

# **DIGITAL ASSETS AND DIGITAL BURDENS: OBSTACLES TO THE DREAM OF UNIVERSAL ACCESS**

Nicholas Crofts  
Inventaire et documentation scientifique  
Musées d'art et d'histoire  
2, rue Charles Galland  
1211 Genève 3  
Suisse  
[nicholas.crofts@ville-ge.ch](mailto:nicholas.crofts@ville-ge.ch)  
<http://www.ville-ge.ch/mah>

**Over recent years, a number of high-profile projects have promoted the dream of universal access to cultural heritage through the integration and dissemination of the digital assets held by ‘memory institutions’: museums, libraries and archives. We argue that this vision is based on a number of questionable assumptions about the nature of the obstacles involved, the quality of the digital assets held by these institutions, their objectives and imperatives they face.**

**The paper concludes that meaningful and sustainable universal access to cultural heritage is unlikely to be achieved through such broad-scale projects, but that other trends can already be detected that point towards a different future, one which challenges the traditional role of museum documentation.**

## **INTRODUCTION**

The dream of universal access to cultural heritage through the integration and dissemination of the digital assets held by ‘memory institutions’: museums, libraries and archives, has been at the heart of CIDOC's work for almost as long as anyone can remember. Successive generations of CIDOC members have contributed to a series of projects, data models, terminology standards, and guidelines, culminating, most recently, with the CIDOC *Conceptual Reference Model*. The goal of enabling universal access to cultural heritage is the common thread running through these initiatives, each one bringing the dream a step closer.

CIDOC is not alone in seeking this goal. Over the years, numerous national and international projects have been launched, budgets raised and countless hours of work invested to make universal access possible. A glance through the proceedings of previous CIDOC conferences reveals a long tradition of announcing the launch of ambitious projects (though far fewer talking of their successful completion). The

process continues today – major initiatives are still under way that seek to harvest cultural heritage information from disparate sources and bind it into an homogeneous format for general consumption. However, despite all this concerted and sustained effort, the ultimate goal remains tantalisingly out of reach, like the summit of a mountain that fails to materialise around the next bend in the road. We may be nearly there, but we have been “nearly there” for an awfully long time. To avoid long-term frustration, I would argue that we need to take a serious look at the *obstacles* to progress. By gaining a better understanding of the factors that are antagonistic to the goal of universal access we can re-evaluate the limits of what can realistically be achieved.

## **KEY QUESTIONS**

The rationale behind universal access projects goes something like this:

A substantial body of cultural heritage information already exists in digital form; more is being produced and maintained by 'memory institutions' such as museums, libraries and archives. At present, this material tends to be fenced off in 'information silos' and public access is limited. However, there is a widespread consensus that this material should be consolidated, enhancing its value, and made more readily available. Individual organisations lack the capacity to achieve this, but centralised support and coordination can make the dream a reality.

I wish to address three key assumptions that are implicit in this rationale and which, I believe, lie at the origin of the difficulties we face.

- i. Adapting to new technology is the major obstacle to achieving universal access
- ii. The corpus of existing digital documentation is suitable for wide-scale diffusion.
- iii. Memory institutions want to make their digital material freely available

## **GETTING TO GRIPS WITH TECHNOLOGY**

Much current thinking on universal access appears to stem from the assumption that cultural heritage institutions are prevented from making universal access a reality by their inability, through lack of understanding and access, to take advantage of new technology. The DigiCULT report stated that “Today, archives, libraries and

museums all over Europe face similar challenges as they try to take advantage of the enormous potential [...] of information and communication technologies.”<sup>i</sup>

From this perspective, the key challenges are to raise the general level of technical expertise, to make technology available, narrowing the “technology gap”, and to provide a framework for cooperation. When the technological obstacles are removed, cultural heritage institutions will naturally make their resources available on-line in integrated platforms.

