"Toy Kit" of the Emperor: Exhibiting National Palace Museum's artefacts of Emperor Chien-lung on tablets

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Abstract

Representing *"interest in playfulness", The value of a curio box is appreciated by cleverness of its design, including hidden layers and triggers setting them off.*

This idea serves as the inspiration of our new application: exhibiting popular National Palace Museum artifacts on social sites in the form of a "toy kit," on tablets. More precisely, we see our highly interactive design as "curio boxes" for modern emperors–the users. Our goal is to bring about enjoyable, engaging and intimate experience over the artifacts.

This application, though under extensive construction, received positive reviews from a focus group composed of the students of National Chengchi University. We find by fostering the archive as a virtual, yet touchable toy kit can obviously bring the user closer to our content. In this project, with the support from National Science Council of Taiwan, we will help the NPM develop brand new mobile experience of its collections.

Conceptualizing a Curio Box

Figure 1: *An 18th century curio box. Image courtesy National Palace Museum.*

The long-term aim of National Palace Museum is to educate the general public knowledge of their collections.

Emperor Ch'ien-lung(1711-1799), the forth Emperor of the Ching Dynasty, had a well known enthusiasm on artifacts. Some of his most famous collections are "toy kits," or "curio boxes," archiving a variety of his objects d'art, which composes a vital and predominant part of National Palace Museum's collection.

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In this application, users will be able to experience a reimagined, contemporary, digital curio box with the artefacts selected by the NPM Facebook page community. While the ancient, analog texture of curio boxes is redesigned to a contemporary style, we try to preserve the playfulness of it, and amplify such merit through modern technology.

Curating Artefacts with Social Media Data

In a mobile application, it could be with great frustration when trying to feature a few work from tens of thousands of artefacts. In fact, the same problem may appear to users when facing a large variety of object d'art— there are so many choices that they have no idea where to start with. Hence, there has to be a wiser way to curate.

Besides, this application is targeted at the general public. Selecting which work is implemented and which is not will be crucial to this aim.

Actually, we have a handy and reliable evaluation criteria— National Palace Museum's facebook page—The NPM page consist of a large audience of 52,000 plus, and has been constantly "exhibiting" artefacts on their official facebook page. Via posting photos and brief introduction of pre-selected artefacts, it would be easy to know which artefacts are most popular among the audiences.

Our team utilize 2 tools: Netvizz and Gephi. The former is a Facebook application to extract data from personal networks, pages or groups; Gephi is the tool for visualization of social graphs. We use Netvizz to extract data from the official NPM page, processing the data acquired with Gephi, we thus understand which artefacts are particularly engaging and popular.
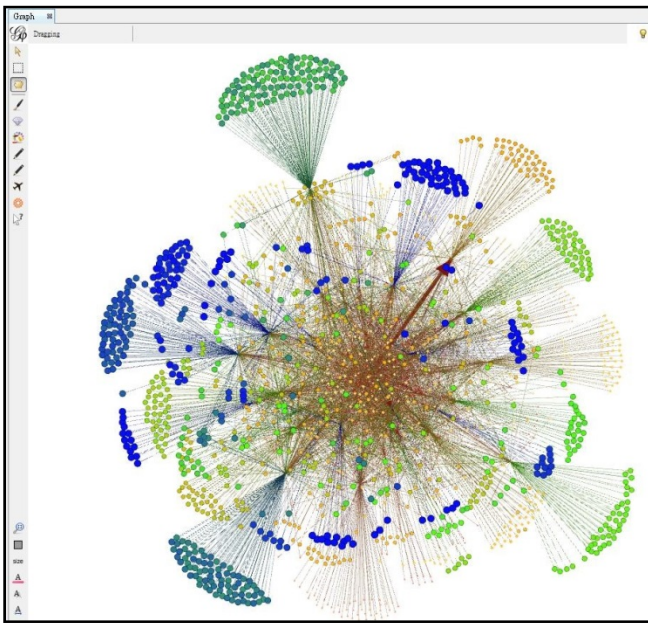
Figure 2: using Gephi to visualize engaging NPM facebook page contents.

