DELTA software technology

AMELIO
Modernization Platform

Modernization of Legacy Systems

100% automation slashes risks and costs

Irrespective of their age and implementation technology – from Cobol to Java – often mass changes to existing application systems are necessary. How can the costs and risks be controlled?

EXTENSIVE CHANGES ON THE LIVING OBJECT

Due to changing business processes and new IT strategies (e. g. SOA), productive application systems more often require platform migrations, modernizations and other mass changes. Because such projects not only involve a considerable effort, but also a high risk – after all, it is an operation on the living object – they often got postponed until they are definitely unavoidable, or you are talking about a complete re-development. But in this case, costs and risks are much higher.

Mostly, not even the necessary changes makes you feel concerned, but the masses of mostly thousands of involved program components and the resulting questions:

- How can the continuous consistency and quality of the changes be guaranteed?
- How can a blockage of the running maintenance and development during the mass changes be avoided – or vice versa; how can it be avoided that inevitable repairs to the running system endanger the change project?

Last but not least the most important question:

- How should an entire system be tested? How can it be guaranteed that hundreds of thousands of individual changes don't affect the stability of the entire application?

CHANGING SOFTWARE BY SOFTWARE?

Because mass changes are rarely complex in particular, modifications can primarily be seen as an extra task that doesn't even require the precise knowledge of the application. So it is worth a try to limit the costs by outsourcing these activities. But, even though it will be successful, the problems mentioned before will thereby get worse and the resulting costs will be higher as well. So the automation remains, i.e. the change of software by software. Just like programs reliably process data, change tools can

- Change code consistently, reproducible at any time and absolutely error-free
- Recognize dependencies and consequences
- Register every change and document it in an audit-proof manner
- If necessary, quickly re-do all changes with changed rules

The biggest advantage of automatic changes is where manual changes have their biggest weakness: at the tests. A consequent automation will

drastically reduce the extent of the tests. Once it is proven that a change rule and its automated implementation is correct, you can be sure that this change will also be done correctly the next thousand times.

COST REDUCTION BY FULL AUTOMATION

But this exception is only applicable if the changes are done completely automatic. Every additional manual change would query the principle. So that means:

If change automatically, then 100%

Thus, a "little automatic" or even "as much as possible" is not enough. Delta Software Technology provides with AMELIO Modernization Platform a tool that fully automates changes – that means 100%. The automation guarantees speed, security and repeatability. The changes are done absolutely reliable. The test effort will verifiably be reduced by at least 90%. It is a production line tailored to the project's requirements.

This opens up new possibilities for the planning and implementation of the projects:

- Changes can be experimentally implemented.
- Transformation strategies can be easily verified with the entire volume.

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- The transformation project is totally independent of parallel running projects.

- The transformation time can be chosen arbitrary.

- If the requirements change, the changes are repeated with the new rules.

EXPERIENCES IN REAL PROJECTS

Here are some figures concerning the requirements of a real project for the platform migration of a legacy system (Cobol):

- Over 11.000 modules must have been changed

- Altogether, over 10 millions of LoCs

- Over 1,3 millions of individual changes

Convincing results:

- Each day a few hundred programs are automatically changed. The program's processing time from the analysis to the complete implementation of all changes takes 5 – 10 minutes.

- The performance of the production line built by the AMELIO tools can be arbitrarily scaled through parallel connected workstations.

- Transformations can be repeated as often as desired.

- The test effort is reduced by at least 90% as result of the fully automated implementation of the changes.

Users confirm: In this way large change projects can be implemented in a very short time, secure and with less resources.

"The extent to which AMELIO automated the project was truly amazing. The tool delivered absolutely reliable results."

Jürgen Mülders, Service Manager, T-Systems Enterprise Services, Germany

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Delta Software Technology

Delta Software Technology is a specialist for generative software tools automating the modernisation, integration, development and maintenance of individual IT applications. We understand business IT as a living organism that is continuously evolving. Our automated solutions help you to quickly and safely adapt your applications to new business requirements, architectures, technologies and technical infrastructures.

AMELIO® Modernization Platform™
The tailor-made factory for the modernisation of large IT applications:
100% automation and therefore safe, reliable and error-free.

SCORE®
Data Architecture Integration™
Data as real business services: fast, easy and independent of
data architectures and management systems.

HyperSenses®
Integrierted system for model driven development of DSLs and software generators.

SCORE® Adaptive Bridges™
Intelligent service enablement for the reuse of proven applications
with state-of-the-art technologies: flexible, profitable and non-invasive.

SCOUT²™ Development Platform
Optimized and integrated development processes across all software components,
tools and platforms: Stopping the "fight against the infrastructure".

ADSplus™ Application Development
Platform-independent development for future-proof back-end applications.

Delta has a 30-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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