“Networks with other institutions across sectors will be an essential component of every organisation. The governing principle [...] will not be competition but partnership.”<sup>ii</sup>

There are indeed some formidable technical problems to be faced if universal access to cultural heritage is to become a reality, and cultural heritage institutions do indeed have difficulty in dealing with them. The most obvious is perhaps the very low level of technical and semantic compatibility to be found in documentation between institutions, and often within institutions. Despite all CIDOC's efforts, there is still no internationally-accepted standard for museum documentation. A well-known quip on the subject says that standards are like toothbrushes – “everyone thinks they're a good idea but no-one wants to share”.<sup>iii</sup> The general tendency in museum documentation has long been to use standards as a source of “inspiration” - to adapt rather than to adopt. The result is a situation where data from different institutions usually present deep-level structural and terminological incompatibility. Overcoming this level of heterogeneity to create an integrated resource is no small feat.

However, these semantic issues are, in a sense, just the “fun” problems: integrating incompatible data is complicated but not insoluble. It is just the sort of brain-teasing problem that the CIDOC CRM<sup>iv</sup> has been designed to address and that information specialists revel in.

## **POST-TECHNICAL PROBLEMS**

There are some indications that the technology-gap, or lack of technical expertise may in fact only serve to conceal more fundamental issues. Even in situations where the technical problems have already been overcome, there may still be a reluctance to go ahead and make access possible.

Two examples come to mind from my own experience in Geneva at the *Musée d'art et d'histoire*. The first was a project to develop an “OPAC” application for the museum's main collections database.<sup>v</sup> This contains records for over 300'000 objects, around 100'000 of which are accompanied by images. The application allows live access to non-confidential information about the museum's holdings and provides records that are comparatively rich and detailed. Data about anonymous donors, location, insurance value and similar pieces of sensitive information are filtered and hidden from view, but all other data fields are available. Images are of a fairly modest resolution, sufficient for consultation on the web but insufficient for high-quality publication. The conception and design of the interface is a little clunky by today's standards – a solid grasp of Boolean operators is an advantage – but the application works well enough, and is still in use in-house. And there's the rub. For reasons that were never entirely clear, permission was never granted to go on line...

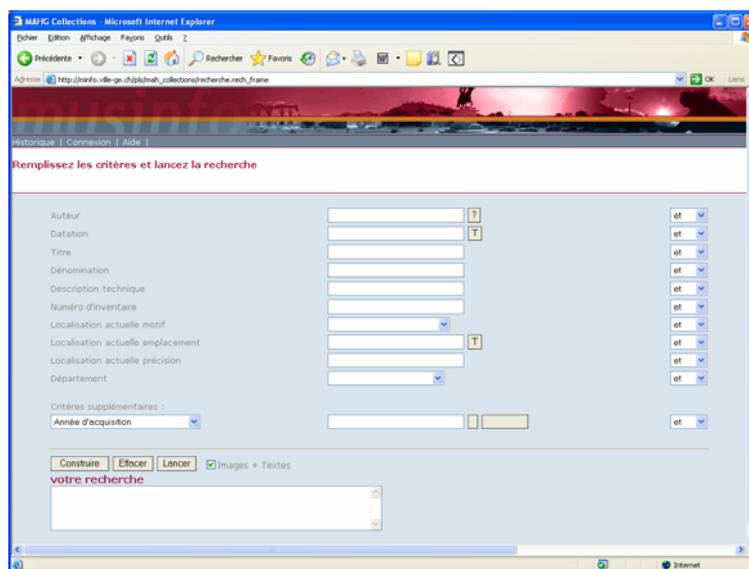


Fig 1. MAH collections OPAC application

More recently, in 2003, we developed an on-line interface to our digital photographic library, again intended for public use.<sup>vi</sup> The application incorporated a number of technical innovations: the user interface is of the now familiar single-field 'web search' variety, and provides *hints* to make it easier to formulate queries. A semi-automatic system translates the basic cataloguing data from French into German and English, and images are resized on-the-fly to adapt to the user's screen resolution.

