

KNOWLEDGE BASED SECURITY USING DRM

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Abstract:

To take precautionary secures to the software is combat work. The analysis of avoiding the unauthorized access to the software will be done by the knowledge based security using Digital Rights Management. DRM is a standard code. The DRM will embed with source code which will protect from piracy. Knowledge based DRM and biometric based DRM are the two methods using in security process. In the proposed system, knowledge based security is given in the software by using DRM. The DRM application is elaborated and set with the questions, based on the relative answers for the desire authoritative information the concept will work. This concept was delivered to the consumer during software sales. Set of general questions will be created and saved in the source code and it will embed with application software. The collection of knowledge based answers will be stored in the created database. Those answers will embedded with the database using DRM. When the user wants to use the software it will ask questions and we need to give correct answers those given answers will match to the database. When it matches with the database answers it will permit the user to use software. If it mismatch with the database it will not allow using software. Using this software it will give better secure.

Keyword: DRM (Data Rights Management).

I. INTRODUCTION:

Ability of communication through the internet became common, so there should be a need of security. The main aim of this project is to secure the software while using through internet. In this paper we are using DRM security. So the consumer and producers need the security. Here we are using DRM. The main goal of the DRM is to allow the authorized person to use the software and the unauthorized users are not allowed.DRM direct to carry out successful security. Here providing and protecting the software is the necessary and specific task. The execution of testing the unauthorized access will be deal with DRM agent.

DRM is a standard code which will ingrain with origin code. Knowledge based and biometric based DRM are the various method used in this paper. In this principle, knowledge based is developed in this project. Knowledge based DRM is used to secure the software. The questions are given to customer which they need to answer for those queries during software purchasing those procedures will be under agent based DRM. The queries are already inbuilt with source code. The answers are also stored in the database that is answered by the users. When the user needs to work with software he wants to give the correct answers which he already given during software purchasing. Then only it will allow the user to use the software. If it mismatches with correct answers it will not allow the user to use the software. In this way we are securing the software.

II. DRM

DRM is digital rights management. It is a logical loom to exclusive right securing for media. The main aim of this DRM is to allow only the authorized user to access the purchased software. It is just to avoid the piracy. The illegal users are not allowed to use the materials. These were urbanized because online theft of things is more nowadays. It is applied as a piece of code inside the software or the material and so it does not allow the illegal users to use. It also prevents copying and specifies time stage in which the information can be used or restricts the number of devices that can be fitted. Though we already have many rules and algorithms to protect the software or materials it has been a common issue that the things are stolen and misused easily. Our method primarily spotlight on making it unfeasible to steal the information and aims for giving better and higher security.

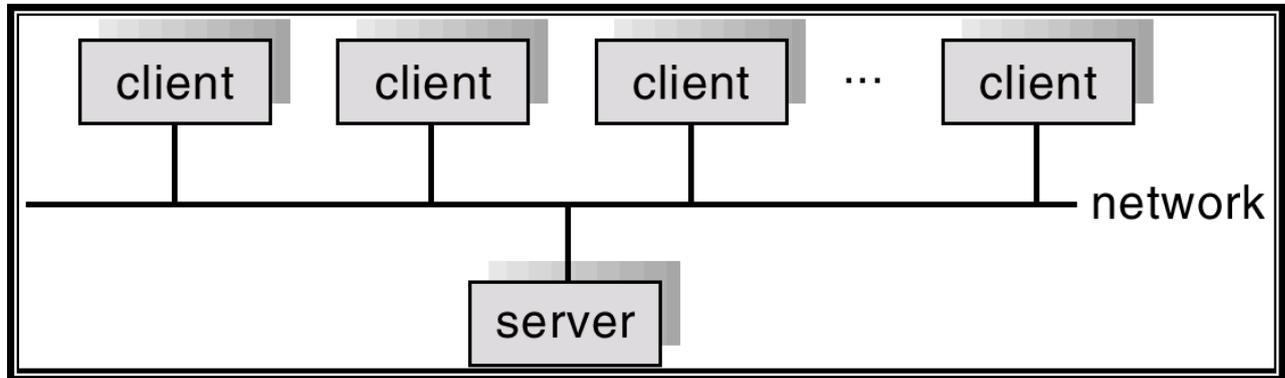
The main advantage of using DRM is:

1. DRM tries to secure the patent owner privileges.
2. It does not normally use other forms of duplicate security such as "serial keys" and "keyfiles".

3. It permits for secure information delivery for the customer.
4. It agrees for information source to observe transaction of their goods more powerfully
5. It cuts down on the amount of piracy for a given piece of software

III. WORKING OF DRM

It works on client- server concept. Distributors acts as server. Customers act as clients. It is easier to apply safety measures on server side than the client side and so the server side is considered as safe and the client as unsafe. Network act as a intermediate medium between client and server.



A. Server side:

To secure the information from illegal users, it is accumulated inside secure container. To access or use the information valid authorization is needed. REL (Rights Expression Language) is used. It allows only the authorized users to access and deny other illegal users. To make sure that the content resides secret and is acknowledged properly, secure communication is used. This assures that hackers cannot obtain a secure container and the accompanying license when these are sent to a justifiable user, and ensures that the users obtain them appropriately.

