An Experiment Revealing the Abilities of (Un)Experienced Pattern Users Relating Tactics and Architectural Patterns

Azadeh Alebrahim, Stephan Fassbender,
Martin Filipczyk, Michael Goedicke, Maritta Heisel

Who might attend? This focus group is open for all interested pattern enthusiasts. Any background is sufficient as no preliminary knowledge on architectural patterns and tactics is required. Indeed, the experiment benefits from participants who have different backgrounds and knowledge as the influence of the background and knowledge on the results created is one of the variables we would like to measure within the experiment. We are sure that the experiment taking place in this focus group will be beneficial and a unique experience for you, no matter which background and knowledge you have.

What is the motivation? Currently, we are investigating the relationship between architectural patterns and tactics in the software architecture domain. In software architecture, patterns are used for designing systems based on common knowledge and best practice solutions. Each architectural pattern has certain implications, namely both positive and negative influences on various software qualities. Tactics, on the other hand, target and improve a single software quality with only a minor or even no impact on the overall architecture. In our this year's EuroPLoP paper, we tried to create a mapping that states the compatibility between a set of patterns and a set of tactics. Although we created the mapping carefully and to the best knowledge and belief, we have no assurance of its quality. Therefore, we have planned and designed an experimental setup hat serves two purposes. First, we are trying to get pattern experts to get together and discuss a gold standard mapping between architectural patterns and tactics. Second, we are interested in the quality of mappings (compared to the gold standard) that have been created by groups which differ in size and pattern experience.

What am I expected to do? In case you decide to participate in the experiment, you will actively discuss the matter of architectural patterns and tactics and thereof gain new insights into these topics. No further preparations are needed.

How do I benefit from attending? If you don't have any detailed background on architectural patterns, you will get a first impression on the topic and get the chance to discuss with experts on the matter. In case you are an expert, you will get a new view on patterns and tactics you might already know. Additionally, you will experience first hand how (non-)experts deal with the topic. As the experiment is based on communication and discussions between the participants, we hope you will also have fun while gaining new knowledge as EuroPLoP-addicted enjoy such discussions on the matter of patterns.

Are there further benefits? You as participant will not only help us (the ones conducting the experiment), which is highly appreciated and we will be grateful for your assistance, but also help the EuroPLoP community to extend the body of knowledge about patterns as there might be interesting insights gained from the experiment. For example, one question assessed in the experiment is the influence of working in science versus working in industry on the reliability of a mapping created. We will also explore whether experience with applying patterns regardless the context (i.e., science vs. industry) is of more relevance for a mapping's reliability than studying patterns in theory. Some of the results might be generalizable and therefore all of us will benefit in the future from these new insights.