Again, the application is used in-house, but at the time of writing we are still waiting for permission to go live.<sup>vii</sup>

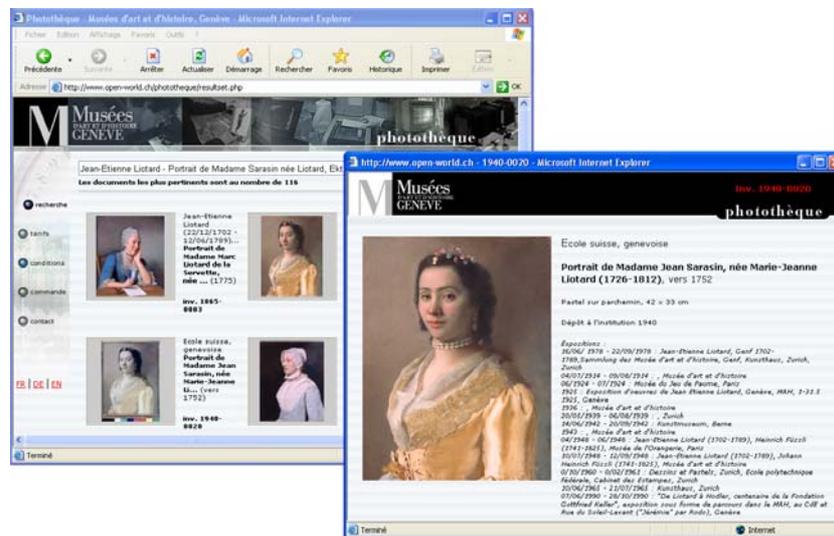


Fig 2. Musées d'art et d'histoire, digital photo library

There may also be obstacles not to making material accessible, *per se*, but to *integration and cooperation* with other institutions and resources. The DigiCULT report emphasises the need for active co-operation and the development of “common virtual cultural heritage platforms”, Andreas Bienert is quoted as saying “There will be network services or no services at all [...] It is absolutely necessary to achieve this kind of co-operation”. Yet it is still commonplace to find cultural heritage material presented exclusively on *institution-specific* web sites, even when a collaborative alternative exists. A striking example from France is the conspicuous absence of the Centre Pompidou collections in the national *Joconde* database. The obstacle here is clearly not technological, since the Centre publishes similar material on its own website.

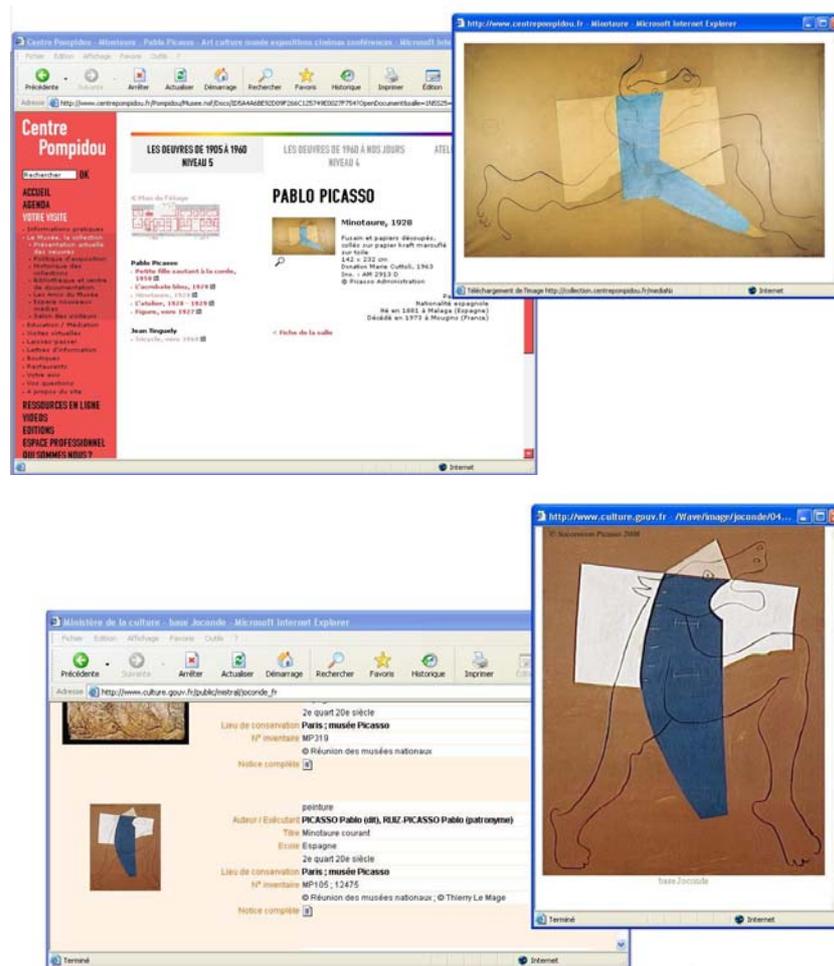


Fig 3 Centre Pompidou et Joconde, Picasso: Minotaure 1928

There is a natural reluctance to talk openly about projects that have not come to fruition. So it is difficult to know how representative these examples are of the general situation. However, they do indicate that *technology issues* are not the only obstacles to achieving universal access.

