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Get in touch with us



Delta Software Technology GmbH Eichenweg 16 57392 Schmallenberg

phone +49 2972 9719-0 fax +49 2972 9719-60 e-mail info@delta-software.com

www.delta-software.com

24.-25.11.2009 iX-Days for COBOL

COBOL is still the most common programming language for the development of commercial applications. Therefore, the main focus of the iX-Days for COBOL is on modernisation strategies, starting with the integration of web services and service-oriented architectures to development environments and test data management.

Being a specialist for generative development tools, Delta Software Technology has more than 35 years of experience in development and modernisation of COBOL applications. Many of our customers have modernised their applications not only once, but several times over the years and thus made the best of their investment. Our contribution to the iX-Days for COBOL presents a current large-scale project that accomplished several modernisation requirements at once.

Migration, Architecture Transformation and Modernisation at RDW – Experiences with Full Automation in a Large-scale Project

RDW ICT, the independent IT of the Dutch Centre for vehicle technology, approval and information, honoured as one of the best government organisations, modernised its entire IT applications with two goals: reducing costs and obtaining flexibility.

RDW ICT decided against outsourcing and for full automation:

- 14 million Lines of Code have been modernised completely automated;
- 1,3 million changes with an error rate near 0;
- Return on investment within one year.

This large-scale project included

- the migration of Unisys OS2200 RDMS RSA to Microsoft Windows with .NET and SQL Server
- the transformation of the expensive monolithic applications to a modern layer architecture

COBOL (Delta ADSplus) will remain the language for business logic, front-ends will be implemented as ASP.NET web applications.

Topics of the lecture are the applicability of full automation for other modernisation projects, requirements and prerequisites, pro-



ceedings, effects on parallel projects, productive applications and the project organisation.



The iX-Days for COBOL (iX-Days rund um COBOL) are organised by the HLMC agency in collaboration with the iX magazine published by Heise. The event addresses decision-makers and developers who want to know more about best approaches for their modernisation projects and how to adapt their COBOL applications to their business strategies.

The *iX-Days for COBOL* start with half-day workshops on November 24th. The conference will take place on November 25th and is accompagnied by an all-day exhibition.

Register now. You will find all information and registration forms at

iX-Days for COBOL, 24.-25. November 2009 in Munich: www.cobol-day.de

Further Information

Delta's tools automate the development, maintenance and modernisation of large application systems. They help you to use and benefit from the latest concepts for your software development. As "The Generator Company" Delta Software Technology has a 30-year track record of successfully delivering innovative, generative tools to Europe's leading companies. We competently support you with the modernisation of your applications as well as with the design, development and introduction of tailormade development processes and tools.

Following products have been used at RDW:

- <u>AMELIO Modernisation Platform</u> to fully automate the modernisation and migration
- <u>SCORE Data Architecture Integration</u> to transform the architecture

Please <u>get in touch</u> with us if you want to modernise your applications with full automation or if you want to improve your software development with automation.

07.-08.10.2009 MDSD Developers' Day: Practical Application Scenarios of Modeldriven Development

Practical Application Scenarios of Model-driven Development

Even though model-driven software development has turned to a mainstream topic, there is still uncertainty when it comes to selecting suitable concepts and tools for the practical (that means: commercial) usage:

- There is a large range of current MDD tools which is the right one for a specific project?
- Which comparison criteria for MDD tools are essential for the practice?
- MDD tools mostly cover only a section of the development process how do you best integrate them into a tool chain?

These are only some of the questions that were discussed at the Developers' Day in Oldenburg (Germany) on October 7th and 8th, hosted by the



OFFIS Institute along with Delta.

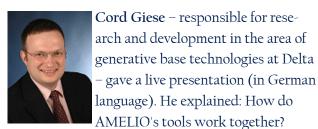
IF-ModE Project Partners Presented Tool Catalogue

The Developers' Day was organised as part of the research project <u>IF-ModE</u> (Interoperability and Feature Tracing for Tool Chains in Model-driven Development). Within the project, information, techniques and practical application scenarios for the usage of MDD tools and tool chains are compiled into a comprehensive tool and criteria catalogue. The current results were presented and discussed at the Developers' Day.

Tool Chain from Real Practice: AMELIO Modernization Platform

At the Developers' Day, Delta presented a model-driven tool chain which has already proven its productivity in big projects: <u>AMELIO Modernization</u> Platform.

AMELIO provides the opportunity to completely automate mass changes of large IT applications. Each project that requires such mass changes is different. To achieve 100% automation, standardised tools have to be assembled with individual tools and corresponding governance processes into an integrated tool chain.



