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SOA Governance: Survey and Model

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Abstract
Governance for Service-oriented Architectures (SOA) is an upcoming research topic. It faces a multitude of new challenges when compared to the related concept IT Governance. So far, a variety of special frameworks for SOA Governance have been proposed. Until now, there is no holistic approach covering all perspectives and consolidating them to form a universally valid model. During our research, we analyzed several approaches to SOA Governance, identified major components, and developed a generic governance model for SOA.

State of the Art
In the last years, SOA increasingly gain importance and have established as alternative to common enterprise architectures.
Governance approaches for SOA are as crucial as they are for common IT systems or departments (e.g., CObIT or ITIL). However, there is no common conception or idea concerning SOA Governance and approaches so far. During the last years, a variety of approaches, frameworks, and definitions to describe and realize the term SOA Governance have been proposed. Most of them originate from software vendors that propose concepts and frameworks in order to promote their software products. Most existing approaches are based on different definitions, understandings, and perspectives of SOA Governance. Consequently, the majority mostly addresses and covers completely different aspects of the topic, respectively (Afshar, 2007; Software AG, 2005; Marks and Bell, 2006). Additionally, so far, only few concepts for technical support for SOA Governance have been proposed.
Summarizing, challenges include a common term definition, a standardized framework for SOA Governance, as well the investigation of technical basics for SOA Governance. These issues are addressed by our research.

Survey/Comparison
We investigated a variety of different conceptual approaches to SOA Governance. Most of them are proposed by software vendors, some have academic origin. We identified ten criteria, consisting of components integrated in the approaches and assessed each proposal according to the components integrated (Niemann et al., 2008). As result, we could compare the concepts with each other. Furthermore, we identified a set of standard components that were integrated in the majority of approaches: organizational changes, new roles and accountabilities, best practices, a SOA lifecycle, and a policy catalogue.
We investigated these standard components and identified a set of core components for our generic governance model.

Governance Model
Some of the standard components were not considered to be completely independent. For example, we considered the service lifecycle, the SOA lifecycle, and the SOA roadmap to

be highly dependent on the actual SOA system, company, and strategy. In our model, these issues are represented by according *policies*. As instrument for system assessment, we considered a SOA Maturity Model as crucial for the control of a SOA system.
Most of the standard components have been made core components of our model. As shown in Figure 1, the governance model consists of three elements: SOA Goals, the SOA Governance Control Cycle, and the SOA system, the enterprise architecture to be controlled.

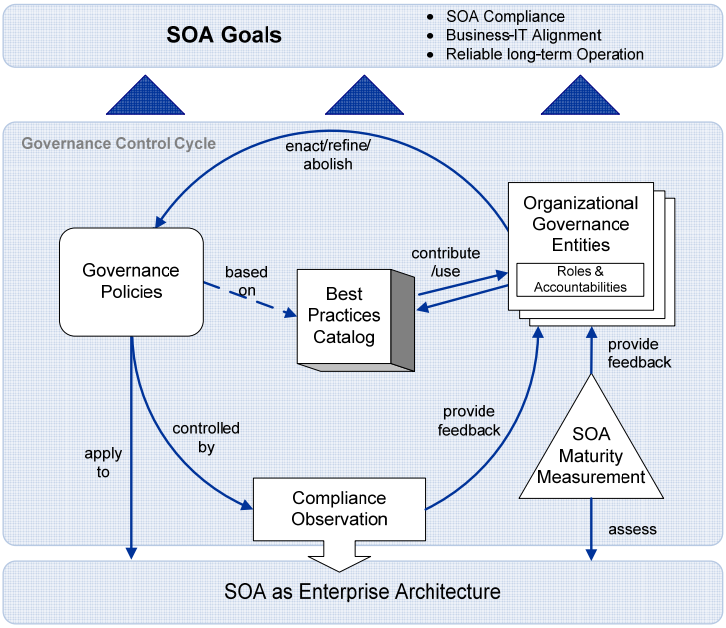

Figure 1: *Generic Governance Model*

Conclusion

Based on the results of the survey and its analysis, we developed a generic governance model. It represents the first integrative model for SOA Governance that covers all major aspects and perspectives on this topic identified so far.
Future work covers a structure model, and process model, based on the generic governance model. A major part of our research focuses on technical support for SOA Governance approaches, called *Compliance Observation* (cf. Fig.1), including e.g. the automation of compliance checks.

References

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