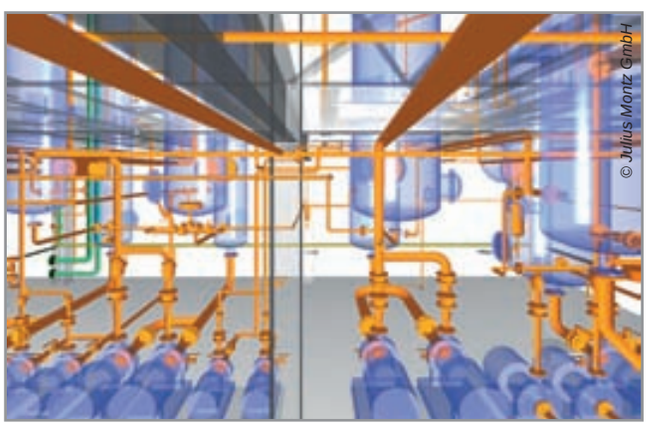
source: Economic Engineering, 2010-04, Dr.rer.nat. Bernhard D. Valnion

CADISON® USER

VAMED-KMB (Vienna, Austria) is operating one of the largest CADISON® databases. "It was a challenge to do the latest upgrade, but together with ITandFactory we´ve made it!" Mr. Gert Gasperin, one of the Project Engineers, said.

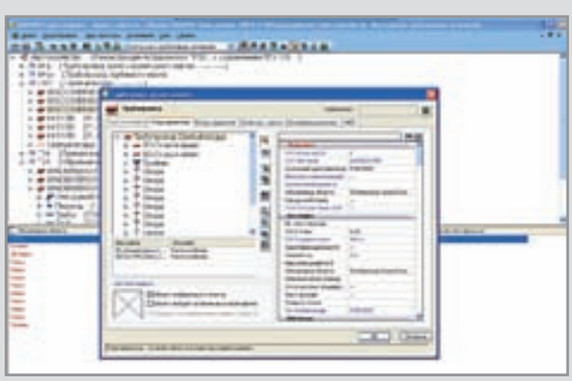
CADISON® USER

Kanzler Verfahrenstechnik – KVT (Graz, Austria) uses CADISON® for several years. Mr. Michael Decker, one of the Project Engineers of KVT, is highly satisfied with the „CADISON® ROHR2-Interface". Decker: „Now we are able to directly calculate our CADISON® generated pipes with ROHR2".



CADISON® USER

Fresenius Kabi Austria which is situated at Linz (Austria) recently upgraded their CADISON® installation. Project Manager Mr. Robert Stadlbauer praised the CADISON® Consultants which helped them to smoothly upgrade.



CADISON® is available in German, English and Russian language.

Two mainstay businesses and one safety standard

In many ways the speciality chemicals supplier United Initiators isn't really so different from any supplier of chemical base materials. But the company's decision to install CADISON® as a solution for its service and maintenance applications has got what it takes to catch on in the process industry in general.

Although the gross profit in the speciality chemicals industry has dropped by an average of 3.4 percent in the last ten years (1), this sector is still in good shape compared to base chemicals. As a consequence of massive overcapacities and much tougher competition from Asia, the suppliers of chemical commodities have seen their profits slashed by a third. As in the discrete manufacturing industry, companies in the process industry are well advised to become more focussed.

United Initiators GmbH & Co. KG (2), a supplier of speciality chemicals, has been a key employer in the south of Munich for many decades. Up to July 31 2008 it was part of Evonik Industries and now is owned by the US financial investor Speyside Equity. In Pullach the company produces and markets organic peroxides and persulphates mainly used in the production and processing of polymers. Besides its main site in Pullach, at which around 300 people are employed, it has bases in the USA, Australia and China.

Germany's Isar Valley has been a base for the chemicals industry since 1911. With the production of hydrogen peroxides (H_2O_2), the scientists Gustav Adolph and Albert Pietzsch laid the foundations for the set-up of industrial plants on what is now United Initiators' company site. Like persulphates, peroxides are initiators that trigger chemical reactions.

"Safety forms the basis for our business"

"Safety forms the basis for our business," is the maxim at United Initiators. This maxim is firmly anchored in the awareness of every employee and shapes their behaviour and the way they work.

All technical activities, irrespective of whether these involve a new installation or a conversion, the introduction of or changes to production processes and workflows, are preceded by exhaustive hazard analyses conducted by highly qualified experts.

Owing to the properties of the products made and the raw materials used, the company equipment and its employees must meet very high requirements. Accordingly, the systems for monitoring and guaranteeing safety as well as for the continuous improvement of all processes are highly developed.

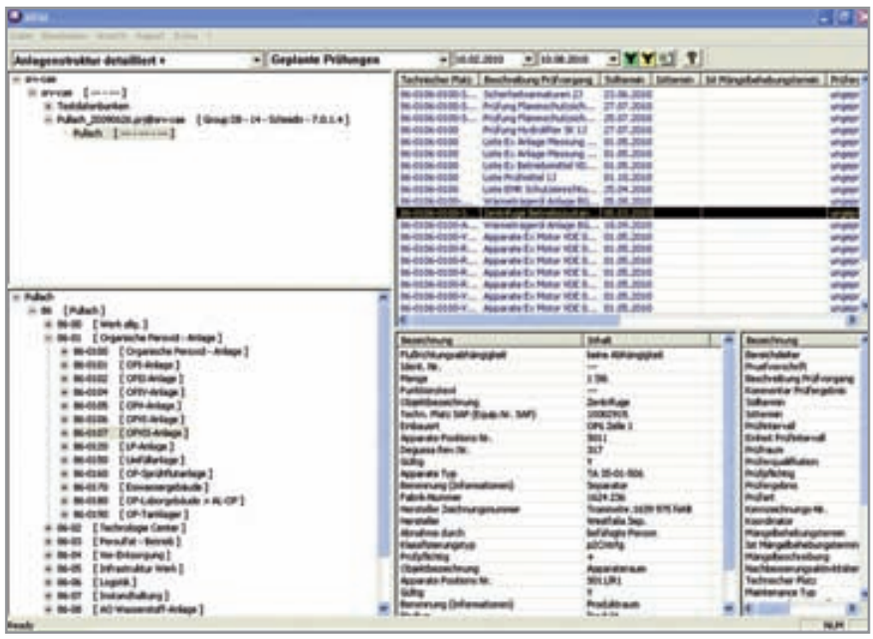
In a talk with our editors, Karl-Heinz Böttcher, Technical Manager at the company's Pullach site, spoke about the successful application of organizational and technical instruments and methods at the facility.

The tasks and responsibilities of the Technical Department comprise design and planning, new installations and conversions as well as maintenance, including performing all monitoring duties for all technical equipment on site. As a key instrument for reliable and efficient processing, the planning tool CADISON® is used. CADISON® is a product supplied by ITandFactory GmbH based in Bad Soden (Germany) and uses Autocad as its geometry engine.

Another important criterion for this choice was migratability of data, which were in the past captured by a system provided by Evonik. Obviously, the team from ITandFactory managed this with flying colours, after all otherwise this talk would never have taken place in this form. "The migration of the legacy data was a real challenge," stresses


© fotolia

Rainer Schmidt, who is responsible for the technical revision/regular tests now controlled with CADISON®. In a period of around five months, everything was finished. Strictly speaking, only four weeks were effectively needed to convert the documents of the 5 000 test cycles already completed. A certain haste was necessary as the next tests were already pending. "Migration always means a certain time in which the old



© Photo: United Initiators

CADISON® MRM in action at United Initiators

system no longer functions, but the new one is not yet available," Schmidt pointed out.