## SUITABILITY OF EXISTING DOCUMENTATION

Based on my own experience in museum documentation, a major non-technical problem area is with the raw material needed to make universal access possible – the existing collections documentation present in museum databases.

A technical revolution has taken place during my professional lifetime – I started working in museums in the mid 80s: the “paleo-Internet” period when command-line, text-only computing was the norm and a local area network in a museum was still

considered pretty cool – but while this technical revolution has taken place, there has not been a corresponding revolution in *documentation practice*. The way that documentation is prepared and maintained and the sort of documentation that is produced are still heavily influenced by pre-Internet assumptions. The documentation found in museums – the raw material for diffusion – is often ill-suited for publication.

The “received culture” of documentation practice, expressed in documentation standards and embodied in the documentation itself, constitutes an obstacle to evolution. All standards are based on choices – choices about what needs to be done and how to do it. Museum documentation standards represent assumptions about the role of museums, the people who work in them, and the purpose of documentation. Unfortunately, many of the major documentation standards now used and abused by the heritage community were initially developed *before* the Internet revolution took place. They reflect a world in which access to museum documentation was restricted to internal use only. It was prepared for and used by experts. Arcane terminology, codes and abbreviations, typographical conventions and obscure references were commonplace and even *efficient*, given the restricted potential audience and the technology available at the time. Our global, institutional thinking about documentation may have moved on from the “received culture” view, but standards, and the corpus of existing documentation, keep us locked-in to its basic tenets.

A notable example of the persistence of the received culture is the continuing lack of any agreed standard or recommendations for dealing with *narrative* information. Jane Sledge and others were already talking about the need to integrate narrative content and enhanced contextual information over ten years ago at the CIDOC conference in Nuremberg: “The storytelling medium of museums and the Web is just being designed. To access these stories the museum community must participate thoughtfully in the discussions for cataloguing Web materials”.<sup>viii</sup>

Documentation standards do of course evolve, but changes to standards are time-consuming and complicated to bring about. Modifications inevitably have an impact on technical tools, such as computer applications, and, more importantly, on the existing *corpus* of museum documentation. There is an enormous latency involved in updating an existing database to bring it in line with a modified standard, so evolution tends to be agonisingly slow.

The result of all this is that much of the cultural heritage information available on-line today looks and feels depressingly scanty and reused – the bones of the old inventory database still showing through.

