User Centered Design of ITSM Tools

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Introduction

• IT Security Management (ITSM) is important for organizations

• ITSM context has three characteristics:
  – Complex
  – Collaborative
  – Diverse stakeholders
An Example From Our Case Study
Usability Evaluation of ITSM Tools

- There are different techniques for usability evaluation
  - Lab usability study
    - Validity, participant recruitment
  - Field study
    - Time consuming, participant recruitment
  - Discount usability evaluation methods
    - Do not address specifics of IT security
Problem Definition

• Discount usability evaluation methods do not address specifics of IT security
  – Collaboration
  – Complexity
  – Stakeholder Diversity

• We focus on heuristic evaluation as a widely used discount usability evaluation technique
HEURISTIC EVALUATION OF ITSM TOOLS
“Error Prevention: Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.”
Error Prevention

• Nielsen’s original heuristic: “Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.”

• In ITSM:
  – ITSM tools should facilitate the creation and use of cues and norms.
  – ITSM tools can prevent errors by involving other stakeholders.
  – ITSM tools can reduce errors by exposing the system at different levels of abstraction.
Future Work

• Testing heuristics
  – Recruit evaluators, perform a comparative study
  – Challenges: participant recruitment, complexity of the system

• Field study of IdM tools and practices
  – Challenges: participant recruitment, long process, broad area
• P. Jaferian, D. Botta, K. Hawkey, and K. Beznosov. **A case study of IdM adoption in an insurance organization.** Under review.
• P. Jaferian, D. Botta, K. Hawkey, and K. Beznosov. **Interpreting Nielsen's usability heuristics in consideration of the complex and cooperative nature of it security.** Under review.