Which role does model data play within this process? Which questions have been important for

customers, and how have they been answered for a specific project?







<u>Developers' Day 07 – 08 October 2009</u> in Oldenburg

The Developers' Day was arranged by the <u>OFFIS</u> <u>Institute</u> and Delta subsequent to this year's MSI workshop. It addressed software developers and architects. The Developers' Day focused on the rating and the practical usage of MDD tools. The practical evaluation should clarify the following crucial questions:

- Which application cases have to be supported by tools / tool chains to provide a genuine added value for you?
- For which application cases do you already use model-driven approaches?
- Which tool (chain) features are important to you/which would disqualify a tool immediately?

(from the MDSDPraxis homepage)

Model-driven Development in Practice: Be a Part of It!

For details of the event, please take a look at the Developers' Day flyer:

<u>Developers' Day 07-08.10.2009: Practical Application Scenarios of Model-driven Development</u>
(German)



Our presentation was held on October 7th in the afternoon. Participants from the academic world and representatives from the industry discussed practice-related questions concerning the usage of MDD tool chains, thereby sharing their experiences.

More details about the Developers' Day you will find at: http://www.mdsdpraxis.de

MSI Workshop: MDD, SOA and IT Management 2009

Directly preceding the Developers' Day, the OFFIS Institute and the technical group "Software Architecture" of the "Gesellschaft für Informatik" were hosting the MSI Workshop "Model-driven Development, SOA and IT management". The MSI Workshop presented research results from the area of modernising existing application systems in order to address new business challenges. The event focused on MDD, SOA and EA (Enterprise Architecture).

For details please refer to the MSI Workshop Flyer

23.-25.03.2009 Model-Driven Development and Product Lines



The sessions, tutorials and discussion panels of this year's MDD & PL have been especially interesting for companies that develop software as selfcontained products or as significant part of other products. Main topics of the conference were:

• Decision criteria for MDD and PL concepts

- Implications for the development processes
- Requirements for staff qualification
- Effective tool chains

Delta Software Technology presented possibilites for increasing efficiency and quality with model-based generative tools for two economically most important subject areas: integration and modernisation.

Automatically Error-free - a Vision?

Model-based and generative techniques can be applied for the maintenance and modernisation of software systems as well. But, how far can processes be automated by this approach? Is it possible to improve the quality of the results and to reduce the error ratio with it? What are the strategies and concepts necessary to approach this vision?



Rüdiger Schilling, managing director of Delta Software Technology and responsible for the conception and the application of generative software tools, provided answers to these questions in his conference lecture. Models and generators play

a decisive role regarding quality. Indeed, it may be necessary to leave the beaten tracks and to organise processes quite differently to achieve the maximum benefit.

Rudiger Schilling illustrated the existing possibilities and limitations by means of experiences from a comprehensive modernisation project with thousands of programs and more than ten million LOC. The results were suprising and very convincing.



Comparing Persistency Layers: Are Generated Adapters the Better Ones?

Deltas contribution to the Student Day explored the (extremely) different concepts to connect business logic and database systems: different generic approaches are opposed to adapters generated from models.



Cord Giese, responsible for research and development in the area of generative base technologies at Delta Software Technology, introduced Delta's generative solution using a concrete

example for the target platform C# / ADO.NET / Oracle. A detailed comparison of the examined concepts particularly focuses on maintenance and performance. Where are the respective advantages?

MDD & PL 2009: Downloads

If you are interested in improving the results and automation for migration and integration projects then please download our presentations now:

You will find further presentation material directly on the event's website: MDD & PL 2009

Profit from Our Experience

As a specialist for generative development tools Delta Software Technology has proven track record of implementing efficient model-based development methods boosting software development. We support you with design, development and introduction of tailor-made development processes and tools. Please get in touch with us if you would like to improve the efficiency of your software development using automation.

3rd Model-Driven Development and Product Lines: Synergies and Experience

In economically tough times competition for best quality and productivity gets harder. In the area of software development leading-edge concepts to increase quality and productivity are characterised by model-driven methods and product lines.

The 3rd MDD & PL conference which has been organised as part of the conference on "Services Science, Agents, and Services for Business, Research, E-Sciences, and IT-Logistic" (SABRE) provided an overview on the state-of-the-art in current research and technology and presented practical experiences with MDD and PL concepts.

