























CADENAS Wall Calendar 2014



For the successful commercialization of components and their 3D CAD models you need two things: Innovative technology and creative ideas. You receive both from us as a one-stop solution! Let yourself be inspired.





Download at: www.cadenas.de/kalender/ecatalogsolutions-2014

Clear up, cast out, creating order – it's natural to regularly free your desk from unnecessary ballast to keep track of things. But what about your digital desk?

The Strategic Parts Management PARTsolutions by CADENAS offers innumerable options to create almost effortless a clean parts master.



You haven't got a CADENAS Calendar 2014 at your office wall? Jump at the opportunity and write an e-mail with the subject: »eCATALOGsolutions Kalender 2014« or »PARTsolutions Kalender 2014« at Marketing@cadenas.de. We'll send you your personal copy. Sorry, but these calendars are only available in German. (While stocks last.)

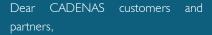
EDITORIAL



Jürgen Heimbach Dipl.-Ing. (FH) CEO CADENAS GmbH



That was 2013!



there is a lot to be learned from German medium-sized enterprises. At least this is indicated by the NSA spying scandal and the continuous growth of German economic performance. At CADENAS we also feel this considerable growth: Our Strategic Parts Management PARTsolutions and its search methods are becoming increasingly popular in terms of issued licenses. Also the numbers of Electronic Product Catalogs are rising steeply.

Quality and innovation power are and remain the most important factors for the global success of German products and services. At CADENAS we cooperate with and for our customers according to this principle.

For instance, we called out the German Standard Parts Award together with GANTER and the :K Magazine, to raise awareness for the importance of standard and supplier parts. Moreover we would like to promote awareness for costs involved with the product development phase.

We also constantly improved our Strategic Parts Management PARTsolutions. In summer 2013 the version 9.07 was released. Among many other improvements there is also an extension of the intelligent search functions and the seamless integration into numerous 3D CAD programs.

But also at our download portal PARTcommunity much has happened: The new PARTcommunity mobile web app now reaches all those tablets and smart phones that are not operated with iOS or Android. All who haven't got their own product catalog app yet are without excuse now, as this is a fast and affordable solution.

All in all the trend to the app is continuing unabated into 2014: The CADENAS PARTcommunity 3D CAD model app had significantly more than a quarter million downloads this year.

Again, this year's Industry-Forum was a special highlight for us and our customers. More than 200 visitors exchanged information and learned about the latest innovations from the industry and the best practice methods of the other companies.

Santa Claus probably also has a very sophisticated production method. After all, he has been delivering all his presents just in time for more than 100 years. How does he do that? At CADENAS we have a certain theory, to put it plainly:



As successful as the last year went, we are certain that we can do even better. Therefore we would like to thank our customers and partners for the great cooperation. With plenty of new ideas we start together into the year 2014!

CONTENTS

- **3** Editorial
- **4** Table of contents
- 6 The CADENAS year 2013



CASE STUDIES

- **10** BOMAG case study
- 14 ZF Friedrichshafen AG case study
- 18 RÖHM GmbH case study









JOINT SUCCESS WITH CUSTOMERS

- 20 PTC Creo
- 21 SVS-Automation
- 22 Wärtsilä
- 23 Norelem
- **24** AMF
- **26** Siemens PLM
- **27** Rollenbau





CADENAS NEWS

- I 5 years of PARTcommunity
- 3D CAD model app 2.2.4
- More than 320,000 downloads
- 32 German Standard Parts Award
- PARTcommunity mobile web app
- PARTsolutions version 9.07
- **36** 14th Industry-Forum 2013
- Logistic Just in Time Christmas video



The CADENAS year 2013





TRADE FAIRS

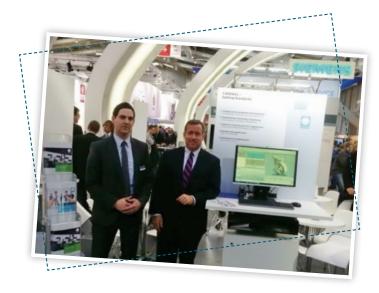


At the Hanover fair of that year, the CADENAS team fascinated interested customers with their trade fair entertainment package at the Riegler stand.

HMI WITH SIEMENS



CADENAS shared another stand with the representatives of Siemens PLM, where the integration of PARTsolutions with NX and Solid Edge was demonstrated.







Another special event took place at this year's Motek Together with GANTER, CADENAS presented the German Standard Parts Award.

CIO ANNUAL FORUM



Always keep you cool: At the CIO Annual Forum in China Li Hao presented CADENAS PARTsolutions together with our partner Linkable.



PTC GLOBAL, LLC

In June CADENAS visited the PTC Live Global 2013 in Anaheim California, USA. Besides a lot of sun, the visitors were able to get a closer look at the possibilities of the CADENAS products PART solutions and eCATALOGSolutions.

SIEMENS PLM DE



At the Siemens PLM Connection in Germany in April, CADENAS did not only give the visitors a better understanding of the PURCHINEERING concept, but also raffled a 7 inch Lenovo tablet.



The CADENAS year 2013



SUMMER FESTIVAL



At the summer festival the CADENAS employees once again showed what they are made of:

With a hot game of beach volleyball in the

Fribbe public pool...







...and as a reward there were not only trophies for the winning teams...



...but also a great atmosphere, a delicious barbecue and beer (of course also non-alcoholic beverages for children and drivers:-))





The Industry-Forum 2013 offered the visitors once again a lot of best-practice presentations of top-class speakers about the successful use of the CADENAS software solutions.





INDUSTRY-FORUM



At the "Rapid Prototyping" of Cinteg the visitors were able to watch how tangible objects are made out of digital data within a short amount of time.





For the prize of the year's raffle, the visitors had to try especially hard: Only those persons who visited all stands were able to complete the QR code properly and were rewarded with one of the prizes sponsored by the numerous exhibitors.



BOMAG GMBH // CASE STUDY

PARTsolutions at BOMAG

LOOK FOR PARTS, FIND AND REUSE THEM





» Since 2009 the Geometric Similarity Search has been in use, to manage repetitive parts and standardize self-designed parts at BOMAG. Using the PARTsolutions manufacturer parts catalogs also optimizes the efficiency of design. I am very happy that we can draw a consistently positive conclusion after many years of cooperation with BOMAG. «

Markus Poppinghuys, Branch Manager Essen CADENAS Solutions GmbH

LIMIT THE PROLIFERATION OF PARTS AND IMPROVE BUSINESS PROCESSES WITH PARTSOLUTIONS

BOMAG, with its headquarters Boppard near Koblenz, is the world market leader in the field of compaction technology and manufacturer of machines for the compaction of soil asphalt and refuse, stabilizers/recyclers, land milling machines as well as finishers. For a better management of self-designed and supplier parts, BOMAG has been using CADENAS' Strategic Parts Management PARTsolutions since 2011. The key performance of the PARTsolutions software is to find CAD components in a company faster and easier, to reduce and manage them and thus save costs in the long-term. Moreover the cooperation between procurement and

engineering has improved, since CA-DENAS' software solution offers both departments access to the PARTsolutions parts database.

