
Protokoll der Fachschaftssitzung ETiT

Protokollant Philip Gottschling

Anwesend Anna P., Dominik R., Philip G., Tobias M.

Gäste

Datum 19.08.2013 18:15–18:45

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1 Post

- nur Marketing und Sponsoring

2 Protokoll von letzter Woche

3 Termine und Aufgaben

3.1 Termine

27. August 2013: Vorträge der BK² Privacy Preserving Power Grid Monitoring (P3M)

31. August 2013 10:00: HSQ³-Redaktionstag

12. September 2013 14:00: UA-Lehre

8. Oktober 2013: Beginn OWO

11. Oktober 2013: Ende OWO

31. Oktober 2013: Evaluation der zentralen Verwaltung

3.2 Aufgaben

keine

3.3 erledigte Aufgaben

keine

¹Fachschaftenkonferenz

²Berufungskommission

³Hochspannungsquelle

4 Berichte

4.1 FSK⁴

Aufgrund der Sommerpause gibt es nicht so viel zu berichten.

- Die Fachschaften Bauingenieurwesen (FB 13) und Architektur (FB 15) gründen einen Förderverein für ihre Fachschaften.
- Im September findet ein Gespräch zwischen den Studierendenvertretern und Kanzler Efinger statt
- Die FSK im September findet bei den Chemikern (FB 7) statt

5 Evaluation der Zentralen Verwaltung

Dominik schlägt als Vertreter vor: Stephan V. (schon angesprochen) und Ivan M.

⁴Fachschaftenkonferenz



Elektrotechnisches Kolloquium des FB 18 „Elektrotechnik und Informationstechnik“

Der Dekan lädt alle Angehörigen und Freunde des Fachbereichs Elektrotechnik und Informationstechnik herzlich zu folgendem Vortrag ein:

Termin: **Mittwoch, 28. August 2013, 10:00 Uhr**

Ort: **Rundeturmstr. 10, Darmstadt**

Gebäude S3 / 20, Raum 18

Dr.-Ing. Tobias Hoßfeld / Universität Würzburg:

Holistic Modeling and Analysis of Internet Applications: Example on Energy Consumption and Quality of Experience of Smartphone Apps

The Internet offers an increasing diversity of distributed applications and services over various media. Especially, the popularity of smartphones and mobile applications has experienced a considerable growth expected to continue in the future. Understanding and measuring quality of Internet services and underlying networks from an end-user perspective has attracted strong attention which is caused by increased competition among stakeholders i.e. application provider, network provider, hardware vendor. Since smartphones have only very limited energy resources, battery efficiency is one of the determining factors for a good user experience. However, these trends create conflicting, challenging demands on the stakeholders involved.

For analyzing and optimizing Internet and Smartphone apps, a holistic modeling of Internet applications is required. This holistic model considers all relevant layers including the physical network, the application itself, but also the user layer reflecting user perception, behavior and interaction.

In this talk, the tradeoff between energy consumption at the smartphone and the generated signaling traffic in the mobile network is discussed. This tradeoff is controlled by the mobile network configuration but also by the actual application traffic characteristics and directly influences QoE of the considered smartphone app. In the second part of the talk, a QoE model for YouTube video streaming is presented as basis for QoE monitoring and optimization.

Fachbereich 18 Elektrotechnik und Informationstechnik
Der Dekan



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et:t

Elektrotechnisches Kolloquium des FB 18 „Elektrotechnik und Informationstechnik“

Der Dekan lädt alle Angehörigen und Freunde des Fachbereichs Elektrotechnik und Informationstechnik herzlich zu folgendem Vortrag ein:

Termin: **Dienstag, 27. August 2013, 10:00 Uhr**

Ort: **Rundeturmstr. 10, Darmstadt**

Gebäude S3 / 20, Raum 18

Dr.-Ing. Florian Kerschbaum / SAP Research Karlsruhe:

Privacy in the Smart Energy Grid

Smart meters communicate fine-granular consumption data to the electricity provider. This information allows privacy-intrusive inferences about the household and its inhabitants. Smart meter roll-outs have been stopped due to these privacy concerns. We contribute a privacy-preserving architecture for smart metering. Consumption data only leaves the household encrypted under the household's key. Later the household performs the necessary computations, such as billing, and proves in zero-knowledge the correct computation. Therefore nothing except the result (final amount) is revealed to the electricity provider and yet, the integrity of the computation (billing) is preserved. We even overcome key sharing issues for spatial aggregation across households using homomorphic encryption and again zero-knowledge proofs. This allows grid providers privacy-preserving forecasting of energy demand and hence improves the management of the smart grid. Our final result contributes an efficient general technique for zero-knowledge proofs of non-algebraic statements. This enables the efficient privacy-preserving computation of arbitrary functions in our architecture, e.g., verification of demand-response targets, but it also has many other applications in computer science, such as the efficient zero-knowledge proof of knowledge of pre-images to cryptographic one-way hash functions.



Elektrotechnisches Kolloquium des FB 18 „Elektrotechnik und Informationstechnik“

Der Dekan lädt alle Angehörigen und Freunde des Fachbereichs Elektrotechnik und Informationstechnik herzlich zu folgendem Vortrag ein:

Termin: **Dienstag, 27. August 2013, 14:00 Uhr**

Ort: **Rundeturmstr. 10, Darmstadt**

Gebäude S3 / 20, Raum 18

Prof. Christoph Sorge / Universität Paderborn

Privacy-enhancing approaches for smart electricity meters

Smart electricity meters regularly transmit up-to-date electricity consumption values of individual households to electricity suppliers or transmission system operators. This information can help to detect fraud, to improve electricity consumption forecasts, to make consumers aware of their electricity consumption and (eventually) to support dynamic pricing. However, detailed consumption profiles also reveal information about households, e.g. concerning presence of persons and the use of individual electric devices like washing machines or TV sets.

In most cases, power consumption values of households qualify as personal data. While this implies a legal protection, technical measures are preferable: They have a potential to keep all benefits of smart meters and to improve consumers' privacy at the same time. The talk gives an overview of privacy protection for smart electricity meters, taking legal considerations as a starting point. From a technical perspective, the talk introduces a model for the smart meter privacy problem and presents concrete approaches. An approach involving communication among the smart meters is shown in detail and analyzed concerning its security.