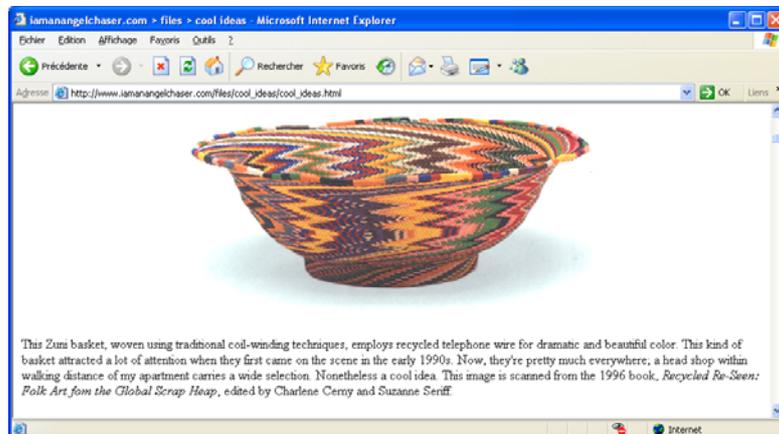


*Fig 4. Musée d'ethnographie, Genève, Zuni basket*

This item is part from the collections of Geneva's ethnography museum. The photograph is accompanied by the following information:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| INVENTAIRE                          | ETHAM K001670                       |
| COLLECTION                          | Amérique                            |
| DESCRIPTION                         | panier                              |
| PERIODE                             | 19e s.                              |
| PROVENANCE                          | Etats-Unis                          |
| RÉGION                              | Nouveau Mexique                     |
| POPULATION                          | Zuni, Pueblo                        |
| FONCTION 1                          | réceptient                          |
| TYPOLOGIE                           | panier                              |
| MATIÈRE                             | fibre végétale, fibre de yuccaliana |
| © 2008 Musée d'ethnographie, Genève |                                     |

...which raises more questions than it answers. Compare it with this short but informative description of a contemporary Zuni basket.<sup>ix</sup>



*Fig 5. Contemporary, Zuni basket*

In some instances, attempting to adapt existing museum documentation to make it suitable for public consumption may simply not be worthwhile. It requires the elimination of all that confidential, personal, irrelevant, or uninteresting, and the translation of all that is coded, obscure, elliptic or abbreviated. References need to be made explicit, public-friendly terminology and contextual information need to be provided. And all this may still not be enough to transform the documentation into something relevant and appropriate for wide-scale dissemination. An *adaptation* is seldom as good as something that is *purpose-built*. To highlight the difference, we should think about the problem from the perspective of the *information you would like to find*, rather than the *information we can currently provide*. Make the shift, in other words, from a product-led to a demand-led model.

## **COOPERATION**

Are cultural heritage institutions, museums in particular, genuinely interested in achieving universal access? The idea has become so axiomatic that the question might sound heretical. However, there are indications that some institutions at least may have reservations. To put it bluntly, universal access may be in conflict, or at least may be perceived to be in conflict, with an institution's *commercial interests*. If this is the case, then they are unlikely to make a whole-hearted commitment to integration projects.

In the current economic climate there is strong pressure on museums of all sorts, both public and private, to maximise their performance – to turn a profit or, at least, to cut costs – and to demonstrate their relevance in terms of number of visitors. A museum's collections are its major “asset”. Access to the collection and derived products can be commercialised directly or, in a not-for-profit organisation, leveraged so as to shine by whatever performance criteria are in place. In this context, allowing free unrestricted access to these assets may be seen simply as undermining the institution's potential or, more cannily, as a form of *advertising*. However, for the publicity impact to be effective, the distributed products must be clearly identifiable with the institution. In other words, the cultural information artefacts have to carry clear

institutional “branding”, or the benefit to the institution is lost. Concerns about damage to an institution's brand image can create an obstacle to universal access.

I am sure that many people find this sort of idea distasteful and possibly mistaken. Jim McGuigan is quoted in the DigiCULT report: “The notion that a cultural product is as valuable as its price in the marketplace, determined by the choices of the 'sovereign consumer' [...] is currently a prevalent one, albeit deeply flawed. Its fundamental flaw is the reduction of all value [...] to the logic of 'the free market'.”<sup>x</sup>

However, like it or not, the commercial and financial pressure on museums is real, and the need to protect a brand image may override the desire to provide unrestricted access. Writing recently on the Museum Computer Group mailing list, David Dawson acknowledged that issues related to brand image had effectively stalled the NOF-digitise<sup>xi</sup> project in the UK:

“The Plan was always to aggregate NOF-digitise content [...] but initial plans were scuppered by negative feedback from one large national institution that felt that its brand was under threat.”<sup>xii</sup>

Given the vital importance of protecting brand image for many institutions' commercial well-being, anything that is seen as diminishing or threatening the brand is unlikely to be supported. Unfortunately, most approaches to universal access tend to do just that. Incorporated into a common search engine, digital assets tend to become fungible and anonymous, just part of an immense result set, or worse still, they may become identified with the search engine itself, especially if the search engine in question is one dedicated to cultural heritage. I would suggest that the danger of “institutional anonymity” may be one of the reasons that museums can be persuaded to provide collection-level information to projects such as Michael-UK, but seem to prefer to draw users onto their own institutional websites to consult item-level descriptions. The “corporate image” of the Michael portal provides little room for each institution to express its own specific brand identity.