INITIAL SITUATION AT BOMAG

At BOMAG about 85,000 standard, supplier and self-designed parts are built into the various products of the range. So far the parts management was carried run by an SAP based system. This system, however, had some serious weak points: Only those components were managed that were repeatedly used. For the drawing parts, the previous solution referred only to small or repetitive parts. Moreover these parts always had to be classified manually. Therefore the acceptancy of this system was rather small throughout the whole company.





Dieter Hickmann, CAD administrator engineering at BOMAG, explained to us the requirements resulting out of that in the following way:

"According to our internal analysis, especially small and repetitive parts are quite expensive when they are created for the first time. The real costs of course depend on the size, the

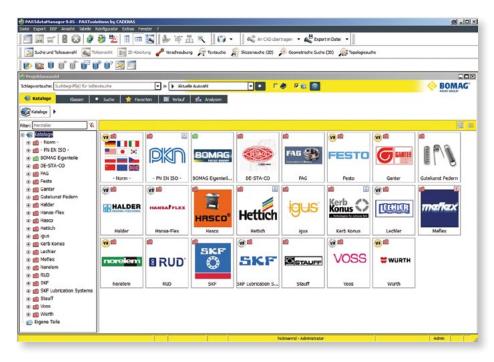
complexity and the material of the respective components. However, before any drawing part, no matter how simple, can be produced, it has to be designed and entered into our PLM system. Then a 2D drawing and a flow chart have to be created and a storage place has to be set up. If a part is not an in-house production, it runs through the procurement process.

All these process steps cause tremendous costs. On the average every new creation we avoid, means a cost saving of about 1.200 Euros to our company. Of course new parts will constantly be created at BOMAG, since we are permanently developing new products. But at least we have to avoid creating duplicate parts."



THIS RESULTED IN SPECIFIC DEMANDS FOR A NEW PARTS MANAGEMENT:

- 1. The user should be provided with a reliable and efficient parts search and management system.
- 2. Avoiding duplicate copies is of highest priority to realize an effective cost reduction.
- 3. The system should be simple and easy to learn, user friendly and intuitively operable, to ensure that the training period and user errors are reduced to a minimum.
- 4. Moreover the system provider should offer a consequent and extensive support for the implementation/introduction of the system.



Direct access to 3D CAD data from Electronic Product Catalogs of renowned manufacturers via the PARTdataManager

PARTSOLUTIONS SPECIFIC SOLUTION

"After we had looked at several systems, we eventually decided for CADENAS' PARTsolutions, because it offers exactly the solution we need", says Hickmann.

At BOMAG, PARTsolutions is used in the design as well as in the equipment design and the procurement:

"Our purchase department is informed with a notification of change when a new part has been designed and released for procurement. By means of PARTsolutions the procurement can upload the new part and use it to look for a similar component. This way it is possible to estimate from the beginning how much the new component will cost. This approach makes sense with complex molded parts made of casting or plastic", Hickmann explained.

PARTSOLUTIONS INTEGRATION INTO THE BOMAG SYSTEM ENVIRONMENT

Altogether about 80 workstations at BOMAG in Boppard are equipped with PARTsolutions. The integration of the previous company's software environment was carried out by a software management system that automatically installed PARTsolutions on the workstations. Moreover it ensures that the complete system is always equipped with the latest version.

The 80 workstations are supplemented by five floating licenses that allow individual employees to use the functions of the Strategic Parts Management ad hoc. These include in particular:

 Using the Geometric Similarity Search within an existing parts inventory

- Using the Geometric Similarity and Topology Search directly from the CAD design software
- Searching and directly inserting standard and catalog parts into the CAD development environment

Hickmann comments: "Our developers are using the CAD software 'Creo Elements/Direct Modeling' from PTC. It makes work a lot easier when the Standard Parts from the catalog can be directly imported into the CAD environment."

JOINTLY PLANNED PROJECTS

All relevant workstations in the three areas of design, equipment design and procurement are equipped with PARTsolutions. Also the computers of newly hired staff are equipped with the Strategic Parts Management by default.

Particular attention is paid to the development of the newest CADENAS' software solution. For instance the integration of the hole pattern search function coming up in 2014 is a eagerly awaited feature.

There are also considerations for the medium term to equip another BOMAG production site with PARTsolutions in 2015.

CONCLUSION: IMPROVEMENTS AND OPTIMIZATIONS AT BOMAG

With regard to the complete project, Dieter Hickmann draws a positive conclusion:

"The conversion to the new software went smoothly. Since the classification of small parts can now be omitted, we save a lot of time. All in all, the situation at BOMAG developed very positively since PARTsolutions has been in use:

The total amount of new parts has not decreased of course - as a result of permanent new developments, new components are constantly created - but without the use of PARTsolutions the increase of new parts would have been significantly higher. The main reason: Due to the high user acceptance of PARTsolutions, the cost awareness of our designers when they create new components has tremendously improved."



BOMAG IN FIGURES

- Cooperation with CADENAS: since 2009
- Installed standard and supplier parts: approx. 85,000
- Savings per newly created part: approx. 1.200 Euro
- Number of PARTsolutions workstations:
 80 + 5 floating licenses



ZF Friedrichshafen AG // case study

ZF Friedrichshafen

relies on CADENAS' Strategic Parts Management in the product development

The simple implementation of PARTsolutions to the PDM System was the decisive selection criteria

ZF is a global leader in driveline and chassis technology with 121 production companies in 26 countries. ZF is one of the ten largest automotive suppliers worldwide. Since 2005 ZF has been using CADENAS Strategic Parts Management PARTsolutions at 2,400 workstations to manage standard and supplier parts.

PARTsolutions allows companies to find CAD components faster and easier to reduce the new creation of parts and manage them and thus save costs in the long-term. Moreover, the system offers access to the 3D CAD data from millions of standard and supplier parts of more than 600 renowned manufacturers' product catalogs.

