

CodeWarrior™ Development Studio

ANALYSIS TOOLS ATtACK CONSTRUCTION KIT

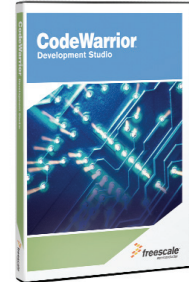
ATtACK Puts You Ahead of the Game

Get to know the inner-workings of your application like never before, with the Analysis Tools Construction Kit (ATtACK) from Freescale. ATtACK lets you custom-build tools to profile, debug and analyze your application — reliably, quickly and efficiently.

The ATtACK framework was originally created by Freescale to build the highly popular CodeWarrior Analysis Tools (CATS) suite — including the Hierarchical Profiler and Code Coverage tools, both of which are used today by developers around the world. This powerful framework, crafted by Freescale developers to accelerate their own projects, is available to all developers! With ATtACK, you can create tools as powerful as the

CodeWarrior Analysis Tools to solve the highly specific, system-level problems you encounter in perfecting your games project. ATtACK accelerates your project in two ways. First, ATtACK provides an out-of-the-box starter set of tools. Then, you can use the ATtACK Application Programming Interfaces (APIs) as a starting point to build your own customized tools, such as:

- > Application profilers
- > Cache analyzers
- > CPU performance counter tools
- > Program tracing and flow analysis tools
- > Debugging and error detection tools
- > Processor simulators



Benefits

- > Seamless integration with CodeWarrior compiler technology

The ATtACK framework is fully compatible with CodeWarrior development and analysis tools.

- > A fast track to customized analysis tools

The ATtACK framework allows for a quick, easy construction of tools for memory leak detection, memory alignment checking, cache analysis and more. Individual developers can use ATtACK to write tools for their own requirements, eliminating the need for team-wide decisions and deployment.

- > Instant compatibility with third-party libraries

ATtACK ensures compatibility and performance capability with any third-party, CodeWarrior-generated software, even without the source code. In addition, you can examine executables without recompiling, thanks to ATtACK's patented Binary Code Instrumentation (BCI) technique.

Binary Code Instrumentation

The ATtaCK Binary Code Instrumentation (BCI) is a patented technology that lets you create analysis tools for any application without having to recompile. The ATtaCK framework directly modifies the application's binary image, allowing you to analyze libraries even without source code.

Using BCI, a tool inserts analysis code directly into an application's binary image, forming an instrumented version of the application. Choose the placement and function of the analysis code, then define the task that the tool performs. After the tool creates the instrumented application, the ATtaCK framework runs the application and collects the analysis data.

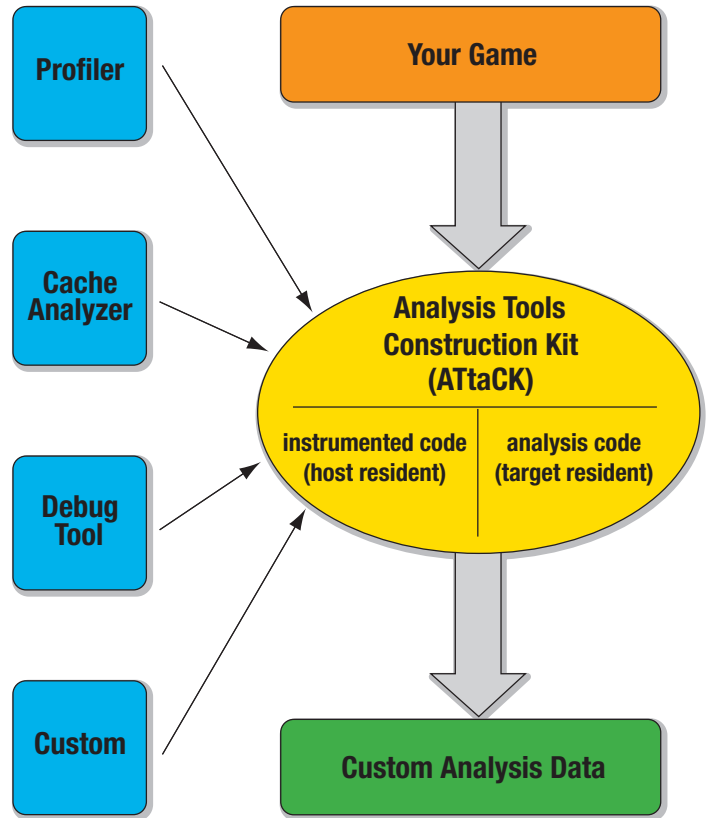
Although the technology is complex, the ATtaCK framework handles all the detail work. You simply use the published API to tell the ATtaCK framework what to instrument, and the program takes care of the rest.

Framework Architecture

The ATtaCK framework consists of two components packaged as C and C++ libraries. The instrumented code component supplies interfaces used by a tool's host-resident code. The analysis code component supplies interfaces that are used by the tool's target-resident code. The ATtaCK framework also includes a published API.

Proven Stability

The ATtaCK framework is identical to the technology used to implement the Hierarchical Profiler and Code Coverage tools in the CodeWarrior Analysis Tools suite. In short, the ATtaCK framework has a proven track record in implementing industrial strength technology.



Easy to Use

The ATtaCK framework uses a standard programming interface, which allows you to create tools in C or C++. There's no need to learn a new programming language or use assembly level programming.

In addition, the ATtaCK framework includes a number of sample tools you can use out-of-the-box. You can also use the ATtaCK APIs to develop custom tools.

Improved Productivity

The ATtaCK framework allows you to build real tools with just a few dozen lines of code. Creating tools with the ATtaCK framework is so easy, there's no need for a separate development team. Instead, individual developers can create quick analytical tools without disrupting the development schedule.

Learn More: For more information about Freescale products, please visit www.freescale.com/games.