

Invitation to participate in an interview on Requirements Technical Debt Quantification

Dear <PARTICIPANT NAME>

We, Judith Perera, AP Kelly Blincoe, AP Ewan Tempero, Dr Yu-Cheng Tu, and Faith Culas from the School of Computer Science and the Department of Electrical, Computer and Software Engineering, University of Auckland, and Professor Matthias Galster from the Department of Computer Science and Software Engineering, College of Engineering, University of Canterbury, are an inter-disciplinary research team located in New Zealand.

The consequences of sub-optimal decisions made concerning software requirements are captured by the concept 'Requirements Technical Debt (RTD)'. Some instances of sub-optimal decisions related to requirements are the inadequate gathering of user needs, ambiguous specifications, a wrong prioritization of requirements, inadequate (or partial or incorrect) implementation of user needs, and design decisions that do not essentially satisfy user requirements. We are investigating how to quantify RTD. We hypothesize that quantifying (or measuring or estimating) RTD can help manage it and would lead to huge cost savings for software companies as well as their stakeholders.

With this series of semi-structured interviews, we want to gather perceptions of software practitioners on how to quantify RTD for software requirements in general and for requirements related to 'veracity' --- requirements related to truth, trust, authenticity and demonstrability. Our goal is to understand what metrics or tools may be helpful in the decision-making to manage RTD. There could be user needs pertaining to different dimensions of veracity such as regulatory, data, financial, process, and cultural that may be gathered as software requirements and implemented as software features or architectural design decisions in the systems you design and develop. You could help us by sharing your perceptions on sub-optimal decisions made concerning these requirements and whether and how measuring the consequences of such decisions can be helpful to you and your company.

A 60-minute interview will be conducted online in English. However, the meeting will be scheduled for 90 minutes to allow for any potential technical issues or extended discussions. The session needs to be recorded and transcribed for data collection and analysis but we will de-identify the data prior to analysing and reporting study results so that your anonymity and confidentiality is preserved.

Participation in this study is voluntary and you are allowed to leave the interview at any time without giving reason. Your identity will be kept confidential. You can review, edit, and withdraw your data after the interview without giving a reason. Further information can be found in the Participant Information Sheet. If you are interested in participating in this study, please send us the signed Consent Form, and we will schedule the interview at your convenience. Both the PIS and the Consent Form are attached to this invitation.

We are happy to answer any questions you may have prior to participating. Thank you very much for your interest and participation.

Kind regards
Research Team

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Approved by the University of Auckland Human Participants Ethics Committee on 14/06/2024 for three years. Reference Number: UAHPEC27696.