

Hyperobject©

The museum display case as a digital portal that “suggests” relevant objects

Introduction

“Technology is culture and culture is a set of technological processes. There is no separation between culture and digital. We live in a society, an economy of intersections” (Jeffrey Schnapp)

The advent of personal electronic devices has introduced change in an individual’s relationship with the space that surrounds them and with other individuals and groups. Goppion’s digital breakthrough explores and challenges the conditions of production and the dissemination of knowledge.

In the incorporation of new digital technologies into the humanities, the field of Digital Humanities was born, an “interdiscipline” with its own dedicated set of methods, devices and heuristics linked to the digital in both human and social sciences.

In the museum sector, Digital Humanities offers plenty opportunity to amplify the visitor experience by both personalizing it to the visitor whilst introducing educational prospects that until just a few years ago, were unimaginable; opportunities that are especially useful to younger generations whose methods of knowledge acquisition and communication are increasingly transforming.

To render the Hyper Object Display Case© functional, data and metadata need to be conceptually interoperable and their documentation is necessary. Digital archives are essential in doing so (these may include catalogs, bibliographic data, graphs, photographs), allowing the curatorial team to expand the readability of exhibition objects and to connect them to external contexts (such as other museums, monuments or regions). This allows the archives to come to life within the collections and within the structures that host them (*living archives*).

Goppion Hyperobject Technology

The Goppion Hyperobject Technology® (GHT) app is a simple “portal” through which the object opens a variety of routes of knowledge that the visitor selects based on their capacity to enter the museum’s physical routes, as well as their personal interests, their understanding, and the amount of

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time they are able to dedicate to the museum visit.

The system prioritizes the objects by providing all the information necessary for visitor knowledge and contextualization, thus allowing a closer relationship with the collection.

The routes can start with a principal object - or “masterpiece” - in order to direct the visitor to objects that are less obvious and less grand but have some type of relationship with the major work. Alternatively, the route may begin with secondary works that direct the visitor towards the major ones via various period and art medium pathways.

Based on the principles of the ‘Internet of Things’ (or perhaps the Internet of ‘Objects’ is more suitable to this scenario), the app manages a flow of information that connects the works and their characteristics with the entire collection of data and their processing via the Internet or a local area network (McEwen et Cassimally, *Designing the Internet of Things*, 2014). In response to visitor interactions and thanks to the actuator components placed near the objects, signals are transformed into data in the viewers’ devices (smartphones, tablets, etc.), where they can be processed to provide answers to questions.

The Goppion Hyperobject Display Case® is the beginning of a sort of ‘museological democracy’ wherein each visitor is free to dictate and amplify their own visit, in relation to the object as a whole, connecting them to complementary objects in a chain of curiosity spawning curiosity.

In the example of Cartone della Scuola di Atene, both the work as a whole as well as its singular elements - its depicted subjects, details, etc. - can be rendered responsive through one or more transponders, becoming nodes in a network in which each visitor, on the basis on their interests, can view multimedia on varying segments of the works, can select or create their desired tour itinerary within the museum, and can discover similar objects on view at the museum. The app also allows connections to other museums or exhibitions that hold relevant works (only in the case where their collection is equipped with the actuator technology).

The operating system can be updated with new content and links, providing visitors with renewed and expanded routes and the museum a sustainable and steady approach of integrating their collection into the Hyperobject system.

The capability to consume multimedia content on a personal device without

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disturbing or interfering with others in proximity enhances visitor experience. It also allows for an “emotional” atmosphere, arousing the user’s desire to gain a more intimate understanding of the works.

Unlike other systems, GHT avoids content matching and allows the user autonomy in its use without any intrusion in the interaction between system and user.

GHT introduces various advantages for museum curators and the public, such as the possibility for school teachers to prepare for a museum visit in advance. Moreover, it allows users to share the experience with others on social media, thus encouraging them to personally visit the museum. Via comments specific to certain content, such as the arrangement of the object and its captioning, which the visitor can tag via the system, curators can review the effectivity of the exhibition structure/narrative and can make any necessary adjustments to make them more effective.

The involvement of visitors’ smartphones in the use of the GHT system allows the museum to avoid the purchase, use and maintenance of equipment such as audio guides, minimizing educational engagement costs.

The GHT system can be personalized to serve the needs of every museum via made-to-measure custom design in both functionality and appearance, guaranteeing alignment with the museum’s brand identity.

The Goppion Hyperobject Technology® also operates within the Smart Case System®.

Smart Case System®

Developed by Goppion, Smart Case System® allows an active role in both the processing of information and the protection and conservation of exhibited works.

Thanks to its series of sensors and actuators that work either individually or collectively, the Smart Case System detects the presence of anomalies and reacts by actively intervening through automatic control systems - immediately alerting control staff, who are always informed without need for personal monitoring of malfunction, such as failure to close, deviation from set climate or lighting settings, vibrations or seismic shocks. Wherever possible, the system autonomously activates corrective actions, in one example, by restoring the desired relative humidity or temperature.

The integration of Smart Case System functions - which can also be incorporated into reports of visitor flows aggregated or segmented into visit date and hour - is an added value and can act as a new metric for managerial departments.