While prior to the introduction in June 2009, certain maintenance functions were already supported in the MRM module (Maintenance & Revision Management) from CADISON®, these were not sufficient for the intended purpose. Special modifications were necessary. For the application at United Initiators, it is particularly important for a large number of different testing intervals to be meticulously maintained. The different types of test, e.g. TÜV (Technical Control Board) or mass tests, in connection with certain technical requirements for the objects, apparatus or machines to be tested must be supported by CADISON®. Böttcher states, "United Initiator's requirements aren't particularly exotic." Many owner/operators have to comply with similar test obligations, says the expert.

The documentation within the CADISON® MRM is now designed such that both the test specification and the test log as documentation is linked to the tested object. If any faults are detected during testing, subsequent remediation of these faults is also recorded in the IT system.

You might ask why United Initiators doesn't use the installed SAP system to coordinate its service and maintenance work. This would be feasible, after all the Walldorf-based company does include a dedicated module in its range of software solutions. The reason is the rather complex document management in SAP version 3.1i. Till date the maintenance cost accounting is still done with the SAP system.

There is no question of replacing it with the other system at the present time, instead a synergistic coexistence is planned. So as part of the data migration to CADISON®, the so called "Technische Plätze" of SAP was copied. As a unique reference an equipment number generated by SAP is used and allocated to each object, like a serial number (e.g. for drives or pumps). "In addition, the user navigation and prompting in CADISON® is what we expect from a modern IT tool," explains Schmidt.

ITandFactory regards the decision taken in Pullach as one with strategic consequence. The add-ons in the MRM module are to be further refined and made accessible to a wider clientele in the operator environment, says Account Manager Jens Weingärtner from ITandFactory.

Certainly, United Initiators is aware of the additional potential offered by CADISON®, says Böttcher: "CADISON® is currently not yet used as a planning engineering tool, but exclusively as a service and maintenance tool. But we put emphasis on the entire lifecycle of our equipment. Everything that has to be documented and managed during the operating phase is to be stored centrally in one single source database." Ideally, in this database for each object, e.g. the quotation, the order, the technical drawings, the test and maintenance protocols and the disposal certificate, all documents are to be linked. And it is exactly this that CADISON® is capable of doing. So there are no further obstacles to widening the domain of application at United Initiators.

The start of an intensive partnership

source: Economic Engineering, 2010-02, Dr.rer.nat. Bernhard D. Valnion

(1) www.deloitte.com, (2) www.united-in.com

Karl-Heinz Böttcher

© Photos: Valnion

Rainer Schmidt

mit CADISON: 1 Jahr

[Schneller am Markt: cadison.com]

Juli	August	September	Oktober	November	Dezember	Januar 2012
1 Fr	1 Mo	1 Do 35	1 Sa	1 Di Allerheiligen	1 Do	1 So Neujahr
2 Sa	2 Di	2 Fr	2 So	2 Mi 44	2 Fr	2 Mo
3 So	3 Mi 31	3 Sa	3 Mo Tag der Dt. Einheit (D)	3 Do	3 Sa	3 Di
4 Mo	4 Do	4 So	4 Di	4 Fr	4 So	4 Mi 1
5 Di	5 Fr	5 Mo	5 Mi 40	5 Sa	5 Mo	5 Do
6 Mi 27	6 Sa	6 Di	6 Do	6 So	6 Di	6 Fr Heilige Drei Könige
7 Do	7 So	7 Mi 36	7 Fr	7 Mo	7 Mi 49	7 Sa
8 Fr	8 Mo	8 Do	8 Sa	8 Di	8 Do Mariä Empfängnis (A)	8 So
9 Sa	9 Di	9 Fr	9 So	9 Mi 45	9 Fr	9 Mo
10 So	10 Mi 32	10 Sa	10 Mo	10 Do	10 Sa	10 Di
11 Mo	11 Do	11 So	11 Di	11 Fr	11 So	11 Mi 2
12 Di	12 Fr	12 Mo	12 Mi 41	12 Sa	12 Mo	12 Do
13 Mi 28	13 Sa	13 Di	13 Do	13 So	13 Di	13 Fr
14 Do	14 So	14 Mi 37	14 Fr	14 Mo	14 Mi 50	14 Sa
15 Fr	15 Mo Mariä Himmelfahrt	15 Do	15 Sa	15 Di	15 Do	15 So
16 Sa	16 Di	16 Fr	16 So	16 Mi Buß- und Bettag (D) 46	16 Fr	16 Mo
17 So	17 Mi 33	17 Sa	17 Mo	17 Do	17 Sa	17 Di
18 Mo	18 Do	18 So	18 Di	18 Fr	18 So	18 Mi 3
19 Di	19 Fr	19 Mo	19 Mi 42	19 Sa	19 Mo	19 Do
20 Mi 29	20 Sa	20 Di	20 Do	20 So	20 Di	20 Fr
21 Do	21 So	21 Mi 38	21 Fr	21 Mo	21 Mi 51	21 Sa
22 Fr	22 Mo	22 Do	22 Sa	22 Di	22 Do	22 So
23 Sa	23 Di	23 Fr	23 So	23 Mi 47	23 Fr	23 Mo
24 So	24 Mi 34	24 Sa	24 Mo	24 Do	24 Sa	24 Di
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26 Di	26 Fr	26 Mo	26 Mi Nationalfeiertag (A) 43	26 Sa	26 Mo 2. Weihnachtstag (D) Stefanitag (A)	26 Do
27 Mi 30	27 Sa	27 Di	27 Do	27 So	27 Di	27 Fr
28 Do	28 So	28 Mi 39	28 Fr	28 Mo	28 Mi 52	28 Sa
29 Fr	29 Mo	29 Do	29 Sa	29 Di 48	29 Do	29 So
30 Sa	30 Di	30 Fr	30 So	30 Mi	30 Fr	30 Mo
31 So	31 Mi		31 Mo Reformationstag (D)		31 Sa	31 Di

2011

Integrated Digital Plant Model

CADISON

without CADISON: 4 years

December 2010	January	February	March	April	May	June
1 Wed 48	1 Sat New Year's Day	1 Tue	1 Tue	1 Fri	1 Sun	1 Wed 22
2 Thu	2 Sun	2 Wed 5	2 Wed 9	2 Sat	2 Mon	2 Thu
3 Fri	3 Mon	3 Thu	3 Thu	3 Sun	3 Tue	3 Fri
4 Sat	4 Tue	4 Fri	4 Fri	4 Mon	4 Wed 18	4 Sat
5 Sun	5 Wed 1	5 Sat	5 Sat	5 Tue	5 Thu	5 Sun
6 Mon	6 Thu	6 Sun	6 Sun	6 Wed 14	6 Fri	6 Mon
7 Tue	7 Fri	7 Mon	7 Mon	7 Thu	7 Sat	7 Tue
8 Wed 49	8 Sat	8 Tue	8 Tue	8 Fri	8 Sun	8 Wed 23
9 Thu	9 Sun	9 Wed 6	9 Wed 10	9 Sat	9 Mon	9 Thu
10 Fri	10 Mon	10 Thu	10 Thu	10 Sun	10 Tue	10 Fri
11 Sat	11 Tue	11 Fri	11 Fri	11 Mon	11 Wed 19	11 Sat
12 Sun	12 Wed 2	12 Sat	12 Sat	12 Tue	12 Thu	12 Sun
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14 Tue	14 Fri	14 Mon	14 Mon	14 Thu	14 Sat	14 Tue
15 Wed 50	15 Sat	15 Tue	15 Tue	15 Fri	15 Sun	15 Wed 24
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17 Fri	17 Mon	17 Thu	17 Thu	17 Sun	17 Tue	17 Fri
18 Sat	18 Tue	18 Fri	18 Fri	18 Mon	18 Wed 20	18 Sat
19 Sun	19 Wed 3	19 Sat	19 Sat	19 Tue	19 Thu	19 Sun
20 Mon	20 Thu	20 Sun	20 Sun	20 Wed 16	20 Fri	20 Mon
21 Tue	21 Fri	21 Mon	21 Mon	21 Thu	21 Sat	21 Tue
22 Wed 51	22 Sat	22 Tue	22 Tue	22 Fri Good Friday	22 Sun	22 Wed 25
23 Thu	23 Sun	23 Wed 8	23 Wed 12	23 Sat	23 Mon	23 Thu
24 Fri	24 Mon	24 Thu	24 Thu	24 Sun Easter	24 Tue	24 Fri
25 Sat Christmas Day	25 Tue	25 Fri	25 Fri	25 Mon Easter Monday	25 Wed 21	25 Sat
26 Sun Boxing Day	26 Wed 4	26 Sat	26 Sat	26 Tue	26 Thu	26 Sun
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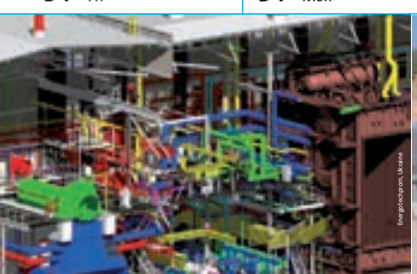

