

EXPLANATORY STATEMENT

Manager

Project Title:	Understanding Requirements Changes in Software Development
Name of Principal Investigator/ Supervisor:	Rashina Hoda
Name of Co-Investigator/ Supervisor:	John Grundy
Name of Student Researcher:	Kashumi Madampe

Researcher Introduction

Rashina Hoda is an Associate Professor in the Department Software Systems and Cybersecurity, Faculty of Information Technology, Monash University, Australia.

John Grundy is a Professor in the Department Software Systems and Cybersecurity, Faculty of Information Technology, Monash University, Australia.

Kashumi Madampe is a PhD candidate in the Department Software Systems and Cybersecurity, Faculty of Information Technology, Monash University, Australia.

Project Description and Invitation

Requirements changes are crucial in software development. By this project, we investigate what kind of requirements changes prevail in software development environments, how these requirements changes impact the teams and members and how these requirements changes can be managed effectively by the teams and members.

We invite software practitioners to participate in our research and their participation is voluntary. Call for participation adverts will be posted to software practitioner user groups online. Upon showing willingness to participate, further information will be given about the project, participant's demographics will be collected and interview time will be arranged.

With your permission, observations will be conducted. Therefore hereby we seek your permission for access to your organization's facilities to conduct interviews with participants and to observe the teams managing requirements changes.

Accessing software repositories and mining the data (digital artefacts), mainly commit messages, comments, issues, and tickets will be done upon your permission. All data collected will be kept confidential. See 'Anonymity and Confidentiality' section below for details.

Intention of Participation

The main intention of the interviews, observations, and mining software repositories is only to collect data towards practices in software development environment with the focus of understanding the changes. Therefore we seek your assurance that participation or non-participation will not affect the employment status of the participants, the participant's relationship with your organization or access to your services.

Non-Participants

Interviews will be conducted at a suggested non-disruptive environment in the workplace if the convenient venue for interview suggested by the participant is their workplace. Observations will only take place upon your permission. Therefore we will not interact with anyone other than the participants and no data will be collected from non-participants.

Project Procedures

This research uses both Quantitative and Qualitative research methods. Using this method, data will be collected using face-to-face, semi-structured interviews, pre-interview questionnaires, surveys, observation of workplace and practices, and by mining software repositories. The interview will be approximately an 30-45 minutes long and will be audio-recorded and transcribed to assist in analysis. Observations will be approximately 2 hours long and will involve the research observing workplace settings and practices without causing any major disruption to normal mode of work. Photographs of workplace settings and artefacts may be taken with permission from the team's manager. Software repositories owned by your organization will be accessed upon your permission using the credentials provided by you and data mainly, commit messages, comments, issues, and tickets will be mined.

Analysis of the data will involve comparing data from one interview to another, quantitative analysis of survey data, and mined software repository data in order to identify patterns of common concepts. Further abstraction of data at different levels will lead towards a ground theory which will help explain the change management strategies, challenges faced by software practitioners and their solution strategies.

Results from this research will be published for the benefit of greater practitioner and researcher communities. Identity of the participant will not be published in any publication arising out of this research keeping your identity confidential. The responses you make will be published anonymously.

Data Storage/ Retention/ Destruction/ Future Use

Data (digital and paper artefacts) will be securely stored at the researcher's office at HumaniSE lab, Monash University under password protection (for digital artefacts) and under lock and key (for paper artefacts) and for a period of 6 years and destroyed thereafter. Whilst overseas, data will be kept safe in the shared Google Drive of the investigators. Furthermore, anonymous responses of the participants in the form of the interview transcriptions with the participant IDs, photographs or any other artefacts will be uploaded to the GitHub repository of the student researcher. The anonymous data will also be uploaded to IEEE data port as required.

Hard copies of consent forms will be stored securely at Principle Investigator's office under lock and key and electronic copies of consent forms will be stored at Principle Investigator's office under password protection for the same period as that of data and destroyed thereafter.

Right to Withdraw from Participation

Participant can ask for the recorder to be turned off at any time without giving a reason. Participant has the right to withdraw from participation at any time up to 30 days after the interview without giving a reason. And participants are offered the opportunity to edit the transcript for 30 days from the receipt of transcript.

Anonymity and Confidentiality

Personal data (e.g.: gender, occupation) of the participants shall only be accessible by the researchers. The researchers will keep the participants' identity confidential and will make the responses anonymous. Interviews will be audio recorded and transcribed by either the researchers or another transcriber (or both). In case of a third-party transcriber, the person will have signed an appropriate confidentiality agreement. Observations may include digital photographs of workplace and any other artefact as the participant agrees to share. Reproduction of these photos or artefacts in publications/reports etc. will avoid identification of the individual participant or company. The audio recordings will be stripped off any personal information before being sent to the transcriber. Any papers published as a result of the study will not identify the participants, company or non-participants. As a general practice of ethics approval, we will need the written consent from you as the Manager. A consent form to the same effect is attached herewith.

Contact Details and Approval Wording

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For any queries regarding ethical concerns you may contact the Chair, Monash University Human Research Ethics Committee, Room 116, Level 1, Chancellery Building D , 26 Sports Walk, Clayton Campus, Wellington Rd, Clayton VIC 3800, Australia, Email: muhrec@monash.edu

Approved by the Monash University Human Research Ethics Committee on 27th May, 2020 for five years. Reference Number: 23578.