Arrangement of autonomous computer systems is one of the major issues in the distributed computing system. Each machine has its own unique Media Control Access (MAC) address. When the machine is connected across the globe on the Wide Area Network (WAN), intruders can be easily caught by the MAC address of the machine. If one transmits the confidential information from one device to another device then it is very important for safe delivery of the information with secure transmission of MAC address, so that intruders could not break the MAC address. In the present work, an approach for secure transmission of information along with the MAC address is depicted with well known Rivest, Shamir and Adleman (RSA) algorithm of the security system. The algorithm is tested on different MAC addresses of different machines through the object-oriented programming JAVA language. Before implementation, Unified Modeling Language (UML) approach is used to build a cryptosystem model.


**Index Terms**

Computer Science  Security

**Keywords**