Do you understand Software?

Many business-critical core applications have grown over decades. The necessary knowledge for a secure and efficient maintenance, further development and re-writing often doesn't exist anymore. The size and complexity of the applications hardly allow a manual regaining of the knowledge. The only solution is: an automatic solution. That's why AMELIO Logic Discovery regains the knowledge from COBOL and PL/I applications 100% automatically.

1 Who still understands the old applications?

Understanding an existing application is difficult, even when you wrote it by yourself years ago. But this luxury becomes less and less. Many core applications are decades old and the developers from those days enjoy their retirement. You shouldn't rely on the documentation, it is rarely complete and often not suitable for a new generation developers. There is only one thing to do: take a look at the source code to determine what the program does, can and/or did earlier. Not an easy task if the programs consist of thousands lines of source code. The only thing that helps is an automatic solution.

AMELIO Logic Discovery is such a solution. It reads the source code, performs the abstraction which is necessary for the understanding, identifies redundant coding and prepares the gained knowledge for an interactive presentation. And because not all applications and tasks are the same, the analyses from AMELIO Logic Discovery can be tailored to the respective task. In this way the "heirs" have the possibility to perform the maintenance of the legacy applications efficiently and with low risk. Even the cleaning of the application is not a problem anymore. You now know what belongs to the running system and what is just ballast.
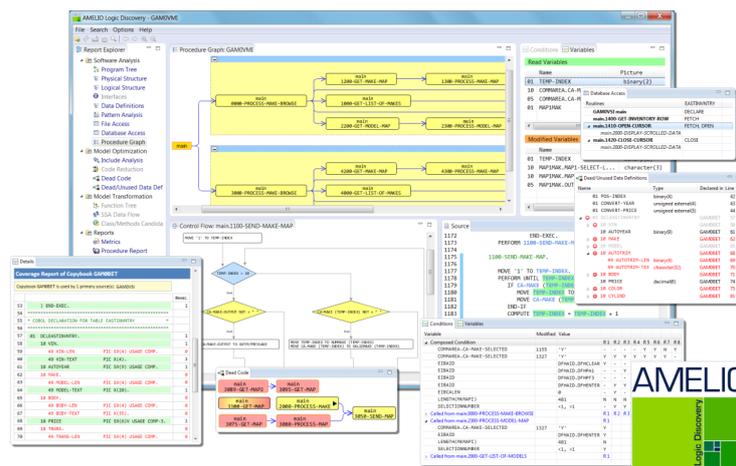

Figure 1: Presentation of analysis results

2 Understand Software – fully automated

AMELIO Logic Discovery is able to analyse large and complex COBOL and PL/I applications in a comprehensible way. Core components of this technology are models, abstraction and automation. The applications are imported completely and fully automated, whereby abstract and language-neutral application models are produced. Further analyses are performed on these models and the results are presented interactively. Besides existing standard analyses, also customer- or project-specific analyses can be defined. An example for a standard analysis is the overview of the defined data fields, its usage, its origin and its re-definitions. A key issue is the analysis of the existing functionality. 30 years ago COBOL programs should be structured according to the Jackson Structured Programming. But today you want to know what the program is doing, how it is doing it and what it all contributes to a particular action being carried out and under what conditions. AMELIO Logic Discovery therefore follows the application logic and presents what belongs together. Even if the separate parts are spread across the source code. In this way AMELIO Logic Discovery builds a new view on the functionality. In this context, several decades of change history are summarized and extracted what is still valid today. Moreover, the condition analysis detects which condition must be fulfilled to ensure that a specific functionality is performed. If multiple paths are available for execution, the different conditions are aggregated.

By using abstraction and a language-neutral presentation AMELIO Logic Discovery provides a view on the functionality of the application that doesn't exist in that way. On one hand it can be used as basis for an efficient and safe maintenance and further development. On the other hand it can also be the basis for a re-development of several parts in a modern language, e.g. Java or C#, as the developers must not master the legacy language. The new components can then be used in the legacy application as well as in new applications.

AMELIO Logic Discovery is extendable. In this way by using the code smell analysis it is possible, for example, to find out if and where company-specific coding standards are violated. For modernization projects the "Points of Interest" can be detected automatically. Especially for cleaning and modernization projects there is the possibility to connect AMELIO Logic Discovery with other tools from the AMELIO family and thus to perform the desired changes to the source code fully automatically.

3 Comprehension secures the future

With AMELIO Logic Discovery you regain the knowledge that exists in the source code. And without the need for your developers to spend a lot of time and effort on software archaeology. On the basis of this knowledge you can reliably make the decisions how you want to maintain, further develop and/or re-implement your business-critical applications.

AMELIO Logic Discovery

AMELIO Logic Discovery helps to understand the existing COBOL- and PL/I-applications and thus reduces the costs for re-implementation of the existing functions and for the modernization of the applications.

Further information can be found here: **delta-software.com/amld**

Delta Software Technology - The Perfect Way to Better Software

Delta Software Technology is a specialist for generative development tools that automate the modernisation, integration, development and maintenance of individual IT applications.

Our solutions help you to quickly and safely adapt your applications to new business requirements, architectures, technologies and technical infrastructures.

AMELIO® Logic Discovery
Comprehending COBOL- and PL/I-Applications: Cut costs and risks
for maintenance, modernization and re-implementation.

AMELIO® CleanUp-Factory
Securely improve your COBOL-, PL/I- and Delta ADS applications and
regain the flexibility and adaptability for your core applications.

AMELIO® Modernization Platform™
The tailor-made factory for the modernisation of large IT applications: 100%
automatically and that's why it is safe, reliable and error-free.

Delta has a more than 40-year track record of successfully delivering advanced software technology to Europe's leading organisations, including AMB Generali, ArcelorMittal, Deutsche Telekom, Hüttenwerke Krupp Mannesmann, Gothaer Versicherungen, La Poste, RDW, Suva and UBS.

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