Objects from the past, narratives for the present

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ABSTRACT

This paper aims to participate to the dialogue about the content management systems for handling enriched museum information. We will argue that the collections management systems (CMSs) used today leave out important and valuable interpretative data created in the daily work of the museum. A review of the currently used systems and a presentation of the advantages and disadvantages of those will support the argument. Furthermore museum theory and practice that articulates the interpretative framework towards content management will be discussed along with some efforts to approach such a future development.

1. INTRODUCTION

Museum automation efforts have already a long history. The use of Information and communication technologies (ICTs) in museums began in the early 1960s. Nevertheless, the advances in technology and investments made by museums and the cultural heritage community as a whole in automation projects, could point to only modest results, especially in comparison with the successes of commercial organisations that have automated their operations (Jones-Garmil, 1997:51). This can be explained by the complexity and intangible quality of the information that museums create, manage and deliver and by the diversity and complication of museum operations in order to develop, convey and enable cultural information and knowledge exchange with their communities.

Museums use computerised systems to improve accountability and responsibility for their collections. These item-centric collection management systems, administered by registrars and collections managers, manage information about the museum's collections and about transactions and activities involving objects in the collections.

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However, current systems do not reflect the new role and multi-dimensional character of museums dictated by the influence of post-modern theoretical approaches. Issues concerning museum collections management are strongly related to the process of public "representations" of the past. In this process, museum objects and museum creators are not the only ones involved; visitors are also part of this. They could participate in the creation of narratives relevant to their lives, if they were able to access information about the objects and about the creation of meaning in the museum.

In order to meet the public's demand for participation in the creation of meaning and interpretation, museums should consider broadening the scope of documentation. Collections systems that are well–constructed to receive administrative information and physical descriptions of the objects do not include research, interpretative and contextual information and therefore are no longer adequate. Managing enriched contextual information sets additional requirements, which are not covered by existing collections management systems.

2. COLLECTIONS MANAGEMENT SYSTEMS

The first computerization projects in museums were concerned with the automation and processing of museum data and have been driven by the need for record-keeping and inventory control. Data about collections has always been the most rigorously structured and tracked information in museums and this was the basis of computerised database systems.[1] Early museum collections databases automated the manual registrations methods; however, there were also projects that tried to incorporate collection management procedures.[2]

Museum CMSs embody information about the following collection-related activities: accessioning, inventory control, location and movement control, cataloguing, conservation management, rights and reproductions, risk management, insurance management, exhibition management, dispatch, loans, deaccessions and disposal, etc. (Pedley, 1998; Stiff and McKenna, 2000; Ashby, et al., 2001). This information relates to the curatorial functions and is primarily –and often exclusively- geared to internal users (e.g., curators, registrars, conservators, etc.) (Light, et al., 1986). Nevertheless, there are examples of CMSs published on the web addressing on-line audiences through browsing object-level records or searching facilities (free text search or indexes).

Today, many companies and organizations actively address museum automation needs and museums can choose among many sophisticated software applications and systems for collections information management. Commercial CMSs are user friendly, have graphical user interfaces and multiple navigational techniques (e.g. buttons, pull down menus, keystrokes, etc.) and can accommodate rich media content as attached files. This, in most cases, translates in permitting the user to

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[1] A smaller set of automation efforts came from museum education departments and focused on interactive exhibits (Besser, 1997a). A discussion of these efforts will not be part of this paper.
[2] For example, the DARIS computerization project in Detroit in the early 1979 was used for cataloguing, exhibition management, registration and object location tracking (Jones-Garmil, 1977).

browse a series of pictures, or watch a video, while focusing on a specific collection item (Scali, and Tariffi, 2001).

However, CMSs are not homogeneous; the ways data about collections are structured, stored, indexed and retrieved present great differences (Koot, 2001:251). The development of standards for the description of the structure and the content of collections databases moves towards more consistent systems. The main advantage of using an agreed standard is that it enables sharing and exchanging information between different museum departments or different museums (Bower and Roberts, 1995).