MDD & PL 2009: March 23 - 25 in Leipzig

"The motivation for increasing productivity, improving quality, for mastering complexity and for strengthening the power to compete is very high in the software development industry, especially in Germany, Austria and Switzerland. Model-driven and generative development techniques as well as the implementation of software product lines offer effective potential to meet these challenges."

(from the MDD&PL homepage)

27.-28.02.20083. IIR Expert Conference:Software Testing Management

The Least Expensive Tests are Those Which Need NOT to be Done!

Application systems are getting more and more extensive and complex. Each and every modification, extension or new development has to prove its correctness passing strict audit rules. But: Are ever more elaborated tests the only way to assure the correctness of the changes? Has the important testing



phase always to be the "worst end" of all software projects?

Delta Software Technology offers alternatives. They will enable you to slash the time and efforts for tes-

ting in large projects by more than 90% - verifiably.

The 2-day IIR Expert Conference "Software Testing Management" started with Rüdiger Schilling, CEO of Delta Software Technology, and his provoking thesis:

"We do not need more tests, but strategies to slash test amount."

- Where (in your development cycle) do you best start to reduce the necessity of tests?
- How can you lower the error ratio?
- To which extent can tests be avoided before hand?
- How to select the right and necessary components for the test?

3. IIR Expert Conference: Software Testing Management

The 3td IIR Expert Conference "Software Testing Management" presented on February the 27. to 28,2008 in Vienna was aimed across all business branches at project managers, IT managers, CTOs and IT consultants in the areas software development, testing, IT quality management, IT processes and methods.

The event provided more than 70 delegates with high-quality speeches from theory and practice. The

delegates learnt about new strategies and best practices that increase the quality of testing and at the same time reduce costs.

- When is automation really profitable?
- How to handle failed software projects?
- Business companies merge systems too: The big challenges for software testing
- Successful introduction of SAP and new SAP releases
- ISO, ITIL, Cobit, SOX What do they bring? A Quality ABC
- New trends and perspectives for test methodology

Cost Reduction for Testing

The questions and discussions during the conference made it very clear: The accomplishment of mass changes is an especially pressing topic when it comes to maintenance. For large application systems maintenance and test are far more complex, risky and above all far more frequent. Therefore, maintenance carries a far greater potential to reduce costs as the new development.

If you want to reduce your test costs, then we would like to discuss your concrete situation with you. Let us together, whether the automation of development and maintenance is a solution for you to reduce test costs while at the same time gaining more quality, reliability and flexibility.

"Even if there are no other reasons for the automation of the software development, at the latest it will pay off for the testing," concludes Rüdiger Schilling, Delta Software Technology, concludes.



Further Information

Please read also the following report: Please get in touch with us if you would like to know more about how you can slash your test efforts.



AMELIO Modernization Platform - RDW gewinnt Plattformunabhängigkeit

"AMELIO Modernization Platform ist die zuverlässige Lösung für die systematische Modernisierung unserer komplexen Anwendungen – 100% automatisiert, maßgeschneidert und generativ. Mit AMELIO konnten wir dieses anspruchsvolle Großprojekt schneller und mit weniger Ressourcen realisieren." Carine Joosse, ICT Manager Projects, RDW, The

As "The Generator Company", Delta has a 30-year track record of successfully delivering advanced generator technology to Europe's leading organisations automating the development, maintenance and modernization of large application systems.

21.02.2008 Automation of Software Maintenance

Scared of Large Changes?

Changing large IT applications is a big challenge. Are you facing large modernisation or maintenance projects?

Not the contents of single changes, but the actual amount of existing and possibly involved modules, the interconnectedness and dependency of the applications, the necessary time and the given deadlines are the reasons that maintenance takes such a large share of the overall IT costs.

Automation Reduces Risks and Efforts

According to current estimates, up to 80% of the IT's capacities are occupied with maintenance tasks. These ressources – or at least part of it – could better be spent to develop new functions and applications. Using the right tools to automate the software maintenance will offer you decisive advantages: they drastically reduce the risks and efforts for mass changes.

The expert seminar "Automation of Software Maintenance" on February 21, 2008, was a great success. 15 participants from 13 companies - amoung them AXA Winterthur, RTC, Swiss Life and the Swiss Exchange SWX - were amazed, how automation can boost the velocity, quality and reliability of the maintenance.

The delegates learned about new strategies and best practices for the software maintenance and they saw what other well-known companies have done and which proceedings granted them success.