THE INITIAL SITUATION AT ZF

Until 2005 there was no special system at ZF to manage parts in use. Only Standard Parts were stored in a so called Standard LIP database, which was only useable in combination with the CAD program PTC Pro/E and

not with the second strategic system CATIA. This resulted in a high amount of newly created parts, entailing cost of approx. I.000 Euros per part. Christian Salhi, responsible for computer sciences and information technology at ZF summarizes the requirements to the new system as follows:



» It was important to us that the parts are no longer obtained from somewhere on the internet, since this involves substantial problems for the whole company. Because as soon as one designer would look for a certain cylinder, he would create a new number for it. This way a myriad of costly duplicate copies were created in the course of time. «

Christian Salhi Responsible for computer sciences and information technology ZF Friedrichshafen AG



"A crucial point to us was the connection with our existing Axalant product management system. Besides saving and managing all our documents, product CAD data, etc. the PDM is also an interface for our SAP system. Therefore it was mandatory that the new Strategic Parts Management system could be linked with our PDM system", says Salhi.

CADENAS SPECIFIC SOLUTION: STRATEGIC PARTS MANAGEMENT PARTSOLUTIONS

Eventually CADENAS' Strategic Parts Management PARTsolutions was chosen. The decisive factors were the high compatibility to the existing system, the functionality of managing and searching for the parts. Especially the possibility to look at individual parts before downloading them with a rotatable 3D model, led to a considerable saving of time. The combination of the broad catalog selection and the different search functions where parts can

be compared topologically or identified per sketch or full-text search, reduces the workload significantly. The system is mainly used for working with CAD designs. Especially in the field of equipment design where a lot of supplier parts are in use. Altogether ZF holds 2,400 licenses, so basically every CAD user has the possibility to use PARTsolutions.

INTEGRATION INTO THE ZF SYSTEM ENVIRONMENT

Besides linking the parts management system to the existing PDM system, the integration requires an individual adjustment to the needs of the different departments: "Internally we particulary have very different approaches. For instance the requirements in the product development, where gear units and axes are planned, are very different from the traditional mechanical engineering and fixture construction. In product development for instance we use PARTeditor and PARTproject to create our own native

catalogs. Another issue was the adjustment to our second PDM system. A few years ago we integrated a subgroup that does not work with Axalant but with PTC's PDM Link. But this adjustment was also handled successfully and has been working perfectly ever since", says Salhi.

JOINTLY PLANNED PROJECTS

After ZF has successfully carried out a release change from PARTsolutions version 8.1 to version 9.05, many other activities are already planned. For better representation of the native catalogs they will be converted from the previous SDL data format to the newer JT representation. For this there is already a limited introduction/implementation of the PARTsolutions version 9.07 in the ZF plant in Schweinfurt.

"An upcoming project will be the improved distribution of catalogs over our internal ZF synchronization process at the individual ZF production sites. Here we rely on CADENAS' applica-



tion server, released in 2014", Salhi explains. The application server of 2014 makes it possible to retain catalog data and automatically hand it over to the respective clients. This way there it is no longer necessary to retain the extensive catalogs locally at the respective production sites, which allows a higher performance of the whole system.

CONCLUSION: IMPROVEMENTS AND OPTIMIZATIONS AT ZF BY USING PARTSOLUTIONS

The experience with the introduction of PARTsolutions Salhi summarizes as follows:

"At big companies like ZF you need a certain amount of time until new applications are completely implemented. The key user training with CADENAS contributed a lot to accelerate this process and there was also a lot of positive feedback about it. Meanwhile the employees have also taken on well the Strategic Parts Management. Especially the possibility to search visually for specific parts in the PARTsolutions PARTdataManager was a very welcome improvement to our previous PDM system. Although we still have the need to reduce our component diversity, the multiplication of parts has significantly decreased since the introduction of PARTsolutions."

Altogether ZF recorded a considerable reduction of costly duplicate copies. Due to the improved search functionality, the 3D view and the simple export of catalog data into the 3D CAD environment, ZF profits from a noticeably accelerated component development.



ZF FRIEDRICHSHAFEN AG IN FIGURES

- Cooperation with CADENAS: since 2005
- Savings per newly created part: approx. I.000 Euros
- Number of PARTsolutions workstations: 2,400



RÖHM GMBH // CASE STUDY

The Strategic Parts Management PARTsolutions at the Röhm GmbH

Integration of PARTsolutions in SAP and Solid Edge

RÖHM RELIES ON RELIABLE SOLUTIONS

RÖHM is one of the globally leading chucking tool manufacturers with a wide and powerful product range for clamping and gripping technology. For its products, the company is using about 12,000 different standard and supplier parts. With more than 60 establishments and agents and over 1,500 employees, RÖHM is present across the globe.

CADENAS and RÖHM have been cooperating since 1998. To reduce their parts diversity, RÖHM has been using CADENAS Strategic Parts Management PARTsolutions since 2005.

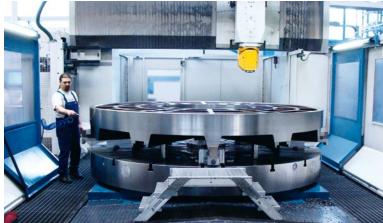
INITIAL SITUATION AT RÖHM

Before PARTsolutions was implemented at RÖHM, CAD parts were manually filed in SAP. This was a lot of effort that had to be carried out with every new part. Depending on the type every newly created part would cost the company at least 200 Euros. This is why RÖHM needed a parts management that could manage all components professionally with relatively little effort. It was the declared aim to reduce the parts diversity and reduce costs this way.

Dipl.-Ing. Heinrich Müller, CAD administrator at RÖHM, explained the requirements resulting from that aim:

"The standardization in the design and an easy handling of the catalog support the design processes financially and by saving time. Using parts over and over instead of creating them anew, reduces the effort for departments like procurement and logistics. We made a lot of good experience with CADENAS' solutions that already had been used previously in the company. This is why we immediately focused on the Strategic Parts Management PARTsolutions. RÖHM has been cooperating with CADENAS since 1998. Therefore it was only natural that when they changed to the 3D CAD system Solid Edge, they would again select a CADENAS solution", says Müller. PARTsolutions is mainly used for the design department.





Drill chuck assemby

Special portal turning and milling machine

PARTSOLUTIONS INTEGRATION INTO THE RÖHM SYSTEM ENVIRONMENT WITH SAP AND SOLID EDGE

At RÖHM all workstations that are equipped with CAD also have an access to PARTsolutions. Altogether about 90 engineers are using CADENAS Strategic Parts Management at the different company sites.

"At first PARTsolutions was introduced to integrate it into our Solid Edge environment. After this task was successfully fulfilled, we decided in a next step to connect it to our SAP system. The particular challenge was to link PARTsolutions with our in-house SAP system. Additionally it was necessary to carry out a user specific adjustment to our company-owned PLM software. CADENAS helped us to tailor PARTsolutions exactly to our needs", says Müller.

