DELTA
software technology

NEWSLETTER

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1 Even more productive with ADS on Eclipse 6.2

ADS on Eclipse provides comprehensive support for the maintenance and further development of your ADS application in an integrated development environment. With the release of ADS on Eclipse 6.2 new functions are available, which make working with ADS even easier and more efficient.
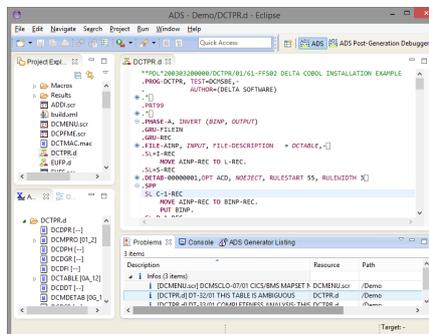

ADS-Editors

Specific editors which are based on the standard editor from Eclipse have been developed for the different module types like macros, programs, masks etc. with their particular syntax requirements. These task-related editors support you with special functions in the creation and editing of the different source types.

- Grouping of source code sections which logically belong together ("code folding") as well as chroma coding for all module types.

- You can configure the automatic formatting and indentation of the source code in a context-dependent way.

- Code Assistants and individually extensible templates for macro statements and processor calls support you in the development with code completion.

- Other new functions are the different Content Assist functions for location and paragraph names in .SL and PERFORM statements as well as .FILE names in PSD.

- The outline display simplifies the navigation in larger source codes.

- Development processes can be automated by using "Apache Ant", for example the packaging for generations.
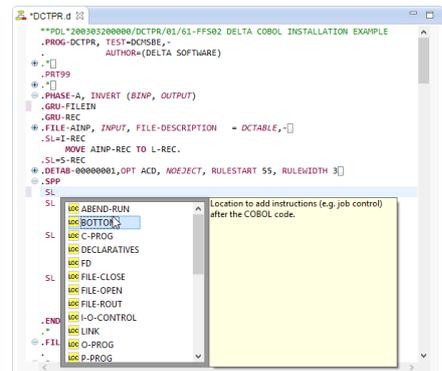

ADS on Eclipse - Editor and Content Assist

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ADS Generators

You start the ADS generators directly from the Eclipse environment. The configuration is per

formed in the graphic interface of Eclipse. Views for generation listings and cross-reference lists of the called macros support you in the daily work. With the new version 6.2 you see generator messages directly at the associated point in the source code and also collected in a "Problems" view for the entire project. The output of generator messages can be configured user-specifically.

ADS Report Wizard

The ADS Report Wizard supports you in the creation and configuration of reports and analyses. As result you receive detailed documentations about your applications directly in your working environment: Coverage analyses, call trees, cross-references and much more.
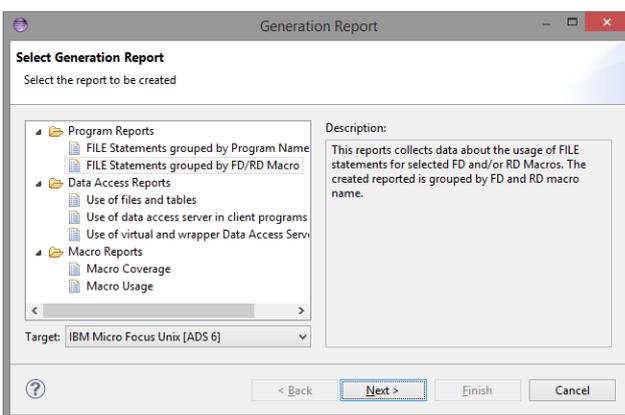
ADS on Eclipse - Generation Report

Standardizing the Development Environment

ADS on Eclipse comes with additional innovative tools, for example the ADS Report Wizard and

the ADS Post-Generation Debugger. These tools help you to quickly understand and efficiently further develop the applications developed with ADS and the used macro frameworks. These comfort functions and innovative tools are part of the following integrated solutions:

- ADS on Eclipse
- ADS on Micro Focus EDz (Enterprise Developer for z)
- ADS on IBM RDz (Rational Developer for System z)
- ADS on Microsoft Visual Studio

You get a powerful, integrated working environment with a modern, graphic interface to comfortably develop your applications with ADS, C, C#, C++, COBOL, Java, PL/I and other languages.

Avoid media breaks, optimize the development and test processes and increase the productivity in your application development with ADS on Eclipse.

ADS on Eclipse – give it a go

Now the new ADS on Eclipse version 6.2 is available for COBOL and PL/I. You can order the release now by using our contact form. We would also be pleased to present ADS on Eclipse personally.

More on ADS on Eclipse

You want to know how you can facilitate your application development with ADS on Eclipse? Please get in touch with us.

