



Ancient manuscript data security system on national library of Indonesia's Khastara Website

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ABSTRACT

This study aims to evaluate the data security system of ancient manuscripts that have been uploaded to the KHASTARA (Khasanah Nusantara) website at the National Library of the Republic of Indonesia. The research method used is a qualitative method with a descriptive approach. The data in this study was collected by conducting an interview with one of the informants engaged in digitizing ancient manuscripts, data and information centers. In addition, data is collected by observing and documenting so that the data obtained is more accurate. The results of this study show that the National Library of Indonesia has preserved ancient manuscripts very well and disseminated the information through the KARTHA website. However, PERPUSNAS RI has not implemented a data security system for its collection of digital ancient manuscripts, only securing its network (firewall). The conclusion of this study is to hope that there will be awareness of all employees on digital ancient manuscript data and the existence of competent human resources in the field of data security.

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1. INTRODUCTION

The library serves as a storage place for information and education for the wider community as well as for school children and students (Maulina, 2021). Simply put, libraries are essential for the dissemination of information and knowledge. The Library Law defines a library as "an institution that collects printed and recorded knowledge, then processes it specifically to meet the intellectual needs of its users through various means of knowledge interaction" (Chapter 1, Article 1). Library collections are not only in print form such as books, magazines, palm leaves, newspapers, etc. The library's collection is also in the form of recordings such as CDs, tapes, microfilms, and others.

One of the library collections that has important information for the nation's culture is ancient manuscripts. Ancient manuscripts are library collections that are more than 50 years old. The writings of our ancestors and ancestors, such as those found in ancient manuscripts, are an irreplaceable part of our cultural heritage that must be preserved for future generations (Nugraha, Herwin Cahya and Laugu, 2021). Ancient manuscripts are of historical value and importance as well as rare and prone to damage because they are very old, therefore they need to be preserved. Preservation activities are

carried out to keep valuable information in it from being lost and damaged. Based on the explanation from (Pramana, 2022) The purpose of preservation is to ensure that library items, especially historical manuscripts, remain in usable condition for as long as possible so that future generations can make use of them.

Along with the rapid development of information technology, libraries are required to be able to keep pace with these technological developments, even walking side by side with technology for the dissemination of information to their collections. The personality of users, their information requirements, their relationships with others, their level of competitiveness, etc., have all changed as a result of IT advancements. In today's society, libraries must be flexible enough to adapt to the various needs of their visitors (Sa'diyah, Lailatus and Adli, 2019). Libraries have been able to preserve ancient manuscripts with the help of existing technology so that data and information can be accessed by the wider community.

The preservation of ancient manuscripts with the help of technology is called digitization, digitization activities are important, especially for rare or ancient collections so that the information in them is maintained and can be learned by current and future generations. The rare book collection can be preserved for future generations by digitization, which is the process of converting analog media into digital or electronic formats (Wakhid, 2022) (Wakhid, 2022). Information security is very important. Maintaining the security of information packets when transmitting over the Internet is an example of data security (Qammaddin, 2020) The increasing transfer of data and information on the internet, resulting in the hacking of data and information by irresponsible individuals and harming various parties.

(Husain, and Tajuddin, 2018) developed a web application to digitize ancient Sasak manuscripts so that future generations can more easily access data and information about these documents through mobile devices. Interviews, written documents, field notes, and questionnaires were used to compile the findings of this study, which were collected in Darmaji Village, Central Regency, and the State Museum of West Nusa Tenggara Province. Research conducted by (Sanjaya, IGAS and Sasmita, Gusti Made Arya and Arsa, 2020) obtained 18 security holes contained on the X institution website, not only that this study also provides recommendations for improving website security at X institution. Research conducted using system security testing methods. While the current study aims to evaluate the data security system of ancient manuscript collections on the Khasanah Nusantara (KHASTARA) website of the National Library of the Republic of Indonesia.

2. RESEARCH METHODS

This research uses qualitative methods with a descriptive approach, because this study describes the circumstances to be observed. The location of this research is in the National Library of the Republic of Indonesia. The data in this study was collected by observing and documenting the observed conditions in order to obtain transparent results. In addition, conducting an interview with one informant from the Data and Information Center (PUSDATIN) of the National Library of the Republic of Indonesia. Data collection techniques are a way for researchers to collect every existing data so as to obtain the data needed. In this study using data collection techniques by making observations, interviews, and documentation.

3. RESULTS AND DISCUSSION

First, the digitization of ancient manuscripts. According to Law Number 43 of 2007 concerning Libraries, ancient manuscripts are a very valuable cultural property of Indonesian intellectual works that are still spread throughout society, and to preserve

them requires government involvement. The importance of preserving ancestral history because it contains local wisdom, and one way is to digitize historical texts (Arpus, 2022).

Through observations, the National Library of the Republic of Indonesia carried out digitization activities for ancient manuscripts. Digitization activities are divided into 2 parts, namely, first digitizing printed library materials such as rare books, palm leaves, newspapers and old newspapers. The digitization process uses the CZUR scanner machine. The result is in the form of jpg, and through the editing process using the photoshop application. Then, the data is watermarked to anticipate data theft belonging to PERPUSNAS RI. After that, some of the data is uploaded on the KASKARA website, the PERPUSNAS webopac uses the INLIS (Integrated Library System) application and some are put on a CD.