This conversion period was accompanied by a series of trainings. The employees received extensive training to handle the new software and therefore were able to use PARTsolutions to full extent shortly after the introduction.



» In first place our aim was a higher efficiency through improvement of the design processes. Our time effort decreased significantly through the possibility to select parts directly from the products of the catalog while designing

HEINRICH MÜLLER CAD Administrator RÖHM GmbH

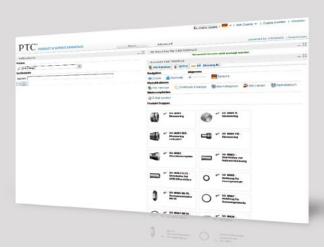
CONCLUSION: INCREASE OF **EFFICIENCY AND COST SAVINGS** DUE TO THE STRATEGIC PARTS MANAGEMENT **PARTSOLUTIONS**

In terms of the complete project Müller draws the following conclusion:

"For design users the parts management became a lot more comfortable. Parts can be found and used significantly easier. Now it can also be tested whether the searched part has already been used before it is incorporated again into the material master data. Thus internal processes run a lot faster. In the eight years we have been using the parts management system, our product range has considerably increased. Needless to say this resulted in an increase of required parts as well. However, we expected that the new creation of parts increased in a moderate, proportional relation to the diversity of parts use for our new developments. By using PARTsolutions a parts growth above average was avoided."



PTC CREO



CADENAS expands cooperation with PTC

AND DELIVERS THE WORLDWIDE LARGEST ONLINE CATALOG INTEGRATED INTO PTC CREO, FOR 3D CAD MODELS



» With launch of the PARTcommunity Portals for PTC another big step is completed to provide customers of PTC Crew with the best tools and means to make work easier to them. «

Brian Thompson VP Product Management PTC Inc.

CADENAS presented the new PARTcommunity portal for PTC®, which offers the worldwide largest Creo® integrated online catalog for CAD models in native formats for the design software PTC. Via the PARTcommunity portal engineers get immediate access to millions of certified, native 3D CAD models from over 400 industrial manufacturer catalogs. From these the 3D CAD models can be downloaded for free and configured.

"CADENAS supports us to offer the excellent performance our customers expect from us", says Brian Thompson, VP Product Management, PTC.

Engineers can now browse the manufacturer catalogs precisely for the necessary part, configure product options, receive an interactive 3D preview and can eventually download the model to add to their PTC Crew environment.

"These options save engineers a lot of time and shorten work flows", explains Walter Leder, COO at CADENAS.

"It is all about the highest possible customer satisfaction. We share this philosophy with PTC and are looking forward to further cooperating with the PTC team, to be able to offer engineers everywhere the best solutions."

Besides the online engineering Portal, CADENAS will continue to closely cooperate with PTC, to develop more complementary solutions.



SVS-AUTOMATION



SVS-Automation

expands dealer network with CADENAS'

3D CAD download portal

PARTcommunity

Optimal implementation of solenoid valves in the Electronic Product Catalog

Since the beginning of the year, customers of the solenoid valves' manufacturer SVS-Automation from Polling can download the complete product range as 3D CAD models in the SVS PARTcommunity download portal for free. The new 3D CAD download portal of SVS-Automation is based on the latest PARTcommunity version 3.0 of CADENAS, the software manufacturer from Augsburg.

FREE AND FAST DOWNLOAD OF 2D AND 3D CAD MODELS

The download portal gives customers of SVS-Automation access to the complete solenoid valves series as 2D and 3D CAD models and can integrate them directly into their design. Besides saving a lot of time, the new 3D CAD download portal offers the best possible availability of 3D data world-

wide via numerous vertical market places and CADENAS' software solution for the Strategic Parts Management PARTsolutions.

CLOSE COOPERATION WITH THE CUSTOMER BRINGS THE DECISIVE COMPETITIVE EDGE

CADENAS' offer convinced SVS-Automation especially because they can now expand their dealer network easily and simply across Europe and due to better communication with the customer they can react easier to customer specific demands.



» With the implementation of our complete product range in the Electronic Product Catalog we are a trendsetter in our industry. With this we would like to make working with our products as easy as possible for our existing and future customers. «

Franz Staudacher
CEO
SVS-Automation GmbH



Wärtsilä

Seamless integration

of the 3D CAD download portal in the **Wärtsilä** website

IMPROVED CAD DOWNLOAD DUE TO BETTER PARTCOMMUNITY EMBEDDED TECHNOLOGY

CADENAS presents its global innovation: The 3D CAD download portal technology PARTcommunity has now been seamlessly integrated – without programming effort but with a customer specific design and layout – in the website of a component manufacturer.

As of now, manufacturers of components can integrate all desired elements of the CADENAS PARTcommunity technology for 3D CAD download portals. These are, for instance, search for the desired component, product display or CAD download. Layout and design of the PARTcommunity embedded can be graphically designed via backend by yourself without programming experience.

Wärtsilä, a global leader in complete lifecycle power solutions for the marine and energy markets is the first to adopt the next generation of the PARTcommunity embedded technology developed by the software manufacturer from Augsburg. All functions of the 3D CAD download portal PARTcommunity are seamlessly integrated into the website of the company headquartered in Helsinki. This allows an even faster and easier download of the 3D CAD models of marine engines.



COMPREHENSIVE 3D CAD MODEL SERVICE DIRECTLY ON THE MANUFACTURER'S WEBSITE

Due to the new PARTcommunity embedded technology, Wärtsilä's customers can directly look for 3D CAD models of the marine engine series Wärtsilä 20, configure them or, for instance, have a 3D preview and a chart with all component information displayed. Afterwards engineers can then download

the 3D CAD models easily in a JT format or import them directly into their respective CAD system for shipbuilding and plant engineering like AVEVA Marine and Tribon. The extensive CAD service is easy to handle and can be operated intuitively.

Wärtsilä has an Electronic Product Catalog based on CADENAS' eCATALOGsolutions technology. Due to embedded PARTcommunity, the know-how of the software manufacturer from Augsburg is directly integrated in their own website. The decisive benefit of the innovative technology is that users are not led away from the manufacturer's website because of popups or external links. A special programming by the manufacturer or CADENAS is not necessary in this case.





NORELEM

3D CAD model app in practical use -

a springboard for progress and simplification

Renowned supplier of standard parts norelem reports about practical use of the app



The 3D CAD model app of the standard and component supplier norelem, based on CADENAS

eCATALOGsolutions technology has been available for download for iOS^{TM} and AndroidTM for about 6 months; time to take stock for the first time.