2 Understanding Your Clients' Source Code - but how?

Service providers in charge of the maintenance or the refactoring of legacy application systems or taking over the overall responsibility within the frame of outsourcing contracts, have to overcome the same obstacles again and again: The older the systems, the more trouble they have to obtain a comprehensive overview of the actual state. The applications have grown over many years, mostly over decades, and have been tailored to new requirements again and again. Programming standards that have been strictly followed at the beginning of the lifecycle, have been less and less regarded in later years. The original architecture has been extended and modified continually and as a result the systems have grown ever larger and more complex. Inevitably, when placing outsourcing offers or taking over the maintenance of such systems, the same questions arise:

- What effort has to be calculated?

- Where to best take action for the software maintenance?

- What side effects are to be expected?

The existing documentation is generally not sufficient for the outsourcer. The savvy people from earlier years of the applications have left the projects and their grown knowledge about the background and the interrelationships got lost.

As a result, maintenance and outsourcing projects are confronted with the same task: How to obtain reliable and effective information? The "usual" sources like compiler analyses, cross-references, sta-

tistical analyses etc. are only a small help as they only provide selective statements. Information about the coherences and the application logic is missing.

Analyse COBOL, PL/I and Generated Code

AMELIO Logic Discovery provides a comprehensive view on the application structures for large and complex application systems that have been developed with COBOL, PL/I or in a generative way with Delta ADS. Comprehensive, in-depth analyses of the implementation details are used to build the knowledge about the architecture, the infrastructure and especially the application logic. AMELIO Logic Discovery provides the essential conclusions about the application logic, the interrelationships and the dependencies required for the maintenance or refactoring of legacy systems.

In the following is a selection of the available analyses:

Application Architecture

- Which programs and sub-programs constitute the application?

- What are the conditions for program branches?

All execution conditions leading to program branches are examined and consolidated.

Interfaces are identified and evaluated. Interface conflicts are recognized and disclosed.

Procedures and Composites

- Detection of procedures and their aggregation to logical units, so-called composites.
- Which procedures and composites access which data in what way?

The information obtained delivers essential conclusions about the functional structure of the applications and is therefore an indispensable prerequisite for the understanding and especially for the refactoring.

Calling Conditions for Programs and Procedures

Calling conditions are detected for all programs and procedures. For that purpose, the conditions are analysed from the program start, over continuous intermediate steps to the call itself. The conditions are consolidated and concisely displayed in clearly arranged condition tables.

I/O-Analyses

Which tables or files are accessed by which procedures in a direct or indirect, read-only or modifying way?

Cost Factor: Superfluous Code and Data Structures

Especially outsourcing and refactoring projects suffer from superfluous, unused code whose maintenance or revision is unnecessary and expensive. AMELIO Logic Discovery detects such code and data structures with dedicated analyses:

- Dead Code:
  Code blocks (paragraphs, procedures, composites) are identified which are never called or only called from no-longer used code or whose execution conditions could never be fulfilled.

- Dead Data:
  Data elements and structures are evaluated for whether they are used completely, partially or whether they are used never or only by dead code.

- Include Analysis:
  Which fields, structures and code parts from copybooks or include modules are used how often? And which parts only create dead code?

With this information copybooks or includes can be adjusted, reduced or even completely dissolved.

To clean-up the applications, we offer with AMELIO Modernization Platform a solution for the safe implementation of all changes. It removes the superfluous code and the unused data structures in programs, copybooks and includes fully automated.

Clear View on the Applications

As all analyses results are stored in models, they are available as language-neutral documentation and as specification for modernizations. This model-based approach makes it possible to add customer-specific adaptations to the existing analyses.

Users of AMELIO Logic Discovery noticed very quickly that they no longer need their previous time-consuming and recurring analyses and that they now have a much better overview and more detailed insight into the applications. The manual technical analyses become superfluous, dead code information is identified directly and easy to handle. The analyses results enable them to calculate offer more reli-

ably. Developers in modernization and refactoring projects can focus on their real maintenance and modernization tasks and work more efficiently.

What AMELIO Logic Discovery Can Do for You

Have you experienced the described obstacles for outsourcing and refactoring projects?

We would love to demonstrate to you the power of AMELIO Logic Discovery – at best directly with your applications. Please contact us.

3 AMELIO Logic Discovery - for COBOL

It is difficult and expensive to understand large and complex applications. But real understanding of the applications is a decisive factor for many projects in the area of modernisation, outsourcing, re-implementation.

AMELIO Logic Discovery provides the necessary information for this purpose about the functionality and the architecture of the applications.

The tool is available for the analysis of applications that have been developed with COBOL, PL/I or in a generative way with Delta ADS.

Find out which analyses AMELIO Logic Discovery provides to help you to better understand especially COBOL applications:

For more information on AMELIO Logic Discovery please have a look here.

AMELIO Logic Discovery for COBOL

AMELIO Logic Discovery is an innovative analysis tool that helps to understand COBOL applications better and extracts its relevant functionality. It analyses large and complex applications and derives knowledge about the application functionality from the implementation

For more information on AMELIO Logic Discovery please have a look here.

