How to Measure Energy-Efficiency of Software: Metrics and Measurement Results

Timo Johann, Markus Dick, Eva Kern, Stefan Naumann

Timo Johann, Markus Dick, Eva Kern, Stefan Naumann, {t.johann, m.dick, e.kern, s.naumann,}(at)umwelt-campus.de

Trier University of Applied Sciences, Umwelt-Campus Birkenfeld
Campusallee, D-55768 Hoppstädten-Weiersbach, Germany

http://www.green-software-engineering.de/

This presentation corresponds to the following paper:
Timo Johann, Markus Dick, Eva Kern, Stefan Naumann: **How to Measure Energy-Efficiency of Software: Metrics and Measurement Results.**

The GREENSOFT Model
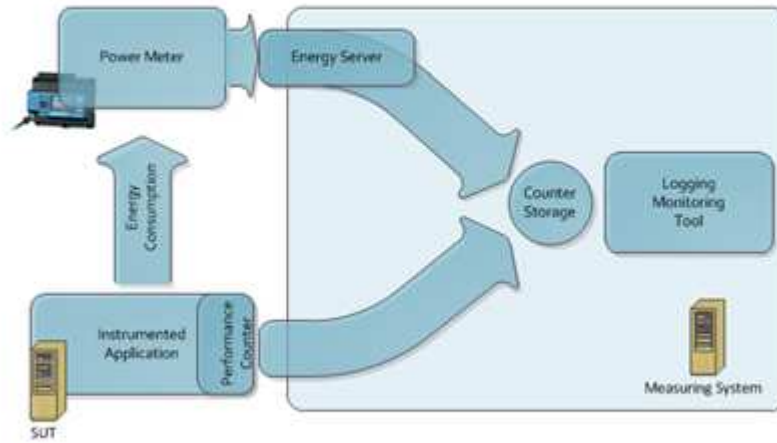
Proposal for a Measurement Environment

Development of Metrics

- The method allows to create indicators, but …
- The metric "Performed Work / Joule" is too simple.
- How can a more complex metric look like.
  - What must be expressed by the metric?
  - What sustainability aspects can be covered?
- What needs to be done to make the method feasible for every day use?
- What stakeholders are interested in sustainable requirements?

If you have further ideas or suggestions on how to improve the measurement and rating method,

feel free to contact us at the Environmental Campus Birkenfeld of the Trier University of Applied Sciences in Germany.

Thank you very much for your time and attention.