with CADISON: 1 year

[faster to market: cadison.com]

July	August	September	October	November	December	January 2012
1 Fri	1 Mon	1 Thu 35	1 Sat	1 Tue	1 Thu	1 Sun New Year's Day
2 Sat	2 Tue	2 Fri	2 Sun	2 Wed 44	2 Fri	2 Mon
3 Sun	3 Wed 31	3 Sat	3 Mon	3 Thu	3 Sat	3 Tue
4 Mon	4 Thu	4 Sun	4 Tue	4 Fri	4 Sun	4 Wed 1
5 Tue	5 Fri	5 Mon	5 Wed 40	5 Sat	5 Mon	5 Thu
6 Wed 27	6 Sat	6 Tue	6 Thu	6 Sun	6 Tue	6 Fri
7 Thu	7 Sun	7 Wed 36	7 Fri	7 Mon	7 Wed 49	7 Sat
8 Fri	8 Mon	8 Thu	8 Sat	8 Tue	8 Thu	8 Sun
9 Sat	9 Tue	9 Fri	9 Sun	9 Wed 45	9 Fri	9 Mon
10 Sun	10 Wed 32	10 Sat	10 Mon	10 Thu	10 Sat	10 Tue
11 Mon	11 Thu	11 Sun	11 Tue	11 Fri	11 Sun	11 Wed 2
12 Tue	12 Fri	12 Mon	12 Wed 41	12 Sat	12 Mon	12 Thu
13 Wed 28	13 Sat	13 Tue	13 Thu	13 Sun	13 Tue	13 Fri
14 Thu	14 Sun	14 Wed 37	14 Fri	14 Mon	14 Wed 50	14 Sat
15 Fri	15 Mon	15 Thu	15 Sat	15 Tue	15 Thu	15 Sun
16 Sat	16 Tue	16 Fri	16 Sun	16 Wed 46	16 Fri	16 Mon
17 Sun	17 Wed 33	17 Sat	17 Mon	17 Thu	17 Sat	17 Tue
18 Mon	18 Thu	18 Sun	18 Tue	18 Fri	18 Sun	18 Wed 3
19 Tue	19 Fri	19 Mon	19 Wed 42	19 Sat	19 Mon	19 Thu
20 Wed 29	20 Sat	20 Tue	20 Thu	20 Sun	20 Tue	20 Fri
21 Thu	21 Sun	21 Wed 38	21 Fri	21 Mon	21 Wed 51	21 Sat
22 Fri	22 Mon	22 Thu	22 Sat	22 Tue	22 Thu	22 Sun
23 Sat	23 Tue	23 Fri	23 Sun	23 Wed 47	23 Fri	23 Mon
24 Sun	24 Wed 34	24 Sat	24 Mon	24 Thu	24 Sat	24 Tue
25 Mon	25 Thu	25 Sun	25 Tue	25 Fri	25 Sun Christmas Day	25 Wed 4
26 Tue	26 Fri	26 Mon	26 Wed 43	26 Sat	26 Mon Boxing Day	26 Thu
27 Wed 30	27 Sat	27 Tue	27 Thu	27 Sun	27 Tue	27 Fri
28 Thu	28 Sun	28 Wed 39	28 Fri	28 Mon	28 Wed 52	28 Sat
29 Fri	29 Mon	29 Thu	29 Sat	29 Tue 48	29 Thu	29 Sun
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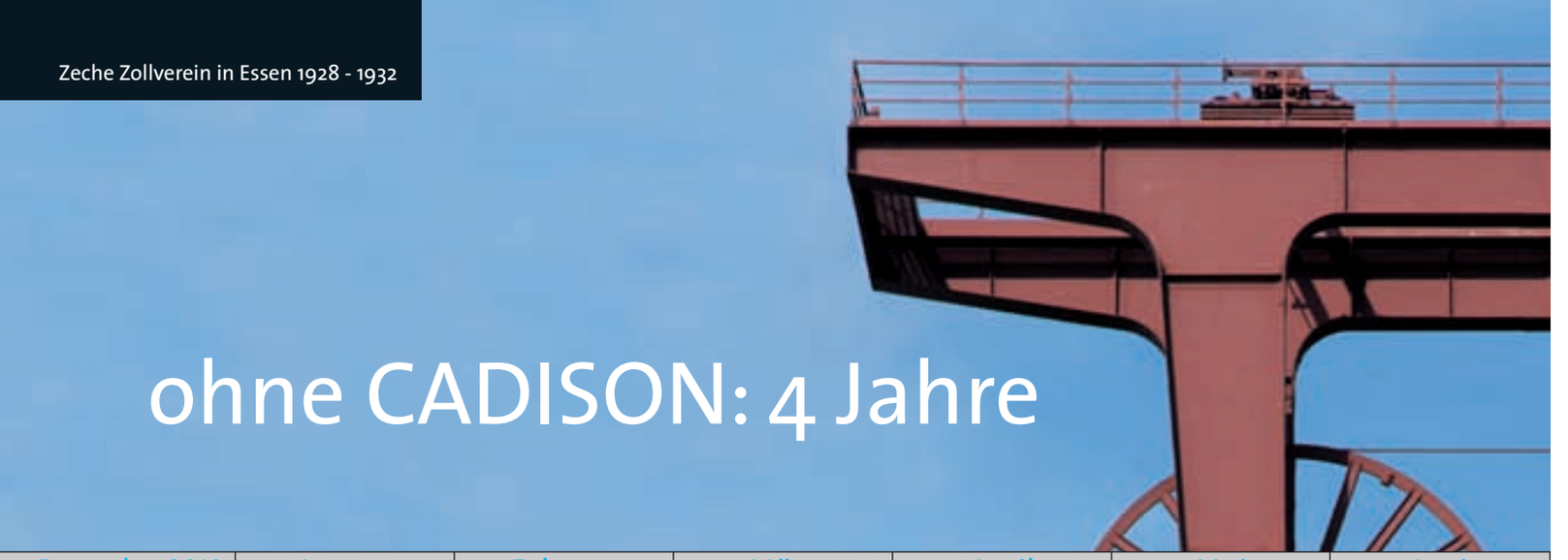
31 Sun	31 Wed		31 Mon		31 Sat	31 Tue

