Digital Systems of the National Palace Museum

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The collection of the National Palace Museum (NPM) is comprised of nearly 700,000 treasures of Chinese art and culture. Greater efforts are increasingly necessary to computerize the NPM’s systems and make the exhibition, education, research, management, and preservation of these treasures even more efficient. For this reason, digital systems of the NPM are varied tasks, including multimedia displays, digitizing the collection, the creation of a digital museum, and management information systems. This paper introduces the NPM website and the multimedia system in the NPM’s painting and calligraphy gallery. These two digital systems employ the latest technology to present the best of what Chinese art and culture have to offer.

The NPM website serves as a digital museum to introduce the objects in the collection. It allows domestic as well as foreign visitors to browse at their own pace, bringing the NPM to them. Browsing through the exhibitions and collection, both texts and images provide an overall yet detailed offering. In addition, with more interactive functions, such as a search index, virtual reality, games, distance learning, and publication services, visitors will easily be able to learn more about Chinese art and the NPM. At present, the NPM website is in Chinese and English, with French, Spanish, German, and Japanese versions being developed. The NPM also plans to create mirror sites to provide the website at overseas agencies as well as on the websites of other renowned museums. In doing so, the appreciation of Chinese art at the NPM can be expanded more convenient to overseas Chinese and international people. The NPM website focuses on design and artistic presentation as well as content in order to complement the incomparable quality and beauty of the works in the collection. Figures 1 to 6 introduce the real webpages on the NPM website.

The multimedia section in the NPM’s painting and calligraphy gallery provides visitors with alternative means to appreciate Chinese painting and calligraphy. Since
the display of painting and calligraphy is rotated on a regular basis, visitors may not be able to view the NPM’s most famous works. Consequently, two multimedia venues are offered. One is a theater that shows “The Beauty of Famous Paintings at the National Palace Museum,” which is projected from behind onto a large screen. Using high-resolution DVD technology, the movie introduces some of the masterpieces of painting and calligraphy from the NPM collection. Many relevant details are described, including composition, brush-and-ink, coloring, inscriptions, and seals and signatures. The other is a section where visitors may operate two interactive computer programs; “Treasured Paintings and Calligraphic Works” and “Fun and Games for Children.” The former offers a detailed description of selected masterpieces of painting and calligraphy, allowing visitors to appreciate and study these treasures according to their own interest. The latter provides visitors of all ages an opportunity to learn about Chinese painting and calligraphy through games. Thus, the multimedia section in the NPM’s painting and calligraphy display provides a comfortable and spacious environment for visual and audio enjoyment. Even the decoration was inspired by the NPM’s collection of painting and calligraphy. For example, the walls of the theater are composed of sandblasted glass representing an enlarged version of the T’ang calligraphic masterpiece “Autobiography” by Huai-su. At the entrance is a glass panel sandblasted with the Sung masterpiece “Solitary Temple in Snowy Mountains” by Fan K’uan. The lighting is just right to bring out the flying brushwork and the towering majesty of the snowy mountains, presenting a feast for the eyes that complements the actual and digitized masterpieces of painting and calligraphy on display. Figures 7 to 15 illustrate the hardware and the software of the multimedia section in the NPM’s painting and calligraphy gallery.

Key words: digital museum, multimedia system, and website.
Fig. 1. Home page of the exhibition “Art and Culture of the Han Dynasty (206 BC-AD 200)” on the NPM website.

Fig. 2. Home page of the exhibition “Art and Culture of the Han Dynasty (206 BC-AD 200) from the Collection of the National Palace Museum” on the NPM website.
Fig. 3. Home page of the exhibition “Han Dynasty Narratives in Painting and Calligraphy” on the NPM website.

Fig. 4. Home page of the exhibition “Microcosms of Buddhist Art: Sutra Illustrations” on the NPM website.
Fig. 5. Home page of the exhibition “The Painting of Yun Shou-p’ing (1633-1690)” on the NPM website.

Fig. 6. Home page of the exhibition “A Collection of Famous Paintings” on the NPM website.
Fig. 7. Entrance to the NPM’s multimedia section of the painting and calligraphy gallery.

Fig. 8. Inside the NPM’s multimedia section of the painting and calligraphy gallery (to the left is part of the glass wall upon which is sandblasted Huai-su’s “Autobiography” and in front is the screen for “The Beauty of Famous Paintings at the National Palace Museum”).
Fig. 9. Partition glass wall with cutout calligraphy in the NPM’s multimedia section of the painting and calligraphy gallery.

Fig. 10. Visitor using one of the interactive computers in the multimedia section of the NPM’s painting and calligraphy gallery.

Fig. 11. Sample page introducing an artist from “Treasured Paintings and Calligraphic Works,” one of two interactive computer programs in the NPM’s multimedia section of the painting and calligraphy gallery.
Fig. 12. Sample page introducing a painting from “Treasured Paintings and Calligraphic Works,” one of two interactive computer programs in the NPM’s multimedia section of the painting and calligraphy gallery.

Fig. 13. Sample page introducing a signature from “Treasured Paintings and Calligraphic Works,” one of two interactive computer programs in the NPM’s multimedia section of the painting and calligraphy gallery.
Fig. 14. Sample page of a rendering from a painting in “Fun and Games for Children,” one of two interactive computer programs in the NPM’s multimedia section of the painting and calligraphy gallery.

Fig. 15. Sample page from “Fun and Games for Children,” one of two interactive computer programs in the NPM’s multimedia section of the painting and calligraphy gallery (the cartoon above automatically becomes a painted version).