Towards An Empirical Analysis Of Trustworthiness Attributes In The Context of Digitalization

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Research Topics

- Trustworthiness Software Development & Web-Services
- Trustworthy KI Web-Services
- Privacy in Web-Services
- Automated conflict resolution approaches für Web-Services
- https://blog.hwr-berlin.de/schmietendorf/forschungsthemen/
Agenda

• Introduction
• Related Work
• Viewpoints
• Future Work
Introduction
Introduction

- Trust and Trustworthiness of services are essential
  - in the digitalization
  - perceive differently across multiple academic and industrial disciplines
- **STEEPLE** Analysis of the influences as key method [1]
  - Social, Technological, Economic, Environmental, Political, Legal and Ethical
Related Work
• McKnight brought together the various aspects and their dependencies on trust in one design [1]

• distinguishes in trust in the institution through psychology and sociology, which influences the personal trust
• 2016 Robbins shows a modern trust-risk-act-model [1],
• called relational trust
• connections between trust, risk assessment and the relation to activities
Related Work

- Trustworthiness attributes of web-based software identified by literature review [1] and survey [2]
Viewpoints
two main elements are decisive for its reputation with consumers

- User trust and
- the trustworthiness of the service

trust can be personal, transferred and based on core trust, for example in institutions

The trustworthiness of the service is

- based on its attributes and
- on those confirmed by third parties
trusted digital services

trust

personal trust
  - by knowledge
  - by emotion

referral Trust
  - by trusted Truster
  - by emotion

trust in institution
  - by competence
  - by law

attributes
  - measured
  - estimated

third party confirmed
  - certificates
Future Work
Future Work

- We Initiate the research project **EUMoVe**
  - Empirische Untersuchungen zur Modellierung von Vertrauenswürdigkeit (EUMoVe)
    - In eng.: Empirical studies on trustworthiness modeling
- S1 – Simulation of a trustworthy scrum process
- S2 – Trustworthy public WiFi
- S3 – Trustworthy AI-Webservices
- S4 – Trustworthy web presence of mediators
Future Work

- Each empirically determined trustworthiness attribute ($A_i$) per examined system ($S_j$) should be weighted.
- Attributes are categorized according to the STEEPLE dimensions.
- Create the general model.
- Similar or different systems will contribute to the overall set, but also add information on different weights.
Thank you.

We will gladly answer your questions by email:
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