2011

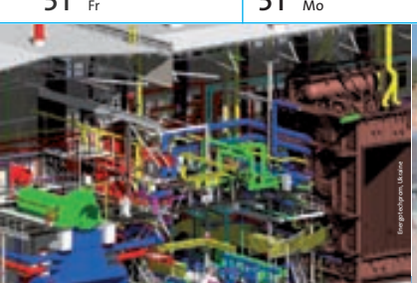
Integrated Digital Plant Model

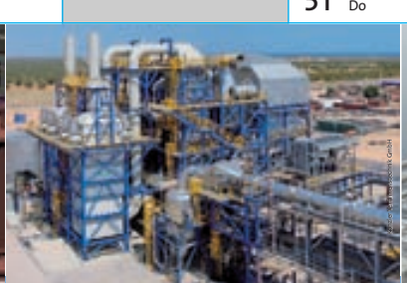
CADISON

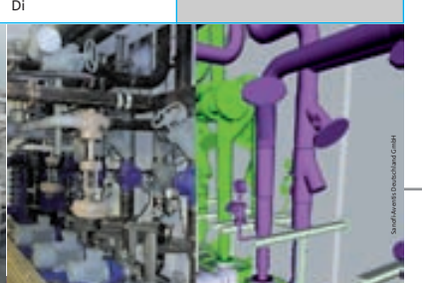


ohne CADISON: 4 Jahre

Dezember 2010	Januar	Februar	März	April	Mai	Juni
1 Mi	1 Sa Neujahr	1 Di	1 Di	1 Fr	1 So Tag der Arbeit (D) Staatsfeiertag (A)	1 Mi
2 Do 48	2 So	2 Mi 5	2 Mi 9	2 Sa	2 Mo	2 Do 22 Christi Himmelfahrt
3 Fr	3 Mo	3 Do	3 Do	3 So	3 Di	3 Fr
4 Sa	4 Di	4 Fr	4 Fr	4 Mo	4 Mi 18	4 Sa
5 So	5 Mi 1	5 Sa	5 Sa	5 Di	5 Do	5 So
6 Mo	6 Do Heilige Drei Könige	6 So	6 So	6 Mi 14	6 Fr	6 Mo
7 Di	7 Fr	7 Mo	7 Mo	7 Do	7 Sa	7 Di
8 Mi Mariä Empfängnis (A) 49	8 Sa	8 Di	8 Di	8 Fr	8 So	8 Mi 23
9 Do	9 So	9 Mi 6	9 Mi 10	9 Sa	9 Mo	9 Do
10 Fr	10 Mo	10 Do	10 Do	10 So	10 Di	10 Fr
11 Sa	11 Di	11 Fr	11 Fr	11 Mo	11 Mi 19	11 Sa
12 So	12 Mi 2	12 Sa	12 Sa	12 Di	12 Do	12 So
13 Mo	13 Do	13 So	13 So	13 Mi 15	13 Fr	13 Mo Pfingstmontag
14 Di	14 Fr	14 Mo	14 Mo	14 Do	14 Sa	14 Di
15 Mi 50	15 Sa	15 Di	15 Di	15 Fr	15 So	15 Mi 24
16 Do	16 So	16 Mi 7	16 Mi 11	16 Sa	16 Mo	16 Do
17 Fr	17 Mo	17 Do	17 Do	17 So	17 Di	17 Fr
18 Sa	18 Di	18 Fr	18 Fr	18 Mo	18 Mi 20	18 Sa
19 So	19 Mi 3	19 Sa	19 Sa	19 Di	19 Do	19 So
20 Mo	20 Do	20 So	20 So	20 Mi 16	20 Fr	20 Mo
21 Di	21 Fr	21 Mo	21 Mo	21 Do	21 Sa	21 Di
22 Mi 51	22 Sa	22 Di	22 Di	22 Fr Karfreitag (D)	22 So	22 Mi 25
23 Do	23 So	23 Mi 8	23 Mi 12	23 Sa	23 Mo	23 Do Fronleichnam
24 Fr	24 Mo	24 Do	24 Do	24 So	24 Di	24 Fr
25 Sa 1. Weihnachtstag (D) Christtag (A)	25 Di	25 Fr	25 Fr	25 Mo Ostermontag	25 Mi 21	25 Sa
26 So 2. Weihnachtstag (D) Stefanitag (A)	26 Mi 4	26 Sa	26 Sa	26 Di	26 Do	26 So
27 Mo	27 Do	27 So	27 So	27 Mi 17	27 Fr	27 Mo
28 Di	28 Fr	28 Mo	28 Mo	28 Do	28 Sa	28 Di 26
29 Mi 52	29 Sa		29 Di 13	29 Fr	29 So	29 Mi
30 Do	30 So		30 Mi	30 Sa	30 Mo	30 Do
31 Fr	31 Mo		31 Do		31 Di	







Pipeline construction with CADISON® Autorouter Function

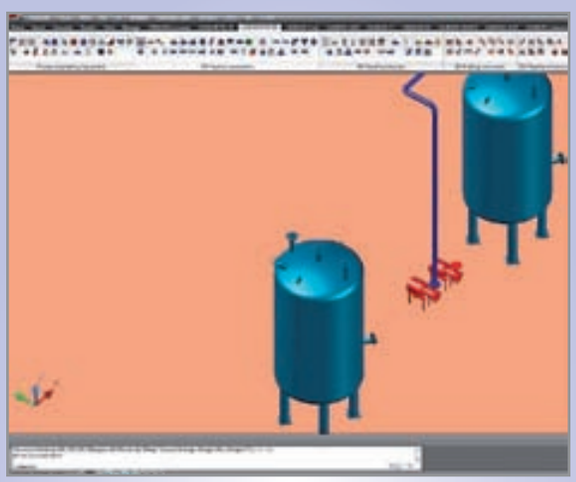
In order to meet today's market requirements the work has to be done in an easy and simple way. Especially pipeline constructions require technical help to be completed within the given time period. Therefor, we would like to introduce to you the CADISON® Autorouter Function in more details:

Most of you already know this function from simple pipe constructions. However, the Autorouter can significantly help you to solve some more complex design requirements.

The construction of device connections can be difficult due to technical complexity, e.g. when different sloped nozzles have to be done from different angles. CADISON® Autorouter Function makes this work easier!

The example given below shows how the vessel nozzle is connected with the suction side of the pump.

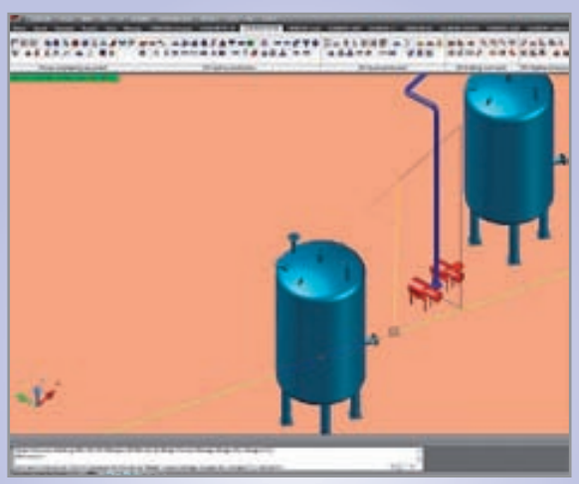
1



Initial situation

- with the command ☞ **Construct a pipeline** you'll draw the pipe from the pump's suction side first in the negative Y direction and after that up to the centre of the existing pipe
- now type ☞ **R** (for Router)in the AutoCAD command line to activate routing in the direction to the vessel and confirm with ☞ **Enter**.
- next select the red connection point of the nozzle
  · CADISON® suggests a possible pipe routing
  · if the result doesn't match your expectation, you can get a new alternative by pressing ☞ **Space Bar**

