

## ABSTRACT

This thesis presents a model of secure intelligent trade agents that have been dispatched securely to a network via the asymmetric proxy re-encryption (APR) mechanism, collect and analyze data from servers on the network and make decisions to buy and sell goods on behalf of users. The combination of the X-cash and the APR scheme make these agents secure and efficient intelligent trade agents. The agents have been protected against potentially malicious hosts by public key encryption mechanisms. Furthermore, the agents will visit only the authenticated list of hosts approved by the AR. Lastly, we believe that our proposal may become well suited as a useful building block in the design of secure agent protocols.

The result is a mechanism by which electronic trades can occur in a highly distributed setting with strong security guarantees.

