

Designing a Prototype of Digital Museum to Promote Woven Songket, A Local Product of Sumatera, Indonesia

Bertalya^{a*}, Prihandoko^a, Rakhma Oktavina^b, Danu Satria Ramadhan^b

^aFaculty of Computer Science and Information Technology, Gunadarma University, Depok, Jawa Barat, Indonesia

^bFaculty of Industrial Technology, Gunadarma University, Depok, Jawa Barat, Indonesia

*Corresponding author: bertalya@staff.gunadarma.ac.id

Article history

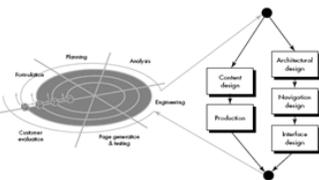
Received :1 January 2014

Received in revised form :

15 February 2014

Accepted :18 March 2014

Graphical abstract



Abstract

One of Indonesia's cultural heritage is woven *songket*. *Songket* is not just a piece of cloth but with a diversity of functions and motifs contained profound philosophy about human life. Hence, the *songket* fabric must be preserved so as not to disappear due to the influx of modern cloth products from outside. This study aims to create a digital museum that displays digital images of woven *songket* and provide information relating to the various motifs representing the cultural distinctiveness of local centers in Sumatra. In addition, a digital gallery is developed to display a wide range of products derived from the local creative industries of *songket* cloth. The methods used for data collection are observation and interview. The development of digital museum consists of the process of formulation, planning, analysis, design, manufacture and testing of web pages, as well as evaluation.

Keywords: Cultural heritage; digital museum; *songket*; Sumatera

© 2014 Penerbit UTM Press. All rights reserved.

1.0 INTRODUCTION AND BACKGROUND

One of the work cultures of the forefathers of Indonesia are woven *songket*. *Songket* is a fabric woven craft that has been handed down by from generation to generation 200 years ago in Sumatera. *Songket* is not only a tangible piece of cloth, but through the motifs and its function, implies a very deep meanings.

Various attempts were made by the government and elements of the community to maintain and preserve the cultural heritage of *songket* by the ancestors of Indonesia. Examples include organizing exhibitions which aim to disseminate information about the culture of weaving *songket* and the establishment of the Textile Museum, which was built by the central government in Jakarta which is also used as a medium for preserving culture by storing and displaying *songket* masterpieces [1].

However, a museum or gallery, like the one in Jakarta Textile Museum has limited space which could not accommodate all of the *songket* which originates from all corners of *songket* weavers in Sumatera. *Songket* fabrics which were displayed in a display cabinet also has limitations because the color can fade and affect the overall *songket* motifs.

In this paper, we developed a digital museum that contains digital images and information of the *songket* motifs with a large storage capacity. In addition, it will also have a digital gallery that can demonstrate the derivative products, such as clothing and

accessories created by local *songket* fabric with attractive appearance. The digital museum is also useful to preserve local culture *songket* cloth which is a heritage in the land of Sumatera as well as provide greater opportunities for anyone to access information on the *songket* fabric. Besides, the creation of digital gallery can promote creative industry products resulting from *songket* cloth.

The Indonesian Government Regulation (PP No.19/1995) states that the museum as an institution is built to function as the storage, maintenance, security, and the use of nation's culture and heritages, as well as to support the protection and preservation of the nation's cultural wealth [2]. Thus, a museum is a medium or functions as a facilitator of cultural heritage preservation.

Traditional museums that store the cultural heritage are required to be physically transformed into digital form using multimedia technology and network systems. Multimedia is a combination of text, audio, images, graphics, video, and animation [3]. Digitization of museum collections and objects presented in the internet media can facilitate consumer network search information about the objects of cultural heritage.

Multimedia technology that enables high representation of museum collection objects are not only displayed in the form of drawings or digital images, but also in the form of demonstrations, such as weaving *songket* cloth-making process by using video technology. The process of digitization of cultural

heritage objects document makes it possible to process the document object expenditures, transfers and modifications carried out by the computer [3]. Integration of multimedia elements in a vast communications network such as the internet, will allow museum collection objects and dissemination of information to be showed to the world audience [4].

2.0 RESEARCH METHODOLOGY

The development of the digital museum and gallery follows the stages of software engineering process (Pressman, 2001). The process is then combined with multimedia technologies using text, image, audio, and video in order to convey the mission of cultural preservation of the Sumatran *songket* cloth more meaningful, aesthetic, and interactive.

The data used are primary data obtained by direct observation and interviews to places producing the *songket* fabric in Palembang.

Figure 1 shows the stages following formulation, planning, analysis, engineering (design and production), page generation and testing, as well as customer evaluations [5].