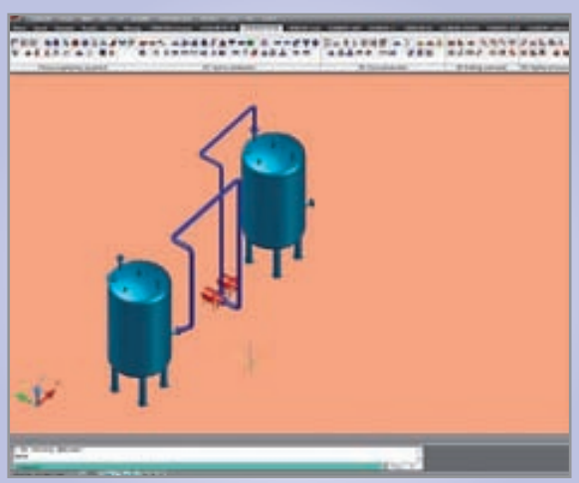
2



Offered pipe routing by CADISON® Autorouter

If you want to accept the offered pipe routing, confirm by using the ☞ **left mouse button** to activate the automatic "pipe overlay" function and to finish pipe drawing.

3



Finished pipeline

10 for 10 –

10 important Reasons for CADISON®

Now on 64-bit platform
- significant improvement in handling large models (more than 1.5 Gigabyte)
- no longer waiting for swapping memory content
- efficient extraction of drawings

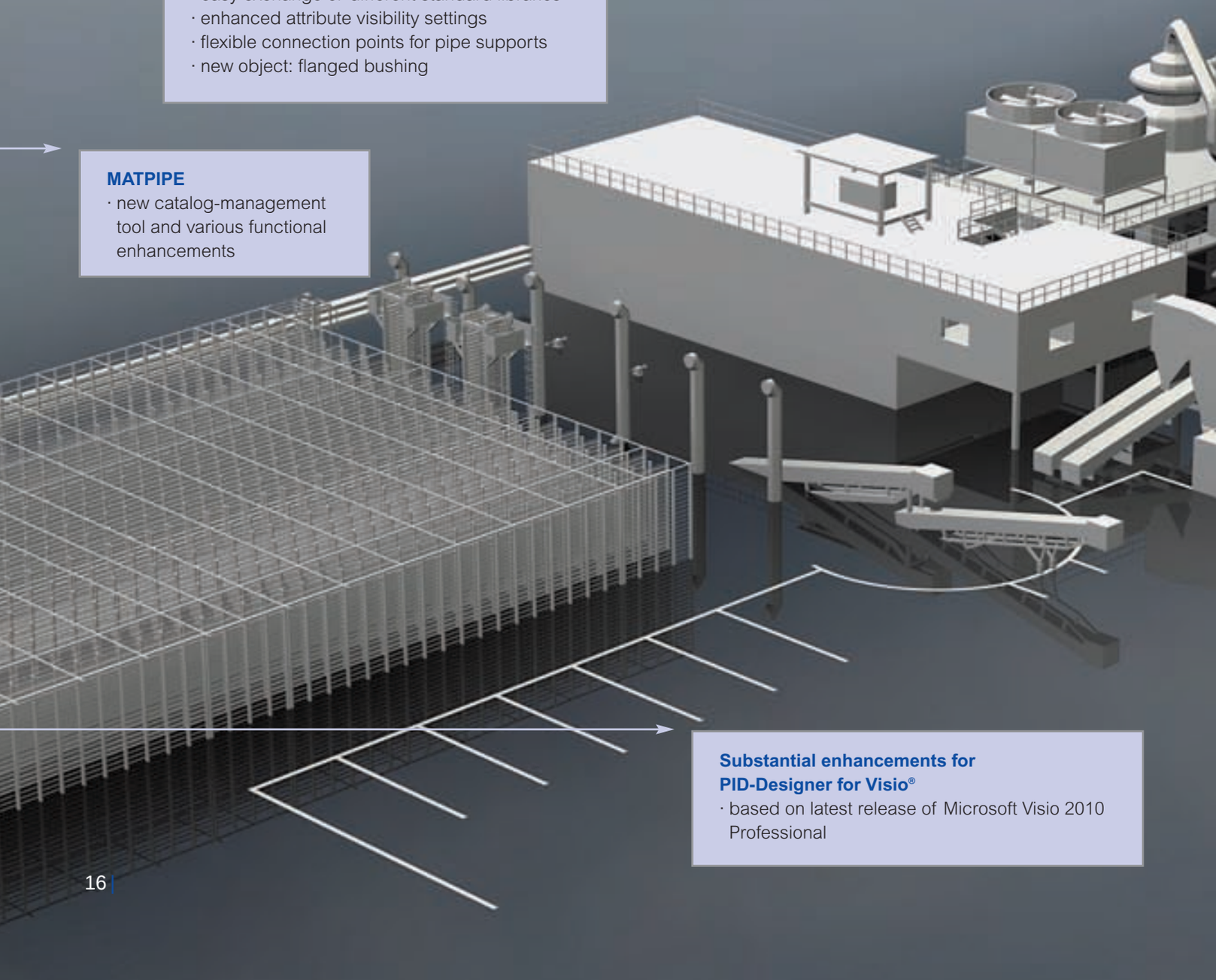
→ for more details see also page 5

Increased performance with up to 30 % time- and cost savings
- lots of tiny improvements sum up to an impressive payoff

Easier and faster GUI (graphical user interface)
- this process has been started since CADISON® R8. With the feedback of the CADISON® users we have been able to modernise the GUI