4 HKM pours Data Accesses into the Perfect Form

Steel is one of the most important materials. Due to its properties many application areas – from the architecture to the automobile manufacturing – are not imaginable without steel. It is versatile and cost-effective. Steel is the key material for mastering the challenges in the energy sector. These are the very same properties the large German steel company Hüttenwerke Krupp Mannesmann (HKM) expects from its IT applications: stable, reliable, adaptable, cost-effective, a key for the business change.

That is why HKM relies on the generative development tools from Delta Software Technology for the development and maintenance of their IT applications for more than 30 years. Now, HKM accomplished a modernization project to make their applications fit for the future in the service and object-oriented world.

"One of the key reasons we have selected SCORE is that we can make our mission-critical applications available as services that we can quickly and easily reuse – without any extra effort – in other contexts, for example in a service-oriented architecture, Enterprise Portals and the like."
Gerhard Batiajew, CIO, HKM

From data-oriented Servers to application-specific Data Services

The main steel production processes are controlled and managed by the application system "Stahlwerk Online" ("Online Steelworks"). For storing the production data of "Online Steelworks" HKM uses Informix databases on Fujitsu PRIMEPOWER servers under Solaris. For the development of the data access servers HKM uses SCORE Data Architecture Integration from Delta Software Technology.

SCORE Data Architecture Integration is a generative tool to quickly and easily provide data from the most different sources as real business services within service-oriented or any other application architectures. The developer declares the access structure in models – so-called composition models. From this declaration, the tool generates the entire access code in COBOL– completely and automatically.

The client applications have been developed with the software development system Delta ADS in a Microsoft Windows environment and were also 100% generated – for the productive use in a runtime environment under openUTM COBOL.

SCORE as well as ADS enable the developers to develop the software on a neutral, platform-independent level – without worrying about the technical details. The implementation for the target environment is generated automatically. If one or even more components of the target environment are changed (operating system, database, transaction monitor), the required adaptations in the applications can be automatically implemented by simple re-generation.

To continually ensure flexibility, maintainability and future sustainability, the data access layer of these applications have now been modernized – in multiple ways:

- Until now, HKM has worked with servers based on the tables' definitions, i.e. purely data-oriented servers. As a result, the clients were offered more functionality than they required or were allowed to use in their respective context. Furthermore, this resulted in unnecessary dependencies between client and server side which made the maintenance more difficult. That is why HKM decided to change over to application-specific data access modules – a child's play with SCORE Data Architecture Integration. The accesses have been defined on model-level by using the Composition Manager. Afterwards, the new data servers have simply been generated. The clients now have data services exactly tailored to their needs. Changes and extensions can now be implemented quickly and securely without any undesirable side effects.

- At the same time, HKM took advantage from the upgrade to the latest release of SCORE Data Architecture Integration to implement the existing models not only platform-neutral but also 100% language-independent. Still existing fragments of native COBOL code have been mapped on features of SCORE Data Architecture Integration and are now generated automatically as well.

IT Applications ready for the Future

With this successfully concluded project HKM has increased the maintainability and flexibility of the existing systems. Furthermore, HKM has now made

the prerequisite for several possible subsequent steps:

With SCORE Adaptive Bridges the bridge to JAVA now can be built. Adapters and class libraries can be generated directly from the existing models at the push of a button – without having to modify them. New OO applications (e.g. in JAVA) can thereby use the existing (COBOL) servers as real services like components of their own architecture.

Furthermore, from the existing models which are now not only platform independent but also language independent JAVA servers can be generated as well as COBOL servers – real object-oriented code that corresponds to the full extent of the JAVA standards. A "quantum leap" that would not have been possible without SCORE Data Architecture Integration.

Development tools for the change of the IT applications

HKM regularly evaluates its IT technologies. The generative development tools from Delta Software Technology enable the application development teams to modernize their business-critical systems in an easy and risk-free way.

HKM's IT thereby has the capabilities they also provide for their steel products: Stable, reliable, adaptable, cost-effective, a key for the business change.

> *"The generative development tools from Delta Software Technology enable us to modernise our applications easily and risk-free and to quickly realize cost-oriented decisions."*
> **Gerhard Batiajew, CIO, HKM**

About Hüttenwerke Krupp Mannesmann

The leading German steel producer Hüttenwerke Krupp Mannesmann (HKM) produces over 5 million tons of steel every year with more than 3,000 employees. Every eighth ton of the crude steel produced in Germany is manufactured in Duisburg. The range of delivery and services of HKM comprises more than 1,000 different high-quality sorts of steel that even fulfil the strictest quality specifications.

Automate the Development of Your Data Layers

Generative tools help our customers to quickly and securely benefit from the latest technological development for their applications. Discuss with us your requirements and the possibilities for your individual IT applications. Please contact us now.

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