



## Action IC0804

Energy Efficiency in Large Scale Distributed Systems  
Passau, Germany, April 15<sup>th</sup> 2010  
**13:30 – 18:00**

**13:30 Introduction** by Jean-Marc Pierson, Chair of the Action (15mn)

**13:45 Working Group 1: State of the art and continuous learning of hardware adaptation possibilities**

- Presentation of the WG1 Brochure on “Hardware Leverages for Energy Efficiency in Large Scale Distributed Systems”, Georges Da Costa, Davide Careglio, WG1 Chairs (15mn)
- Storage energy and disk acoustics modes, Ronen I. Kat (15mn)

**14:15 Working Group 2: Characterization of energy consumption and energy efficiency**

- The Voyage of WG2 has begun, Alberto E. Garcia, Karin A. Hummel, WG2 Chairs, (15mn)
- Evaluating the Energy Consumption and the Silicon Area of On-Chip Interconnect Architectures, Mohamed Bakhouya (10mn)
- Energy consumption of applications, Georges Da Costa (10mn)
- Energy-aware mobile data mining, Carmela Comito (10mn)
- Energy-efficient BitTorrent Architecture for Green Internet File Sharing, Andrea Passarella (10mn)
- Energy Cost Model for Quorum-based replication protocols, Robert Basmadjian (10 mn)

**15:30 Break**

**15:45 Running and Starting Projects**

- EcoGrappe - Energy Consumption Management in Clusters, Eugen Feller (15 min)
- GAMES Project: Green Active Management of Energy in IT Service centres. Massimo Bettoncini (15mn)
- FIT4Green - An Attempt to Reduce ICT Energy Consumption in Federated Environments, Gergoe Lovasz (15 min)

### **16:30 Working Group 3: Adaptive actions for distributed systems**

- WG3 news. Laurent Lefevre, WG3 Chair (5 minutes)
- From 'time to solution' to 'kWh to solution", Thomas Ludwig, (20 minutes)
- Energy-and-GPU computing", Stephane Vialle (10min)
- Profit-Aware Allocation Policies for Green Server Farms, Michele Mazzucco (10 min)
- PoliSave: Efficient Power Management of Campus PCs, Luca Chiaraviglio (10 min)
- Application of Game Theory to distributed load-balancing", Balakrishna Prabhu (10 min)
- Energy-efficiency in office environments, Andreas Berl (10 minutes)
- Energy-Efficient Wired Communication Networks, Lars Dittman (10 min)

### **18:00 End of Workshop**

#### **18:00 Working Groups specific meetings**

##### **WG1 Internal Meeting**

- Identifying the next steps forwards, Laurent Lefèvre and Hermann de Meer

##### **WG2 Meeting**

- Energy consumption models in the FIT4Green project, Florian Niedermeier (10 mn)
- Power-aware broadcasting protocols in MANETs, Mohamed Bakhouya (10mn)
- Energy efficiency in Aristote University Thessaloniki, Athena Vakali (10 mn)
- Energy efficiency in Univeristy of Vienna, Karin A. Hummel (10 mn)
- Summing up WG2 and identified synergies. Alberto E. Garcia and Karin A. Hummel (10mn)

##### **WG3 Internal Meeting**

- Identifying the next steps forwards, Laurent Lefèvre and Hermann de Meer

### **19:30 Dinner**

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For information, **WG4** will meet on Friday, April 16<sup>th</sup>. You are kindly invited to join their discussion. Here is the program:

09:00 Introduction by Tuan A. Trinh and Rastin Pries, WG 4 chairs

09:10 Overview over activities in energy efficiency research and teaching, Louis-Francois Pau

09:30 GreenCloud: A packet-level simulator of energy-aware cloud computing data centers, Dzmityr Kliazovich

09:50 Energy-aware scheduling for mobile data mining, Carmela Comito

10:10 Coffee break

10:40 How to characterize a good energy aware placement? Damien Borgetto

11:00 Energy efficiency in data centers, László Gyarmati

11:20 Profit-aware allocation policies for green server farms, Michele Mazzucco

11:40 Wrap up and WG4 roadmap