- Prof. Jochen Ludewig, ISTE, University Stuttgart:
 - Software Maintenance As Familiar as the Daily Traffic Jam
 - Conditions and requirements of software maintenance
- Rüdiger Schilling, CEO, Delta Software Technology:
 - Automation of Automation An Utopia? Impacts of automation on quality, security, flexibility and last but not least on the costs of software maintenance
- Gerard Doll, Director ICT, RDW: Continuity under Control



Automated maintenance from the management point of view:

Costs reduced and flexibility gained!

- Dirk Meyer, CEO, Delta Software Services:
 Experiences in Large Projects
 Bespoken solutions for different tasks Deutsche Telekom, SUVA, RDW
- Norbert Nigg, CEO, SAXOS Informatik AG:
 How to Tackle Maintenance Projects
 Effective proceedings wrong tracks organisation tools



Automation of Software Maintenance

Is software maintenance your subject? Then, we would like to discuss your specific challenges with you. Let us work together to find out, how you can reduce your maintenance costs while at the same time gaining more quality, reliability and flexibility.

Generative Tools for Your Software Development and Maintenance

As "The Generator Company", Delta has a 30-year track record of successfully delivering advanced generative tools for the development, maintenance and modernisation of application software to Europe's leading organisations.

Please <u>get in touch</u> with us if you would like to know more about how Delta Software Technology can help you to improve the efficiency of your software maintenance using automation.

08.01.2008 HyperSenses: Domain-specific Code Generation

Generative Software Development

Within the scope of the cooperation with the Information Systems Institute at the University of Leipzig (Germany), Cord Giese from Delta Software Technology gave the guest lecture "HyperSenses – Domain-specific Code Generation2". This session was part of the overall seminar "Generative Software Development" and took place on January 8th 2008 in Leipzig.

In his lecture, Cord Giese presented approaches to automate software development even more – by the usage of special tools for the development of software generators. This could be referred to as "automation of the automation"; the capabilities of code generation are forced up over again: "code generation²" (= code generation to the second).

- Fundamental correlations and trade-offs concerning the usage of code generators
- Domain-specific generators
- Special tools for the development of domainspecific generators
- Delta's tool HyperSenses™

Experiences from concrete commercial projects underlined the efficiency of the approach and the products.



Leading-edge Tool Development

Progressive generator technologies, which are consistently improved, provide the basis for Delta's products. Experiences from more than 30 years of commercial practice as well as the newest results from research partners have contributed to these technologies.

The continuous technical exchange with research partners, who are playing a leading role in the area of the generation of software, is rather essential for Delta Software Technology: the ideas and results from the research area are used for the further development of Delta's generator technologies. Furthermore, Delta provides scientists and research institutions with selected new technologies to receive feedback at an early stage. This enables Delta to develop reliable first-class products, that are particularly suitable for the usage in large projects. On the other hand, the academic side receives challenges and experience reports from the world of commercial practice.

Our Speaker: Cord Giese



Cord Giese is responsible for research and development in the area of generative base technologies at Delta Software Technology GmbH. He regularly presents research results at conferences and in publications. Cur-

rently his work is focused on new methods and technologies for the automation of software development.

UNIVERSITÄT LEIPZIG

Wirtschaftswissenschaftliche Fakultät
Institut für Wirtschaftsinformatik

HyperSenses – Domain-specific Code Generation²

The lecture "HyperSenses – Domain-specific Code Generation²" was part of the overall seminar "Generative Software Development" and took place on January 8th 2008 in Leipzig. The lecture was presented in German.

Learn more about how you can automate your software development using generative tools like HyperSenses. Download the presentation "HyperSenses – Domain-specific Code Generation?" now.

Information Systems Institute at the University of Leipzig

The <u>Information Systems Institute of the University of Leipzig</u>, directed by Prof. Dr. Ulrich Eisenecker, is one of our most important research partners: besides a successful cooperation within the PESOA research project, a range of collaborative seminars and workshops about the topics generative programming, product lines and automation of software development has taken place.

Many people interested in the area of the automation of software development know Prof. Eisenecker because of his book "Generative Programming". His research activities are dedicated to an increased automation of software development. The following topics are directly associated with this ambition: generative and model-based software development, software system families, domain-specific languages and generators.

EVENTS 2009



Would You Like to Know More?

Please <u>get in touch</u> with us if you would like to know more about how Delta Software Technology can help you to improve the efficiency of your software development using automation.

Free Delta-Newsletter

Our regular newsletter delivers information on upcoming events, current projects, case studies, new product announcements and general news that we think will be of interest to you. Subscribe to our free newsletter today.



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