Escola Politècnica Superior d'Edificació de Barcelona
UNIVERSITAT POLITÈCNICA DE CATALUNYA

L'Institut d'Estadística i Matemàtica Aplicada a l'Edificació (IEMAE) recull propostes en el sector de l'edificació sostenible de professors de diferents departaments de l'EPSEB de forma transversal i en aquest context dinamitza i dóna suport a l'activitat dels seus membres en l'àrea de l'Estadística i Matemàtica Aplicada orientades a noves metodologies i les seves aplicacions.

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Seminari IEMAE

http://iemae.upc.edu

17 de juliol de 2009

16:30h, Aula 0.5, EPSEB

Calendari Curs 2008-09

08/10/08: Modelització matemàtica a topografia. Amparo Nuñez i Felipe Buil

19/11/08: A simulation-based algorithm to predict time-dependent structural reliability. Àngel A. Juan

22/01/09: Structural reliability and fuzzy sets. Albert Ferrer

15/04/09: L'scheduling en la gestión de proyectos. Manel Mateo

27/05/09: Survival analysis techniques applied to building maintenance. Carles Serrat

19/06/09: Discrete event simulation and fuzzy sets in structural reliability and availability in building construction. Pere López

17/07/09: Lights Out at MIT. A study in motivating and measuring energy-efficient behavior change. Josh Hester

22/07/09: Fuzzy Sets, Aggregation Functions and Application. Gleb Beliakov

LIGHTS OUT AT MIT.
A STUDY IN MOTIVATING AND MEASURING
ENERGY-EFFICIENT BEHAVIOR CHANGE

Josh Hester
MIT student

Abstract

With today's concerns about climate change and economic recession, it is essential for every large business and organization to scale back on their energy consumption. While it is helpful to make new buildings as "green" as possible and it is possible to install more energy efficient fixtures and appliances in buildings, the most basic and direct method of reducing our energy consumption is to change our behavior. Something as simple as being more conscientious about turning off the lights can lead to significant savings. The Lights Out project is a pilot project in two of the buildings at MIT to determine the effectiveness of computer-mediated feedback mechanisms to cause this behavior change. Cameras were installed outside these buildings to monitor the overnight usage of lights, and a program was written to analyze the camera images and send weekly emails to each lab director with a summary of their lab's energy usage. Initial data from September and October 2008 indicate that this feedback did led to some reductions in overnight lighting use.