The Development of Digitalization at the National Museum of Prehistory, Taitung, Taiwan

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A Newly Opened Museum in Taiwan

The National Museum of Prehistory is the first and the largest national museum of archaeology in Taiwan.
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The historical background of the Museum goes back to the year of 1980, when workers building the Peinan Station of the Southern Line Railway inadvertently uncovered a prehistoric site – the Peinan Site.
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Further rescue excavations uncovered at this site proved that this is the most complete prehistoric settlement with a date of 3000 years ago found to date in Taiwan, and more than 1500 slate coffins as well as 20,000 stone, jade and pottery artifacts were uncovered.
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In order to save this important archaeological site and cultural relics uncovered from it, the government of Republic of China started to initiate plans for constructing a museum at the Peinan Site in 1990. The museum finally opened its door to the public on August 17, 2002.
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The Museum occupies a land of 28 hectares and is composed of two sections – the Main Exhibition Hall and the Peinan Cultural Park. The Main Exhibition Hall has 14 galleries, which display three major permanent exhibitions: Taiwan’s natural history, Taiwan’s prehistory and Taiwan’s indigenous peoples.
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The Peinan Cultural Park is the first park in Taiwan established for preserving the archaeological site. The Park has a Visitor Center, which exhibits the artifacts from the Peinan Site, and an open-air exhibition of archaeological excavation.
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The goals of the Museum are as the follows:

(1) To collect and to study the prehistoric cultural relics from the Peinan and other sites.

(2) To investigate, preserve and advertise the prehistoric cultural heritage.

(3) To promote the social and cultural education of archaeological and anthropology through the exhibitions and educational programs.

(4) To develop the research of prehistory and to encourage the internationally academic exchange.

(5) To promote the development of tourism in east Taiwan.
After the opening, efforts have been done to make the museum as the first class museum in Taiwan or even in the world.

One of the efforts is to make the museum digitalized. Museum digitization can yield substantial benefits in many aspects, such as in research, in collection management, in administration, in preservation, in public access and in marketing and promotion, etc.
Therefore, starting from the very beginning, we have initiated and undertaken a series of digitalization projects. In the following, I will give a brief introduction to each of the projects.
1. Setting up a World Wide Web Site

As a newly established museum, it needs immediately to set up a World Wide Web site, through which the information of the museum can be delivered directly to those who want to know or to visit the museum. The website provides not only information about the visitor service, exhibition, educational activity, and research of the Museum, but also online resources, through which visitors can easily access the museum’s collections.
The Birth of the Museum

The National Museum of History, located in the historic site at Beimen, started to purchase and collect historical and cultural materials since the late 1970s. Initially, the efforts were mainly concentrated on the acquisition of material related to Sun Yat-sen's life and career. However, the range of the collections gradually expanded in response to the ever-increasing needs. The National Museum of History was formally established on May 15, 1989, and on November 24, 1992, it was officially opened to the public.

In 1989, the National Museum of History initiated the Heritage Park Project, which aimed to establish an environment where historical topics could be discussed and presented to the public. The Heritage Park Project involved the construction of a special museum building and a number of exhibition halls.

The museum is dedicated to the preservation and presentation of Taiwan's historical heritage. It provides a platform for the study and understanding of Taiwan's rich cultural heritage.

www.nmp.gov.tw
2. Digitalization of museum’s collections

The collections of the museum chiefly consist of specimens of archaeology, ethnology, botany and geology, and the total inventory number is over 10000.

About 3000 ethnological specimens have been digitalized, making it accessible and searchable via computer for researchers and public inside as well as outside the museum.
3. Designing and constructing a digital management system of the museum’s collections.

The structure of this digital system is composed of three subsystems:

- Collections management.
- Documents and images management.
- Multimedia management.

This digital management system allows users to search the data of the museum’s specimens, photographs, documentary records, tapes and films through the interface of the browser on the web page.
4. Designing and building a digital library information system.

This system consists of four functions:

- Providing general information of the library.
- Providing an online catalogue in the library for the users to search its collections.
- Enabling users to access the library’s databanks.
- Enabling users to access the web resources.
5. Building a wireless internet environment within the Museum

Making internet connection in the museum much more convenient and to facilitate exhibition and educational activities in the museum.
6. Building a hand-held audio tour system.

Enables visitors to choose the exhibits of interest and learn about them at their own pace.
7. Designing and creating interactive educational programs in the exhibitions.

Help to improve the quality of the exhibitions and to make the exhibitions more interesting and attractive.
1. Creating A 3-D Virtual Animation

In order to improve the static nature of the exhibitions in the museum, a 3-D virtual animation has been creating. This virtual animation will help to reconstruct and to present the life ways of the prehistoric Peinan people.
2. The Creative and Value-adding Digital Project for the Education and Promotion of Taiwan’s Prehistory Cultures (1): The Peinan Site and Peinan Culture

This project consisted of two parts:
Developing an electronic database of the archaeological artifacts from the Peinan site.

Developing a virtual reality for interactive reconstruction of archaeological discoveries.
### Q5、藏品資料類型與數量（若不同資料類型需不同的Metadata著錄格式，請註明，並標明計畫進行的優先順序）

卑南遺址考古學標本（包括石器、陶器、玉器、金屬器、骨角器、玻璃器等不同類型標本）共500件。

### Q6、目前典藏品目錄資訊的狀態？

#### 6-1 使用的系統

系統名稱、關鍵數量、資料庫系統相關文件（規格書，Schema...等）

目前本館使用的系統為本館委託傳技資訊股份有限公司開發之數位典藏管理系統，共包括三大子系統，分別管理標本、圖文影像、多媒體三種類型資料。有關標本檔案的管理系統為「蒐藏品管理系統」，資料庫系統使用MS SQL，內容資訊包括民族學標本、考古學標本、考古遺址、自然史岩石礦物標本、動物化石、岩心、植物學標本三學門七類標本之財產管理、研究編目、典藏流通管理（保存修復、展覽、保藏、借出、借入、裝運、評鑑、盤點、關連參照等十多項類別記錄，目前資料庫內建有民族學標本3000多筆、考古學12筆、自然史標本109筆。

#### 6-2 是否使用任何metadata標準？

編目資料使用Dublin Core and MICI為Metadata著錄格式，XML為交換語言。

#### 6-3 是否有任何既有的著錄表單？（如：文物基本資料表、登錄表...等）

有，本館考古學標本整理工作單。

#### 6-4 是否有公開網站，可供查詢使用？

有，但系統程式與資料仍在測試修正中，僅開放館內人員使用，尚未對外公開。

#### 6-5 是否有其他相關參考資訊（如：其他單位網站、著錄規範...等）

無。
Other Planned Projects

1. Building a Virtual Museum of Taiwan’s Indigenous people.

In order to promote the development and the research of the cultures of the indigenous peoples in Taiwan, a plan for building a virtual museum has been initiated.
Concluding Remarks

Digitization is an inevitable trend in museum operation. Although it has still many disadvantages, such as high costs, requiring expertise and pulling museum staff away from their regular workloads, it should be viewed as a necessary and long-term investment for achieving the goals of the museum.