The characteristics of contemporary CMSs can be summarised into the following (Dawson and McKenna, 1998; CHIN, 2000):

a) CMSs attempt to create and store records for every object in the museum.

b) CMSs usually incorporate a powerful database and give users the opportunity to pose numerous queries to that database.

c) CMSs tend to be relatively open; most CMSs vendors have recognized the need to import records from/ or export records to other systems, easily. The use of common data structure standards is especially useful in this respect.

d) CMSs are dynamic, with system tools oriented towards handling data that is constantly growing and updated.

e) CMSs can be published on the web and selected records can be exported into other programs and reused.

2.1 Use of Collections management systems

Once data is automated their use changes radically. Questions that could not be realistically dealt with the manual systems can be routinely answered by computerised systems. This in turn changes users' perception of the data and affects the kinds of questions they pose and therefore the pathways of research (Sarasan, 1988: 36).

Collection management systems are object-centric; all data within them refer to particular objects. Internal users of CMSs have at their disposal a powerful tool to care for and preserve collections, to create reports and to meet audit responsibilities; e.g. a collection manager can easily find the physical description and classification of an object, information about the history of it prior to its acquisition, details of its subsequent incorporation into the collections, etc. He/She is able to follow the object from the storage to the conservation department or the exhibition gallery or even to another museum. All this management data are stored into the system and enable its users to obtain knowledge of the "life cycle" of an object in the museum (Kavakli and Bakogianni, 2004).

Furthermore, the general public through the web can obtain a view of museum collections. But, is the raw information in CMSs (file photo with maker's name, description and accession number) adequate to satisfy the needs of web audiences who are often unable to interpret this information? Although CMSs can reflect complex relationships between objects, this is usually limited to situating an object

within a set (a group or a collection) (Donovan, 1997). The relationship between an object and other objects, people, or theories (usually a key element of an exhibition catalogue) is seldom reflected in online museum collection databases (Besser, 1997b).

Museums need to wrap layers of interpretation around the bare fact of an object before the public can begin to grasp its significance. The more raw materials are available, the more they have to be mediated by indexing and in-depth-interpretation in order to become valuable for the public.

Information in CMSs may seem adequate in terms of management issues and descriptive data of objects, but museums are not only storehouses; they also operate as unique interpreters, as meaning-makers and knowledge enablers that constantly manage, develop, accrue and deliver intangible cultural assets, besides taking care of the tangible ones (Hooper-Greenhill, 1992:193-194). Therefore, museums research, translate and communicate the social and cultural context of objects, people and their environment through various communication means (e.g. exhibitions, catalogues, publications, educational material, multimedia and web applications, and more). Objects then are made physically and intellectually accessible to the museum audience (Mason, 2002).

2.2 Issues of interpretation

The subjective and fragmental view of cultural interpretation has been recognized by theorists of material culture and museums alike (Shanks and Tilley, 1993; Pearce, 1994; Hodder and Hutson, 2003); there are more than one narrations of the past and surely museums do not have the "one true story". Objects from the past are open to many interpretations depending on the time, the person and the social context of the viewer, just like texts and narratives depend on the reader. In other words, interpretation of the objects which come from the past has little to do with a "real' or "direct" interpretation of that past, and much to do with projects in the present and the future (Tilley, 1994: 67).

Current museum theory and practice is about understanding and encouraging the importance of getting the museum visitor, the "reader", actively involved in the process of interpretation and creation of meaning in the museum. This is not a sheer claim for more education and learning in the museum; rather it is an aspiration for better and more democratic learning and "intrinsically motivated" and "mindful" museum experiences that result from the possibilities given to visitors to draw novel distinctions, acquire new perspectives and become aware of the context of the museum collections (Falk and Dierking, 1995; Hooper-Greenhill, 2001).

