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1 GSE Working Group "Application Development Languages"

The working groups of  provide a platform to exchange practical experience in all aspects of IT. The information enables the members to ensure the effectivity of their installations, to make well-informed decisions and to influence product development by IBM and its partners.

The AADLD – Application Development Languages working group of GSE European Working Group is the place to exchange experiences with higher programming languages as PL/I, COBOL or C. The next meeting will be held in Münster (Germany) and is organised by LVM Versicherungen.

- GSE: ADL Guide
 05. – 07. October 2015, Münster, Germany

We are pleased to have been invited to present you our way of gaining a better understanding of legacy applications and thereby to significantly ease their maintenance and modernisation.

On 7th October at 9:00 am Delta Software Technology presents:

AMELIO Logic Discovery – Understanding PL/I Applications

The bulk of today's productive PL/I applications  have been developed many years or even decades ago. Only in very rare cases the original designers and developers are still in charge. Usually, their successors ("inheritors") or external service providers are maintaining and modernizing the applications or working on the re-implementation of their functionality in modern languages.

In these cases it does not suffice to retrieve details or to track single fields. Quite the contrary, it is about getting a detailed and full comprehension of the application in its entirety. The older and the more complex the applications are, the more knowledge about the applications is already lost. It gets more and more difficult to really understand the applications.

- How do you obtain reliable information on the current implementation, about the inner structure of the COBOL and PL/I applications, about contexts and dependencies?

- How do you identify code that's no longer necessary, i.e. dead code, dead data definitions, not only within single programs but across complex Copy Book, macro and include hierarchies?
- How do you get a clear view on the code structures, on the logical connections of procedures, on endlessly cascades conditions?
- How do you distinguish framework coding form business logic?

In our presentation we will conceptually address these questions and show how we implemented the concepts in our tool AMELIO Logic Discovery. AMELIO Logic Discovery helps you to better understand and securely modernise your PL/I applications, allows you to recognize patterns and to perform focused analyses, it can be perfectly tailored to your needs.

Our Presenter



Dr. Daniela Schilling

Daniela Schilling is CIO at Delta Software Technology.



Martin Herbst

Martin Herbst is chief architect at Delta Software Technology.

GSE European Working Group "Application Development Languages" with Delta

We are glad to welcome you on the GSE European

Working Group "Application Development Languages". Discuss with us, how to automatically analyze PL/I applications, to rediscover the contained knowledge and to minimize the risk for a modernization.

You don't have time to meet us in Münster? Contact us, we would like explain the concept in a personal conversation.

GSE Working Groups

GSE is a non-profit association of companies, organisations and individuals who are involved in Information and Communication Technology (ICT) solutions based on IBM architectures. GSE is an effective forum supporting the needs of today's ICT professional.

For more information on GSE please visit www.gse.org

Please find further information on GSE Working Groups and the meeting agenda [here](#).

2 AMELIO Logic Discovery for PL/I convinces LVM

In a proof of concept Delta exemplarily analysed selected PL/I applications from LVM with AMELIO Logic Discovery. The analyses were performed automatically, completely, quickly and reliably. Within the restricted timeframe the presented results could only be achieved by using a powerful automatic support.
Peter Nübel, Bereichsleiter Vertragssysteme-II

Over several years LVM developed its business critical core-applications with PL/I. This resulted in large, complex and powerful systems which are customized to the specific needs of the users. They contain a lot of expertise on the internal processes.

During the regular maintenance these applications have to be adapted to new requirements again and again, e.g. due to legislative changes. This can result in significant modifications, restructurings and even architectural changes. At the same time LVM aims to re-implement parts of the application in JAVA.

Modernization projects like this need to overcome particular obstacles: on the one hand in many cases the original developers are not available any longer. Instead, the applications are maintained by their heirs who however do not know the reasons for formerly made implementation decisions. On the other hand the available documentation targets to support the maintenance. But this documentation does not contain the information needed for modernization and re-implementation purposes.