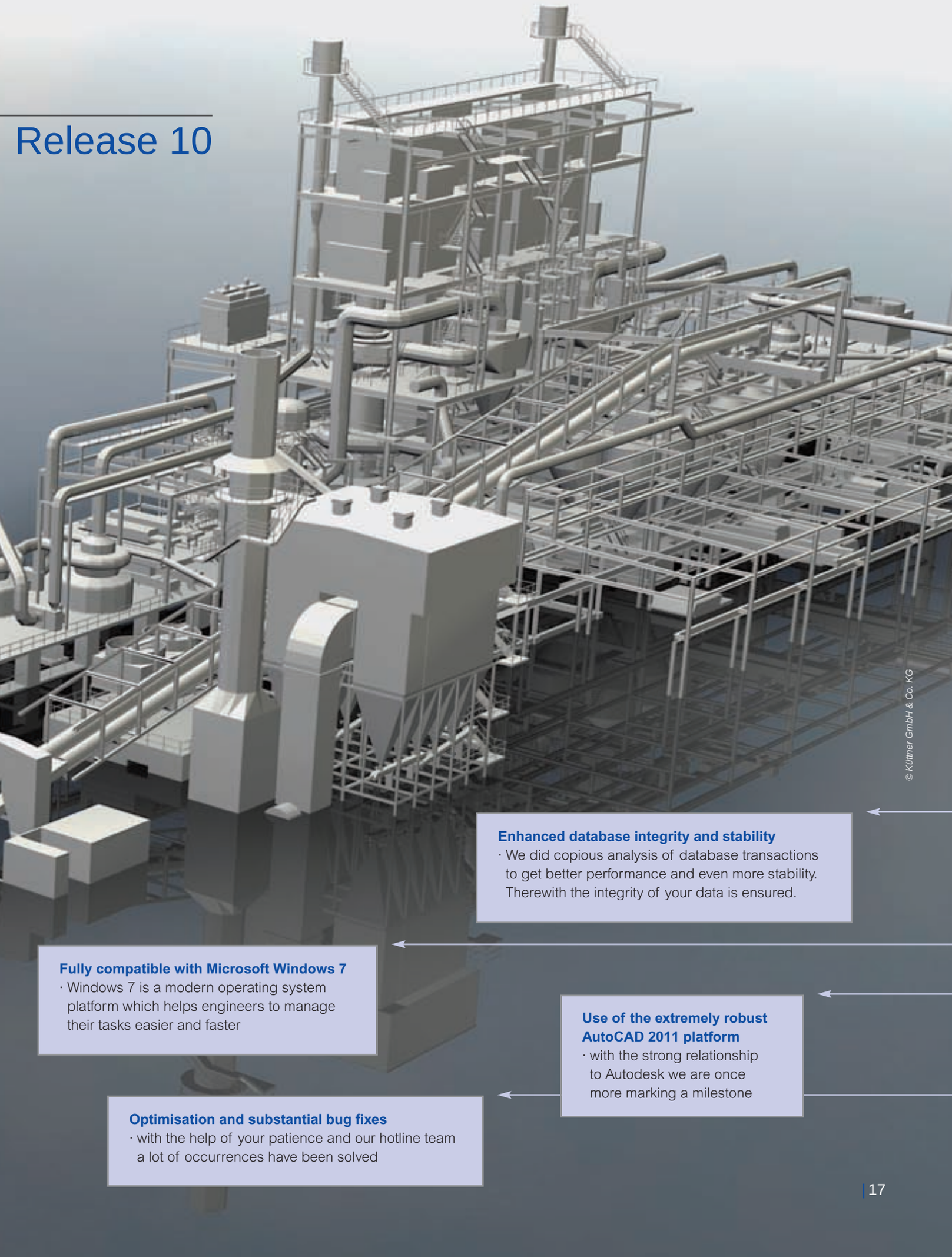
New and enhanced functionality (some examples):
- easy exchange of different standard libraries
- enhanced attribute visibility settings
- flexible connection points for pipe supports
- new object: flanged bushing

MATPIPE
- new catalog-management tool and various functional enhancements



Substantial enhancements for PID-Designer for Visio®
- based on latest release of Microsoft Visio 2010 Professional

Release 10



Enhanced database integrity and stability
· We did copious analysis of database transactions to get better performance and even more stability. Therewith the integrity of your data is ensured.

Fully compatible with Microsoft Windows 7
· Windows 7 is a modern operating system platform which helps engineers to manage their tasks easier and faster

Use of the extremely robust AutoCAD 2011 platform
· with the strong relationship to Autodesk we are once more marking a milestone

Optimisation and substantial bug fixes
· with the help of your patience and our hotline team a lot of occurrences have been solved

Faster project setup with CADISON® project templates

In this article we will show you, how project managers can speed up a new project in CADISON® with pre-defined project templates.

Definition

A project template is a CADISON® database in which the project manager has defined “all company standards” and all the important steps for projects. Based on your company project template, project managers can start a project in CADISON® in a very easy way – in just "some seconds".

Main-Advantages

Project templates in CADISON® have the following advantages:

· Ready document structures
  - all projects look the same
  - every user works in the same document structure
  - finding information in other projects is therefore very simple
· plant structures with the right tagging numbers
  - basic premade structures
  - tagging numbers will also be automatically created in drawings
  - needed media with pipe spec structure
  - media basics are ready to use
  - very few parameters to change
· company project settings as pre-settings and pre-definitions
  · structure views as pre-definitions
  · different settings for different project types
  · ready to use reports are pre-defined

Summarized you can say, that

· daily work will be reduced
· same info everywhere at the same place
· all users are using the same settings
· errors will be reduced
· only approved reports are in use

Practice steps

Create a project template

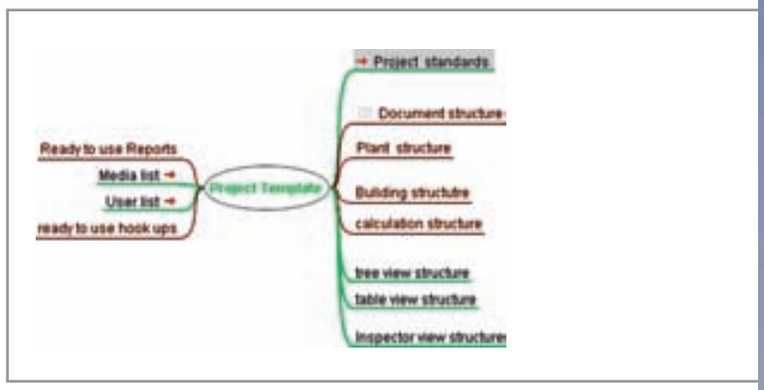
Use the CADISON® function ☞ **Create a new project database** and create a new Project

Project settings

Fill out all needed project settings (which are different from the Default-Template) or use the function ☞ **ListFromFile** for project manager:
Project name, Project No, Company Address. Set the ISOGEN Settings in Tab 807

Plant structures

The plant structure is a pre-definition in which the equipment and components can be placed below. Also the user can isolate his working plant, which is very helpful for the daily work!



If the plant structures have to be flexible, you can also use the ☞ **ListFromFile** Function.

Needed media

· Insert all needed media
· Insert on each media an empty pipe spec
· Modify the media settings
  - Line type
  - Color
  - Line width

Structure views

· Insert all objects in the tree
· Create a structure view for the
  - Tree (only data visible for search function)
  - ObjectInspector (only necessary data is visible)
  - Table view (can also be used for virtual reports)
  - Company standards can be saved in a .cac file; different views can be selected

Needed reports

· Insert all reports in the project template in the right document folder
· Create for all reports a starting revision 0

Document structures

All projects will have the same basic document structure

Working with project templates

Create a new project with the company project template – in just a few steps to a new project!
Select the company project template:
· Copy the database
· Move the copied project in the required database group
· Modify project settings
· Modify engineering data, add or delete required or non required objects
· Add required drawings (P&ID, 3D Layout …)

Project template maintenance

Modifications will be done in the project template if changes are necessary.

Integrated Digital Plant Model

CADISON® is a modular CAE solution that can be easily configured for specific scenarios. Thanks to the solution's use of integrated databases, all project data is automatically and instantaneously available in its entirety within the various application domains such as P&IDs, 3D piping planning, isometric drawing generation, automatic report generation and so on.

CADISON® Project-Engineer: This tool allows multiple users to work on the same project concurrently. This means that you can design and perform all the calculations for a project using a kind of data object building method without the need of CAD. You can then do the detail work in stages during the next steps. We call this conceptual engineering.

CADISON® P&ID-Designer: This tool allows project planning processes and diagrams to be merged seamlessly in such a way that all project related data is dynamically available to users. This in turn allows all project preliminary planning to be integrated with basic and detail engineering, and then merged with two dimensional layout planning.

New: now also available as PID-Designer for Visio®!

