

Title	FWサーバシステムの検証に関する研究
Author(s)	横川, 智良
Citation	
Issue Date	2008-03
Type	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/4358
Rights	
Description	Supervisor:片山卓也, 情報科学研究科, 修士

Research on verification of FW server system

Tomoyoshi Yokogawa (0510109)

School of Information Science,
Japan Advanced Institute of Science and Technology

February 6, 2008

Keywords: verification, theorem proof, object-oriented, modeling.

Summary

I inspected using theorem certificate burial goods of model property and proved justice of the movement with audit of a FW server system and modeling using object-oriented of the manager of an inspection target in this paper.

Background

Today, the Internet and the rapid development of information infrastructure for advanced information networks that make up society. On the other hand, modern information in the property. Runoff and the problem has become serious. The flow of information has become a serious problem and has been . So compared to the traditional, more highly reliable information security technology to the growing interest. Well, in order to maintain data security, if there was any kind of way. One of the keys to the data processing itself directly on the protection of encryption technology. Another is to control the flow of data, such as the approach to prevent runoff. In addition to the various methods available, I will focus on the data flow control and verification. Research in object-oriented languages predicate model using UML class diagram, sequence diagram modeling specifications. Then these operations, functional language in describing ML. The ML-HOL delivery programs, conduct verification system. When the generator through a logical format of the description of the basic ML available to the operator.

and access to object-oriented on HOL. UML is used in this verification, unified modeling language. This is an object-oriented model based on the common description. And the object-oriented analysis of standard design notation. HOL is open to the public and predicate logic theorem prover and validate analytical models can be used. That is a lot of data type libraries, and powerful data capabilities and build a system exists in the area covered by the various data types best suited to handle.

Purpose

In this study, in the organization's data security is logically tenable that the verification of theorem proving. Until last year, the login manager of FW erver system verification is performed. So this is a further validation functions of audit manager The proof of HOL work in the big human and temporal costs also need to be found. This has so far proved as HOL perform at the same time, the efficiency of the work and conduct research.

Paper Structure

The first talks about the formal validation, and then verify the adder examples, the last theorem prover mention HOL. Paper is detailing the specifications of the By object-oriented model. And to validate the proposition.