
Kim Grüttner – OFFIS Institute for Information Technology
William Fornaciari – Politecnico di Milano
Luciano Lavagno – Politecnico di Torino
Davide Quaglia - EDALab
Motivation

Problem
► Power becomes Achilles Heel for software and mobile device success

Background
► Software controls HW power states
► Inefficient software can drain battery in a few hours

Challenges
► Complex, distributed SW functions
► Executes on heterogeneous HW platforms
► Optimization needs real usage scenarios
► Expensive lab equipment for measurement
► Debugging distorts power measurement

Virtual Prototype based Solution
► System level OS software analysis
► Block level power state tracing
► HW/SW co-analysis
► Debugging even in low power modes
► Deterministic, repeatable scenarios

Source: Jan M. Rabaey
Agenda

Eugenio Villar, Fernando Herrera Casanueva, University of Cantabria, Spain / Francisco Ferrero Mateos, GMV Aerospace and Defence SA, Spain

► Energy and timing analysis and optimization of embedded applications
William Fornaciari, Carlo Brandolese, Politecnico di Milano, Italy

► From RTL IP to functional system-level models with extra-functional properties
Daniel Lorenz, Kim Gruettner, OFFIS, Germany / Nicola Bombieri, University of Verona, Italy / Sara Bocchio, STMicroelectronics, Italy

► Run-time resource management based on design space exploration
Chantal Couvreur, IMEC, Belgium / Philipp A. Hartmann, OFFIS, Germany / Gianluca Palermo, Politecnico di Milano, Italy / Fabien Colas-Bigey, Thales, France

► Network-aware Design-Space Exploration of a Power-Efficient Embedded Application
Mihai Lazarescu, Parinaz Sayyah, Politecnico di Torino, Italy / Davide Quaglia, EDALab, Italy / Emad Ebeid, University of Verona, Italy / Sara Bocchio, STMicroelectronics, Italy

► Panel
Thank you very much for your attention

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