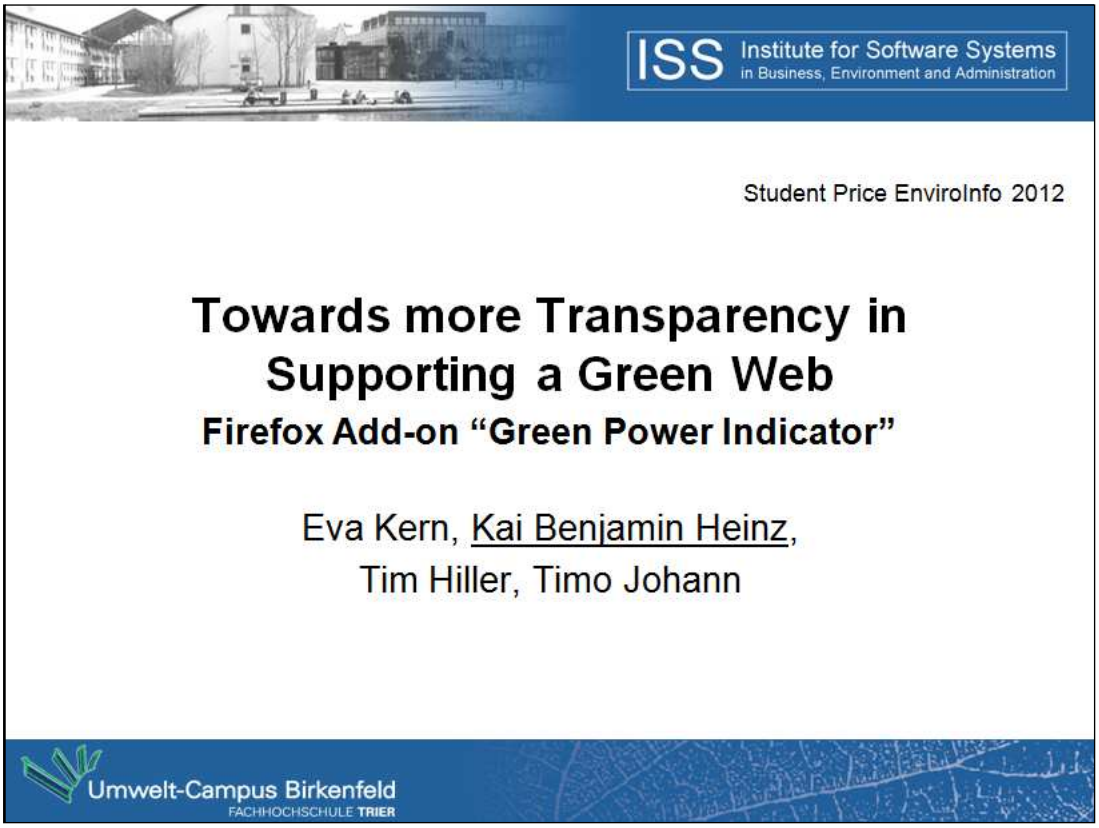

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Outline

I. Introduction

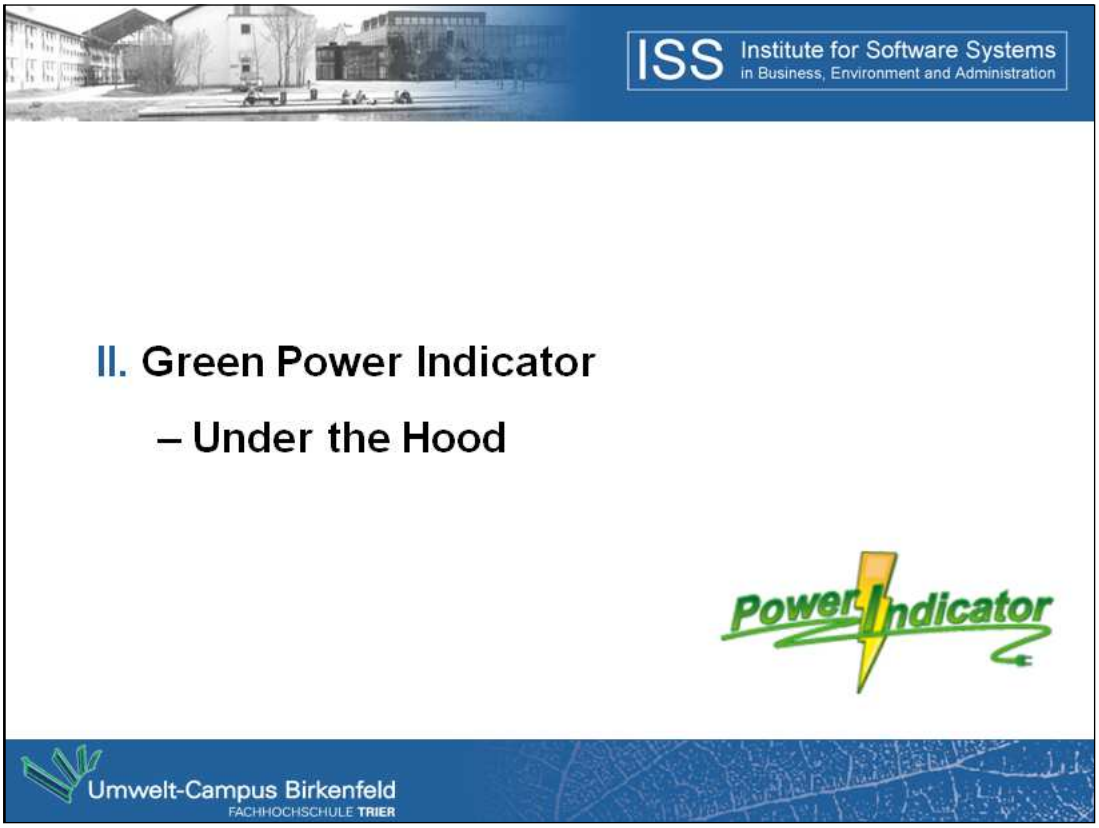
II. Green Power Indicator – Under the Hood

