Bachelor’s Thesis

P3P_nxl – Building a next generation privacy preference language framework

Context
With the rise of the internet the protection of privacy becomes a more and more challenging and necessary issue. In the first instance legal regulations are used to address privacy concerns regarding new technologies and systems. But because of the ex-post character of legal regulations, the rules codified therein only operate when the legal system is invoked. Therefore technical systems can be used to enforce legal compliance and prohibit the violation of these legal rules in an ex-ante manner. One such technical framework to protect the privacy of online users is the Platform for Privacy Preferences (P3P).

Problem
P3P consists of a software client to define a user’s privacy preferences, a privacy preference language that is used to codify a company’s privacy policies in a machine-readable format, and a browser extension to match the user’s preferences with the policies of an internet site or service. While P3P is a W3C standard, studies have shown a decreasing adoption of P3P (~10% of all analyzed websites).

(1) What are the reasons for the weak adoption of P3P?
(2) How can we build a new framework or improve the existing one to address these reasons?

Approach
• Research the shortcomings of P3P and the reasons for the low adoption rate.
• Develop and implement enhancements to treat the weaknesses of P3P
• Evaluate your solution against criterias identified before

Skills: web technologies, javascript, (python)

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Our Mission:
Our lectures cover fundamental methods and techniques in the areas of service computing, cloud computing, and enterprise computing. We like to engage students in hands-on building of distributed information systems and to take an interdisciplinary approach to evaluating such systems. Through a close mentoring of students, especially in our seminars, we aim to introduce students to our ongoing research and to excite them to do future studies and research with us.