Museums, in the echo of post-structuralist and post-processualist (or interpretive) archaeologies, have been engaged in their self-critical analysis and they have attempted to depart from singular and fixed narrative displays, towards more experimental and reflexive exhibitions that welcome and generate multivocal responses and alternative "readings" that also bring important cultural debates into the museum (Karp and Lavine,1991; Hooper-Greenhill,1992; Pearce,1994; Vergo,1994; Macdonald, 1996; Mouliou and Bounia, 1999; Mouliou, 2005).

This is mirrored and meditated practically through innovative, creative and self questioning museum exhibitions and public programs (Kotler, 2001: 419). Some examples include: the Prehistoric gallery in the Museum of London in 1994;[3] the permanent exhibition in the Riesco Gallery, London Borough of Croydon;[4] the exhibition "Matter of Choice: Collecting the Century at the Whitworth" organized by the Whitworth Art Gallery in Manchester in 2000;[5] the exhibition "1884-1930: From the Christian Collection to the Byzantine Museum" organized by the Byzantine and Christian Museum of Athens in 2002.[6] In all these examples the museum discusses its authority and the objectivity of its choices and promotes critical analysis and dialogue about the way it exhibits itself; it asks its visitors to question its authority, to think for themselves, to become active creators of meanings and narratives.

But in order for this to be so, museums need to provide all essential information and primary sources that they will enable visitors to create their meanings. What does this "essential information" include then? Does it refer only to objects and data about them? Or, the term is more inclusive, and we should redefine it, following the self-questioning and thought-provoking direction museum theory and practice already point to?

During the preparation of an exhibition, museum professionals (curators, educators, conservators and so on) create valuable information by research and interpretation. This information may include multimedia elements (images, video, audio, and graphics) and extensive text sources (object labels, wall panels, research notes, entire publications, education and interpretive material). Creating this enriched information consumes much of the resources of an institution and it is the second most valuable asset of a museum after the collections themselves (Grant, 1999: 19).

In order to manage and re-use these valuable assets then, museums should document their programmes and the rationale behind them along with the produced information, the same way they document their objects. But for such a development museum documentation practices should obtain a new approach. The enriched museum information and the public programmes should be confronted as objects, "information objects" that can be incorporated into the museum's information system (Ashby, et al., 2001). This system will be then used in order to empower visitors and museum professionals alike, to participate in the construction of narratives and knowledge in a more comprehensive and interesting way.

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[3] The permanent exhibition of the prehistoric collections of the Museum of London was one of the first to suggest that museums should move away from the "one and only true story", recognize subjectivity in their interpretations and stimulate visitors' critical viewing by asking them questions like "Can you believe what we say?" (Cotton and Wood, 1996: 53-71).
[4] The permanent exhibition of the Chinese collection in the Riesco Gallery looks for visitors' reactions to the museum content and incorporates their comments, personal narratives and interpretations in the museum representations (Economou, 2003: 63).
[5] This was an exhibition about the choices the museum faces when it forms its collections and about the criteria that affect this process. The approach that was followed was revealing: photos of the curators and of the museum employees that made those choices were placed next to the exhibits along with notes explaining their rationale (Economou, 2003: 63).
[6] This was a temporary exhibition presenting the history of the museum through its collections, its founders and the historical context that affected both. Archival, photographic and archaeological material was presented in order to discuss how the museum formed its character through time and how its history influences its present and future (Lazaridou and Santorinaios, 2004:155-158).

3. FROM COLLECTION MANAGEMENT TO CONTENT MANAGEMENT

Managing this content-rich, complex and interconnected information puts additional requirements not covered by the majority of CMSs used today. Museums' internal information systems need to evolve from their focus on collections management - essentially the data entry and retrieval of brief data such as numbers, dates and names - to content management systems able to store the truly valuable, enriched information that museums produce on a daily basis but does not make its way into information management systems (Ashby, et al., 2001). This enriched information should be included into a management system able not only to maintain but also repurpose this asset both for internal and external use.