III. Conclusion & Outlook

IV. Bonus: About the Environmental Campus Birkenfeld

I. Introduction

An user can manage the energy consumption if ist own PC. In order to save energy, he can turn-off the computer or replace parts by more energy-efficent ones. However, the user has totaly no control over the energy consumption of the www. He/She does not even realize that energy is needed for hosting a web-page. To make the user aware of this fact, we developed the Green Power Indicator, which visualizes that energy is needed for the currently displayed website.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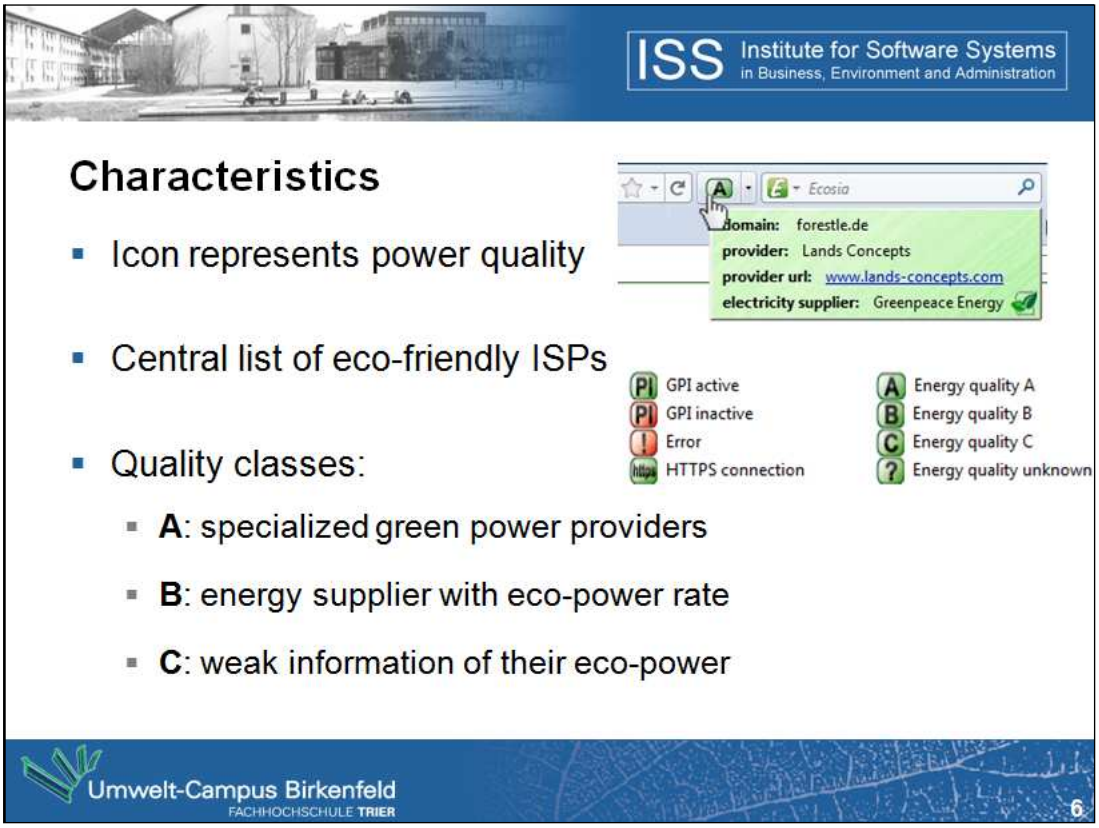