B. Client side:

Client side needs more protection since many users can access the content simultaneously and the content may change or it might be stolen. It needs some mechanism on the client side. It consists of rules, facts and condition. It must be executed in aggressive atmosphere. Actions must be taken to guarantee correct execution of rules, facts truthfulness and condition truthfulness. It is referred to as a Trusted Computing Base (TCB). A TCB functions as a trusted third party for computing. This TCB makes sure that only the person with authority does all the operation from opening the secure container, translating into analog format. If it is not used then there is no warranty that only approved person uses it. TCB is not needed when the client sends only the report of digital content. DRM systems run on network. This paper mainly focuses on internet and cellular phones. We would make sure that how influential and safe a TCB is implemented.

IV. TYPES OF DRM:

The two types of DRM are knowledge based DRM and biometric DRM.

C. Knowledge based DRM:

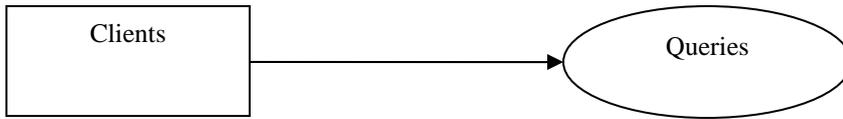
From the basic knowledge techniques it is generated by existence. By having more basic questions it is defined. This is called as knowledge based .Since we are using DRM it is called as knowledge based DRM security. The knowledge based DRM security is implemented by more questions. To view or to use this type of knowledge based DRM we need to remember those knowledge answers that we answered for those questions.

D. Biometric DRM:

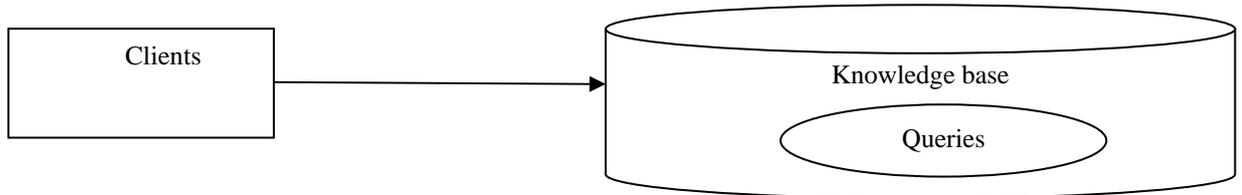
To protect from unauthorized persons and to secure more we need to use biometric DRM. The fingerprint impression, facial impression, Iris impressions are considered as biometric. Those biometric matches will be stored in database. When the person wants to use the software, this will be encrypted secret, with the help of key we need to decrypt the secret. Here that key is fingerprint, it will match with input fingerprint and originality fingerprint. If it matches it will be authorized person otherwise not .In this way biometric DRM security is used.

V. ARCHITECTURE DIAGRAM:

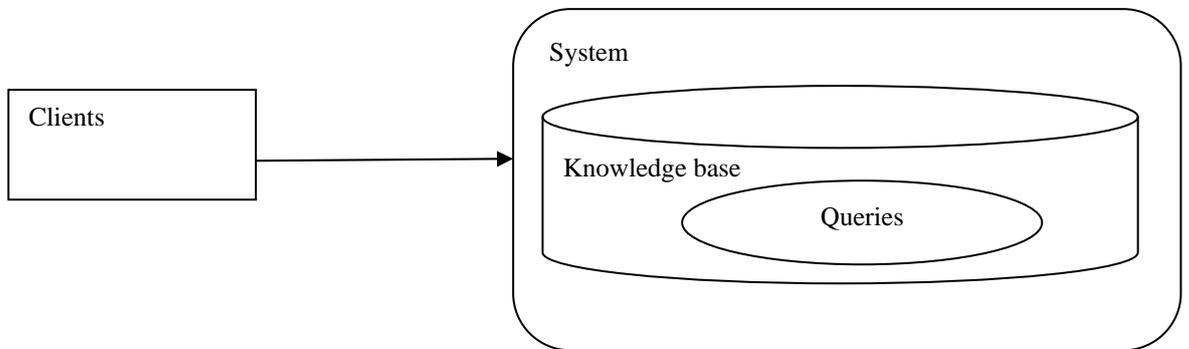
1) During purchasing the software.



2) After purchasing software the knowledge base is created with the help of the questions given by the users.



3) Knowledge based DRM embedded with system.



VI. SECURITY QUERIES USED:

The example queries posted are:

1. What is your childhood teacher name?
2. What is your favorite food?
3. What is your close friend name?

Answers:

1. Sureka
2. Noodles
3. Sasi

Created queries:

1. Enter the first character, second character from your favorite food name, first letter of your close friend name and fourth letter of your childhood teacher name?

Answer: Nose

2. Enter sixth character of your favorite food, second character of your close friend name and third character of childhood teacher name?

Answer: Ear

3. Enter the first character of your childhood teacher name, second character of your close friend name and fourth letter of your favorite food?

Answer: Sad

CONCLUSION

In this way we can prevent the software from piracy and from unauthorized user. Up to 85% we can secure our software by doing this process. Since this is based on knowledge it is more efficient to use than using other methods.

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