Design Process

The main issue in our design process is: how to preserve the "playfulness" of a curio box in a contemporary and digital form? Under such question, we have to figure out the ideal way to present the artefacts that will be at the same time playful and knowledgeable–users can actually learn from our content.

Breaking down the Process

When first opening the application, users see two artefacts adjacent with each other. They are asked to choose one from the two.

After user had picked their ideal object, they will be required to answer a question related with the artefacts. If correct, they acquire the artefact; if not, they have to choose again.
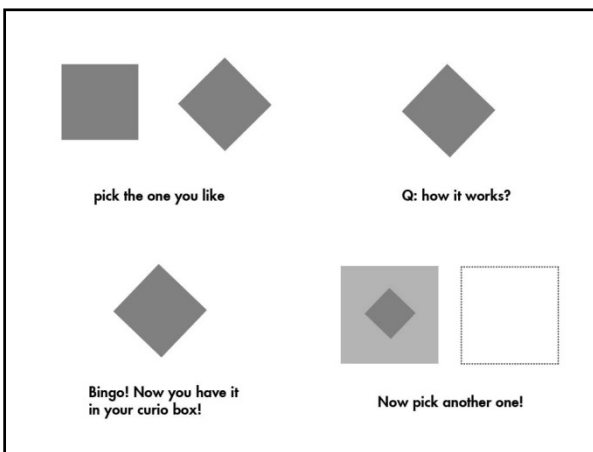

Figure 3: visualising the concept of process.

The acquired artefact will be send to "layer." When user have successfully filled present layer with artefacts, there will be a hint suggesting how to proceed to the next layer.

This idea is to limit user's option by leaving them with just 2 artefacts to consider at a time. As such, we believe people will be encouraged to conduct a much more in-depth exploration into an object. Furthermore, through process of collection, we expect users to have an immediate sense of intimacy—the relation between user and the objet is closer because of user's acquisition of it.

Focusing on Preserving Playfulness

Inside an 18th century Chinese curio box, there could be multiple hidden layers, concealed drawers and triggers. The owner

of a curio box had to literally explore it by tapping, flipping, removing or twisting particular part of the box to access the remaining artefacts.

Such features are realizable because of the new affordances of recent popular tablet devices. This will make meaningful interaction between contents and users plausible. Take the semantic gesture of iPad for example, the triggers of ancient curio boxes can be symbolised by the gestures.

For example, long touch gesture is used to symbolize press-albs drawer; swipe gesture represents removing a certain part of the device, while double tap stimulates the action of finding the empty space behind the cardboard. The gestures used to symbolize analog triggers are listed as figure 4.

Presentation of Content

When considering the suitable presentation of information flow, the first question come to our mind is: why users use this application? The purpose of this application is to resemble a curio box, through which users are able to learn a bit from the process of "acquiring" artefacts.

Under such consideration, the ratio of text and picture is 20:80, featuring visualised explanation rather than a long paragraph of texts. We select a few example of layout as figure 5 and 6.

This app features a mutual and rational layout design. With this style, users from different cultures can access the artefacts without the need for background knowledge. And photos will be sharp, large and clear, that improve the intimacy felt by users.

User Evaluation and Further improvements

We have conducted our user evaluation based on our prototype. the subject consists of 30 students of National Chengchi University's Digital Publishing course. The general idea of this application received positive view. In terms of whether it has triggered their further interest into artefacts, over 85% of students concurred with this.

However, some users report they had problem figuring out how to proceed since there are not enough indication on how to proceed to the next layer. There will be need on improving the guidance feature in the coming versions.