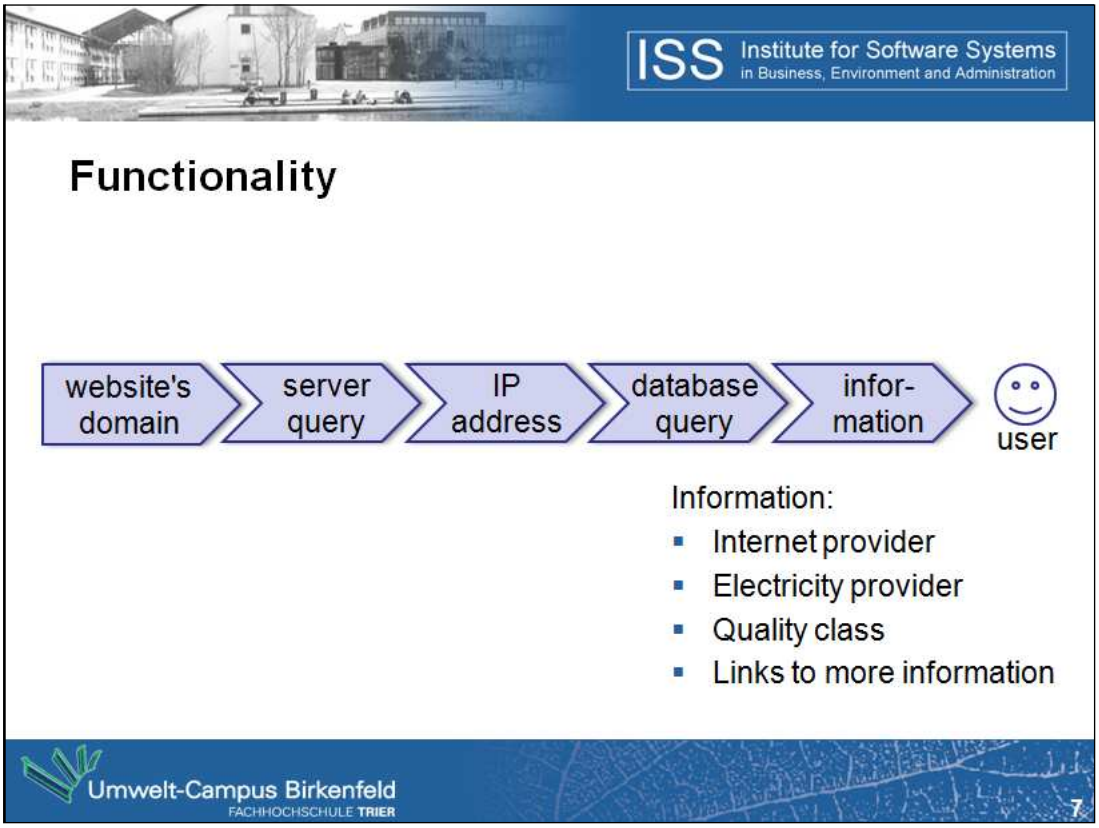
II. Green Power Indicator
– Under the Hood
Power Indicator
Umwelt-Campus Birkenfeld
FACHHOCHSCHULE TRIER



The Green Power Indicator is basically an icon-button located close to the address-bar of the firefox browser (or somewhere else, however the user wants to have it). It dsiplays the energy quality of the servers energy provider. The energy quality is divided into three classes where A is the best and C the worst. C still represents some kind of eco-power. The information are stored on a centralized database.



