



BIM Based Design and Layout of Energy-Efficient Buildings

HESMOS Workshop

Integrated Virtual Energy Laboratory

26. October 2012

OBERMEYER PLANEN+BERATEN, HansasträÙe 40, Munich

Introduction

09:00 - 09:15 **Registration & Coffee**

09:15 - 10:00 **Welcome, Workshop Overview & Introduction of the Participants**

Dipl.-Ing. (Arch.) Friedrich Jonas

Obermeyer Planen + Beraten, Munich

Prof. Dr.-Ing. Raimar J. Scherer

Project Coordinator HESMOS,

Head, Institut für Bauinformatik,

Technische Universität Dresden

Virtual Energy Lab

(Moderation Prof. R. J. Scherer)

10:00 - 10:15 **Building Energy Management in the Entire Building Life Cycle**

Dipl.-Ing. (Arch.) Bastian Bort MBA, BAM Deutschland AG, Stuttgart

10:15 - 10:45 **HESMOS Platform**

Overall Concept, Technical Infrastructure, Modules, Services and Tools

Dr.-Ing. Peter Katranuschkov, Institut für Bauinformatik, TU Dresden

Use and Benefits of BIM for the Energy Management

Dr.-Ing. Thomas Liebich AEC3 & buildingSMART e.V., Munich

nD Navigator – Goals, Concepts and Software Design

Dipl.-Ing. Raimund Zellner, Nemetschek, Munich

10:45 - 11:15 **COFFEE BREAK**

Building Energy Simulation

(Moderation Prof. J. Grunewald)

11:15- 11:45 **Building Energy Simulation: State of the Art
and New Developments in HESMOS**

Prof. J. Grunewald, Institut für Bauklimatik, TU Dresden

11:45 - 12:00 **Simulation Tools in HESMOS
(demonstration of the implemented energy-related processes)**

Dr. Andreas Nicolai, Institut für Bauklimatik, TU Dresden

12:00 - 13.00 **LUNCH**

Energy Simulations in the Design Phase

(Moderation Prof. Grunewald / F. Jonas)

- 13:00 - 13:45** **Preliminary Design Phase: Workflow, Input Parameters and Templates, Simulation, Post-Processing (Live Demonstration)**
 Prof. John Grunewald / Jens Kaiser, Institut für Bauklimatik, TU Dresden
 Ken Baumgärtel / Peter Katranuschkov, Institut für Bauinformatik, TU Dresden
 Raimund Zellner / Timo Paulik, Nemetschek
- 13:45 - 14:00** **Commissioning Phase: Use of Available Data from BIM, Simulation Updates**
 Prof. John Grunewald / Jens Kaiser, Institut für Bauklimatik, TU Dresden
- 14:00 - 14:30** **COFFEE BREAK**

Energy Related Monitoring & Facility Management

(Moderation Prof. Grunewald / F. Jonas)

- 14:30 - 15:00** **Operational Phase: Building Energy Monitoring, Evaluation of Measurement Data and Analysis of Energy Performance (Live Demonstration)**
 B. Hensel, Institut für technische Informationssysteme, TU Dresden
 Ken Baumgärtel, Institut für Bauinformatik, TU Dresden
 Marie-Christine Geißler, BAM Deutschland AG, Stuttgart
 Raimund Zellner / Timo Paulik, Nemetschek
- 15:00 - 15:30** **Energy Optimisation in the Operational Phase, Energy-Aware Facility Management (Live Demonstration)**
 Francisco Fornes-Samso, Granlund, Finland

Invited Guest Presentations

- 15:30 - 16:00** 2 x 15 min. presentations (to be announced at the workshop)

Summary, Outlook and Discussions

- 16:00 - 16.20** **HESMOS – Further Developments in the Third Project Year, Enhancements from the more recent EU Project ISES**
 Prof. R. J. Scherer, Institut für Bauinformatik, TU Dresden
- 16:20 - 17.00** **Open Discussion: Practice-Relevant Modelling, Simulation and Monitoring, eeBIM-Roadmap**
- ca. 17:00** **END**

Software Demonstrators

- ALLPLAN BIM Export for Energy Simulations – Nemetschek, Munich, Germany
- HESMOS nD Navigator – Nemetschek, Bratislava, Slovakia
- HESMOS Components - Energy Solver (NANDRAD, THERAKLES) – TU Dresden, Germany
- HESMOS Components - FM & monitoring tools (WebRoomex, RYHTI Metrix, RIUSKA) – Granlund, Finland
- HESMOS Services for the virtual Energy Lab – Nemetschek, Slovakia & TU Dresden, Germany
- Multi-Model-Filtering Framework – TU Dresden, Germany

HESMOS Portfolio

European FP7 Project

Duration: 3 years (09/2010 – 08/2013)

Funding: 2,7 M€

Partners:

- TU Dresden, Germany (Coordinator)
- Nemetschek Slovensko S.R.O., Slovakia
- Granlund OY, Finland
- Royal BAM Group, The Netherlands
- Obermeyer Planen + Beraten GmbH, Germany
- AEC3 Ltd., UK



Pilot project: Professional School, Pforzheim, Germany

PPP Project, BAM Deutschland AG