Effect of Activation Code / Encryption Code on Digital Goods on Digital Right Management

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Abstract. The purpose of this research is to study the benefits of using activation codes for digital products in marketing. In this study, we used a descriptive method. An activation code is a code that can protect a product from unauthorized users so that digital products can only be used by users who have permission to use the product. The results of this research are in the form of the development of the use of strategies to protect digital product licenses by using an activation code. This code can only be obtained from certain parties who are from existing products, therefore, those who do not have the power to a product cannot provide access to products that do not belong to them. From the results, we can conclude that digital products, which are owned by the brand can only be used by the activation code given by the brand after the user requests permission from the brand either by buying or asking for permission.

1. Introduction
Digital Right Management (DRM) is management in exchanging digital products or software products [1]. Digital products are a term applied in the word nowadays. Many products that are created without physical form are the root of the creation of the term Digital Products. The establishment of digital goods is helped by the distribution of physical goods, however, this event has operational problems in media sales [2]. The encryption key system is often used to protect digital media content. It is used to support broadcast mode and delayed content delivery [3].

Each of the license server processes is operative to generate licenses by which a user client obtains given rights for a given content, usually, the content served from the machine. A distributed set of license server processes operates in a decentralized manner and without access to third-party business logic (e.g., a payment mechanism) or authentication information associated with end-users requesting the given content [4]. The server platform may examine if the client platform attests to a client platform characteristic that affects the integrity of the client platform by using the attestation information, then encrypt and download the content to the client platform if the client platform attests to its characteristic [5]. Online companies who are offering digital products explain that digital products are not rivals to physical products. Digital products have the usual production and distribution that is almost 0 marginal, as well as searches by consumers have a fairly low marginal and ordinary transaction that not big. Companies can generate income by selling digital products, mediating consumer information, or displaying advertisements [6]. System and the method created have a function to enable it to have remote activation in accessing digital content that is protected by one or more mechanisms namely protection techniques for content copies [7]. Digital Right Management (DRM) strategy has differences, from the
aspect of the model even the effects of privacy on its users. One strategy is known as distributor resistance, namely completing DRM metadata with digital products which have been mentioned in the basic transaction that every digital product in the distributor site is only formatted for consumers and can be used with a certain application program [8]. Dieter in computer security one can trace the development from the enforcement of a stand-alone system. This is driven by application applications that utilize information technology and go hand in hand with the changing information technology architecture. so that the problem always makes Digital right management (DRM) require an independent evaluation of security systems [9]. Produces a cryptographic key and shares crypto keys with several Digital right management (DRM) provided by providers that are not the same. It certainly provides flexibility in the application of the DRM system by receiving media devices that are targeted in media reception [10].

Digital signage is a tool that aims to display content in the general public that has two components, namely the manager and player. Digital signage is a software that functions in managing software that involves managing and sending content, setting DSP and setting content on DSP [11].

The purpose of this study is to find out the benefits of using an activation code for a digital product in marketing. In this study, we used a descriptive method. The activation code is a code that can protect a product from an unauthorized user so that digital product products can only be used by users who have permission to use the product. It is because an activation code can only be obtained from certain parties of existing products, therefore, parties who do not have power for a product cannot provide access to products that are not in their possession. We can conclude that a digital product that is owned by a brand can only be used by an activation code that is given by the brand after the user requests permission from the brand either by purchase or permission request.

2. Method
This study used a descriptive method, which aims to find out what variables are related to Digital Product and encryption codes, as well as using several existing studies that have relevance to the encryption code and the implementation of encryption codes for digital products. Therefore, it can be analyzed how much influence the encryption code has on digital products and the benefits as well as producers and consumers.

3. Results and Discussion
In the digital content business, there is a lot of quality content that has high values and an effort to create costly content. Every publisher or developer of digital content of course hopes for feedback and the benefits of the content they create. The use of encryption codes on digital products is very mandatory to secure digital content in the world. Encryption code can only be obtained after the DRM gives access to the user after buying the digital product. For example, for digital products such as operating system software, photo editing, video editing, several e-books, and some games. Figure 1 is a large DRM in the field of distributing game-type digital products.
Figure 1. Digital right management for game

Figure 1 shows a large DRM in the field of distributing game-type digital products. In the DRM, each user cannot access all the digital content contained in it if they do not have a Key activation or decryption code provided by the DRM. This, of course, has the benefit of keeping digital content not used without a purchase permit. In Figure 2 a Digital management Right (DRM) has several digital items that can be accessed.

Figure 2. Digital goods on DRM

Figure 2 shows a Digital management Right (DRM) that has several digital items that can be accessed. Some items are free and some are paid. If consumers want to access digital content or paid digital goods,
consumers can buy according to the prices set by Digital right management so that consumers can get overall access to digital content and digital goods available on the Digital Right management. Figure 3 shows where a key activation of a digital product is received by the user after purchasing access to digital products in the DRM.

Figure 3. Key activation

Figure 3 is where a key activation of a digital product is received by the user after purchasing access to digital products in the DRM shown in Figure 1. With this, the user has access to digital products and because of this loss, users will not be exposed to malware that is spread on the internet that provides key access for software using illegal software. Figure 4 shows how to activate a product in DRM with key activation.

Figure 4. Activate a product

Figure 4 shows the activation of a digital product after obtaining an activation key such as Figure 2. This is so that the user account can use digital products that are purchased and will be stored for a long
time. As well as user accounts have a license even though the product was uninstalled and then installed again. Figure 5 shows the product, which has been activated successfully.

![ACTIVATE A PRODUCT ON STEAM](image)

**Figure 5.** activation succeeded

Figure 5 explained that the success of the activation of the code in the account will help users save the license on the DRM so that even though it is not installed, the user has a sign or proof of license for the digital product. The number of users of digital products now provides more space in the business field to producers. However, it has a gap where the decryption code or modification of digital products can be used by some users who do not have licenses for these digital products. Figure 6 shows where the activated product will be stored.

![Product stored in customer account](image)

**Figure 6.** Product stored in customer account

Figure 6 shows all digital products that have been activated will be stored in the digital product library owned by the user where this time the DRM is a Digital Game Product. Users can use all digital products
that already exist in the user's library because each product has licenses that are opened using an activation code obtained from product purchases.

The use of encryption codes or activation keys for digital products has an important role in the distribution of digital products. So that it has a very strong benefit in the world of software business by the software developer. Besides, the benefits by users caused by using software that has a license can protect users from malware attacks where a lot of software that has been modified has a virus that can make your hardware experience a decrease in performance.

The method for digital certification of authenticity for a physical object and corresponding computer program and storage device. Besides, the use of the method for digital certification is the authenticity of a physical object of value. The method includes the steps of issuing a storage device including a digital certificate of authenticity including encrypted information [12].

4. Conclusion

The encryption code or product activation key is a very good strategy in protecting digital product licenses. The developer can take benefit from the results of their software development without being harmed by the user. Users can be guaranteed the security of the device from virus attacks contained in the software purchased. Encryption code has a very powerful function in the digital world nowadays, even in protecting important files and data that exists. Security code encryption allows guaranteed files, data, and software in the digital world nowadays.

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