Figure 1. CZUR scanner machine



Figure 2. INLIS app home page

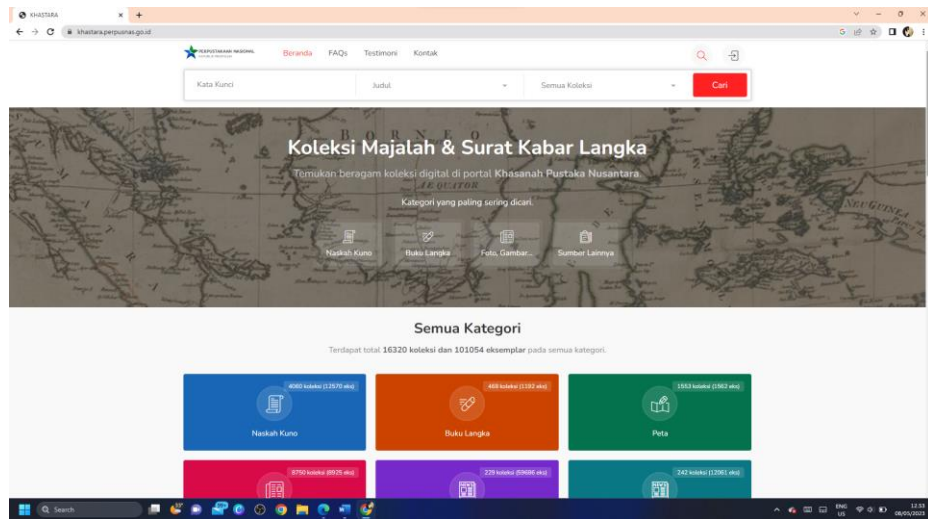


Figure 3. KHASTARA website front page



Figure 4. Shooting room

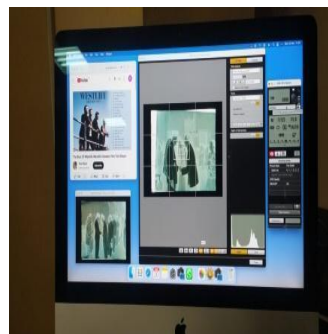


Figure 5. Shooting results

The second part is the digitization of recorded library materials such as microfilm and film. The process is to shoot the recorded library materials using a camera, in this case PERPUSNAS RI uses a digital cannon camera connected to a computer, so that the images will be directly stored on the computer. After taking pictures, editing will be done using the photoshop application.

Second, data security. Data security is the practice of protecting digital information from unauthorized access, corruption, or data theft (IBM, n.d.). From this explanation, it can be concluded that it is very important to carry out data security on every digital data and information. Based on the results of an interview with an informant from PUSDATIN, the National Library of the Republic of Indonesia already has a data encryption policy for ancient manuscript collections, but until now data encryption has not been implemented because there are budget problems so that it only secures access to its network (firewall).

It should have reached the encryption data, yes, only here is the security on the network access side. The Indonesian language is a bridge, the IT language is a firewall. Only limited to firewalls (security on the network). The data should be encrypted. But for now there is no data encryption (Interview March 20, 2023).

For data security policy, we have an encryption policy from PERPUSNAS but it has not been implemented until now. The plan will be implemented as soon as possible. The problem is in budgeting. There are fears that ancient manuscripts will be phished, meaning the data can be manipulated. Data when unencrypted can be phished. It could be that the data when phishing becomes invalid, not genuine data (Interview March 20, 2023). With the application of data security to digital information, in this case ancient manuscripts, it will avoid various kinds of crimes in data such as phishing (the act of manipulating data), as well as data leakage that can harm related parties.

Although it has not encrypted the ancient manuscript data, PERPUSNAS RI secures its ancient manuscript data by watermarking each collection of ancient manuscripts before uploading it on the KISTARA website.

Yes, PERPUSNAS uses watermarks to keep its data safe from phishing. But still very easy to manipulate, now there are applications to remove watermarks. It should be encryption in the form of a password, scan barcodes. For example, if you want to open this data, please scan the barcode, then the password will be sent via email or wa. Although the ancient manuscripts on the Khastara Web are open and intended for the public, they must still be maintained as well (Interview March 20, 2023).

The National Library has not encrypted data on ancient manuscripts due to several serious problems faced, including; There are several problems, namely, coordination with the unit is lacking because awareness of employees is less so the level of employee awareness of data and information security is lacking. Once there is a new incident moves. For example, personal data is leaked or collection data is in phishing or manipulation, hacked. In addition, the number of competent human resources and human resources, because in PUSDATIN not all can be data security. still accounts for 20% of competent human resources in the field of data security. If I am more into information security. Information security includes network security, data, infrastructure, databases, data backups, data centers, and clean desks. Training on Linux security is needed, for example. There needs to be someone who can forensics or know to analyze (attacks from where) related to security incidents in data and web and other assets (Interview March 20, 2023).

4. CONCLUSION

The collection of ancient manuscripts that have been uploaded on a website called KHASTARA is still very vulnerable to phishing and data theft, because the data security only uses the watermark of the PERPUSNAS RI logo image. Therefore, awareness is needed from the leadership and all employees of the National Library of the Republic of Indonesia on the security of ancient manuscript collection data. Currently, security has only arrived at network access (firewall). The ancient manuscript data security system at PERPUSNAS RI can be applied by adding competent human resources related to data security balanced by providing training such as Linux security, creating data security

infrastructure through budgets, and forming special teams to handle data security control incidents such as forensics.

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