Abstract

In this paper, we introduce a knowledge-oriented approach for the Security Requirements Engineering phase for developing E-Voting System. The knowledge acquired through the process of eliciting and analyzing secure E-Voting System is represented in the form of UML models; which can be made available to future developers and the dependency towards security experts can be reduced. In this paper we present a set of security requirements and security requirements patterns that were developed based on the aforementioned approach. Security requirements for modelling have been identified by following the Model Oriented Security Requirements Engineering framework for web applications. The security requirements have been designed into security requirements patterns for creating security requirements ontology for an E-Voting System. The ontology allows all concepts of importance and their relationships to be identified. The paper also compares the approach with other relevant methods in the Security Requirements Engineering phase for developing secure applications.

References


**Index Terms**

Computer Science  Security

**Keywords**

Security Requirements  Security Requirements Engineering  Security Requirements Ontology
Patterns  E-Voting System  Knowledge-Oriented