Conducting Studies with Experts

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About us …

- Our research field:

**Usable Security and Privacy
for
Developers & Administrators**

Overview Topics

1. Investigating & designing usability scales for APIs

2. Is the developer the enemy?

3. Investigating security advice

4. Plugins for IDEs

5. Own ideas

Topic 1:
Investigating & designing usability scales for APIs

- Comparing **different usability scales**

- Which one applies best for **developer**?

- Which one applies best for which **use-case**?

- Choosing the number of categories in **Agree–Disagree Scales**

- Examine related work and summarize, e.g., System Usability Scale (SUS)

System Usability Scale

Please rate from Strongly Agree to Strongly disagree:

1. I think that I would like to use this system frequently.
2. I found the system unnecessarily complex.
3. I thought the system was easy to use.
4. I think that I would need the support of a technical person to be able to use this system.
5. I found the various functions in this system were well integrated.
6. I thought there was too much inconsistency in this system.
7. I would imagine that most people would learn to use this system very quickly.
8. I found the system very cumbersome to use.
9. I felt very confident using the system.
10. I needed to learn a lot of things before I could get going with this system

Literature

Literature at least to read:

- Wijayarathna, Chamila, Nalin AG Arachchilage, and Jill Slay. "**A Generic cognitive dimensions questionnaire to evaluate the usability of security apis.**" (https://arxiv.org/pdf/1703.09846.pdf)

- Acar, Yasemin, et al. "**Comparing the usability of cryptographic apis.**" (https://www.computer.org/csdl/proceedings/sp/2017/5533/00/07958576.pdf)

- Revilla, Melanie A., Willem E. Saris, and Jon A. Krosnick. "**Choosing the number of categories in agree–disagree scales.**" (http://journals.sagepub.com/doi/pdf/10.1177/0049124113509605)

- Wijayarathna, Chamila, and Nalin Asanka Gamagedara Arachchilage. "Why Johnny Can't Store Passwords Securely? A Usability Evaluation of Bouncycastle Password Hashing." (https://arxiv.org/pdf/1805.09487.pdf)

- Find more....

Topic 2: Is the developer the enemy?

"Developers Are Not The Enemy! The need for usable security APIs"

vs.

"The developer is the enemy."

- Conduct research and answer the above question...

Literature

Literature at least to read:

- Wijayarathna, Chamila, and Nalin Asanka Gamagedara Arachchilage. "Why Johnny Can't Store Passwords Securely? A Usability Evaluation of Bouncycastle Password Hashing." (https://arxiv.org/pdf/1805.09487.pdf)

- Wurster, Glenn, and Paul C. van Oorschot. "The developer is the enemy."
(http://people.scs.carleton.ca/~paulv/papers/nspw08gw.pdf)

- Green, Matthew, and Matthew Smith. "Developers are not the enemy!: The need for usable security apis."
(http://mattsmith.de/pdfs/DevelopersAreNotTheEnemy.pdf)

- Find more....

Topic 3: Investigating security advice

- What kind of advice has been presented in the literature? => Form taxonomy

- How do developers react to security advice: warnings, help etc. ?

- Examine all work on this topic
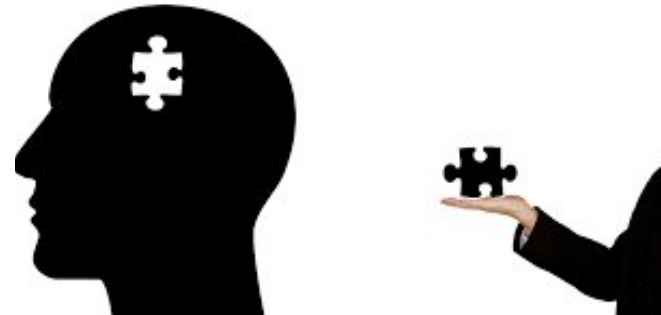
Literature

- Developers Deserve Security Warnings, Too: On the Effect of Integrated Security Advice on Cryptographic API Misuse

Peter Leo Gorski and Luigi Lo Iacono, Dominik Wermke and Christian Stransky, Sebastian Möller, Yasemin Acar, Sascha Fahl

- Do developers read compiler error messages?

T. Barik, J. Smith, K. Lubick, E. Holmes, J. Feng, E. Murphy-Hill, and C. Parnin.
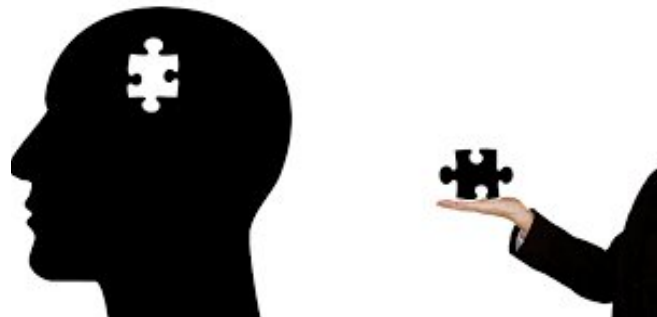
Topic 4: Plugins for IDEs

- Examine literature on different plugins for IDEs

    - What is the goal of the plugins?

    - Which kind of plugins are there?

    - Which techniques are common to increase visibility?

    - How are the plugins evaluated?

Own ideas

- Any **own ideas** for a project in Usable Security and Privacy for developers/admins?

<p style="text-align:center"><strong style="color:#c0601f">GREAT!</p>

- We'd love to work with you on that!

Apply

- Please send your exposé to:

    naiakshi@cs.uni-bonn.de or danilova@cs.uni-bonn.de

Deadline for exposé: 2nd October

- On the **5 October** you will be informed whether you were chosen/not chosen for your favourite lab topic
- **Register deadline for the lab in BASIS:** 31.10.2018