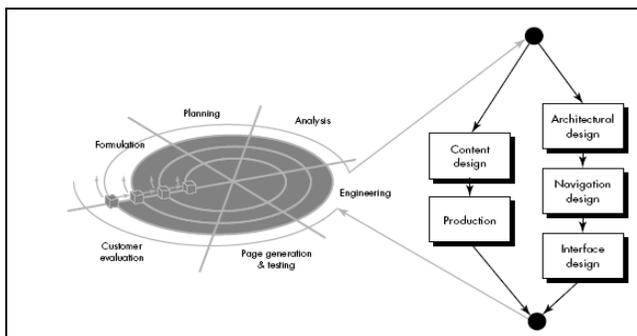


Figure 1 Software development model based on site [5]

Formulation stage is used to identify the goals and activities of the museum and gallery. The museum provides content in the form of information needed by the user. The museum should also

provide specific capabilities that encourage user to use it interactively.

Planning stage is used to estimate the project cost of making software, evaluate the risks associated with the effort being spent, and scheduling for each activity in building software.

Analysis phase defines the activities of the technical requirements, especially from the stakeholders of the site and the museum's digital gallery. It also identifies the content and the graphic design of the site.

The next stage is the design of site content: digital image, text, video, or audio based on the identification of a variety of traditional *songket* motifs and modern obtained directly in places producing woven *songket*.

3.0 THE DESIGN OF THE DIGITAL MUSEUM

The development of the digital museum consists of the process of formulation, planning, analysis, design, manufacture and testing of web pages, as well as evaluation. In the planning and analysis phase of textile museum development, we found that the manager of the museum or collector expects the website to have more featuring information about *songket*.

Songket images are aquired using the Nikon D90 DSLR. The names and philosophical features contained in each *songket* derived from interviews with homeowners and experts of the *songket*, and also from literature searches.

The display of digital museum design is inspired by the shape of traditional house Palembang 'Rumah Limas' as shown in Figure 2. The word 'limas' implies five golden symbols namely (1) the majesty and greatness, (2) live in harmony and peace, (3) always polite and civilized manners, (4) a safe and prosperous country, and (5) to prosper and be prosperous.

The design of digital museum is then built according to the model in Figure 2. The results are shown in Figures 3 to 6.

The front gate of the museum, as shown in Figure 3, shows the original style of the traditional house called the *Rumah Limas*. The Palembang custom house is shown in Figure 2. This design is taken to give the feel of the local area as a place of origin Palembang *songket* [6].