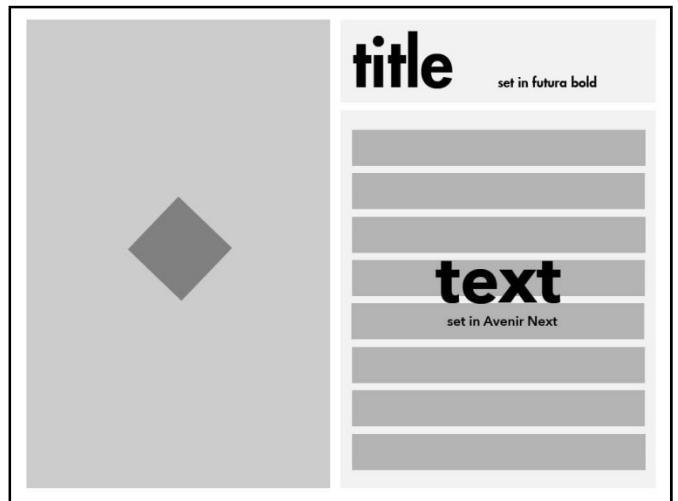| Gestures	Action	Figure
Tap	Selecting an object.	
Swipe	Removing an object.	
Double Tap	Inspect whether there are objects behind an empty space.	
Touch and Hold	Resembling press-open drawers	

Figure 4: Gestures used in this app.

Figure 5: conceptual sketch of layout of a single artefact
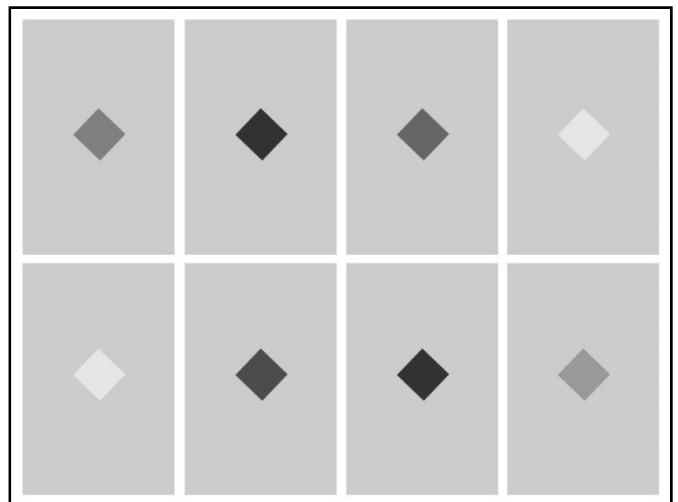

Figure 6: the design of a layer. Different cards symbolised different artefacts.

References

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Author Biography

Wei-Hsiang Su acquired his BA in Chinese Literature from National Taiwan University. He is currently a graduate student of National Chengchi University's Master program of Digital Contents and Technologies. Wei-Hsiang Su's responsibilities in this project include creating contents and project management. His research topics include content strategies on social media and interactive storytelling. He was the first author of Mobilizing 3D Virtual Artifacts Exhibition System of National Palace Museum, which was published at Archiving 2013, Washington DC.

Pei-Jeng Kuo received her B.S. in Physics from National Taiwan University, Taiwan; M.E. from Massachusetts Institute of Technology, USA; and PhD from The University of Tokyo, Japan. She is currently an Assistant Professor at National Chengchi University. Her research topics include indexing, archiving, delivering, and retrieving of multimedia contents with MPEG-7 technology. She also works on digital publishing in recent years. She was the Advisor and contact author of this proposal.

Hsing Huang acquired his BA in Information Management from National Chengchi University. He is currently a graduate student of National Chengchi University's Master program of Digital Contents and Technologies. Hsing Huang's responsibilities in this project are programming and designing user interfaces. His research topics include digital arts and interactive design.

Yi-Ning Huang acquired her BA in animations from National Taiwan University of the Arts. she is currently a graduate student of National Chengchi University's Master program of Digital Contents and Technologies. Yi-Ning Huang's responsibilities in this project are visual art and cultural background studies. her research topics include animal preservation and digital contents