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# DESIGNING SECURE BUSINESS PROCESSES THROUGH SECURE ACTIVITY RESOURCE COORDINATION (SARC)

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## Abstract

*Business processes enable organizations to achieve business goals. Organizations require that their business processes exchange information in a secure environment. Access control mechanisms must be incorporated into the analysis, modeling, and design of business processes to prevent unauthorized access to information resources, to provide non-repudiation mechanisms, and to allow for segregation of duties. Existing methods in the design of secure information systems lack a conceptualization of secure business process. We develop the modeling concepts and modeling grammar that are used by the Secure Activity Resource Coordination (SARC) artifact to represent a secure business process. SARC can be used by business analysts to analyze and model secure business process. Using a real-world business process, we show how SARC can be used to create models that depict the secure activity resource coordination for secure business processes. We plan to empirically evaluate the SARC artifact against the enhanced Use Case and standard UML activity diagram.*

**Keywords:** Secure Business Process, Role-Based Access Control, Activity-Resource Coordination, Security Awareness, Secure Systems Design