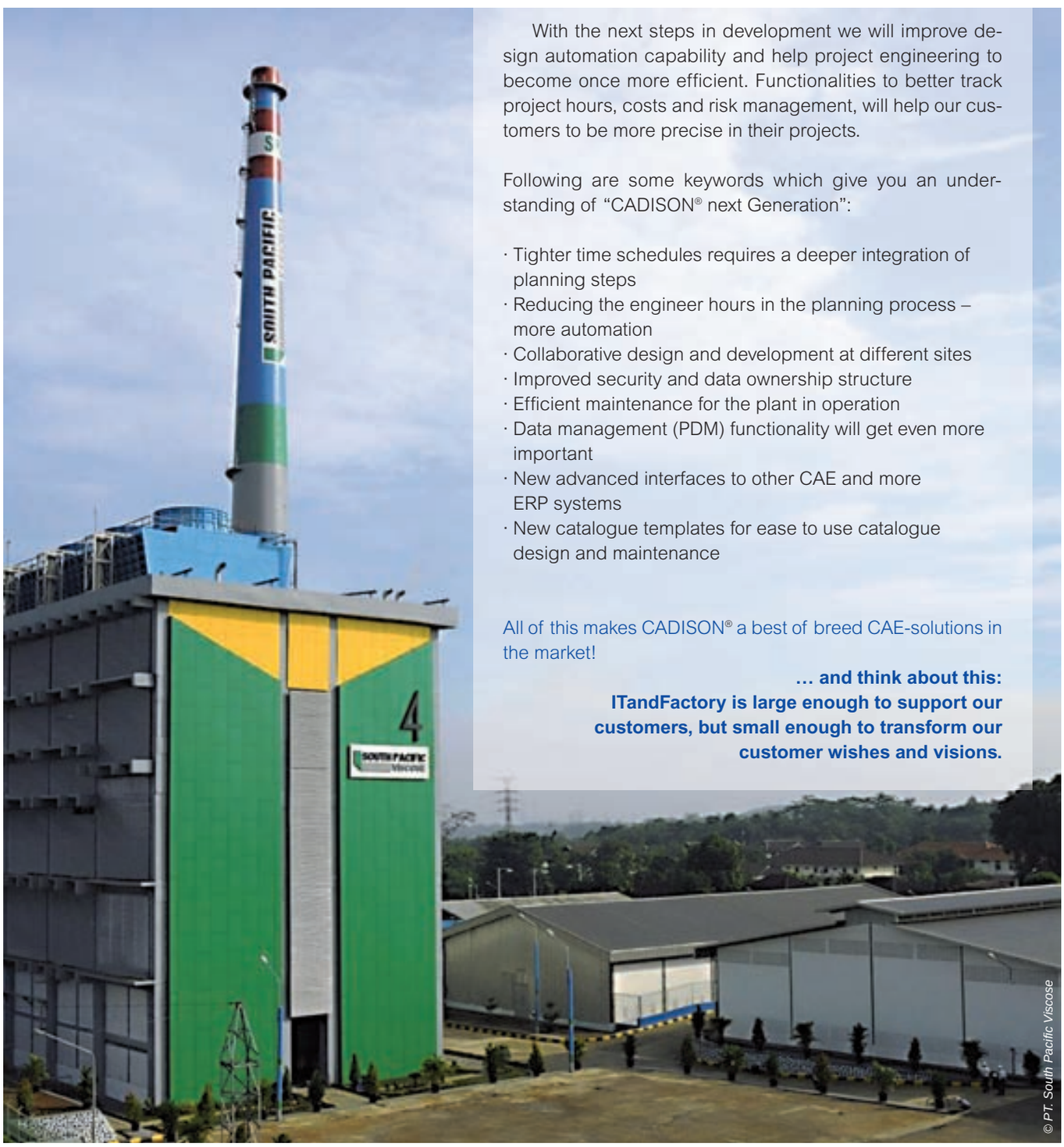
CADISON® 3D-Designer: A complete suite of 3D modeling tools is fully integrated into the AutoCAD 3D platform, one of whose most outstanding features is that it allows for plant specific expansions. The solution also provides numerous extremely helpful and time saving wizards. The P&ID-Designer automatically generates isometric drawings from 3D models. In addition, fully visualized representations allow for outstanding orientation in 3D models.

CADISON® Electric-Designer: This planning tool allows for the creation and management of documentation related to Controls, Installations and ET I&C technology, as well as for direct access to media and connection parameters from R&I diagrams needed for the production of layout plans and hookups.

CADISON® MATPIPE: CADISON® MATPIPE is a platform for the creation and integration of vendor catalogues, pipe category elaboration and updating, the definition of configured 3D variants, data exporting and importing, and for verifying that existing catalogue data has been updated.

CADISON® is an integrated multidisciplinary solution with a focus on improving our customer's project engineering efficiency. Only with a consequent design-approach for still more automatism, our customers can reach their project targets in time and costs.

The vision behind CADISON® or the next Generation CADISON®



With the next steps in development we will improve design automation capability and help project engineering to become once more efficient. Functionalities to better track project hours, costs and risk management, will help our customers to be more precise in their projects.

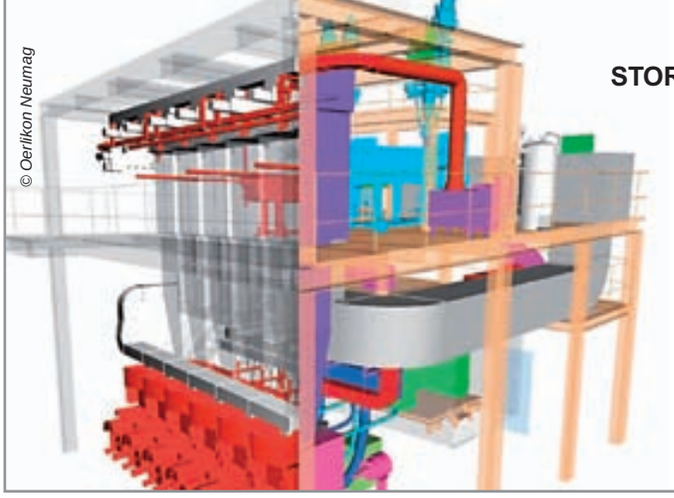
Following are some keywords which give you an understanding of "CADISON® next Generation":

- Tighter time schedules requires a deeper integration of planning steps
- Reducing the engineer hours in the planning process – more automation
- Collaborative design and development at different sites
- Improved security and data ownership structure
- Efficient maintenance for the plant in operation
- Data management (PDM) functionality will get even more important
- New advanced interfaces to other CAE and more ERP systems
- New catalogue templates for ease to use catalogue design and maintenance

All of this makes CADISON® a best of breed CAE-solutions in the market!

… and think about this:
ITandFactory is large enough to support our customers, but small enough to transform our customer wishes and visions.

© PT. South Pacific Viscose



The 50 %-Idea

This article is based on a presentation held by Prof. Dr. Wozny, TU Berlin during "Company Workshop" at Fraunhofer Institute in Magdeburg, 28.01.2010.
This conveys the understanding of ITandFactory.

10 years development time is "normal"

Today the development cycle for a new product is between 56–108 months, until it becomes public. Not included the time for research! Nowadays it's well-known that global markets – and therefore also the globalisation in competition – is the crucial factor for time-to-market!

In the growing sections of fine chemicals and special chemicals – analogue to the pharmaceutical industry – the swiftness of market launches determines more and more the economic success than technical excellence. Against these background development cycles of 10 years or longer – from product idea to implementation of a plant – don't appear suitable.

The savings potential

So – where is the savings potential to launch a product at the market?

The process development starts with laboratory procedures, which check the principle producibility with the desired features. Based on this a process concept with the aid of modeling techniques and laboratory- and pilot experiments will be developed.

The following basic engineering delivers the course of the procedure and the anticipation data for the detail engineering. Following to that comes procurement, assembly and activation of the plant.

The use of mathematical model, MiniPlant instead of PilotPlant, simultaneous handling of development, planning and procurement processes are steps to shorten up the needed time!

