

Reframing Service Oriented Architecture Design Principles in Software Design Quality

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Abstract : Since its inception, the design activities of Service Oriented Architecture (SOA) has been guided with aspects from the Service Design Principles (SDP), such as cohesion, granularity, loose coupling, discoverability, and autonomy, etc. The goal of this paper is two folds. The first is to examine the position of SDP within the context of software quality, and the second is to reframe the aspects of SDP into a more concise terms and relations. This paper is divided into four parts, in which after the introduction, a review on related software quality is provided to determine the quality context of SDP. The third part reviews the original SDP and offers a relation model among the SDP aspects. The fourth part explores the design quality metrics available for SOA and proposes a relationship representing the design quality. Among the aspects of design principles, the cohesion and coupling aspect is determined to be the two important aspects for achieving reusability of a service.

Keywords : SOA, software quality, service design principle, reusability, cohesion, coupling

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