Categorization-based Concept in Requirements Engineering Process

Tatiana Chuprina and Montgomery Scott
Model-based System Engineering
Fortiss GmbH
Munich, Germany
email: chuprina, chuprina@fortiss.org

***Abstract*—**

I. Related Work

The scientific base of our research includes study work about requirements categorization [7]. There the author considers general requirements categorizations commonly applied in industry and recognized by the scientific community [8], [9], [10], [11] and investigates requirements categorization based on a system model and its impact on requirements quality, relying on state-of-the-Art research results such as [12], [13] and others.

The next paper, which made an impact to start this research was [14], where the authors raise doubts about applying of goal-oriented requirements engineering (GORE) in practice due to missing sufficient documentation for industry and lack of comprehension between the scientific society and industry. A consequence paper [2] describes current problems in industry with concern to requirements engineering field and possible reasons for existing gap between researchers and industry.

From the industry perspective, Categorization-based concept study embraces practical knowledge assembled by industry partners of Fortiss with conformity to industry standards and regulations, such as DO-178C [15], DO-331 [16], ISO29148:2011 [17] etc. The standards comprise guidelines and recommendations for system development process.

Our research contributes to the requirements categorization topic, investigating an influence of the general Categorization-based concept on requirements quality.

Commonly recognized in scientific community, the goal-based requirements categorization doesn't seem to prevalent in the industry. The study of Categorization-based concept will expose the idea, which goes ahead of general requirements categorization, providing a common instrument within system development process. Moreover, this concept will bring a method, that guides requirements engineering and review activities. Our research will grant the approach for improving quality of requirements by their structuring using Categorization-based concept .

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