Modularisation, workflow, reusability

Let's focus on the area of plant manufacturing, in which the influence of CADISON® is most visible. Not only in the area of plant manufacturing you can save time with modularisation, system assisted workflow, reusability of modules, the replicable transparency respectively the transparency of development and the support of module libraries.

Modularisation – the plant within the plant

The plant within the plant – a way, to create a small logical piece of functionality with defined functions. This plant within the plant has defined tasks and transfer points and is always available in the same functionality.

Exactly at this point CADISON® is called into action with its object-oriented object data database. All workstations are not only connected during the development process but also during the operation of the plant and so a workflow is formed between the separate work steps. A workflow, which gives all participants transparency in the process, and makes sure to beware of misplanning!

How can engineering, assembly and start-up be speeded up?

Preassembled skids, enhanced project organisation and -planning, reusable modules, an optimal start-up planning, an optimized procurement strategy for critical equipments and an overdesign to secure design-definitions based on preliminary data are the major criteria to hasten the process.

How can exposition, procurement and manufacturing be expedited?

First of all is to name the easy and integrated workflow, then to reduce the norm variety and last but not least strategic partnerships can expedite the processes.

Reusability and repeatability

Under the notion of "learning organization", all made experiences (positive and negative) should be gathered to utilize them in the next process. CADISON® is supporting you in every of these steps.

That only IT-based methods can support such complicated workflows, does not have to be mentioned at this point!

Of course it's clear, that the approach of shortening flow-times is not at the expense of plant-security and environmental protection! Based on early planning with still generic flow charts (P&ID) and with the assistance of the MiniPlant-approach, cost and time can be roughly calculated.

Refining this data with more detailed planning as P&ID, with defining the details of the process and components, which becomes the master for all following planning. This master is the base for detailed account costing and orders. Orders for time-critical processes could be started at the same time as 3D-planning.

With this in mind the statement

"without CADISON®: 4 years | with CADISON®: 1 year" becomes a reality!

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"Saving money w
graphics too

Georg Kremer, Managing Director at ITandFactory (ITF), on integrated process chains in 2D/3D plant design and cost benefits thanks to globally distributed engineering.

Mr Kremer, has "integrated plant design" already become an issue for the more medium-sized plant engineering firms?

I think so. It's obvious in the integration of 2D and 3D design, in which CADISON® in particular can play out its strengths: end-to-end integration from the basic flow chart, through P&ID to 3D plant design. Depending on which piece of equipment you want to use, you define it first as an object in the P&ID, and then do the detailed engineering in the 3D diagram. If it's a one-off design, then AutoCAD functions are used, but if it's a part of a library, then a direct MATPIPE extension is used.

The information defined there is used to automatically generate the isometries. Transfer to Rohr2 software is also possible in order to conduct structure mechanics analyses. For this purpose, working together with Sigma Ingenieurgesellschaft (manufacturer of the Rohr2 application) and the CADISON® client WINGAS, we have extended the existing interface, enabling 95- to 99-percent data transfer from CADISON®. That's an excellent rating for an interface.

Have you thought about the way back, I mean data transfer from Rohr2 to CADISON®?

We're working on that. That's particularly interesting for companies looking for high integration of the design process.

For what percentage of your clients is it interesting?

I reckon, for around 15 to 20 percent.

with low-cost

o ls and multi-site planning”

Your company presents itself to clients as a general contractor centring round engineering software. What advantages are derived from this?

You’re right. We see a very definite need for it. Certainly a whole load of 2D and 3D design solutions have found their place on the market. Here we have come up against competition, as the tools are compatible …

So you need good arguments to convince the clients. Which ones do you put forward?

The integrated data use with CADISON® forms the core of our argumentation and our own conviction. In addition, we ensure our clients have an extremely good pipeline to our software developers to realize quick fixes for those problems that don’t exist as yet. The other exceptional aspect is that we are not only a software but also an engineering partner. In our capacity as a general contractor, we arrange for the placement of qualified staff to ensure the success of the client project. This makes ITF unique and in demand on the market.

Please give us an example.

We are currently working on a project in Indonesia that comprises a complete engineering contract including supply of the software. If we had just been supplying software, we would not have been given this opportunity; the client wanted everything from one source. The design tool was certainly important to the client, but it was not the sole criterion for his decision, the client was far more concerned that the plant should be designed according to schedule and he would have one contact partner to deal with all aspects and issues.

Can you tell us how you realize such a project?

We do the design work in an affiliation of companies: be it together with Triplan or Neilsoft as preferred partners, or through companies from CADISON®’s environment. We were able to persuade some of our customers to act as CADISON® service providers and operate as such on the market.

Is the multi-site plant design particularly important to your clients?

Increasingly so. The basic design for premium engineering projects is usually realized in Central Europe (safeguarding know-how), whereas more and more frequently the detail engineering is moving east, if not to the Far East, because cheaper resources are available there. Associated with this is the question of multi-site data transfer, not only on CAD file level, but also with regard to the reconciliation of CADISON® databases in order to really improve efficiency.

For it’s not just a matter of cost benefits when it comes to staff – an employee in India might cost perhaps just half of one in this country – but it is also important to preserve data integrity because otherwise the subsequent rework can lead to extra costs that outweigh the cost benefits elsewhere.

Is there any way to save on the IT costs, too?

In terms of cost structure, the clients are often critical of the costs for graphics platforms. Clients are looking for alternatives and the Visio platform from Microsoft now offers an attractive option. This can easily be used to generate P&IDs, but anything else you might think of in 2D too. We have been supplying this solution since the beginning of this year.

How high is the cost benefit?

90 percent. That’s something decision-makers really like to hear.

Speaking of costs: how high are the administration costs for CADISON®?

On the one hand we use the worldwide standard platforms such as AutoCAD and MS-Office, which substantially reduces the training costs. Installation of CADISON® is easy too: a ready-to-use environment is provided, in which 80 percent of the settings can already be practically used. The remaining 20 percent are done by ITF consultants. But most customers don’t have any difficulty in realizing these settings themselves. It isn’t necessary to learn a programming language. You only need to follow a system. The user doesn’t need to bother about the administration of the database. The system does that automatically in the background.

And everyone is talking about 64-bit ITF too?

You should come to this year’s CADISON® International Conference, which will be held on 30 September and 1 October in Darmstadt, Germany. Highlight at this event will be the première of the 64-bit version of CADISON®. We are currently completing the final trial run and we can already say that you can use it to design any size of plant. Benchmarks with the 32-bit version have shown that the 64-bit version is 2 to 5 times faster.

Many thanks for the invitation and the interview!

source: Economic Engineering, 2010-05, Dr.rer.nat. Bernhard D. Valnion

“Current comparisons with another system made it clear: Under consideration of all circumstances, CADISON® is the optimal engineering tool for AEL.”
Dipl.-Ing. Silvio Sturm, Design/System Technology Division, AEL Apparatebau GmbH Leisnig

"CADISON® saved to us approximately 30 % of expenditure time"
Dipl.-Ing. Hartmut Claussen, Head of Project Management & Mechanical Engineering, Oerlikon Neumag

"We can load large plants with large data set and work with them in actual time – a result of lean and special structure of this plant engineering tool."
Dipl.-Ing. Jens Willumeit, System Supporter for CAD Systems in Plant Engineering, Oerlikon Neumag

”With CADISON® we always know that the proposals and the calculations for the current planning phase will match up. For a project worth € 3 or 4 million we need today about 20 hours to put together the proposal – before (CADSION®) it has taken twice that long.“
Andreas Hiegelsberger, Project Manager Process Technology, LTH Dresden

“CADISON® is used at Westfalia Separator at an intensity and complexity which is practically impossible to match.”
Sebastian Lux, CAE Consultant, Lux Engineering