In your dreams:
Digital media bring to life real collections

This is a preprint: the published version may differ in minor ways.

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In museums, we have a problem of success. In the course of the last 50 years, we have added to the collections at a huge rate. As Gosling pointed out in ***mda*** *Information* Vol 2 No 2 September 1996 "at an annual growth rate of 1.5% the size of the Nation's Collections will double within 47 years. A century hence it will have increased by almost 450%". This is the average rate of increase as reported by Lord and Lord (1989), and almost any museum collection will provide confirmation (e.g., those cited in Keene 1996). Unfortunately, although they have policies guiding them as to ***what*** they collect, very few museums besides art galleries have a clear idea of ***why*** they are collecting: what their collections are to be useful for.

One way of making collections useful is to encourage people to visit and enjoy the collections in store. But stores are not designed for this purpose, and of themselves they may not be very interesting to visit. It is possible that the technology of electronic information and digitisation could help us here. Objects do have stories to tell, and often riveting associations. If one has a knowledgeable guide, a tour of the stores can be an inspiring experience. How can we use information and digital technologies to create new inspiring experiences, that will illuminate more of our collections, and that can be shared by hordes of people? It would be especially helpful if the information already being built in museums' collections databases - knowledge bases - could be linked to the object: i.e., the virtual collection could be brought together with the actual collection. This paper sets out to imagine just a few ways in which currently or imminently available technology could bring this about.

So, in your dreams ...

- Objects will speak to you.
- Costume will be enlivened by ghosts.
- Visitors will virtually try on historic costumes.
- Visitors will design personal tours of the stores, and robots will conduct them.
- Hordes of people in schools, universities and at home will use the collections for teaching, learning and study.

Objects will speak to you

Many objects in stores do speak to visitors: but not as we would hope. They look so obscure, boring and often dusty that they say very clearly, "Walk on by!" - and visitors do, with no more than a glance. But suppose some objects literally could speak to you?

1. An infrared movement detector senses a visitor nearby (or the visitor could touch a panel, etc).
2. A wireless transponder nearby calls up the data in the "label" field from the collection database.
3. A small speaker near the object generates electronic speech to read out the "label" information to the visitor.

Simple - why has no-one done it! Perhaps they have? This is not the same as portable sound systems where the visitor carries round cumbersome equipment and inputs numbers to listen to pre-recorded information. The special features of this idea are first, that the collection database is the source of the

information; and second, that the voice appears to come from the object. It would be a very direct experience if the object was perceived itself to speak. Maybe many objects would be speaking at once? Excellent - a store full of chattering objects.

Visitors can virtually try on costumes

This idea addresses the problem of costume collections. Clothes are essentially meant to be worn in social circumstances - they are meant to move, to be worn by people, not arranged on figures (sometimes headless!) or on hangars. Museums can't use historic costumes in this way, of course. But perhaps new technology could come to the rescue. It wouldn't even have to be very new technology to liven up costume displays.

1. The back and sides of a large costume display case consist of projection screen material (it must be used in theatrical productions).
2. Video film of an appropriate historical nature is back projected onto the screens.
3. When the costume display is changed, the film can be changed as well.
4. Add faint background sound and music to complete the experience.

This would play to the current visitor preference for experiential exhibitions, without prejudicing the conservation of delicate textiles. In the further future, ghostly 3D virtual figures, as in holograms, could walk round among the displayed costumes. I haven't been able to find out whether this is possible yet.

1. The characteristics of the textile and the costume construction have to be measured and input.
2. A facility is provided for visitors to scan their bodies.
3. Visitors could select a costume to try on from a virtual clothes rack, and see themselves wearing it.
4. The technology will allow their virtual selves to move round, with the costume realistically flowing and draping.

This is already almost feasible, given enough ready money or the gift of persuasion. The Department of Computing Science at University College London are working on a project towards developing 'virtual costume' for clothing manufacturers and retailers. The aim is that web visitors to e-tail sites will be able to scan in their body characteristics and try on clothes electronically.