Figure 2 Rumah Limas



Figure 3 The Front Gate

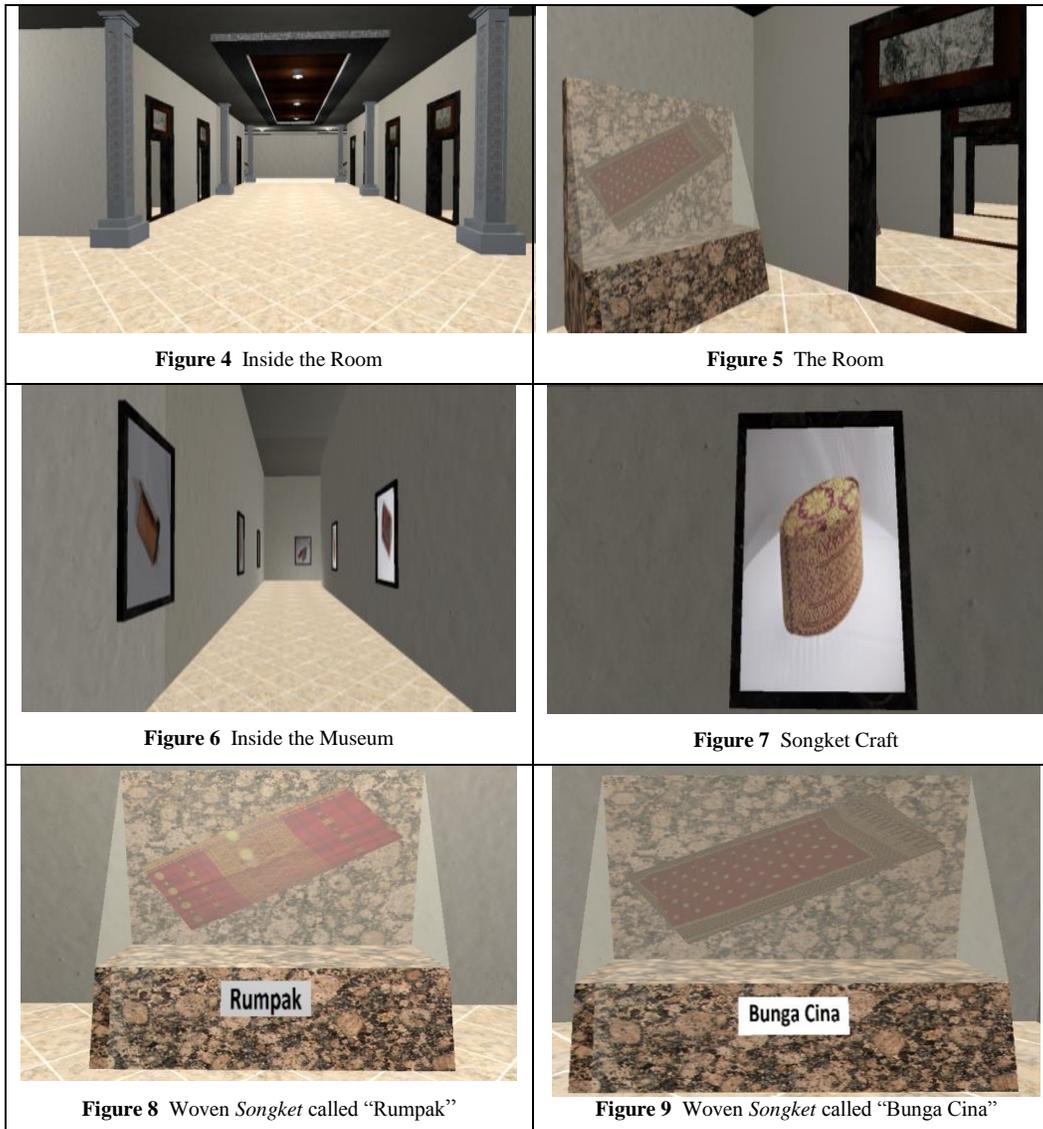


Figure 4 Inside the Room

Figure 5 The Room

Figure 6 Inside the Museum

Figure 7 Songket Craft

Figure 8 Woven Songket called “Rumpak”

Figure 9 Woven Songket called “Bunga Cina”

Upon entry into the museum, the user will be exposed to the inside of the museum. On the 1st floor there are 8 rooms as shown in Figure 4.

In each room there is a storefront that displays one of the *songket* motifs. On the first floor there are 14 types of fabric pattern on display, a sample room, storefront and fabrics on display, as can be seen in Figure 5. On the second floor, the visitors can see a picture frame displaying a variety of handcrafted *songket* along the hallway.

On the second floor, there are approximately 15 photos as shown in Figure 6. One example of *songket* craft is *Kopiah* (a headgear) as shown in Figure 7. Figure 8 shows a kind of woven *songket* used for men, called *Rumpak*, while Figure 9 shows a peculiar kind of *songket* motif called *Bunga Cina*.

4.0 CONCLUSION

In order to maintain the historical aspects of woven *songket*, a digital museum was developed. This kind of museum will be

more flexible than the real museum due to some technological factors, such as extra storage capacity and easy access by users.

This paper presents a concept of digital museum that was built to accommodate the needs of preservation *songket* heritage. A number of Palembang *songket* has been identified and used as a source of data in the digital museum. The style of digital museum adopts the characteristics of the Palembang traditional house, to get a closer feel of the heritage.

The concept of digital museum presented provides convenience and flexibility in finding and getting access to the repository of *songket*. Thus, the expected preservation *songket* as the brainchild of indigenous peoples in Indonesia can be cultured, preserved and developed.

Acknowledgement

The authors would like to acknowledge the financial support from *Direktorat Penelitian dan Pengabdian Pada Masyarakat*, Directorate General of Higher Education (DIKTI), Ministry of Education and Culture, Republic of Indonesia.

References

- [1] Tanudirjo, D. A. 1995. Theoretical trend in Indonesia Archaeology. In P. Ucko (ed). *Theory in Archaeology, A World Perspective*. London: Routledge. 61–75.
- [2] Rahardjo, S, and Muluk, H, 2011, *Pengelolaan Warisan Budaya di Indonesia*. Bandung: Penerbit CV Lubuk Agung.
- [3] Vaughan, T. 2005. *Multimedia: Making It Work*. 6th Edition. Translated by T.A. Prabawati and A.H. Triyuliana. Yogyakarta: Penerbit Andi Yogja-karta.
- [4] Schweiber, W. 1999. The Learning Museum: How Museums use Information Technology to present value-added Collection Information for Lifelong Learning. *Proceedings of the 7th International BOBCATSSS Symposium Learning Society–Learning Organisation – Lifelong Learning*, Bratislava, Slovak Republic.
- [5] Pressman, R. S. 2001. *Software Engineering: A Practitioner's Approach* 5th ed. McGraw-Hill Companies.
- [6] Arifin, K. Z. 2006. *Songket Palembang. Indahnya Tradisi Ditemun Sepenuh Hati*. Jakarta: Dian Rakyat.