## **POSITIVE DEVELOPMENTS?**

Reading the blurb describing universal access projects can be stimulating. Trying to use the resulting web portals, on the other hand, can be frustrating. Given the generally poor quality of the results from centralised projects, what positive

tendencies can be observed? The embarrassing answer has to be that the most conspicuously successful growth areas for universal access lie outside the control of museums and cultural organisations. Individuals and other organisations are stepping in to provide access to cultural heritage material, filling the gaps left by museums heritage organisations. Compare, for example, the results of searching through the MLA's *Cornucopia*<sup>xiii</sup> site using the search criteria “William Hogarth, Tate Britain” with those from *Google*. Google lists an exhibition at the Tate in first position, and the Tate's page on its Hogarth collections in second. *Cornucopia* on the other hand, despite its cheery claims “Whether you are interested in painters or politicians, dinosaurs or space travel, the Romans or the Victorians, *Cornucopia* can tell you what is available and where to see it.”, provides no results at all, even though Tate Britain is one of the participating institutions and Hogarth is specifically mentioned in the Tate's description of its collections.

A little farther down the Google listing are links to Wikipedia articles on Hogarth. Again, it is instructive to compare these Wikipedia articles with pages provided by the Tate's own web site. The Tate's page on Hogarth's *The Gate of Calais*, for example, is informative and professional, but the corresponding Wikipedia article is more detailed, contains cross references to other works and related artists, a bibliography and, significantly, a link to the Tate's own web site.<sup>xiv</sup>

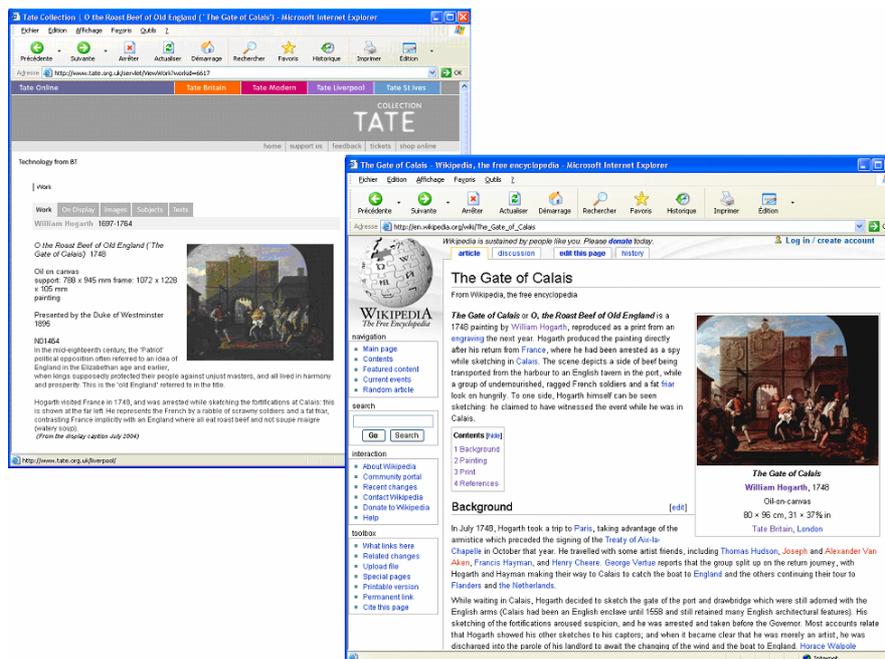


Fig 6. Tate Britain and Wikipedia, Hogarth : The gate of Calais

Material made available by non institutional organisations or by private individuals often contains cross-references to additional background information and comparable items drawn from a number of institutions. The Wikimedia Commons page, for example, devoted to the “Dame d'Auxerre”, a statue dated around 640–630 BC, probably from Crete, groups two photographs of the original in the Louvre, with a striking polychrome reconstruction of the statue from at the University of Cambridge.<sup>xv</sup>



