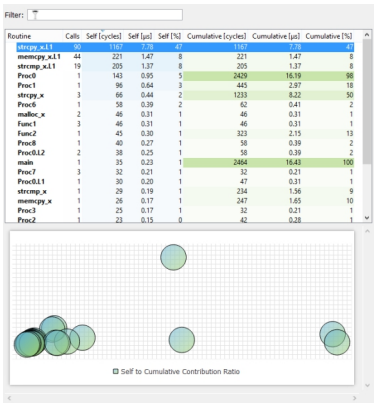
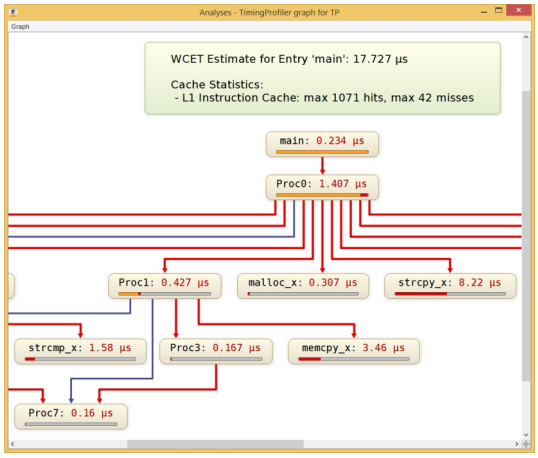
TimingProfiler

Monitoring Timing Behavior During Code Development

TimingProfiler helps developers identify application parts that are causing unsatisfactory execution times. It is ideally suited for constantly monitoring timing behavior during software development and in model-based development environments. **TimingProfiler** delivers results as soon as there is compiled code. It can be used early in the process when measurements on physical hardware are costly or not even possible.



Global contributions



Call graph with timing information

Usage of variables

Why do you need TimingProfiler?

- TimingProfiler helps address timing behavior continuously during development **from early stages on**.
- Developers can **immediately understand** the timing effects of their implementation decisions.
- TimingProfiler **visualizes** the call and control flow graph with timing information and displays relevant information about the executable.
- TimingProfiler computes worst-case execution time estimates for a slightly idealized model of the target processor. In contrast to aiT it cannot derive guaranteed timing bounds, but efficiently computes **timing estimates**.
- **No access to physical hardware** and **no code instrumentation** are required.
- TimingProfiler automatically explores **all execution paths** in a program for all potential inputs.
- **No effort** is needed to set up and execute elaborate timing measurements.
- TimingProfiler can be **easily integrated** into the development process and used in **continuous test and integration** frameworks.
- Developers can **identify bottlenecks** early and **avoid late-stage integration problems**.

Supported processors and compilers

- TriCore/AURIX (Tasking/GCC)
- PowerPC (Diab/GCC/GHS/CodeWarrior)
- NEC/Renesas V850 E1, V850 E2 and RH850 (GHS/Diab)
- LEON2/LEON3 (gcc/GNAT)
- ARM (Cortex-M / Cortex-R) (TI/ARM/gcc/GHS/Tasking/Keil MDK-ARM, GHS Ada)

For further targets, please contact us.

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