Exploring the Tradeoff Between Privacy and Utility

S2ERC Autumn 2018 Showcase
Georgetown University, 13-15 Nov 2018

Ulrico Celentano (Tapio Frantti presenting)
Status

- PROTECT (exPloring the trRadeOff beTwEen privaCy and uTility)

- Collaboration with Georgetown University (Clare Sullivan) started

- Bachelor’s thesis being developed within PROTECT project
Collaboration with Georgetown University (Clare Sullivan)

- Joint paper in preparation
- Tentative title: “Privacy Protection: Juridical Compliance and Technical Constraints”
- Contributors: University of Oulu (editor), Georgetown University, Nokia Bell Labs
- Tentative target: Computer Law & Security Review
- JuFo* category 1
  - * Julkaisuforumi / Publication Forum (http://www.julkaisuforumi.fi/en) classification of publication channels
“Privacy Protection: Juridical Compliance and Technical Constraints”

Table of contents (work in progress)

1. The concept of privacy
   - A brief history of privacy protection
   - What is personal data
   - Is pseudonymised data still personal?
   - Who has the (right to) control data gathering and processing
   - Also discuss IoT (not personal devices but linked to persons, etc.)

2. Overview of related security threats
   - Ecosystem, including attackers, etc.

3. Analysis: legislation in some countries
   - US, EU (GDPR), etc.

4. Synthesis: derived technical constraints
   - Legal concepts and requirements: how they are implemented technically
   - Technical realization and economic impact (related to technical solutions)

5. Discussion
Bachelor’s thesis being developed

- Samuli Määttä, University of Oulu
- Topic: Overview and classification of statistical disclosure control methods
Next steps and methodology

- Combine previous and ongoing research at Nokia and UOULU
- Overview and classification of statistical disclosure control methods
- Information collection, processing and dissemination
- Various forms of attacks
- Outline of possible solutions
- Metricising privacy and the privacy-utilisation trade-off
- Framework for privacy protection and analysis of case studies

- Bring the above to advance the draft article

- The setup of a platform to demonstrate the proof of concept of the project results is being considered
- More researchers could be hired to the project
- Monthly meetings are planned
- Next joint meeting Tue 4 Dec
Thank you for your attention!

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