Fig 7. Wikimedia Commons: Lady of Auxerre

Similarly, the page devoted to the Swiss painter Jean-Etienne Liotard, contains illustrations of works found in a number of institutions, including Geneva's *Musée d'art et d'Histoire*.<sup>xvi</sup> Conveniently, the works are classified by subject matter rather than by institution. Finally, Wikipedia, and other web sites, allow works that have been dispersed among different institutions to be reunited. The three panels of Paolo Uccello's masterpiece, *The battle of San Romano*, can be viewed side-by-side and compared.<sup>xvii</sup> By contrast, the three institutions that now house the panels: London's National Gallery,<sup>xviii</sup> the Louvre in Paris<sup>xix</sup> and the Uffizi in Florence,<sup>xx</sup> present only their own particular panel and provide no links to the other institutions' web sites.<sup>xxi</sup>

Cross referencing material from different institutions undoubtedly enhances the value of cultural heritage resources and significantly improves access, yet few institutions

appear to be willing to provide access to anything that lies beyond their own walls. It could be argued, of course that this task lies beyond the scope of any specific institution's work – most museums have enough trouble documenting their own collections without worrying about those elsewhere. Individual institutions, it might be claimed, aim to provide the raw material upon which others can build to create integrated, cross-referenced resources.

However, this rosy view is not reflected in reality. Consolidated resources are indeed being created, but the material they use, though drawn from a variety of sources, is conspicuously *not* provided by cultural heritage institutions. Copyright notices and other restrictions on institutional websites generally prevent or at least discourage reuse. In this respect, the much acclaimed decision of the London's Victoria and Albert museum to allow use of website images for non profit and personal use is unfortunately atypical. And even here, use of high-quality images, though free of charge, is restricted to non electronic media.<sup>xxii</sup>

Clearly, these restrictions make little sense when viewed from the perspective of encouraging universal access to cultural heritage. It is not even clear that they can be justified in financial terms – for many institutions, the accounting costs associated with charging for use of images far exceeds any revenue.<sup>xxiii</sup> However, I would argue that they are perfectly logical when seen as part of a general strategy for developing and maintaining an institution's brand image.

## **CONCLUSION**

What the foregoing examples seem to suggest is that museums and other cultural heritage institutions may be caught in a *Catch 22* situation with respect to universal access to cultural heritage. While making cultural material freely available is part of their mission, and therefore a goal that they are obliged to support, it may still come into conflict with other factors, notably commercial interests: the need to maintain a high-profile and to protect an effective brand image. If museums are to cooperate successfully and make digital resources widely available on collaborative platforms, they will either need to find ways of avoiding institutional anonymity, or agree to put aside their institutional identity to one side. While cultural institutions are wrangling with these problems, other organisations and individuals are actively engaged in

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producing attractive digital content and making it widely available. Universal access to cultural heritage will likely soon become a reality, but museums may be losing their role as key players.