The full-range supplier from Markgröningen near Stuttgart, Germany is wellknown for his green catalog THE BIG GREEN BOOK, which set a standard in the industry due to its logical structure and the diversity of available products. The uncomplicated ordering possibility and the fast, reliable and quantity independent delivery as well as the simple provision of product information are responsible for the great success of the company. In April of this year norelem presented its 3D CAD model app at the Hanover fair, which makes the data of THE BIG GREEN BOOK catalog also available as mobile application for smart phone and tablet PC.

INDISPENSIBLE 3D CAD TECHNOLOGY

Since the implementation of the app, norelem has been recording constantly growing access numbers with a large proportion comes from foreign



» The app is another step to grant the user simple and fast access to CAD data everywhere. To us the app is especially a springboard for further progress and simplification. «

MARCUS SCHNECK
CEO
norelem Normelemente KG

users. For customers this service presents a large additional value, since it saves them a lot of time, offers a high selection and simple transfer of the data into the CAD processing programs. This service is meanwhile so essential

that many sector experts regard it as indispensable basic element.

Although there are no ultimate figures available yet, there is a trend that especially the traditional CAD download or forwarding to the workstation is the function which is mostly used in the app. This shows that the potential of the app has not yet been fully realized. According to this, for instance the Augmented Reality function should be integrated, where photographed parts can be identified by the app and then found in the catalog. The same way the



interface for the HD Full mode offers space for upgrades and design improvements.

Altogether norelem feels affirmed to have invested into the application on the basis of CADENAS' eCATALOGsolutions technology.



AMF

AMF trades online with the CADENAS 3D CAD App

Mobile application makes exciting products available on the road

Comprehensive, uncomplicated and soon indispensable – that 's the way the new, freely available 3D CAD model app of the clamping systems manufacturer AMF presents itself, based on the eCATALOGsolutions technology of the software manufacturer CADENAS from Augsburg. With this application engineers and purchasers can now browse the product catalog of AMF for parts, download CAD models and call up information about innovations on the move.

SUCCESS THROUGH SERVICE AND INNOVATION

The Andreas Maier GmbH & Co. KG in Fellbach, abbreviated AMF, is one of the most innovative companies in the field of clamping systems and quick-change systems that function as interface between the machine table and the workstation fixture. Every year the company launches a multitude of new products on the market aimed at reducing set-up times and finding an individually suitable

solution for the customer. In addition, AMF offers a service which includes not only providing these products but also a complete analysis of the manufacturing situation at the customer and afterwards creating an end-to-end solution. This service performance, unique for this industry, is supported by numerous technical systems and its latest supplement is the AMF App.

CUSTOMER ORIENTATION AND SUPPORT OF SALES

The AMF App for Android and iOS serves two purposes: On the one hand the customers can comfortably find information and 3D CAD models of AMF products and send them to their work place. On the other hand the technology enables the sales staff to find the suitable model at lightning speed when

talking to their customers and integrate it into the fixture, to create realistic simulations with customers. This is made possible through CADENAS' Augmented Reality technology for 3D CAD models.

The most important reason for introducing the 3D CAD model app is the speed of development resulting from it: Most of the time users have to work with different platforms for their project. Therefore prerequisites for efficient working are similarity researches, intelligent search systems and reasonably structured catalog data. All of this is now provided by the AMF App with data from the PARTcommunity.

YOUR PRODUCT CATALOG AS AN INDIVIDUAL CADENAS APP

Besides AMF, many other renowned companies have already realized the benefits of their own mobile product access system: Afag, the :K Magazin, PHD 3D and igus already have an individual 3D CAD App.





FEATURES FOR AMF CUSTOMERS & SALES

Benefits of the AMF 3D CAD model app:

- Free download of 2D and 3D CAD models from the AMF product catalog
- The CAD models are available in all important CAD formats
- Mobile access to all 3D CAD models at any time



SIEMENS PLM



Innovative software solutions on the Siemens PLM Connection

in **Germany** 2013

The combination of the strategic parts management PARTsolutions with NX and Teamcenter attracted a lot of interest among visitors

At the Siemens PLM Connection Germany 2013 which took place from 23^{rd} to 24^{th} April, CADENAS presented the benefits of the Strategic Parts Management PARTsolutions in connection with NXTM and Teamcenter®.

Moreover, as partner of SIEMENS PLM, CADENAS introduced the possibilities to implement the PURCHINEERING concept, which optimizes cooperation between procurement and engineering. The participants were convinced by the intelligent search methods that offer completely new possibilities to intuitively find product information and CAD data of standard, supplier and self-designed parts.

CADENAS SPONSORS PRIZE FOR COMPETITION

As exhibitor CADENAS contributed to a competition which was organized by the Siemens PLM Connection: CADENAS sponsored a 7 inch Lenovo tablet with 16 GB memory that was handed over to the happy winner at the end of the second conference day.

SIEMENS PLM CONNECTION GERMANY - "FROM USERS FOR USERS"

As biggest professional event for users of the Siemens PLM software products in Germany, the user conference could once again excite around 600 users

from the research, development and production sector with a diverse offering. High-class speakers accompanied the participants of the Siemens PLM Connection Germany through the two-day conference, with practical presentations and hands-on sessions.

Together with the corresponding exhibition the conference presented a great information offer about the areas of PLM and CAD.



MAXWELL

Maxwell Rendering

makes a real eye-catcher out of

Rollenbau's product catalog

Realistic product images offer component manufacturers completely new marketing possibilities

Rollenbau, the leading supplier of castors and wheels in Europe, in cooperation with CADENAS, transformed their existing 3D geometries through the new interface software Maxwell Render into photorealistic pictures. To the naked eye the difference to product pictures of professional photographers are hardly visible. This allows the company to advertise their products with high-resolution graphics on their website, in their print catalog, on DVD or on their trade-fair posters.

ROLLENBAU PLACES THEIR PRODUCTS IN THE PERFECT LIGHT

CADENAS made it possible to generate photorealistic pictures of products in CAD format out of the Electronic Product Catalog eCATALOGsolutions at the push of a button. Like in a professional photographic studio, light sources can be defined and positioned at will. The products are rendered in a realistic light situation so that differences to professional product pictures are hardly visible to the naked eye.



SAVE EFFECTIVE COSTS

So far products have usually been photographed by professional photographers. This caused a lot of costs for logistics, organisation and personnel. By using rendered pictures these costs can be reduced in the future.

BECOME A REAL EYE-CATCHER AND SAVE COSTS

Of course CADENAS will, on request, take care of rendering the preview pictures of your catalog or high-resolution graphics.

Turn to the CADENAS team: Marketing@cadenas.de.