An ideal system would enable internal users to access this enriched information; it would allow the re-use of this information both for internal administrative, curatorial and other needs and for presentations directed to the public; it would also allow directing the content to different audiences (museum employees, different visitor groups, scholars, etc.). Museum visitors as internal or external users of such a system would be enabled to extend their experience and relation to museum material, having access to digital versions of the same primary sources and research materials which curators and museum educators had at their disposal to interpret museum objects.

Implementation of such a system requires reconceptualization of its data model and establishment of documentation practices that would run through and beyond departmental and institutional divisions. Museum documentation needs to be put upon a fuller and more secure theoretical basis, however difficult or elusive this may be, or however great a gulf there may exist between the theoretical stance and the everyday practice or the availability of special expertise for study.

3.1 CONTENT MANAGEMENT SYSTEMS

The extension of museum object-centric management systems into content-oriented systems or knowledge databases provides an opportunity to store the wider intellectual assets of a museum (e.g. historical narratives, images, video, audio, graphics, artwork, publications, marketing and educational material).

Currently, three approaches have been proposed for facing the above challenge of preserving, retrieving and re-using the content about collections that is available into the museum.

♦ The first one involves restructuring the data model of existing collection systems in order to emphasise the interrelationships of information elements.[7] The new data model provides additional entities (like people, places, sites and events) that cumulatively form the context of an object and appropriate relationships for associating them to object data. A separate module is incorporated to allow users to create interconnections between object records to related context records. This

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[7] There are some commercial CMSs that aim to respond to museum's need to incorporate information related to objects into management systems (Sarasan and Donovan, 1988; Sarasan, 1997; Ashby, et al., 2001).

enriched, interconnected data is stored in a central repository that everyone throughout the institution, as well as external audiences, can have access to. Moreover, this information may be made immediately available on the Web.

♦ The second approach involves the construction of a separate context repository to function in parallel with the CMSs leaving the CMS database almost unmodified.[8] Context information that relates to a specific work of art (historical, ethnographic, cultural, scientific, socio-economic) is stored in the context repository as interlinked entities. In this case, appropriate metadata for describing and structuring contextual information need to be defined. Semantic relations between the elements of the two repositories should also be created. A common user interface enables the joint retrieval of assets from both areas. These modular content systems are shown in Figure 1.
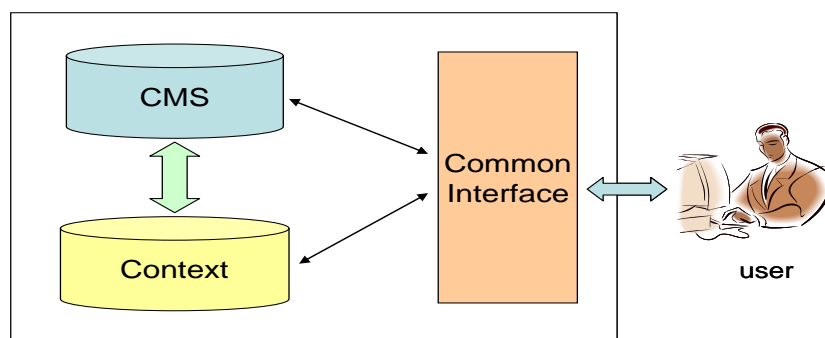

Figure 1: Modular content systems

Both of the above approaches rely on central repositories for storing and retrieving content in a more-or-less predefined format.

♦ The third approach involves the use of a content management system to manage separate documents, multimedia or other electronic files stored in the different computers of the actors that participate in the process of content creation (Grant, 2000). We can take as an example the development of an exhibition and its accompanying catalogue. During the development process a number of documents are separately created: labels, other texts, all sorts of graphics, etc. At the end of the day, where is all that content? The curator has a copy of an essay stored on a diskette somewhere; the registrar has basic object information in the collections management database; the graphic designer has page layouts on his/her drive and graphics and scanned images stored in a separate database system; the educator has a hard drive full of audience-specific interpretive material. At the end of the exhibition, the content elements are scattered throughout the organization. Enormous financial and human resources are invested in creating this content, but the result is an unmanaged asset that is largely unavailable for reuse.