Thus, the only reliable source for information is the source code itself.

But how can the knowledge required for the modernization be transferred or even rediscovered if necessary?

LVM knew that its developers need a tool which reliably analyse the PL/I applications and thereby ensures that the implemented functional range is completely recorded, no special case is left out and the results are presented in a language independent way.

For this reason LVM decided to perform a proof of concept to evaluate the capability of AMELIO Logic Discovery for PL/I.

AMELIO Logic Discovery for PL/I

AMELIO Logic Discovery reliably and efficiently analyses large and complex PL/I applications and helps developers to understand their systems.



AMELIO Logic Discovery for PL/I ...

- ... derives knowledge about the functionality of the application from the implementation details,
- ... separates the application logic from the technical infrastructure,
- ... analyses not only individual objects but also considers the relations between the programs,
- ... works model-oriented and provides the analysis results as language-neutral documentation,
- ... is configurable and can be perfectly tailored to the requirements of a (modernization) project.

For further details have a look at our Flyer "[AMELIO Logic Discovery for PL/I](#)".

PoC successfully finished

LVM has chosen some exemplary sources for the PoC. These were analysed by AMELIO Logic Discovery and the results were handed over to LVM.

The developers showed a big interest: during the three month duration of the study they lively discussed the results within the LVM internal forum. Feedback was given especially from those developers who have to re-implement parts of the PL/I application in JAVA.

During the PoC LVM was also able to gain a positive image of the cooperation with Delta. Enhancement requests of participating developers were accepted and implemented partially even during the PoC.

In a concluding workshop the PoC results were discussed. All participants have a positive view of the PoC. LVM plans to use AMELIO Logic Discovery in projects which aim at re-writing parts of the application in JAVA.

The analysis results provided by AMELIO Logic Discovery and their presentation, even the complex ones, are noteworthy.”
Klaus Schulze, System Architect



The LVM Versicherung (LVM insurance) in Münster, Germany, has developed its business-critical applications in PL/I and was looking for a solution for deep source code analyses to support the further maintenance and modernization.

On the basis of exemplary applications from LVM, we have presented the goals and concepts of AMELIO Logic Discovery. The analyses shown and their presentation have convinced LVM. That is why LVM has now decided to evaluate the functionality and performance of AMELIO Logic Discovery even more detailed as part of a Proof of Concept.

Convince yourself

Do you also have business-critical core applications in PL/I and are you looking for a way to analyse them fully automated and reliable? Please get in touch with us. We would be pleased to demonstrate the capabilities of AMELIO Logic Discovery on the basis of your examples.

3 Procedures and Functions - AMELIO Logic Discovery for COBOL

Understanding large and complex COBOL applications is impeded by the fact that COBOL lacks of structuring concepts such as procedures and func-



AMELIO Logic Discovery for COBOL - Procedures and Functions

The various analysis of AMELIO Logic Discovery detect implicit information and relationships and present the results in a clear and understandable way.

tions. Missing concepts for scoping variables and data structures result in a nightmare when application components have to be modularized.

We show how AMELIO Logic Discovery identifies procedures and logical groups together with their interfaces, determines the scope of variables and derives proposals for refactorings. By this the understanding of the application is facilitated.

4 Join Delta Groups on XING and LinkedIn

We would like to invite you to join our groups on XING and LinkedIn.

Following the repeated demand of our customers regarding for a platform to exchange experience, we now opened dedicated groups for Delta customers and other interested parties on the leading business networks LinkedIn and XING.

Our groups openly gather all people interested in the automation of software development, maintenance and modernisation – especially using Delta

tools. We would like to encourage you to exchange your experiences, discuss approaches and strategies and to profit from the knowledge and opinions of others. Additionally, we will keep you updated on news from Delta Software Technology.

Join our groups now



In case you do not have already an account at these business networks you can sign-on here directly for [XING](#) or [LinkedIn](#).

More newsletters and our newsletter administration can be found here:
www.delta-software.com/newsletter