The Department is also working on realistic crowds, to populate virtual cities, towns and other places, such as those that are being created by technologically minded and equipped historians.

One interesting feature of this project is that it is partly funded by the BBC for its planned digital service.

UCL virtual reality / virtual figures

www.cs.ucl.ac.uk/research/vr/ Projects/3DCentre/
www.cs.ucl.ac.uk/research/vr/projects.htm

Visitors will construct their own tours of the stores

This idea is eminently feasible. It was developed as part of the work on a National Collections Centre for the Science Museum's large objects storage site at Wroughton, near Swindon. The stored collections there are already popular for schools visits.

1. Make (selected parts) of the collection database available over the web.
2. Tag object records using the metadata scheme created for the National Curriculum.
3. A school class could search the database using the National Curriculum terms, and a plan of the store would be printed out, showing relevant objects to visit.
4. The class would be able to plan ahead what sort of things they wanted to observe or discover about the objects.
5. When the children visit, the objects will tell the children about themselves.

National Curriculum subject search
www.nc.uk.net/servlets/KeywordsSearch?Subject=Hi

National Museums of Scotland Granton store
www.nms.ac.uk/granton/index.htm

Robots will conduct visitors round the stores

Euro money is going to make this happen!? TOURBOT is a project being developed by a European consortium lead by the University of Crete. TOURBOTs in their present form look just like Daleks (or dustbins).

They are programmed to avoid bumping into objects or walls, and they will possibly avoid small children too. They interact with visitors to guide them round and explain exhibits. Ideally, the TOURBOTS will have been told beforehand about the tour that the visiting class has planned, and they will conduct the class to their chosen objects.

TOURBOT is one of the projects being funded under the Digicult programme described by Bernard Smith, and there are lots of other imaginative projects to check out there.

TOURBOT:
www.ics.forth.gr/tourbot/

Some other Digicult projects:
www.cordis.lu/ist/ka3/digicult/en/visualisation.html

Hoards of people in schools, universities and at home will be inspired to visit collections for teaching, learning and pleasure

This is happening, too. Digital Egypt for Universities is a project funded by JISC, to create electronic resources for higher education. However, its appeal will be far wider than just university researchers. The partners are the Petrie Museum and the Centre for Advanced Spatial Analysis, both of University College London. Objectives are to demonstrate the unique potential of a specialised university museum collection; to provide reliable data-rich web resources; and to inspire interdisciplinary access to specialised collections. The intention is that researchers will be inspired to visit and study the collections.

The project runs alongside a Designated Collections Challenge Fund project to create a collection database with an image of every object. The database is drawn on in the rich visial recreations of the CASA website, all of which are based on scholarly research and understanding.

The scope of the Digital Egypt website is amazing. Some special highlights are:

Attention to periods other than just ancient Egypt: for example the magnificent collection of Roman / Coptic panel paintings.

The way in which evidence of excavated features such as tombs is presented. There are diagramatic plans, with the location of objects plotted. For objects which exist in the

collections, a click will show the object catalogue record. Scanned images of actual excavation records (tomb cards) can also be viewed.

Similarly, online catalogue records of objects in the collections can be linked back to their findspots and contextual information.

A handling box for Roman Egypt, for schools. The contents are shown on the website, with related museum locations, so that a class can complement the box with a visit to the actual museum.

Virtual reality models of temples, landscapes and tombs. In some cases, alternative interpretations are presented.

Digital Egypt at the Petrie Museum, UCL
www.petrie.ucl.ac.uk/digital_egypt/
www.casa.ucl.ac.uk/digital_egypt/hawara/portraits

Conclusions

There is a positive jungle of innovation that could be applicable to museums. How much will become usable reality? Does it matter? Let's enjoy and make use of this proliferation of digital imagination. However, let us not lose sight of the objective: to enliven the actual collections. I believe the vital thing is to use technology to bring the digital collection, the collection catalogue plus the contextual information, together with the actual collection, so as to get the best of both. The digital collection is vital to your dreams! It has much in common with the actual collection. Catalogue it, store it, conserve it, plan for its future.

References

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