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[8] This solution has been developed in the framework of the research project Open Heritage: Enabling the European Culture Economy (Scali, and Tariffi, 2001).
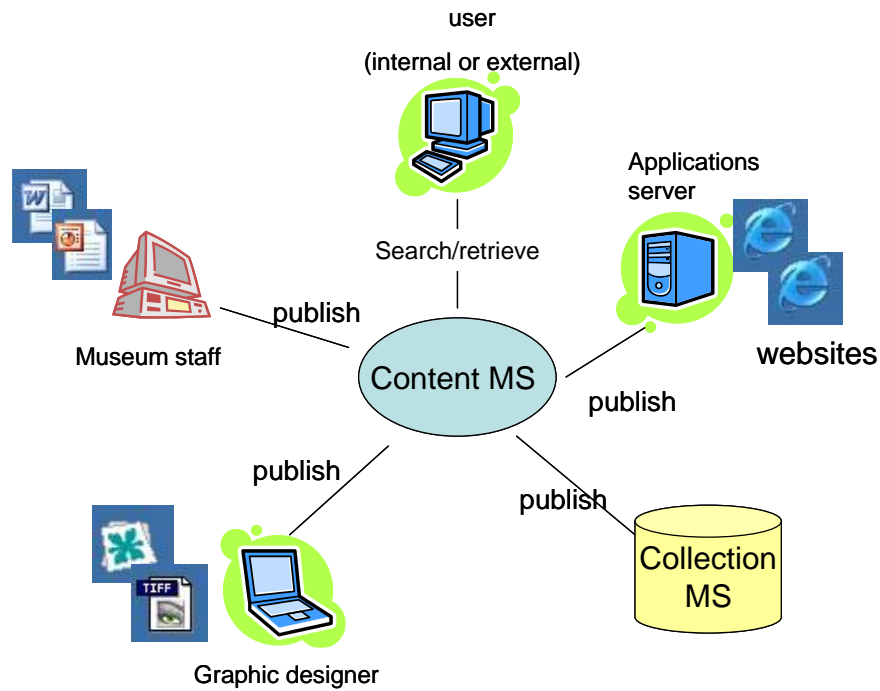
Figure 2: Content Management System

The use of a content management system in this context is invaluable; anyone inside the organisation can publish his/her enriched content to web-based interfaces and can make them accessible through the museum intranet and the Internet, as shown in Figure 2. The advantage of this approach to managing digital content coming from different departments of the museum is that it is not necessary that this content resides in structured database applications as is the case in the systems integration (Blackaby and Sandore, 1997); anyone from a personal workstation can input data into the content management system through easy to use web-based interfaces. Once again appropriate meta-tags should be used for indexing all published material thus allowing intelligent search of information.

4. CONCLUSIONS

This paper brings together two research issues: computerised collection management and interpretation of museum collections. It describes the evolution of traditional collection management systems in order to include contextual information both about objects (e.g., their historical context, social context, geographical context etc.), and about the process of content creation (e.g., the rationale behind museum choices during the development of an exhibition), thus encouraging users to create their own interpretations of museum objects.

By documenting and presenting all contextual information that museum creates a new mode of interaction between visitors and the museum is formed. The perception of the museum as an institution changes from a withholder or controller of information and stories to an open container. This is not a threat, a cancellation of curatorial authority; on the contrary, this empowers museums to consider their role and their ability to offer greater autonomy to their audiences. The narrative becomes a living, flexible thing, not a static or fixed entity.

Technology exists in order to manage more than data. What museums need is a cultural shift within institutions that will transform staff throughout the organization - curators, educators, exhibit designers, cataloguers - into stakeholders in the larger process of regularly incorporating enriched information into a central repository. This information is routinely created for publications, exhibitions, educational programs, lecture series, etc. By using appropriate content management systems, these resources can be managed, repurposed and recycled. Isn't this a challenging perspective?

5. ACKNOWLEDGEMENTS

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