» Despite our extensive product range we are able to generate high-resolution product pictures at the push of a button with eCATALOGsolutions. Now the product pictures in our marketing documents are a real eye-catcher. «

KARL ALFONS ROSSE II CEO Rollenbau GmbH

Anniversary PART COMMUNITY

15 years CADENAS PARTcommunity -

The big world of 3D CAD models

3D CAD download portal again rose significantly in the website ranking



Since 1998 CADENAS has been providing their innovative 3D CAD download portal platform PARTcommunity to component manufacturers and engineers from mechanical, electrical and plant engineering, formally known as PARTserver. In the last 15 years the free download portal for 2D and 3D CAD models has been continuously upgraded with numerous innovative functions. The vision CADENAS pursued when founding the download portal, however, stayed the same: to bring engineers faster and easier to the desired component.

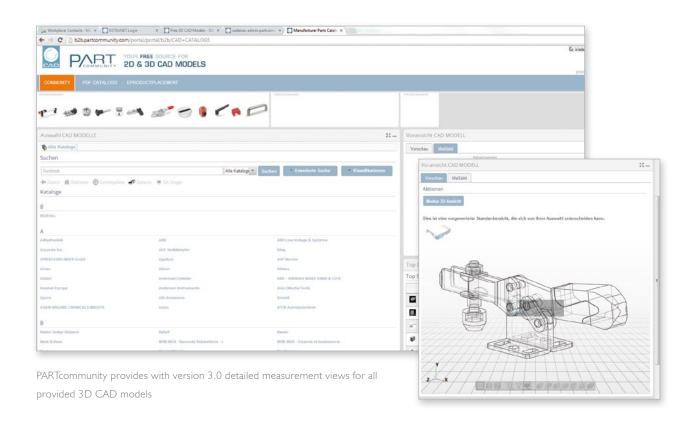
PARTCOMMUNITY ENJOYS GREAT POPULARITY

Meanwhile the 3D CAD download portal impresses with more than 400 certified manufacturer product catalogs and over 8.5 million downloads per month – tendency rising. More and more engineers trust in the free 3D CAD models of renowned manufacturers in the PARTcommunity download portal. The 3D CAD catalogs are based on CADENAS' eCATALOGsolutions technology.

PARTCOMMUNITY 3.0: FREE AND FAST DOWNLOAD

Also the newest version of the PARTcommunity technology 2.1 (since December 2013 also available in version 3.0) promises new features, for instance:

- Higher usability due to simplified portal registration
- New and uniform viewer technology for all browsers
- Compare views at the Geometric 3D Search



3D CAD DOWNLOAD PORTAL PARTCOMMUNITY AS MOBILE APP

Since May 2012 CADENAS' PARTcommunity is also available as 3D CAD model app for free download with access to all components from more than 400 manufacturer catalogs for the operating systems Android™ and iOS™. Already more than 260,000 engineers and purchasers of the mechanical and plant engineering as well as the automotive industry are excited about CADENAS' PARTcommunity 3D CAD model app.

See for yourself the PARTcommunity 3D CAD model app under: www.cadenas.de/de/app-store

CADENAS PARTCOMMUNITY ON INTERNATIONAL RECORD FLIGHT

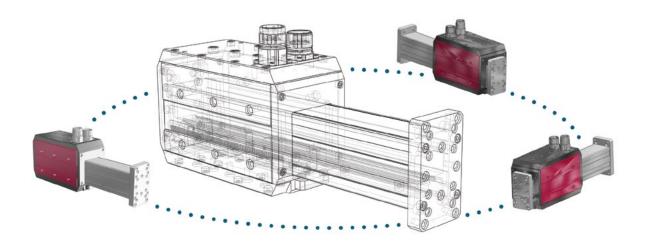
According to www.alexa.com (30th April 2013) CADENAS' 3D CAD download portal PARTcommunity, with more than 400 certified manufacturer catalogs, is worldwide the most visited online parts library for the download of 3D CAD models. Compared to the last study in March 2013 the worldwide ranking of the PARTcommunity website www.partcommunity.com improved by another 16,000 positions from rank 49,610 to under 35,000, according to Alexa (www.alexa.com). Also in international comparison the PARTcommunity download portal has significantly increased in the ranking, for instance in South Korea from rank 1,600 to rank 798.

Alexa describes itself as a web information company and numerous marketing managers consider it as the instrument for web traffic. Alexa currently has over 30 million websites ranked worldwide.

You can visit the CADENAS PARTcommunity here:



PARTCOMMUNITY APP 2.2.4



Precision work with the newest version of the 3D CAD model app

CADENAS NEW PARTCOMMUNITY APP VERSION IMPRESSES WITH TREND-SETTING ADD-ON OPTIONS

Since October 2013 CADENAS' PARTcommunity 3D CAD model app is available in the newest 2.2.4 version. Besides small tweaks/optimizations regarding function and design, the app now also has two completely new features:

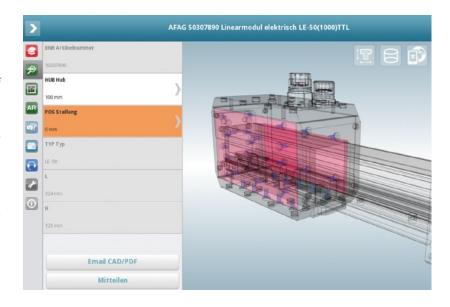
The most important innovation for mobile use is the new transparency function for 3D view. At the touch of a button you can look inside the structure of a selected component or an assembly.

The integrated 2D dimension display also supports a better overview. With it, an uploaded 3D model can be displayed as vector or raster graphics. In doing so, the generated 2D projections show precise indications about the actual dimensions of the displayed model and allow easier comparisons with other models.

NATIVE APP FOR ANDROID AND IOS

The PARTcommunity 3D CAD model app has so far been the only app of its kind, specially developed and optimized for the Android as well as Apple's iOS

system. With it, engineers and purchasers from mechanical, plant and automotive engineering have direct access to more than 400 certified manufacturer catalogs with millions of components that can be directly viewed as 2D or 3D CAD model on a smartphone or tablet.



APP DOWNLOAD RECORD



More than 320,000 Downloads -

sensational success of CADENAS' 3D CAD model app

Amount of PART community app users is constantly rising

CADENAS' 3D CAD model app is getting extremely popular: This shows the sensational member of more than 320,000 downloads. Since May 2012 the PARTcommunity 3D CAD model app has been offering engineers and purchasers mobile access to thousands of components from more than 400 certified manufacturer catalogs of leading international companies. The app can be used with all current operating systems iOS™ and Android™ and is available for free download.

For newcomers CADENAS is now offering a simplified web app. Due to this new technology the PARTcommunity 3D CAD model app can be used with all smart phones regardless of the operating system. For more information, please visit:

www.b2b.m.partcommunity.com

FAR BEYOND 3D CAD MODELS

The app helps engineers and purchasers of the mechanical, plant and automotive engineering industry to directly find the right 2D and 3D CAD model in the desired CAD format.

