

A business process-driven approach to security engineering

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Abstract

A challenging task in security engineering concerns the specification and integration of security with other requirements at the top level of requirements engineering. Empirical studies show that it is common that customers and end users are able to express their security needs at the business process level. Furthermore, systems are often developed by automating existing manual business processes. Since many security notions originate in the world of business processes it is natural to try to capture and express them within the context of business models where customers and end users feel most comfortable and where they conceptually belong. In this paper we develop these views, present an ongoing work intended to create a UML-based and business process-driven framework for the development of security-critical systems and propose an approach to a rigorous treatment of security requirements supported by formal methods. A case study shows how extensions to the UML notation for modelling business processes can be further extended for expressing security notions.