Eliciting Persona Characteristics for Risk-based Decision Making

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Background
- Personas are behavioural specifications of archetypical users; their goals and expectations should be addressed when designing a system [3].
- Previous work [4] has shown how qualitative models can ground personas, but more evidence is needed on the applicability of grounding models in risk-based decision making research.
- We present an approach for eliciting persona characteristics for risk-based decision making that are grounded in an adaptation of the Observe Orient Decide Act (OODA) model [2].

The approach illustrate how the modelling of personas based on decision makers’ understanding of risk, aids in designing for risk and uncertainty.

RRP to Persona Mapping

Decision Making Facilitation
- Participants successfully used RRP to make and justify their decisions.
- Participants found that the hypothetical nature of the scenario made identifying the limitations to their rationale hard.
- An inverse relationship was identified between the early stages of proactive and reactive risk analysis.

Results
- We conducted an elicitation exercise with 30 industrial participants undertaking a cyber security course in Japan.
- Participants were drawn from 11 different sectors including Transport, Oil, Electricity and Manufacturing, with experience ranging from 1 to 20 years.
- Participants were trained on the Risk Rationalisation Process (RRP): our adaptation of OODA.
- Participants were presented with a cyber security decision making scenario, and asked to rationalise their decisions using RRP.
- The results would highlight RRP’s ability in facilitating risk-based decision making, and validate the mapping from RRP to persona modelling.
- CAIRIS [5] was used to derive Toulmin models [1] and persona characteristics from the qualitative model data.

Conclusion & Future Work
- We have contributed methods for eliciting persona characteristics for risk-based decision making by adapting techniques familiar to UX researchers and Human Factors engineers.
- Additional studies will be carried out to further identify how RRP can support design for risk-based decision making.

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