## NOTES

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- <sup>i</sup> *DigiCULT Report*, European Commission, 2002. ISBN 92-828-5189-3
- <sup>ii</sup> *Ibid.*
- <sup>iii</sup> With thanks to Nick Poole of the Collections Trust.
- <sup>iv</sup> *CIDOC Conceptual Reference Model, 2008, version 4.2.4*  
[http://cidoc.ics.forth.gr/official\\_release\\_cidoc.html](http://cidoc.ics.forth.gr/official_release_cidoc.html) accessed 31 May 2008
- <sup>v</sup> 130,000 CHF was allocated for the development of this application in 2001 as part of the *plan informatique quadriennal (PIQ)*  
[http://w3public.ville-ge.ch/candide/intracm2.nsf/084e03fd4f9c9defc125711d00410a08/07b254600bebe55bc1256bd1002c868d/\\$FILE/PR-165.pdf](http://w3public.ville-ge.ch/candide/intracm2.nsf/084e03fd4f9c9defc125711d00410a08/07b254600bebe55bc1256bd1002c868d/$FILE/PR-165.pdf)
- <sup>vi</sup> The application was presented at world summit on the information society in Lyon and Geneva, December 2003 :  
[http://www.ville-ge.ch/fr/media/pdf/sommet\\_lyon1.pdf](http://www.ville-ge.ch/fr/media/pdf/sommet_lyon1.pdf)
- <sup>vii</sup> This situation does not appear to be unusual. The Louvre museum has also developed a digital photographic library, *Imaginum*, mentioned in the Louvre's end of annual report for 2006, which is not available to the public:  
[http://www.louvre.fr/media/repository/ressources/sources/pdf/src\\_document\\_53032\\_v2\\_m56577569831188705.pdf](http://www.louvre.fr/media/repository/ressources/sources/pdf/src_document_53032_v2_m56577569831188705.pdf)
- <sup>viii</sup> *Luminous Links: Providing Museum Information to the Public*, Sledge J. in proceeding of the CIDOC annual meeting, 1997
- <sup>ix</sup> [http://www.iamanangelchaser.com/files/cool\\_ideas/cool\\_ideas.html](http://www.iamanangelchaser.com/files/cool_ideas/cool_ideas.html)
- <sup>x</sup> *DigiCULT Report*, European Commission, 2002. p 14
- <sup>xi</sup> *NOF-digitise* <http://www.ukoln.ac.uk/nof/support/>
- <sup>xii</sup> *21<sup>st</sup> Century digital curation* Email message in MCG Archives, Dawson, D. 6 May 2008
- <sup>xiii</sup> *Cornucopia UK* <http://www.cornucopia.org.uk/>
- <sup>xiv</sup> Such comparisons may be a little unfair – until quite recently Wikipedia operated on a shoestring budget with a staff of just 15. *Sloan Foundation to support Wikipedia's quality and growth initiatives* [http://wikimediafoundation.org/wiki/Press\\_Releases/Sloan\\_Foundation\\_Support](http://wikimediafoundation.org/wiki/Press_Releases/Sloan_Foundation_Support)
- <sup>xv</sup> [http://commons.wikimedia.org/wiki/Category:Lady\\_of\\_Auxerre](http://commons.wikimedia.org/wiki/Category:Lady_of_Auxerre)
- <sup>xvi</sup> [http://commons.wikimedia.org/wiki/Jean-%C3%89tienne\\_Liotard](http://commons.wikimedia.org/wiki/Jean-%C3%89tienne_Liotard)
- <sup>xvii</sup> [http://en.wikipedia.org/wiki/The\\_Battle\\_of\\_San\\_Romano](http://en.wikipedia.org/wiki/The_Battle_of_San_Romano)
- <sup>xviii</sup> <http://www.nationalgallery.org.uk/cgi-bin/WebObjects.dll/CollectionPublisher.woa/wa/work?workNumber=NG583>
- <sup>xix</sup> [http://www.louvre.fr/llv/oeuvres/detail\\_notice.jsp?CONTENT%3C%3Ecnt\\_id=10134198673225156&CURRENT\\_LL\\_V\\_NOTICE%3C%3Ecnt\\_id=10134198673225156&FOLDER%3C%3Efolder\\_id=9852723696500816&fromDept=false&baseIndex=32&bmLocale=en](http://www.louvre.fr/llv/oeuvres/detail_notice.jsp?CONTENT%3C%3Ecnt_id=10134198673225156&CURRENT_LL_V_NOTICE%3C%3Ecnt_id=10134198673225156&FOLDER%3C%3Efolder_id=9852723696500816&fromDept=false&baseIndex=32&bmLocale=en)
- <sup>xx</sup> <http://www.uffizi.firenze.it/english/musei/uffizi/visita/opere.asp?idSala=6>
- <sup>xxi</sup> The case of the Uffizi is particularly striking. The “Virtual tour” available on the official institutional website is difficult to navigate, provides only summary information and no images. *VirtualUffizi*, a commercial site provided by private sponsors and a “bunch of internet friends”, has stepped into the breach to provide a complete, searchable, illustrated catalogue:  
<http://www.virtualuffizi.com/uffizi/index.htm>
- <sup>xxii</sup> <http://www.vam.ac.uk/resources/buying/index.html>.
- <sup>xxiii</sup> Geneva's *Musée d'art et d'histoire* declared a Total revenue in 2007 for location and sale of Ektachromes, hire of rooms, special guided tours and surveillance services of 25,451.92 CHF. Revenue from royalties and hire of photographs was just a fraction of this total amount.  
<http://www.ville-ge.ch/finances/finances/2007/C2007.pdf>