

1st QuASD Workshop: Managing Quality in Agile and Rapid Software Development Processes

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Abstract. Optimal management of software quality calls for appropriate integration of quality management activities into the whole software (engineering) life-cycle. However, despite the competitive advantage of ensuring and maintaining high quality levels, software development methodologies still offer little support for the integration and management of quality. This is especially true for, and essential in, agile software development processes and the recent trends towards rapid and continuous software development. The premise is that faster and more frequent release cycles should not compromise quality. This workshop aims to exchange challenges, experiences, and solutions among researchers and practitioners to bring agile and rapid software processes a step further towards seamless integration of quality management activities into their practices.

Keywords: Quality, Agile Software Development, Rapid and Continuous Software Development.

1 Introduction

Welcome to the First International Workshop on Managing Quality in Agile and Rapid Software Development Processes (QuASD).

The QuASD workshop aims at investigating the current challenges that companies using agile software development and rapid release cycles face when integrating quality management activities into their practices. The objective of the workshop is to exchange experiences and solutions to bring agile and rapid software development processes a step further towards seamless integration of quality management activities into their practices. To strengthen this objective, QuASD 2017 has been held in the context of one of the top-recognized software development and process improvement conferences: the International Conference on Product-Focused Software Process Improvement (PROFES 2017) on November 29, 2017, in Innsbruck, Austria.

2 Keynote: Agile and Rapid Software Development at Nokia Base Station R&D

The keynote focuses on the changes and adaptations of agile software development processes to deal with quality requirements at Nokia. Nokia is a global leader in technologies that connect people and things. It combines global leadership in mobile and fixed network infrastructure with software, services, and advanced technologies to transform how smart devices and sensors tap the power of connectivity. With state-of-the-art software, hardware, and services for any type of network, Nokia is uniquely positioned to help communication service providers, governments, and large enterprises deliver on the promise of 5G, the Cloud, and the Internet of Things.

In this context, Merja Jokiniva (5G R&D Release Manager) shares her experience on leading content and schedule planning as well as progress follow-up of Base Station SW deliveries.

Merja Jokiniva has worked almost 20 years at Nokia Base Station R&D in various roles in Finland and in the USA. Her most recent role is 5G R&D Release Manager where she started at the end of 2016. As R&D Release Manager she leads content and schedule planning as well as progress follow up of Base Station SW deliveries. Before the current role, she worked seven years as a line manager of 4G R&D Program Management team and as a 4G R&D Release Manager. Earlier she has worked in Program, Product and Quality Management. Before joining Nokia, she worked for the University of Oulu several years. There her last tasks were in area of program management by teaching the graduate students and by consulting local companies in program management practices.

3 Accepted Papers

We received a total of eleven contributions in different categories (technical papers, experience reports, emergent research, vision papers, and practitioner messages). These contributions were peer reviewed by three members of the Program Committee, composed of prominent researchers from the community and practitioners. After a tough revision process, eight high-quality works addressing issues on quality in agile software development from different perspectives were accepted. The effort and dedication of the Program Committee and the additional reviewers who collaborated in the revision process were outstanding and deserve recognition (see Section 4).

The accepted papers composing the QuASD workshop program are:

- **3 technical papers** (12 pages long) describing beyond-state-of-the-art methods, tools, or techniques in support of the management of quality in agile and rapid software development and continuous software development contexts:
 - Marcus Ciolkowski, Liliana Guzmán, Adam Trendowicz and Felix Salfner: *“Lessons Learned from a research project on the strategical planning of Technical Debt”*.

- Michael Mohan and Des Greer: “*MultiRefactor: Automated Refactoring To Improve Software Quality*”.
- Mohammad Abdur Razzak, Sarah Beecham, John Noll and Ita Richardson: “*Transition from Plan Driven to SAFe: Periodic Team Self-Assessment*”.
- **4 emergent research papers** (8 pages long) describing research endeavors that have just started. These works present preliminary findings without full-fledged validation:
 - Woubshet Behutiye, Pertti Karhapää, Dolores Costal, Markku Oivo and Xavier Franch: “*Non-functional Requirements Documentation in Agile Software Development: Challenges and Solution Proposal*”.
 - Frank Elberzhager, Konstantin Holl, Britta Karn and Thomas Immich: “*Rapid Lean UX Development through User Feedback Revelation*”.
 - Lidia Lopez Cuesta, Woubshet Behutiye, Pertti Karhapää, Jolita Ralyté, Xavier Franch and Markku Oivo: “*Agile Quality Requirements Management Best Practices Portfolio: A Situational Method Engineering Approach*”.
 - Sven Theobald and Philipp Diebold: “*Beneficial and Harmful Agile Practices for Product Quality*”.
- **1 practitioner message** (4 pages long) that reports on the practitioners’ perspective of managing quality in agile and rapid software development:
 - Michael Klaes and Frank Elberzhager: “*Managing Development Using Active Data Collection*”.

4 Program Committee

The program committee was composed of prominent researchers from several universities and the industrial sector.

Sanja Aaramaa	Nokia, Finland
Jan Bosch	Chalmers University of Technology, Sweden
Javier Criado	University of Almeria, Spain
Xavier Franch	Technical University of Catalunya, Spain
Matthias Galster	University of Canterbury, New Zealand
Juan Garbajosa	Technical University of Madrid, Spain
Lidia López	Technical University of Catalunya, Spain
Michael Mlynarski	QualityMinds GmbH, Germany
Elisa Nakagawa	University of Sao Paulo, Brazil
Anh Nguyen Duc	Norwegian University of Science and Technology, Norway
Markku Oivo	University of Oulu, Finland
Marc Oriol Hilari	Technical University of Catalunya, Spain
Paulo Sérgio Santos	Federal University of Rio de Janeiro, Brazil
Dan Tofan	UberResearch (Digital Science), Romania
Guilherme Travassos	Federal University of Rio de Janeiro, Brazil
Anna Maria Vollmer	Fraunhofer IESE, Germany
Agustin Yague	Technical University of Madrid, Spain

5 Activities

The workshop has been structured to promote discussions and interchange of ideas among participants from both industry and academia sectors.

The keynote will open the workshop activities and is expected to shake the audience. It will be followed by presentations of the accepted papers in various sessions. In the last session, we will organize an open brainstorming space through a wall of ideas, where the participants will post their key messages on particular topics, followed by a plenary discussion on the hottest emerging topics.

All these activities are aimed to:

- Scope the current state of quality management in agile and rapid software development in both research and practice.
- Compile success and failure experiences.
- Produce a research agenda.
- Establish a community to foster long-term collaboration on this emerging topic.

We hope that the workshop participants will enjoy the topics presented here and perhaps find the inspiration to push the field a step further, or open the door for new collaborations.

Finally, we would like to acknowledge all the people who have enabled the organization of QuASD 2017: the authors, who submitted their papers; the Program Committee members, who made possible the conference program; Nokia for being willing to give the keynote a share their experiences on managing quality and quality requirements in the context of agile and rapid software development; and the organizing committee members, who handled all the complexity of arranging an event such as PROFES 2017 and the associated workshops.

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