

The Company

Founded in February 1998, AbsInt Angewandte Informatik GmbH is a spin-off from the Department of Compiler Construction and Programming Languages at Saarland University, Germany.

AbsInt's core competencies:

- analysis and optimization of **embedded applications, processes and systems**
- analysis of **safety and reliability properties** of embedded software
- **compiler technology**

AbsInt has been instrumental in a number of **successful industry projects**. One such example is a compaction tool for mobile phone software developed for Siemens ICM. Other examples include the development and integration of compiler components, software optimizations to enhance performance, tools for conducting reliability and safety checks, etc.

Engineering and Solutions

Take advantage of AbsInt's experience in providing creative solutions to our customers' problems:

- Analysis and optimization of embedded applications according to your criteria. Typical examples: reduction of power consumption or code size, or enhancing the execution speed of your code.
- Tools to analyze and verify the **safety and reliability requirements** of your software: Examples include worst-case execution time prediction for real-time systems, stack usage analyses to prevent stack overflow, etc.
- **Optimizing compilers**: One of AbsInt's key competencies lies in the development of highly optimizing compilers for all kinds of hardware architectures: standard microprocessors, DSPs, MCUs, ASIPs, etc.

The AbsInt Team

AbsInt's team is composed of **highly skilled computer science experts**. Our close ties to Saarland University's Department of Computer Science and its numerous research institutes enable us to benefit from the latest research findings and to recruit highly trained personnel.

Contact

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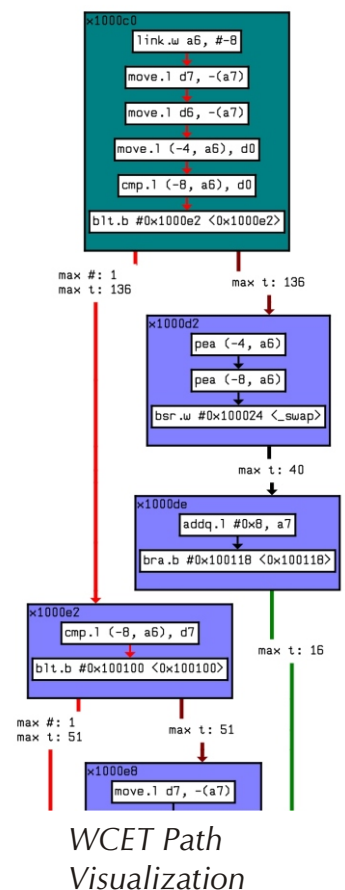
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Products and Services

AbsInt's current product range comprises tools for code compaction, stack usage analysis, worst-case execution time prediction and visualization. Maintenance, training and integration services are available for all products.

- **aiPop for C16x/ST10** is a code compaction tool that automatically reduces the size of compiled C code. Reducing code size directly translates into reduced memory requirements and lower hardware costs.
- **aiCall** automatically calculates a customizable layout of the call graph and the control flow graph of applications at machine level. It is available for C16x/ST10 and PowerPC. A static stack usage analyzer is available as an optional extension module. With this extension, aiCall automatically determines the stack usage of the tasks in your application. Stack overflow is a thing of the past.
- **aiCall/C** automatically calculates a customizable layout of the call graph and the control flow graph of applications at C-level. aiCall/C is available for K&R C and ANSI C.
- **aiSee** automatically calculates a customizable layout of graphs from an easy-to-learn and easy-to-read specification. This layout is then displayed and can be printed or interactively explored.
- **aiT WCET Analyzer** statically computes tight bounds for the **worst-case execution time** of the tasks in your system. These bounds are valid for all inputs and each task execution. aiT is based on statically analyzing a task's intrinsic cache and pipeline behavior. This enables correct and tight upper bounds to be computed for the worst-case execution time. For the development of the **aiT WCET Analyzer**, AbsInt received the 2004 European IST Prize.



Research and Development

AbsInt is involved in **research and development projects**, like the IST-1999-20527 research project of the European IST Programme **DAEDALUS** (Validation of Critical Software by Static Analysis and Abstract Testing). AbsInt's task is to develop a timing validation framework for flight-critical EADS/Airbus software.

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