Analysing requirements specification languages for self-adaptive AAL systems

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Abstract. AAL systems are usually deployed in complex environments and should behave autonomously. So, self-adaptation is an essential concern of these systems that should be part of their requirements specification. The modelling of self-adaptation requirements is a challenging task because it is strongly related to other system requirements. The achievement of self-adaptation requirements typically implies prioritization or denial of different requirements, so it is crucial to have mechanisms for their modelling and analysis. we study the suitability of methodologies for self-adaptation requirement specification in the context of a project to develop AAL systems. Specifically, we compare requirements specifications made in RELAX, Tropos4AS and GODA. Our study with 14 people concludes that understanding these specifications is similar for the three languages but poses some difficulties for users. The analysis concludes that the perceived effort and frustration of the users. Specifically, users perceive the understanding of RELAX specification requires more effort and make them feel more frustrated.