Understanding Inverse Patterns
Till Schümmer, Joerg Haake

Patterns understood as imperatives for good design have many advantages for novice designers. They provide structure and thereby create space for creativity and innovation. On the other hand, imperatives at the same time limit the space for thinking beyond the boundaries of the design imposed by the pattern.

While acknowledging the advantages of the pattern approach, we argue that in cases where creativity is needed, designers should be encouraged to open up new spaces for design by breaking design traditions codified in design patterns. Taken to the extreme, this means that designers deliberately break the rules of patterns and act in the opposite way. Instead of following the pattern's advice, the designer will act in an inverse manner. The resulting design includes an inverse pattern and in theory, opens up space for new design decisions, which will lead to a different design at the end. While this sounds simple, it is not easy to define, what the opposite way really means.

A simple example can be found in educational patterns: A LECTURE is typically used when there is a large group of students and the lecturer wants to deliver knowledge to students simultaneously. Further patterns can be used to improve interactivity of the lecture but they still respect the setting of the lecture. Inverting the LECTURE pattern means that one or more aspects of the pattern are addressed in an inverse way. This can be the direction of content delivery (as in the FLIPPED CLASSROOM pattern). As a result, students deliver their knowledge to the lecturer. A second example for an inversion addresses the time dimension by holding the lecture not in a synchronous but in an asynchronous way. The resulting challenge for a designer implementing the inverse pattern of the lecture will then be to rebalance the new set of forces in a way that learning still takes place. Designers will have to reconsider their understanding of teachers and students and probably question the concept of synchronized learning.

The goal of the focus group is to experiment with inverse patterns. The focus group will explore different design backgrounds of the participants and develop patterns in the different design domains by inverting the patterns' underlying norms and forces. We will then work in small groups to include the inverse pattern in a concrete design. After such an intervention, the design will be re-balanced and finally discussed with other focus group participants.

Questions to solve in this focus group are (among others):

- How to construct an inverse pattern for patterns from different domains (e.g., in object-oriented design, in HCI design, in social media design, in education)?
- When to apply an inverse pattern (indications for the need of creativity, where an inverse pattern could help to trigger creativity)?
- How to continue traditional design after an inverse pattern has been applied?

Focus groups participants will be invited to summarize their experiences in a focus group report that will be written and submitted for publication after the conference.