The PARTcommunity app is based on CADENAS' eCATALOGsolutions technology. The 3D CAD models are also compliant with the most important international standards and available for

all current CAD systems. The extensive functions of the PARTcommunity app include: Product configuration, enhanced product information like pictures and Augmented Reality, application examples of the respective components in practice, request of a non-committal offer, direct contact to the manufacturer, extensive support and company news.



GERMAN STANDARD PARTS AWARD



A Cooperation of:



The master of **Standard Parts**

Winner of the design competition awarded at the MOTEK 2013

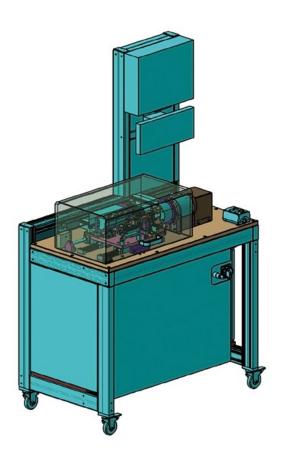
The winners of the German Standard Parts Award have been chosen. The jury of CADENAS and Otto Ganther in cooperation with the trade journal: K magazin, awarded the best and/or most efficient contributions involving the most standard and supplier parts. The design competition was started in March this year. Now, the prizes were awarded at this year's MOTEK – the international trade fair for production and assembly automation – which took place in Stuttgart.

CLEVER COMBINED DESIGNS

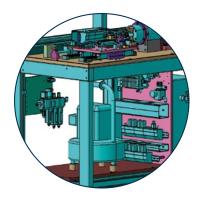
The first place, endowed with 5.000 Euros, was awarded to Robert Fritsch from the TMS VM10 Team of the MQS Messtechnik AG for their mobile measuring machine. The measuring instrument, with its 18 pneumatically controlled probes, serve the purpose to measure individual parts fully automatically and determine tolerances. Besides the pure engineering performance, more than 90 percent of the machine is made of standard parts.



2nd place: feeding system for plastic injection molding



Ist place: mobile measuring machine



The mobile measuring machine is especially suitable for gear parts and delivers highly accurate measurements.

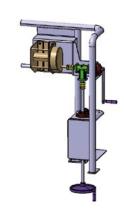
At TMS developers have been using a high amount of Standard Parts.
This accelerates design and rewarded MQS with the German Standard
Parts Award.

The second place, with a prize money of 2.500 Euros was earned by Bernd Weiskopf of Produktionstechnik Weiskopf with his feeding system for plastic injection molding. The flexible design is characterized by its high process security and easy integration in existing product chains. With 556 standard parts of altogether 637, the design reached a rating of more than 87 percent.

The third place, endowed with 1.000 Euros, was awarded to the engineer Martin Möller for his innovative revolu-

tion limiting device. The design allows it to restrict the movement of parts that are manhandled without using fixed stops. The machine consists of 109 individual parts and therefore has a standard parts rate of 81 percent.

The awards were handed over by the jury member Thilo Hofmann, development engineer at Otto Ganter, Michael Kleine, chief editor of the :K Magazin and Jürgen Heimbach, CEO of CADENAS.



3rd place: innovative revolution limiting device



PARTCOMMUNITY MOBILE



PARTcommunity mobile:

Fast & Favorable Web App

for manufacturers

WITH CADENAS THE ELECTRONIC PRODUCT CATALOG BECOMES A PLATFORM INDEPENDENT WEB APP IN NO TIME

Numerous renowned companies have been profiting from CADENAS' native 3D CAD model app for some time. Now the software manufacturer from Augsburg is offering a platform independent entry solution at a favourable price with PARTcommunity Mobile. With this solution, manufacturers of parts can grant mobile access to their Electronic Product Catalogs to customers and sales in no time. Due to the web app technology it doesn't matter whether the mobile devices are operated by the market leaders Android and iOS, or by operation systems like Windows Mobile, Blackberry OS, etc. Manufacturers of parts can adapt the web app optically to their corporate

design and also exactly define content
– for instance which specific (product)
information should be provided.

FAST AND FUNCTIONAL

Regarding the range of functions, the PARTcommunity mobile app is focused on the essentials: Besides the typical browsing through the catalogs, there is also a full-text search to find the required parts. Additionally to the product data a simple 3D animation with low system requirements is displayed.

The CAD data of the selected part can be easily downloaded to the workplace via email, in all current formats. Unlike CADENAS' native manufacturer 3D CAD model app, PARTcommunity mobile is a HTML based application. The web app uses the ajax concept of the asynchronous data transfer. This way it is possible to change the displayed HTML page without having to load it anew. Due to this technology the data volume to be transferred is decreased and an especially fast access to catalog data is realized.

The prerequisite for creating an individual PARTcommunity mobile app is a PARTcommunity portal with an Electronic Product Catalog based on CADENAS' eCATALOGsolutions technology.

PART SOLUTIONS VERSION 9.07

CADENAS PARTSolutions excels with version 9.07

Improved handling due to seamless integration into CAD systems, word completion and calculation assistant

In August CADENAS introduced the newest version of the Strategic Parts Management PARTsolutions. In the version 9.07 of the CADENAS software solution a multitude of new functions for engineering and procurement were integrated and previous features were further improved. Among the highlights are an upgraded seamless integration, the search with word completion and the calculation assistant.



With the newest version the user interface and the search methods of the seamless integration were also revised. This feature allows to integrate the standard and supplier parts library into existing CAD processing programs and use it to look for 3D CAD models within the design software. It is new that the interface was completely aligned to the structure of the PARTsolutions software. All operating elements are now identically arranged so it is no longer necessary to tediously realign between the two programs. The seamless integration is available as dockable extension as well as



in window form for AutoCAD, Autodesk Inventor, NX, Solid Edge, Pro/E Wildfire, Creo Elements/Direct Pro, Creo Parametric and SolidWorks and also only in window form for CATIA. As integrated interface in CAD programs PARTsolutions is now also available for the CAD programs SpaceClaim Engineer, AutoCAD 2014 and NX 8.5.

FIND FASTER WITH AUTOMATIC WORD COMPLETION

The new automatic word completion ensures more efficient working and bigger comfort: Already when entering component search terms, suitable proposals from the data base appear. Especially long or complicated search terms can now be selected a lot faster. At the same time this function gives you a good overview of which search terms are actually available in the selected list. If no proposals appear in the dynamic search function you already get the information while typing that there are no hits to this term.