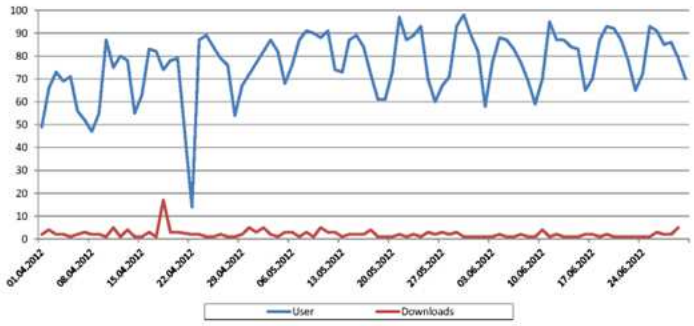
PostgreSQL-Database
Application Server: Zope-based, uses Plone as CMS
Object orientated language Python for Plone programming

The response from that DB-server contains multiple information such as the quality class, the provider, and their energy supplier.

Technical Aspects

- Mozilla Firefox extension:
  - XUL for user interface
  - JavaScript for functionality
- Eco ISPs database
  - Providers in quality classes
  - Statistical data about the requests of green vs not-green websites

Statistics



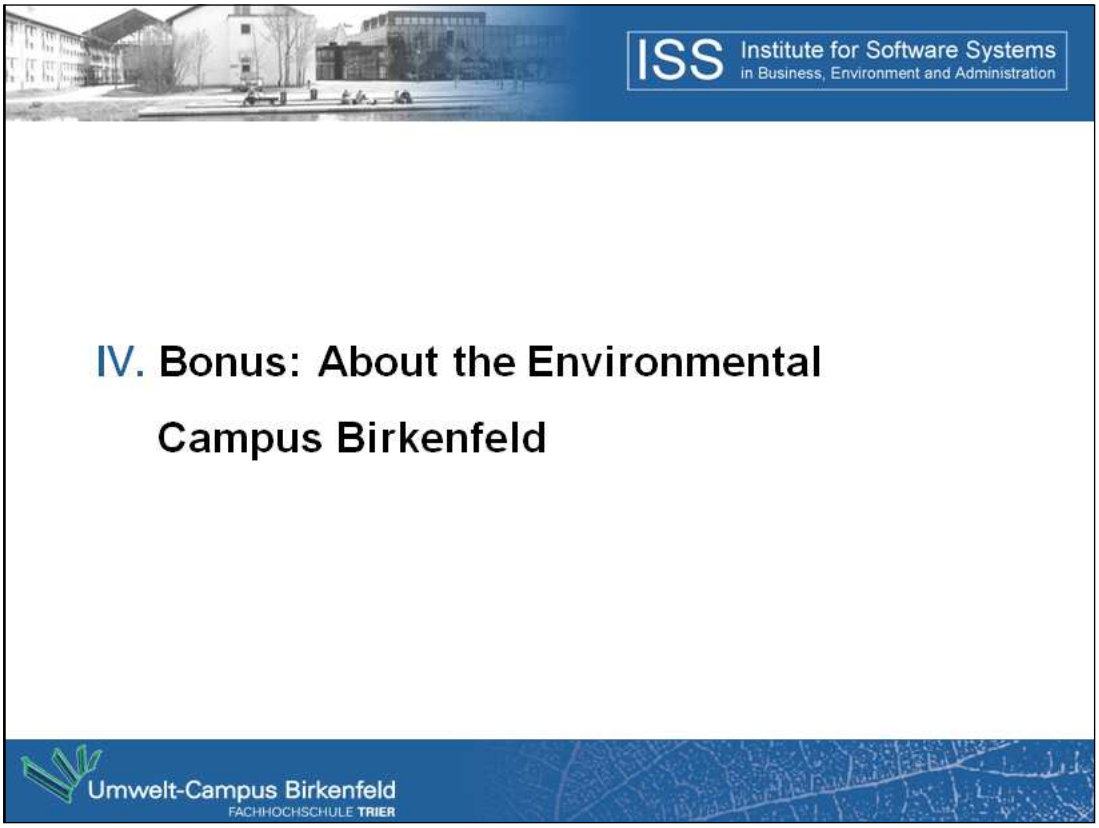
- Overall (December 2010 to June 2012):
  - About 2000 downloads
  - 82 average daily users

III. Conclusion & Outlook

Conclusion, Potentials & Outlook

- Green Power Indicator as one of the different activities to support the movement to a greener Web
  - Allows to take a look behind the webpage (transparency)
  - Allows to choose between “green” and “grey” sites
- Next steps / further ideas:
  - establishment of a community
  - transferring to other platforms
  - development of Green Websites Label

➢ social rethinking about the energy consumption of the World Wide Web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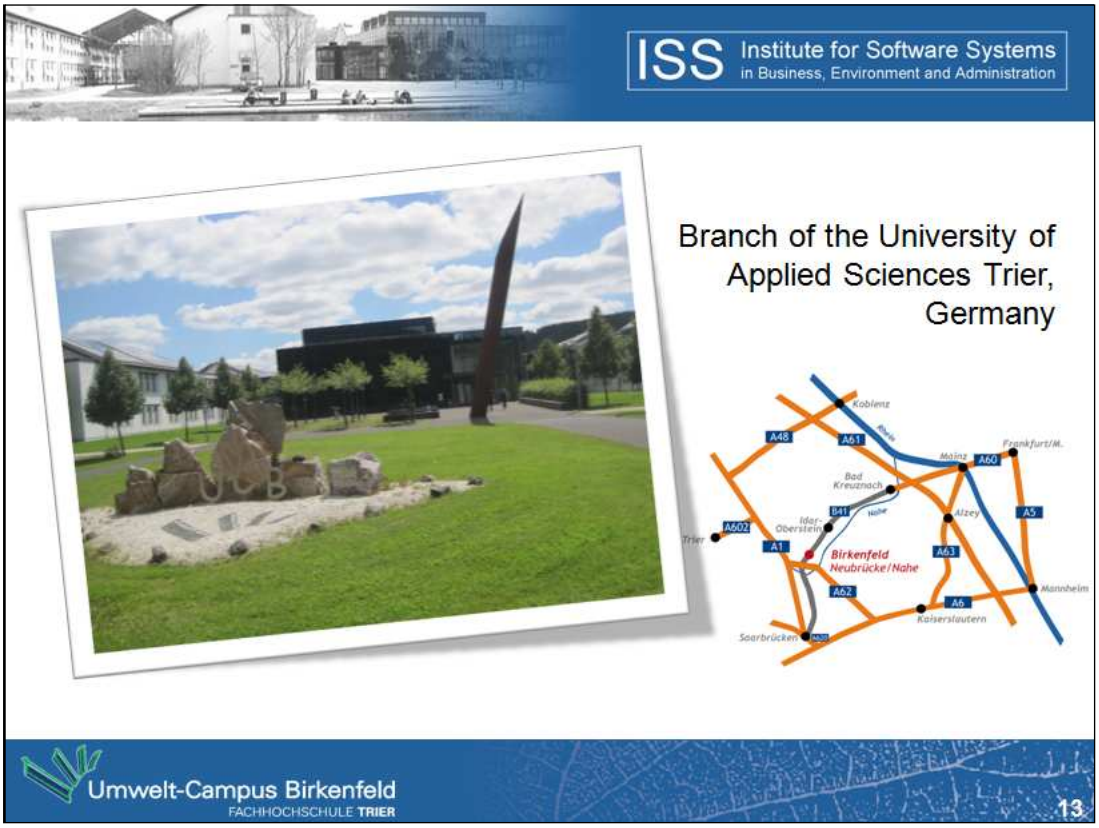
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13

About the Environmental Campus Birkenfeld

- Since 1996:
  - Environmental Planing / Environmental Technology
  - Environmental Business / Environmental Law
- Computer Sciences:
  - Applied Computer Science
  - Media Computer Science
  - Econonomics and Environmental Computer Sciences
- Multiple research projects

Students Projects

- Bachelor‘s degree as well as Master‘s degree:
  - 2 practical projects (min.)
  - Workload: 180 hours
- Green Power Indicator: Firefox Add-on
  - Self-management of the different project teams
  - Different versions of the Add-on
- Tools:
  - Project management: Redmine, SVN
  - Development environment: Eclipse IDE, ANT

Thank you for your attention!

GreenSoft
Green Software Engineering

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