CREATE INDIVIDUAL CALCULATION ASSISTANTS WITH LITTLE EFFORT

Also the help functions were further improved in the new version. For instance the calculation assistant was completely revised and allows an even faster creation of new customer specific assistants. Via a simple input field, all relevant rules and formulas are defined and linked. The resulting assistant can be docked both in the PARTsolutions software and deposited as independent window in the background. Together with the parts search all suitable components that fulfill the desired technical specifications, can now be found fast and easily.





14™ CADENAS Industry-Forum 2013 -

Promising innovations

Apps for Electronic Product Catalogs

The 14th CADENAS Industry-Forum from 19th to 20th February 2013 was again attended by more than 200 professional visitors who informed themselves about the newest topics on mechanical, electrical and plant engineering.

Nearly 20 best practice presentations and the interactive workshops convinced the participants of the benefits CADENAS software solutions provide in theory and in practice. The visitors were especially thrilled about the numerous networking possibilities between the presentations and at the evening event.

CADENAS SETS TRENDS FOR THE FUTURE

The prelude for the 14th Industry-Forum 2013 was the opening speech of Jürgen Heimbach, CEO and founding member of CADENAS, who gave an overview of the newest trends and developments at the software manufacturer from Augsburg.

In the engineering sector the participants were able to gain an insight into CADENAS' new, free knowledge database for engineers and manufacturers, which is an innovative platform for knowledge exchange in engineering due to many innovative ideas. Jürgen Heimbach showed in his presentation how



engineers and purchasers can profit in the future from application examples in the innovative knowledge database.

As highlight in the Electronic Product Catalog sector, CADENAS introduced an innovation which is combined with mobile devices: As of now component manufacturers can additionally equip their print catalog with user-customized Quick Response (QR) Codes. By means of a smart phone users now get within seconds to the desired 3D CAD model or to other additional functions, for instance automatic requests for proposal, technical documents or use cases.

REVOLUTIONARY MARKETING STRATEGIES FOR COMPONENT MANUFACTURERS

A great number of inspiring best practice presentations provided component manufacturers with new ideas about how to exploit the hidden potential when marketing their products with the Electronic Product Catalog eCATALOGsolutions. In their presentation "Customized app - use your creative moments!", Afag presented the first successes with a company-specific app that was tailored to the Afag product catalog in cooperation with CADENAS.

PROPER BLUE-WHITE EVENING UNITED THE VISITORS

In the evening of the first conference day CADENAS invited to a traditional evening event which took place at the brewery of Riegele Wirtshaus in Augsburg. In the typical Bavarian tradition, dinner was served in an informal setting and different topics were discussed. To break the ice, visitors could cheer for one another at different traditional Bavarian games like milking or log sawing and some managed to climb the top of the victory podium.



From plump prototype to Santa's Snazzy Speedster

WITH THE PART COMMUNITY 3D CAD DOWNLOAD PORTAL AND A 3D PRINTER THE CHRISTMAS ELVES MIGHT AS WELL PACK UP AND GO HOME



How does Santa manage to handle his huge load of present orders in such short time? According to unconfirmed reports his business is not really conveniently situated at the North Pole. At CADENAS we have our own theory how Santa's business and its complete logistics is just in time ready by the end of the year. In doing so his key elements are: A 3D printer and access to the PARTcommunity with its intelligent search functions and a huge 3D CAD parts library.

NO SLEIGH? NO PROBLEM!

Santa shows in an exemplary way the possibilities of the Maker Movements, where inventors and tinkerers independently and globally produce their ideas in small series. Per 3D scanner a 3D sketch is created and compared to existing 3D CAD data of standard- and supplier catalog parts via the intelligent search function of the PARTcommunity. With a 3D printer the necessary parts

are instantly produced. Therefore it is perfect to quickly create a prototype you can touch or – like in the case of Santa – release the helping elves from sleigh carving. Who would like to follow suit and start with his own sleigh production, can find the 3D model here in all common CAD formats for free download on PARTcommunity.





For more information to our Christmas video, please visit:

www.youtube.com/ watch?v=u0hUd2Z5RLc

IMPRINT

Editor:

CADENAS GmbH
Berliner Allee 28 b + c
D-86153 Augsburg
Germany

Phone: +49 (0) 82 | 2 58 58 0 - 0 Fax: +49 (0) 82 | 2 58 58 0 - 999

Info@cadenas.de www.cadenas.de

Editorial office: Franz Braun, Lieve Nantke, Stephanie Benirschke

Graphics, layout: Kerstin Reß, Tobias Meyer

© 2014 All rights reserved. Reproduction or electronic distribution only with previous consent of the editor.

CADENAS UNITES

COMPONENT MANUFACTURERS & SUPPLIERS WITH THE INDUSTRY!

CADENAS SOLUTIONS for **industrial buyers** of components

THE STRATEGIC PARTS MANAGEMENT

Sustainable cost reduction of standard, supplier and company parts for engineers and purchasers.



THE GEOMETRIC SIMILARITY SEARCH

Find available CAD geometries in a smart way and classify them semi-automatically.



CADENAS SOLUTIONS

for manufacturers & suppliers of components

THE ELECTRONIC PRODUCT CATALOG



The software solution to create and promote Electronic CAD Product Catalogs.

THE SUPPLIER PORTAL

The platform improves the communication to external suppliers.



THE VERTICAL MARKETPLACES



Numerous online marketplaces to multiply your Electronic CAD Product Catalog.

THE PURCHINEERING CONCEPT

Improves the cooperation between purchasing and engineering.





CADENAS GmbH Augsburg

Berliner Allee 28 b + c D-86 I 53 Augsburg Phone: +49 (0) 82 | 258 58 0 - 0 Fax: +49 (0) 821258580 - 999 E-Mail: Info@cadenas.de

www.cadenas.de/en

THE CADENAS GROUP WORLDWIDE:

Germany Phone: +49 (0) 821 2 58 58 0 - 0 Austria Phone: +43 (0) 664 2 45 27 13 Italy Phone: +39 051 04 16 776 France Phone: +33 (0) 4 8 I 30 00 04

Spain Phone: +34 932 749 540

USA Phone: +1 (513) 453 04 53 Croatia Phone: +385 (0) 35 40 26 60 South Korea Phone: +82 505 936 93 60 Japan Phone: +81 3 59 61 50 31 China Phone: +86 (0) 21 63 55 13 18

Copyright©1992-2014 CADENAS GmbH. All rights reserved. CADENAS, PARTsolutions, eCATALOGsolutions, PARTserver, PARTwarehouse, ePRODUCTplacement and PURCHINEERING are brands of CADENAS GmbH, Augsburg. All further brand names, company names or product names are brands or registered trademarks of their rightful owner. Not liable for any information.